

US-AID WORKING PAPER
ON
"THE INVOLVEMENT OF MINORITY
INSTITUTIONS IN INTERNATIONAL AGRICULTURAL
DEVELOPMENT: ALTERNATIVE APPROACHES"

PREPARED BY

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This paper is provided for information and utilization within AID. It represents the opinions of the author and is not intended as a statement reflecting ESP views on Agency policy.

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THE INVOLVEMENT OF MINORITY INSTITUTIONS
IN INTERNATIONAL AGRICULTURAL DEVELOPMENT:
ALTERNATIVE APPROACHES

I. INTRODUCTION

The purpose of this paper is to provide an overview of the interest, the capacity and the (faculty and staff) capability of the 1890 Land Grant (minority) Colleges and Universities and Tuskegee Institute in participating in US-AID international development projects and programs.

The objectives of the paper are: (1) to provide information on the resources and interest of the minority institutions pertaining to their international development experiences and capabilities; and (2) to identify and analyse alternative ways in which minority institutions' involvement in international development activities can be increased.

Emphasis is placed on: a review and analysis of the information available on the international agricultural and rural development activities; examination of the potential impact of greater minority institutions' participation in these activities; and suggestions and recommendations which can be utilized to increase the participation of minority institutions in the international agricultural and rural development activities of AID, LDCs and/or other international donors and assistance agencies.

This overview is the culmination of weeks of consultation with staff/administrators of AID/Washington, and staff/faculty and administrators of fifteen (15) of the seventeen (17) Land Grant

Minority Institutions and Tuskegee Institute, which expressed interest in and extended invitations for me to visit their campuses. The participating institutions¹ (~~excluding Delaware State and Florida A & M Universities~~) shared the information concerning their institution freely and exchanged views in a spirit of collaboration and cooperation.

The paper is developed with a view of AID's priorities and needs, based upon consultations with a number of staff/administrators of DSB - including ~~AGR/ESP~~, DSB/RD, DSB/DA, Title XI (BIFAD), and the Regional Bureaus;² and a review of numerous AID documents.

An evaluation of each institution was made with, among others, the following considerations: academic/research priorities; management capability; commitment to (and evidence of) international development involvement; past and existing restraints to institutions' involvement; and leadership for such involvement.

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Alabama A & M University, Alcorn A & M University, University of Arkansas at Pine Bluff, Fort Valley State College, Kentucky State University, Langston University, Lincoln University, University of Maryland at Eastern Shores, North Carolina A & T University, Prairie View A & M University, South Carolina State University, Southern University, Tennessee State University, Virginia State College and Tuskegee Institute.

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Staff/administrators included: Glenn Beck, Al Harding, Harlan Hobgood, Earl Leng, Erven Long, Nicholaas Lukyx, William Merrill, Rose Robinson, Erhardt Rupprecht and Tony Schwartzwalder (DSB/AGR and DSB/RD); Sheldon Cole and Harold Jones (Africa Bureau); Fletcher Riggs and Isaiah Jackson (Asia Bureau); John Balis (Latin American Bureau); Louis Clark, Jim Dalton, Dave Steinburg, Ed Vinson and Alfred White (Near East Bureau).

The paper should be useful to administrators and staff of AID/Washington, AID/Missions, BIFAD (Title XII) as well as other agencies of the federal government who, in keeping with the letter and spirit of Affirmative Action, are obliged to involve more minorities in their projects and programs. The paper should also be useful to administrators of organizations and institutions receiving federal funds from AID and other agencies, but who lack the information concerning minority expertise and knowledge to bring these into the mainstream of their projects and programs.

The project from which this paper is prepared was necessary from the standpoint of securing information (data), not previously assembled, concerning the minority institutions. Equally important, from the standpoint of the minority institutions, was that AID had taken the initiative to have someone visit and discuss possible involvement opportunities with the administrators, staff and faculty of these institutions. This project, concerning greater minority involvement, was most welcomed by the institutions and was a significant first step in establishing communication between AID and institutions not previously involved.

The knowledge concerning the capacity of the minority institutions should establish a firmer basis for greater involvement of minority institutions in LDCs. The allocation of funds, through grants and contracts, to academic institutions for involvement in LDCs has gone primarily to the non-minority institutions and organizations. This

pattern of allocation has caused the omission of a viable source of resources that is unique for assisting LDCs in their development thrust. These human skill resources are unique because they have been developed in environments quite similar to those of LDCs. Therefore, the minority institutions have the knowledge and expertise to lead meaningful services in technical assistance and research but they have not yet sufficient opportunity to do so.

The omission of the majority of minority institutions from the mainstream of AID activities has dampened their spirit from seeking meaningful participation. Of course, the capacity of many of these institutions has been limited and this has served as a constraint both to the institutions seeking involvement and to the donor agencies seeking their services. It is apparent, never-the-less, that minority institutions' low level of utilization (involvement) by donor agencies has been in part due to a lack of knowledge concerning what these institutions have to offer, and in part due to apathy and neglect. The information provided in this paper should enable AID to accommodate greater minority involvement in its programs aimed at providing assistance in shaping LDC program and policies to substantially increase agricultural production and prevent poverty and hunger. It should also enable AID to meet its requirements of skilled manpower and that of Affirmation Action.

This paper is limited in the sense that the host of information collected will not be presented here in detail. It is hoped that a follow-up document will be supported so

that the information can be presented as a "workable document" (Manual).

II. MINORITY INSTITUTIONS' INTEREST, INVOLVEMENT AND FOCUS IN INTERNATIONAL DEVELOPMENT

Of the seventeen minority institutions, fifteen expressed interest and collaborated with AID for making available information concerning the capacity of their institution for utilization, and for discussions concerning possible involvement opportunities in international development projects and programs. Of the fifteen minority institutions expressing interest, only five have had previous involvement with AID. They are: North Carolina A & T University; Prairie View A & M University; Southern University (Baton Rouge); Tuskegee Institute; and Virginia State College. Four of these have had 211(d) Institution Building Grants from AID; while the other (Prairie View) have had a 211(d) Tropical Soils Grant. All five of these institutions have had international involvement in LDCs.

Tuskegee Institute has had a long history of international involvement in LDCs. The most recent (current) involvements have been in Jamaica (W.I.) and Yemen, with projects under its Human Resource Development Center and its School of Agriculture, respectively. Both the Yemen and Jamaica projects are supported under contract by AID. The Yemen project is concerned with the improvement of horticultural crops; while the Jamaica project is concerned with community education and rural development.

Tuskegee has also had a 211(d) Livestock Consortium Program with Purdue University, University of Georgia (Athens), University of Florida (Gainesville) and Texas A & M University. The Departments of Agricultural Sciences, Sociology and the School of Veterinary Medicine at Tuskegee were involved in the project with activities in a number of LCS, including Guyana, Swaziland, Mali, Mauritania, and Senegal. This project was terminated in 1977.

North Carolina A & T University has had programs in LDCs. Its most recent involvements have been in Uganda and Tanzania. The program in Uganda was in collaboration with Ohio State University and the University of West Virginia - a consortium formed under an AID contract to provide technical assistance to the University of Makerere. The project concerned curriculum (teaching) development and a research program and involved the Department of Economics of North Carolina A & T. In a consortium with the University of West Virginia, North Carolina A & T University's School of Agriculture was also involved in a project to assist Tanzania's Ministry of Agriculture in training essential agricultural manpower.

Southern University's program (in Cameroon) was to assist in establishing an Agricultural Economics Department and a post-graduate training program for staff/faculty to replace Americans at the termination of the program. The School of Agriculture and its Department of Agricultural Economics were responsible for establishing and implementing

the program.

Prairie View A & M University established a linkage arrangement in 1977 with the Soils Research Institute of the Ministry of Agriculture (Ghana) for a soils project in Kwadaso under its AID 211(d) "Delivery of Soil Technology" program. The program is aimed at improving the production of corn grown by small farmers.

Virginia State College has had a successful rural development program in Ghana since 1975 under its Rural Development Linkage Program with the University of Science and Technology. The program involves: small research projects on problems of small farm operators, carried out jointly by staff members of both institutions; an exchange education and training program for students, staff and faculty; and an exchange of research information program. The linkage program, established under the College's AID 211(d) Grant, has been instrumental in developing a sound rural development capacity for assisting LDCs, AID and other donor agencies. Staff members of the College have had experiences in carrying out project evaluation and design work in LDCs (upper Volta and Kenya) for AID as well as other experiences in working in LDCs.

With the exception of individual staff and faculty members who have had experiences in LDCs by virtue of country of origin, through short term consulting, and/or other means, none of the other ten minority institutions have had any international involvement. These institutions,

however, have expressed interest in becoming involved in international agricultural development. Of these, perhaps the most prepared--based upon their existing capacity, the strength of their agricultural and rural development activities (discussed below), and their management capability--would be: Alabama A & M University, Lincoln University, Tennessee State University and Fort Valley State College. Of the other six institutions, Alcorn A & M University has the strongest agricultural program but is severely limited in its capacity (human resources) for participation. Each of the other institutions, however, has some capacity and potential for becoming involved. Areas of strength, consistent with AID's needs, have been identified at each institution (discussed below).

The limited international involvement by the 1890 Land Grant Colleges and Universities has been due largely to: the lack of resources to develop a capacity for participating in the activities of LDCs, AID as well as other donor agencies; and the lack of opportunity to utilize the existing capacity (small as it might be) to acquire the knowledge and expertise needed by AID and other donor agencies. The minority institutions possess a source of expertise and knowledge that is unique for resolving problems in agricultural and rural development. This has been developed mainly through years of working on similar problems under similar conditions to those

of LDCs. They possess a range of expertise and knowledge in intermediate technologies that are useful and adaptable to LDCs.

The omission of minority institutions from the mainstream of activities has had a rather traumatic effect, dampening the aspiration of staff and faculty members of these institutions to utilize their knowledge and expertise in a meaningful and effective way for the benefit of society as a whole. It has been because of this omission over the years and, of course, constraints peculiar to minority institutions, that the development of capacities which could be useful in assisting AID, other donors, and LDCs have been restrained.

The 1890 Land Grant institutions, until recently with research funding under the USDA's SEA/CR program,³ typically have been obliged to concentrate on teaching and extension activities, with few exceptions in which research has been an integral part of their programs. However, despite the restraints experienced by these institutions and Tuskegee Institute, much relevant extension and research activities have been carried out, and capacities have been developed with capabilities in many areas pertinent to AID's needs. As can be expected, some institutions have greater capacity than others; some are better prepared to be utilized; while others have limited capacity and cannot be involved meaningfully at this time.

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Science Education Administration/Cooperative Research.

III. AGRICULTURAL AND RURAL DEVELOPMENT CAPACITIES OF MINORITY INSTITUTIONS

This section examines the resources and activities of each institution pertaining to international agricultural and rural development. The information is presented under four broad categories: (1) Research and Extension Capacity; (2) Education and Training Capacity; (3) Linkages and Other Capacities; and (4) Unique Capacity for International Agricultural and Rural Development. An analysis of the information available on the agricultural and rural development activities is presented with suggestions and recommendations which can be utilized to increase the participation of the institution in the international agricultural and rural development activities of AID, LDCs and/or other international donors and assistance agencies.

The information includes: the scope and thrust of activities; the areas of focus and disciplines involved; parallelisms of priorities with those of AID and other donor agencies; accomplishments in international agricultural and rural development; commitment of the institution to and management plan for international agricultural and rural development; availability of resources and constraints to the use of those resources; and the extent of utilization to date.

This presentation of the information on each institution is not necessarily in order of importance nor significance to AID's needs. Tuskegee Institute is discussed first, followed by the 1890 Colleges and Universities in alphabetical order.

TUSKEGEE INSTITUTE

Tuskegee has had a long history of successful involvement in helping limited resources people, focusing on the problems of the disadvantaged residents in contiguous rural areas, and amassing unusual (unique for LDCs) expertise and knowledge that have been telescoped to LDCs. Its scope of activities are educational, research and extension with a concentration on the human resource and community development needs of the disadvantaged. The main thrust of Tuskegee's activities, paralleling the priorities and needs of AID, is in the areas of the Agricultural and Social Sciences. The disciplines most highly regarded for the purpose of meeting AID's requirements include: Agricultural Science (animal, poultry, plant and soil); Agricultural Economics; Economics; Rural Sociology/Anthropology; Extension; Education; and Veterinary Medicine. The strongest of these disciplines, in terms of capacity and depth are, perhaps, Veterinary Medicine, Extension, Agricultural Sciences and Rural Sociology/Anthropology.

Tuskegee is firmly committed to international agricultural development. Its past activities in this area extend back to 1900 with a cotton cultivation project in Togo (Africa) under the auspices of the German Government. Its more recent involvement includes: A US-AID technical assistance program in Indonesia to upgrade technical teachers (1954-1959); a US-AID rural teacher training institute in Liberia (1960-1969); a US-AID livestock management program in Guyana (1968-72); a US-AID

211(d) consortium on tropical ruminant livestock production (1972-77); a US-AID funded evaluation of, and technical assistance to, the educational system of Jamaica; a US-AID contract for horticultural improvement project for the government of the Yemen Arab Republic; and a US-AID funded 211(d) institutional building program in comprehensive planning for rural development (emphasizing farm systems, marketing and community organization and new land development).

The organizational structure of the institution to facilitate its international involvement includes: (a) The Carver Research Foundation, with the objective to advance knowledge through research in agriculture, the natural sciences and related areas; (b) The Division of Behavioral Science Research, with focuses on poverty and rural development; (c) The Center for Rural Development, which is responsible for research under the USDA's/SEA/CR program; (d) The Human Resources Development Center (HRDC), which is a major extension "outreach" unit, focusing on social and economic problems of the disadvantaged, both domestically and internationally; and (e) The Cooperative Extension Service, which is a major unit of HRDC. The management capability of Tuskegee basically is sound, but needs firm policies and guidelines pertaining to staff/faculty participation in international projects and programs; particularly in terms of faculty release time for consultative services.

Tuskegee has a sizeable number of qualified persons with unique knowledge and expertise for meeting AID's needs in

disciplines and areas of focus discussed above.⁴ Many of the staff and faculty members have had experience in working in such LDCs as: Guyana, Trinidad/Tobago, Jamaica (W.I.); Tanzania, Liberia, Ghana, Cameroon, Senegal, Mali, Mauritania, Ivory Coast, and Losotho (Africa); Mexico, Peru, Chile, Colombia (South America); India, Pakistan (Asia); and Yemen (Near East).

Tuskegee, like the 1890 Land Grant Colleges and Universities, is critically restrained by lack of funds for expanding its capacity into a greater utilization mode for international agricultural development. Like the 1890 and other (i.e. 1862) institutions, Tuskegee has no excess capacity but, given the resources (funds), could provide an expanded capacity for greater involvement. With its present resources, it could have only limited participation in advisory/consultative services and/or long term involvement (in LDCs) of its staff/faculty without serious disruption in its current activities.

Of the 1890 minority institutions and Tuskegee, the most utilized one of them by AID and other donors in LDCs has been Tuskegee which, of course, is void of many of the kinds of administrative constraints as those of the 1890 institutions. Being a "private" institution, Tuskegee can utilize its resources (funds) for exploring international involvement, whereas the state supported 1890 institutions

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A forthcoming manual will document the size and qualification of staff/faculty at each institution.

cannot. Hence, Tuskegee has been able to explore and take advantage of opportunities for involvement, both by virtue of its flexibility in using its funds and by virtue of its need for securing outside funds for its own survival as a "private" institution. The extent of donor's (AID and others) utilization of Tuskegee has been high compared to that of the other minority institutions, but certainly not at its capacity and expectation levels. While the institute has not been directly involved in consultative activities in LDCs, it encourages its faculty and staff members to become involved.

Research and Extension Capacity

Tuskegee Institute has a sound knowledge base in research and extension activities, with a sizeable number of its staff/faculty members expressing interest in international agricultural and rural development. Those expressing interest are grouped as follows:

- a. Veterinary Medicine----- 6 (All DVMs)
- b. Education ----- 4 (2 Doctorates)
(Vocational and Adult Education Specialists)
- c. Agricultural Sciences -----12 (10 Doctorates)
(including: Agronomist, Animal Nutrition and Production, Forestry Resources and Food Processing Specialists; Poultry Breeder, Soil Chemist, and Plant Pathologist)
- d. Extension (HRDC) ----- 7 (4 Doctorates)
(Community Education and Services Specialists)
- e. Social Sciences ----- 3 (2 Doctorates)
(Sociologist/Anthropologist)

Total 32 (24 Doctorates)

Of the 32 staff/faculty members expressing interest, 14 have had research experiences in LDCs by virtue of their participation in projects and programs, many of which have been funded by US-AID. The current staff/faculty research/extension activities have relevance to international agricultural and rural development. These activities include:

- 1) Twenty-one (21) SEA/CR (USDA) Domestic Research Projects identified under Agricultural Sciences and related areas with emphasis in such projects as:
 - (a) Small Fruits Breeding, Production and Utilization;
 - (b) Nutrition Related Diseases Among Rural Low-Income Families;
 - (c) Livestock Production (Cattle/Feeder Pig) and Diseases;
 - (d) Poultry Production: Enterprise Combination and Management Systems for Small Farms;
 - (e) Vegetable Production by Small Farmers; and
 - (f) Rural Development, including Community, Human Resources, Economic Resources and Natural Resources Development.
- 2) A recently (1977) funded US-AID 211(d) Grant for Developing an Expanded Interdisciplinary Research Program consisting of:
 - (a) Farming Systems - To Identify and Analyse Social and Agricultural Systems;
 - (b) Community Organization - including Social Organizations;

(c) Marketing - including Marketing Systems and Base Line Data;

(d) New Land Management - including Crop and Livestock Management

The Research/Extension Knowledge Base of Tuskegee Institute, in terms of staff/faculty training and experiences, is strongest in the areas of Veterinary Medicine, Agricultural Sciences (Animal, Poultry, Plant and Soil) and Extension under the Human Resources Development Center (HRDC). It is well distributed among disciplines and areas which parallel AID's needs.

Education and Training Capacity

1. The academic units identified as important to international agricultural and rural development are:
 - (a) Department of Agricultural Sciences, including Animal and Poultry Sciences, Plant and Soil Sciences and Environmental Sciences.
 - (b) School of Veterinary Medicine, accredited with a Master of Science in Veterinary Medicine and a professional four-year course leading to a Doctor of Veterinary Medicine.
 - (c) Department of Sociology, with a concentration in Rural Sociology.
 - (d) Department of Economics, with a focus on international and development economics.
 - (e) School of Education, with areas of emphasis being teacher training, para-professionals, vocational education, agricultural and home economics education, adult education and industrial arts.
2. Degree programs are offered both at the undergraduate and graduate levels.
3. Student enrollment includes 137 from LDCs with about 50% in Agricultural Sciences.

4. A major institution for training veterinarians for LDCs.
5. Staff/faculty members include several from LDCs many of whom have special interest in problems of LDCs.
6. Training includes "outreach" programs in community education and development under (HRDC) which has been expanded to LDCs (Jamaica).
7. Seminars, workshop and conferences on:
Community and rural development: Veterinary Medicine; and Agricultural Sciences.

The academic and training programs in the areas identified are thorough and staffed by qualified instructors. The teaching and training approaches emphasized are ideally suited for students from rural poor areas and LDCs. The "hands-on" approach (learning by doing) is emphasized without neglect to the theoretical approach.

Linkages and Other Capacities

1. International linkages include the following LDCs in which Tuskegee has had involvement:
 - (a) Current involvement includes - Jamaica and the Yemen Arab Republic.
 - (b) Past involvement includes - Guyana, Liberia, Mali, Senegal, Mauritania, Tanzania, Ivory Coast, Colombia, and Chile.
2. Domestic linkages and networks include:
 - (a) SECID - (South East Consortium for International Development).
 - (b) Peanut Consortium with 1890 institutions (Fort Valley, Virginia State College, North Carolina A & T University)

and 1862 institutions (including University of Georgia (Athens) University of Florida (Gainesville) and others).

(c) Livestock Consortium with the Universities of Florida (Gainesville), Purdue, Georgia (Athens) and Texas A & M.

3. Linkages with international organizations include: FAO (Rome), The World Bank; and others.
4. Linkages with foundations include: Rockefeller, Ford, Mott, Kellogg and others.
5. Linkages are also maintained through Alumni (Domestic and LDC).

Tuskegee Institute has an advisory consultative capacity with depth in terms of a cross discipline of staff/faculty with working experiences in LDCs. However, an established mechanism with clear-cut policies and guidelines for allowing staff/faculty release time has not yet been established. None-the-less, the institute has some flexibilities and encourages its staff/faculty to become involved in consultative/advisory services. Participation of staff/faculty members in consultative advisory services for LDCs, AID and other donors without sufficient (at least one month) lead time could cause disruption in on-going activities. The areas identified for such services include:

1. Agricultural Science (Animal, Poultry, Plant and Soil);
2. Social Sciences (Economics, Sociology and Anthropology); and
3. Extension, under HRDC.

Tuskegee Institute has a well established but narrow information/dissemination capacity that includes a liaison office located in Washington, D. C. and an office of the Vice President for Fund

Raising and Public Relations which also provides technical assistance in proposal writing.

Unique Capacity for International Agricultural and Rural Development

Tuskegee Institute has quite a capable knowledge base in Veterinary Medicine and its Outreach Extension Program which is unique to US as academic institutions in the sense that its expertise in these areas can be easily translated to LDCs because of similarity of problems requiring extension services and because it has long been a major institution for training veterinarians for LDCs. The Institute can provide a range of technical assistance - low, medium and high level - depending on the discipline required (Animal, Poultry, Plant and Soil Sciences, Extension and Veterinary Medicine). Its years of experience in working on the program of the poor, rural, disadvantaged small land holders and landless people have made its capacity attractive for assisting LDCs.

It has an interdisciplinary research program with focuses on: farming systems; community organization, marketing and new land management. This program, supported under a US-AID 211(d) grant will enhance its capacity to be responsive to AID's and LDC's needs.

ALABAMA A and M UNIVERSITY

Alabama A & M University has developed a capacity that can be utilized to assist LDCs, AID and other donor agencies in their agricultural and rural development activities. This capacity includes departments within the School of Agriculture, Environmental Science and Home Economics, with AgriBusiness, Food Science Technology, Nutrition and Dietitics, Plant and Soil Science, and Natural Resources as the most relevant disciplines to meet the needs of AID and address the problems of Agricultural and Rural Development in LDCs. Supplementing the research and extension activities of these disciplines are the research capabilities of staff/faculty members of the Department of Sociology; and the technical capacities of the Divisions of Biology and Industrial Education. This capacity of the University is unique for assisting LDCs since it has been developed in an environment similar to most LDCs and where the problems faced by the disadvantaged rural people of Alabama are similar to those of LDCs.

The research thrust at Alabama A & M is concentrated in the Agricultural Sciences with funding from SEA/CR and ARS (USDA), NASA, NSF and EPA. Sixteen research projects were identified under the SEA/CR program, with the largest single concentration of projects in plant breeding, production and utilization of triticale. The relevant areas to international agricultural and rural development are in socio-economic studies of low income communities and limited resource household in North Alabama.

The extension activities of the University supplement the research activities by implementing the findings and results

where practicable; and assisting the rural disadvantaged in their development. The Agricultural Sciences and Home Economics work collaboratively with extension. The Division of Home Economics has its main thrust in helping individuals and families acquire skills necessary for efficient and effective family living. The food and nutrition focus includes: general dietetics, management, clinical nutrition and community nutrition; and incorporates the disciplines of Sociology, Psychology and Economics. Units within the division work collaboratively with the Schools of Education and Arts and Sciences, and the Agricultural Sciences' Divisions of Food Science and Technology, Plant and Soil Sciences and Natural Resources. An atypical unit within agriculture is that of Timber Harvesting Management. Alabama A & M has the only four year curriculum in this area and works collaboratively with the Tennessee Valley Authority and various wood using and equipment manufacturing companies.

The academic programs in the disciplines indicated above are strongly supported by the institution. Enrollment (452) in the Agricultural Sciences and Home Economics in 1976-77 exceeded that of any other 1890 Land-Grant institution. Students from LDCs increased from 130 in 1975-76 to 360 in 1976-77, with the largest enrollments from Nigeria (174) and Iran (113). Of the full-time faculty, 43 percent have the Doctorate Degree; while 49 percent have the Masters (some with advanced training).

The faculty and staff members of the areas (disciplines) of strength identified are qualified for assisting AID and LDCs but, with a few exceptions, they lack experience in working in LDCs. Their expertise and knowledge gained from working with limited resources people in rural Alabama (North), however, are adaptable to LDCs because of the similarity of problems vis-a-vis rural Alabama.

The administration of the University has expressed a firm commitment to international agricultural and rural development, but has no established policy and/or guidelines for involvement. This University, however, has a strong basis for international agricultural development involvement in the disciplines indicated above. The management capacity of the University is sound, but needs policies and guidelines for international development involvement. There is no institutionalized organization for administering international involvement, but leadership for such an organization could come from the School of Agriculture, Environmental Science and Home Economics.

Research and Extension Capacity

Alabama A & M has a sound knowledge base in qualification (degree and training of its staff and faculty members) and experience in domestic Research and Extension. Of the staff/faculty expressing interest in participating in AID projects and programs, over 70 percent have the doctorate degree, and were engaged in research and/or extension activities from which the expertise and knowledge developed could be useful in assisting

LDCs. Those expressing interest are grouped as follows:

a. Agricultural Sciences -----	11 (8 Doctorates)
(Plant Breeder (2), Soilchemist (4), Agronomist, Animal Geneticist and Horticulturist (1 each)) Forestry Specialist (2)	
b. Education -----	2 (2 Doctorates)
(Adult and Agricultural Education Specialists (1 each))	
c. Social Science -----	1 (1 Doctorate)
(Sociologist)	
d. Home Economics -----	5 (4 Doctorates)
(Nutritionist & Food Technologist)	
Total	19 (15 Doctorates)

Of the 19 staff/faculty members expressing interest, only four have had research experiences in LDC's international agriculture and rural development mainly by virtue of country of origin. None has participated in US-AID project or programs, but the domestic research/extension activities carried out by them have relevance to AIDs projects and programs in international development. These activities include sixteen research projects under SEA/CR in:

- a. Breeding, Production and Utilization of Triticale
- b. Livestock Production, Management and Utilization
- c. Socio-Economic Studies of Low Income Communities and Limited Resource Households in North Alabama.

With the exception of the Socio-Economic studies and some Livestock Production projects, the other research projects are strongly focused on basic research. The University, nevertheless, possesses a strong basis for improving its capacity for international agricultural and rural development.

Education and Training Capacity

1. The following departments offer academic programs most relevant to international agricultural and rural development:
 - (a) AgriBusiness Education
 - (b) Food Science and Technology
 - (c) Home Economics Education
 - (d) Nutrition and Dietetics
 - (e) Soil and Plant Sciences
 - (f) Sociology
 - (g) Business and Economics
 - (h) Industrial Arts Education
2. The Baccalaureate and Graduate Degrees are offered in all departments.
3. Short courses, seminars, workshops and specialized training courses in the disciplines identified.
4. Staff/faculty members include several from LDCs, many of whom have special interest in problems of LDCs.
5. Increased enrollment of students from LDCs (176 percent increase over the last three years).

The academic and training programs in the areas (disciplines) identified are staffed with qualified personnel (staff/faculty). Although the teaching and training programs have a strong domestic orientation, students from LDCs could benefit, particularly from the training programs in agriculture/extension because of the close alignment of the academic

training programs with the research programs concerning problems of the rural disadvantaged.

Linkages and Other Capacities

1. Domestic linkages and networks consist of:
 - (a) SECID - (South East Consortium for International Development.
 - (b) Agencies/institutions supporting funded research (NASA, EPA, ERS, SEA/CR, TVA).
 - (c) Institutions collaborating on research/extension activities (Purdue University, University of Alabama, University of Mississippi, and others).
2. International linkages consist of:
 - (a) Students from LDCs.
 - (b) Staff/faculty from LDCs.

The Institution's linkages and networks capacity is limited for purposes of international agricultural and rural development involvement; but serves the institution's domestic involvement adequately.

Alabama A & M University's advisory/consultative capacity is limited to Agriculture/Extension/Home Economics. There is no formal mechanism (policy, guidelines) for staff/faculty involvement in consultative advisory services. Some staff/faculty are available but they lack experience working in international agriculture and rural development.

In general, Alabama A & M University has high potential for involvement in international agricultural and rural development. Its capacity serves its domestic activities quite adequately. It has a strong interest for international development involvement but has no formal established mechanism for such involvement. It has capable staff/faculty members in the disciplines of Agriculture/Extension, Home Economics, Biology, Economics and Sociology.

Unique Capacity for International Agricultural and Rural Development

Its tradition in working with disadvantaged poor rural people of Northern Alabama and the expertise developed by a number of staff/faculty in resolving problems under similar conditions to those in LDCs give the University a unique (unusual) capacity to assist LDCs, AID and other donor agencies in their international projects and programs. The knowledge base, however, needs strengthening if meaningful participation in international activities is to take place. The School of Agriculture and Environmental Science, under which the bulk of research/extension activities that are meaningful to LDCs is carried out, has a well organized program of research/extension and training that enjoys a strong endorsement of the administration which has expressed a strong commitment to international agricultural development. Scientists with interest in LDCs are from the following disciplines: Soil Chemistry, Agronomy, Plant Breeding, Food and Nutrition and Sociology.

ALCORN A and M UNIVERSITY

Alcorn A and M University concentrates its programs on domestic activities. Its function embraces teaching, research and community services. Its interest in and capacity for international agricultural and rural development are limited. However, its domestic activities in the area of Agriculture and Applied Sciences are relevant to and embrace the kinds of activities that would enhance development in LDCs; and the capabilities and expertise developed by its staff/faculty could be useful to AID in its projects and programs in LDCs. The disciplines that are most significant in developing a useful capacity in international agricultural and rural development include those in the Division of Agriculture and Applied Sciences, with supporting ones in other divisions. They include:

- (1) Industrial Arts Education, which offers educational and technical programs (intermediate technology) in the building trades, handicraft and agricultural engineering;
- (2) Agriculture, with areas of concentration in agricultural economics, agricultural education, agricultural engineering, animal science, plant science, forestry and agricultural extension;
- (3) Home Economics, with food/nutrition, general home economics, home economics education and institutional management as areas of concentration.

The programs under these disciplines are quite relevant to international agricultural and rural development, and the expertise developed from working on rural problems similar to LDCs could be easily adapted for meaningful assistance to AID as well as other donor agencies. The University, however, had no established organization nor policy to facilitate any meaningful thrust in international agricultural and rural development. Its staff/faculty are fully occupied with domestic programs and activities and, because of its location, the University does not have easy access to a supply of replacement staff/faculty who would be important for minimizing disruption of existing activities should those with expertise become involved in AID projects and programs.

The research/extension thrust of the University is concentrated in the Agricultural and Applied Sciences. The research activities are supported mainly with funds from the SEA/CR (USDA) program. This program focuses on: increasing income opportunities for low-income dwellers in southwest Mississippi; and improving the quality of the environment. The extension activities supplement the research activities by implementing the findings and results where practicable; and assisting the rural disadvantaged in their development. The experiment sub-station of the Mississippi Experiment Station provides resources for both research and extension activities in feeder pig and fruits and vegetable production.

The academic programs of relevance to establishing an international development capacity include the disciplines

of Agriculture and Applied Sciences and those of Industrial Technology (industrial arts and industrial education).

Enrollments in these constitute approximately sixteen percent (450 of 2,860) and 8.5 percent (240 of 2,860), respectively. The disciplines with the greatest potential for a capacity in education and training include: Animal and Plant Science, Agricultural Education and Extension, Industrial Education (Building and Trade) and Home Economics. Students from LDCs are few with little prospect of increasing their number. Of the total full-time faculty, 45 percent have the doctorate degree, while 55 percent have the masters degree (some 10 percent with advanced training).

Of the areas (disciplines) in which the University's potential for developing a capacity lies, there are approximately 32 staff/faculty members with 21 having the doctorate and 11 the masters degree. The staff/faculty members, however, lack experience in international agricultural and rural development; but their skills and expertise, developed under conditions similar to those of LDCs, could be useful to AID and other donor agencies. Their availability for participation now or in the foreseeable future is very limited.

The University has capable leadership in the present administration which has expressed interest in international development. The management capability of the University is adequate, but there is no management capacity for participating in international agriculture and rural development activities.

Research and Extension Capacity

Alcorn A and M University has a limited research and extension capacity in terms of staff/faculty experience in LDCs and availability for participation in AID's projects and programs. The staff/faculty knowledge base in international agricultural and rural development is extremely small and is limited to a few faculty members whose experience in LDCs is by virtue of their country of origin. However, the research/extension knowledge base of the University, in terms of experience and/or expertise in working on problems of disadvantaged rural poor people in environments similar to those of LDCs, is sound.

Of the staff/faculty expressing interest in participating in AID projects and programs and who are engaged in research/extension, over 55 percent (10 of 18) have the doctorate degree, while the remaining 45 percent have the masters or equivalent. These are grouped as follows:

- | | | |
|----|---|--------------------|
| a. | Agricultural Sciences ----- 14 (7 Doctorates)
(including: Food Nutritionist,
Home Management and Education
Specialist; Agronomist,
Horticulturist, Agricultural
Engineering and Education
Specialists; and Industrial
Technologist and Education
Specialists) | |
| b. | Education ----- 3 (2 Doctorates)
(Vocational and Adult
Education Specialists) | |
| c. | Social Science (Economist) ----- 1 (1 Doctorate) | |
| | Total | 18 (10 Doctorates) |

Of the 18 staff/faculty members expressing interest, none has had research experience in LDCs nor none has participated in AID projects and programs but their domestic activities having relevance to AID include:

- a. Basic Human Needs in Rural Development:
Food, Nutrition, Clothing and Housing;
- b. Forage Production and Utilization Systems
for Cow-Calf Enterprises in Mississippi;
- c. Breeding Program for Efficient Production
of Quality Beef;
- d. Dietary Factors in Feeder Pig Production; and
- e. Production of Fruits and Vegetables for Low
Income Rural Residents.

Of these, the strongest capability would be in the studies of basic human needs.

Education and Training Capacity

1. The following departments offer academic programs that are most relevant to international agricultural and rural development:

- a. Agriculture;
- b. Home Economics; and
- c. Industrial Education and Technology

2. The enrollment in these departments constitutes approximately 25 percent of the total University enrollment (2,860 - 1976-77). The academic and training programs in the areas identified are adequately staffed but the faculty and programs lack capability and dimension in international agricultural and

rural development. There is no graduate level training program for students to take advantage of the experiences from the research carried out by faculty and staff. The University, therefore, lacks the capacity in education and training that meet the immediate and intermediate future needs of AID.

Linkages and Other Capacities

The University's linkages and network capacity is limited to a few Federal (i.e., SEA/CR/USDA) and State (i.e. Experiment Station) agencies which, for purpose of AID's projects and programs, is inadequate. Its membership to SECID is an inactive one; and its potential for increasing this capacity in the immediate future appears small. There is no capacity for consultative advisory service, nor is there any effort by the University to establish a mechanism for allowing staff/faculty to participate in AID's projects and programs.

Like most 1890 colleges and universities and Tuskegee Institute, Alcorn A & M University's tradition of working on problems of the rural disadvantaged people in environments quite similar to those of LDCs has made it possible for some members of its staff/faculty to develop skills and expertise that could be useful in resolving similar problems in LDCs. However, in order to utilize these unique skills and expertise, the institution would need resources and a program with an international agricultural and rural development thrust.

Unique Capacity for International Agricultural
and Rural Development

The tradition of working with disadvantaged rural poor people and the experience of its staff/faculty in domestic research/extension activities in environments similar to those in LDCs give the University a capacity that could be useful to AID in its projects and programs in LDCs. This existing domestic capacity, however, would need improvement for it to be translated into a capacity for international agricultural and rural development.

ARKANSAS UNIVERSITY AT PINE BLUFF

The thrust of the academic, research and extension programs of the University of Arkansas at Pine Bluff has been to meet the needs of the rural poor in the communities it serves. Its interest in and capacity for international agricultural and rural development is limited to the Division of Agriculture and Technology which embraces the Department of Agriculture, Home Economics and Vocational Arts. Within this Division, the capacity is limited to a small core of staff/faculty members with experiences in domestic research and extension. The Division of Agriculture and Technology includes the following programs:

- (a) Agriculture, with programs in agricultural engineering and technology, plant and soil sciences, animal science, agricultural economics and fisheries.
- (b) Home Economics, with programs in home economics education, child development and family development, and institutional dietetics.

These departments and programs within them carry out academic and training activities that are relevant to international agricultural and rural development; and the expertise and knowledge gained from these activities could be useful in assisting AID and LDCs in their projects and programs, particularly in the training of LDC personnel (students, etc.). Two other important units of the University are the land grant programs of: the Science Education and Administration/Cooperative Research (SEA/CR) and the Cooperative Extension Service. The thrust of both these programs is to

resolve problems of the rural disadvantaged people in Arkansas. Expertise and knowledge relevant to international agricultural and rural development that have been developed under the research and extension activities are in fisheries, farmer cooperatives and agronomic research.

The academic programs of relevance to international development include education and training in: the departments within the Division of Agriculture and Technology and other departments such as Education, Sociology and Anthropology. The staff/faculty members of these departments are well qualified in their respective areas of specialization. Of the 28 staff/faculty members of these departments, 17 have the doctorate degree, while 10 have the masters degree; and there is one other.

The recent reorganization of the University in the early 1970s, with its merger into the University of Arkansas system, has moved it towards integration of the state's educational facilities and programs, thus giving Arkansas University at Pine Bluff access to more resources than formally and an opportunity for developing linkages and networks that can be useful in improving its agricultural development capacity.

While the University has no established capacity in international agricultural and rural development, it has a number of staff/faculty members with skills and expertises that can be useful to AID as well as other donor agencies. Participation of these staff/faculty in AID's projects and programs, however, will depend on the University's policy and guidelines yet to be established.

The management capability of the University has improved with the current administration under the capable leadership of its president. There is no organization for administering an international development program, but the Division of Agriculture and Technology forms a good basis for one.

Research and Extension Capacity

The University of Arkansas at Pine Bluff has a small core of staff/faculty members with research/extension knowledge obtained mainly from working on problems of small rural disadvantaged people in environments quite similar to those of LDCs. The research and extension capacity is focused in fisheries, cooperatives and agronomic research with strength in areas of plant nutrition and soil fertility. The fisheries research concerns warm water fish culture for small farm operators with a concentration on polyculture systems of fish production. The research in cooperatives concerns human and natural resources of the disadvantaged people of Southeast Arkansas, and is carried out in conjunction with the Cooperative Extension Service of the University. The agronomic research is concentrated on soybean, and it encompasses studies on: soil fertility, soybean nutrition, root growth, irrigation, plant population, and tillage. Another phase of this research deals with adaptability and morphological development of soybean varieties and strains of varying maturity groups.

Of the research/extension staff/faculty members expressing interest in participating in international agricultural and rural development, 80 percent (11 of 14) have the doctorate degree, while the remainder has the masters degree. These are grouped

as follows:

- | | | |
|----|--|--------------------|
| a. | Agriculture/Extension ----- 7 (6 Doctorates)
(including experts in: Fisheries,
Anthropology, Cooperatives,
Agricultural Economics,
Agronomy, and Soil Physics) | |
| b. | Home Economics ----- 6 (4 Doctorates)
(including: Human Development
and Resource Management and
Food Nutrition experts) | |
| c. | Industrial Education ----- 1 (1 Doctorate)
(Masonry and Welding
Technologist) | |
| | Total | 14 (11 Doctorates) |

Of the 14 staff/faculty members expressing interest, none has had research experience in LDCs; nor has anyone participated in AID projects and programs. However, there are at least three whose knowledge in domestic activities could be useful in LDCs for agricultural development.

Education and Training Capacity

The following departments offer academic programs that are most relevant to international agricultural and rural development:

- a. Agriculture;
- b. Home Economics;
- c. Industrial Technology; and
- d. Sociology and Anthropology.

The faculty and staff are well qualified and the academic training is integrated with research so that students receive the benefits from the research despite the absence of graduate programs in the areas or disciplines. The Department of Agriculture offers a fisheries research and training program with the training

component designed to train minority students in fisheries biology. The Department of Home Economics has a sound program in Food, Nutrition Management and Human Development.

Linkages and Other Capacities

The University's linkages and network capacity include active research arrangements and joint projects with institutions in as well as outside of Arkansas. They include regional projects with the University of Arkansas at Fayetteville (Home Economics), Oregon State University, Texas A & M University and Michigan State University (Agricultural Fisheries). As a member of SECID, it is eligible for participation in international activities but it has no formal nor informal international linkages and no policy guidelines for international involvement.

The University's inactivity in international agricultural and rural development constrains its development of a consultative/advisory capacity. However, staff/faculty members of its Agricultural and Home Economics departments have expertise and knowledge developed from domestic research/extension activities that could be useful in assisting AID and LDCs in their projects and programs. These include two in Home Economics (Human Development and Resources Management); and three in Agriculture and Agricultural Extension (Agricultural Economics, Cooperatives and Poultry Management).

Unique Capacity for International Agricultural and Rural Development

The University's tradition of working with disadvantaged rural poor people in environments similar to those of LDCs has

enabled it to develop a capacity in agricultural development that could be useful in resolving agricultural and rural development problems in LDCs. This capacity, however, is quite limited and is confined to a few staff/faculty members of the departments of Agriculture and Home Economics.

FORT VALLEY STATE COLLEGE

Fort Valley State College functions in the land grant tradition of teaching, extension and research. Its interest in and capacity for international agricultural and rural development is limited to its Division of Agriculture in which the following departments are most relevant to the needs of LDCs, AID and other donor agencies: Animal Science, Animal Health, Plant Science, Agricultural Mechanization, and Agricultural Education. Equally important in this Division are the Extension and Research units under the Cooperative Extension Service and SEA/CR (USDA), respectively.

The activities of the Division of Agriculture are supported by Departments such as Economics and Business Administration and Home Economics. The major research thrust is in domestic agriculture with a focus on problems of the disadvantaged rural people. The experience gained by the staff/faculty under similar conditions to those of LDCs can be useful to AID in its projects and programs.

The capacity of the College for international agricultural and rural development, therefore, is with a small number of staff/faculty within the Division of Agriculture, supplemented by a few from other disciplines. This core group possesses skills and expertise developed mainly from working on domestic problems similar to those in LDCs. Within this core group are about four to five staff/faculty members who have had working experience in LDCs by virtue of country of origin and/or short or medium term assignments (i.e. Upper Volta, India, Dominican

Republic and Haiti). The capabilities of these staff/faculty are in: tropical soils, crop production, and farm management. There is also some language capability in: French and Spanish.

The academic programs at Fort Valley of relevance to international development in education and training are in the departments within the Divisions of Agriculture and Home Economics; and within the Department of Economics and Business Administration. The faculty and staff of these departments are well qualified in their respective areas of specialization. Of the seventeen staff/faculty in the Division of Agriculture, 60 percent (10 of 17) have the doctorate degree while the others have the masters degree. The supporting disciplines (Home Economics and Economics and Business Administration) have 20 staff/faculty members of which four (4) have the doctorate degree; while the remaining sixteen (16) have the masters degree (some with advanced training). Although these supporting disciplines have no determined commitment to international agricultural and rural development, faculty and staff members from them having research association (SEA/CR) with the Division of Agriculture, provide resources that can beuseful in that Division in its international development interest.

The College itself has no established policy and/or guidelines concerning international development; and information concerning its management capability was not available. The Division of Agriculture, under quite capable leadership could, however, form a viable organization (mechanism) for administering an international development program.

Research and Extension Capacity

Fort Valley State College has a sound research/extension knowledge base developed within its Division of Agriculture under its SEA/CR (USDA) and its Cooperative Extension Service programs. The thrust of these two programs is in domestic agriculture with a focus on the rural disadvantaged poor people whose problems and environment are quite similar to those of LDCs. The experience gained by staff/faculty members working on these problems and in environments similar to LDCs can be useful to LDCs, AID and other donor agencies in assisting them with their projects and programs.

Of the thirteen (13) staff/faculty expressing interest in participating in AID projects and programs there were: four with research experience in LDCs; ten with the doctorate degree; and three with the masters degree. These are grouped as follows:

- | | |
|--------------------------------|--------------------|
| a. Agricultural Sciences ----- | 10 (9 Doctorates) |
| (Specialists in Management (1) | |
| Tropical Soils (2) Crop | |
| Production, Education and | |
| Community Service (1 each)) | |
| b. Home Economics ----- | 2 (1 Doctorate) |
| (Nutritionist) | |
| c. Social Sciences ----- | 1 (None) |
| (Economist) | |
| | |
| Total | 13 (10 Doctorates) |

The research activities of the staff/faculty expressing interest include:

- a. High Cash Value Crops for Limited Resource
Farmers (Vegetables)
- b. Human Resources and Living Standard
(Rural Development)

c. Nitrogen Fertilization Studies in Soybean
(Nitrogen Fixation)

There were 11 projects by those staff members who expressed interest, and their projects were under the SEA/CR program.

Other areas of research in the Division of Agriculture include: Soil Nutrients; Animal Production Efficiency and Improved Utilization of Agricultural By-Products (Beef Cattle, Feeder Pigs); and Poverty and Malnutrition Studies in Selected Counties.

Education and Training Capacity

The education and training capacity of the College is limited to the disciplines within the Division of Agriculture, and is quite small for addressing the needs of AID in terms of training people for utilization in LDCs. However, the Division offers undergraduate training in the following areas that might be of relevance to AID:

- a. Animal Science
- b. Soil Chemistry
- c. Animal Nutrition
- d. Agricultural Economics

Seminars, conferences, workshops, demonstrations and experiments are offered as a part of the undergraduate training. The staff/faculty members with 60 percent having the doctorate degree, are capable individuals for teaching and the students also benefit from their research work.

Linkages and Other Capacities

- I. Domestic linkages and networks consist of:
 - a. SECID (Southeast Consortium for International Development)

b. AID supported Peanut Consortium with 1890 and 1862 institutions

c. BIFAD under the Title XII program

2. International linkages consist mainly of student and staff/faculty of LDCs, and some information contact with Haiti and the Dominican Republic.

The College has a very small capacity in consultative/ advisory services, limited to two or three people with research experiences in LDCs and some French/Spanish language capability. One restraint to the utilization of this capacity would be the lack of established policy/guidelines for staff/faculty participation in AID's projects and programs.

Unique Capacity for International Agricultural and Rural Development

The College's tradition of working with disadvantaged rural poor people of Georgia and the expertise developed by its staff/faculty members in resolving problems under similar conditions to those in LDCs give it a unique capacity, though limited, to assist LDCs, AID and other donor agencies in their projects and programs. The knowledge base of the College is limited to the Division of Agriculture in which there are some thirteen staff/faculty members whose interest in international agricultural and rural development and work in research and extension could be useful to AID in its projects and programs in LDCs.

KENTUCKY STATE UNIVERSITY

The main thrust of Kentucky State University is in teaching and, more recently under the 1890 research/extension program, the University has developed a modest effort to integrate teaching with research/extension activities. Its interest in international agricultural and rural development is one of expression as it has no usable capacity in this area. The agricultural program which initially had been the strength of the institution for many years has been phased out and incorporated into the Kentucky system at the University of Kentucky. However, the extension program, with the Cooperative Extension Service and the Community Research Service, together with the SEA/CR of the USDA form the core of the staff/faculty with activities and interest in international agricultural and rural development.

The SEA/CR research activities are carried out by staff/faculty members of several departments, including: Sociology, Home Economics, Education and Psychology, Business and Economics, Biology and Chemistry. The focus of the research activities is on Human Nutrition with emphasis on Sub-Chemical Malnutrition to Enhance Development of Disadvantaged Rural People in Kentucky. The focus of the extension activities is on family development and management of the resources of the low-income disadvantaged people.

The academic programs at Kentucky State College that are of relevance to AID and its international development projects and programs are limited to a few departments, with Business and Economics, Sociology, Home Economics and Education and Psychology being the most important. The faculty and staff members of these

departments who have expressed interest in participating in international agricultural and rural development projects and programs are well trained in their respective disciplines and/or areas of specialization. Of the 20 staff/faculty whose qualification fits closest the needs of AID, 55 percent (11) have the doctorate degree while the other 45 percent (9) have the masters degree, some with advanced studies. The disciplines of Chemistry and Biology, whose staff/faculty qualifications through their research work fit the needs of AID, have ten (10) highly qualified faculty members (nine with doctorate degrees) who could lend strength to the education and training capacity of the institution.

The University has no established program in international agricultural and rural development, and, therefore, lacks the organizational structure, policy/guidelines and leadership for such a program at this time. However, interests have been expressed by the administration as well as the staff/faculty for participating in AID's activities. The establishment of an organization with good leadership and the formation of policy and guidelines for a program in international agricultural and rural development would enhance the University's position for its interested faculty/staff members to participate in AID's projects and programs.

Research and Extension Capacity

The research/extension capacity of Kentucky State University is limited to its programs under: SEA/CR (USDA), Cooperative

Extension Service; and Community Research Service. The thrust of these programs is domestic with emphasis on human nutrition and family development of the disadvantaged rural people in Kentucky. The problems are similar to those of LDCs, and the approaches used to the solution of these problems could be useful in LDCs. The staff/faculty engaged in the research/extension activities could be of assistance to LDCs, AID and other donor agencies in their projects and programs. A capacity for international agricultural and rural development could, perhaps, be developed from the twenty (20) staff/faculty members having domestic research/extension experience and expressing interest. From these, there are about six (6) staff/faculty members with some experience in LDC from limited research (2) and by virtue of country of origin.

The staff/faculty expressing interest in participating in AID projects and programs can be grouped in disciplines as follows:

- | | |
|--|--------------------|
| a. Economics/Business Administration ----- | 5 (2 Doctorates) |
| (Economic Development Specialists) | |
| b. Education ----- | 3 (2 Doctorates) |
| (Curricula and Education | |
| Psychology Specialists) | |
| c. Sociology----- | 7 (4 Doctorates) |
| (Rural Sociologist) | |
| d. Home Economics ----- | 5 (3 Doctorates) |
| (Nutrition and Home Management | |
| Specialists) | |
| Total | 20 (11 Doctorates) |

In addition to the above, there are four (3 doctorates and one masters) staff/faculty in Cooperative Extension and Community

Research Services whose experiences from activities in rural development could be useful to AID. Their expertise and skills are in: Special Education; Family Economics and Home Management; Extension Education and Family Relations.

Education and Training Capacity

In relation to international agricultural and rural development, the education and training capacity of the University is quite limited; and with the exception of a few qualified staff/faculty within the disciplines of Business Administration/Economics, Education/Psychology, Sociology and Home Economics, there is very little that can be expected under the existing programs. The academic programs of relevance are limited to undergraduate training and although research/extension and teaching activities have become integrated training in research would be quite limited at the undergraduate level.

Linkages and Other Capacities

With the exception of the SEC/CR program under USDA, and the institution's eligibility for membership to SECID, there are no formal domestic nor international linkages that are of relevance to international agricultural and rural development. The University's consultative/advisory capacity is limited to potentially six staff/faculty members who have had some experience in working in LDCs. Their availability for utilization by AID and other donor agencies would be

severely restrained by their teaching and other University responsibilities. Furthermore, there is no mechanism (policy or guidelines) for facilitating eligible staff/faculty members with interest in participating in AIDs projects and programs.

Unique Capacity for International Agricultural and Rural Development

The tradition of working with disadvantaged rural poor people of Kentucky, where in the rural areas the socio-economic problems and environment are similar to those of LDCs, gives the University uniqueness for assisting in LDCs. However, the existing capacity would need to be expanded and strengthened for it to be useful to LDCs, AID and other donor agencies in international agricultural and rural development activities.

LANGSTON UNIVERSITY

The interest in and capacity for international agricultural and rural development of the University is extremely small, having no more than two staff/faculty members with limited capability for assisting LDCs, AID and other donor agencies. The thrust of the University is in teaching with research activities that have only limited relevance and/or applicability to LDCs. Its agricultural program is limited to Animal Science and Agricultural Education, which themselves are limited with only two full-time equivalent staff/faculty. Research in agriculture is non-existent, but related agricultural research is carried out under the SEA/CR program with USDA support. Education and training activities in areas that would be of interest to AID's program and projects is limited to the disciplines of Agriculture, Industrial Technology, Home Economics and Education - none of which has the staff/faculty capacity nor the program that could be useful to LDCs, AID and/or other donors. The University's interest in international agricultural and rural development is one of expression as it has no available capacity for use in the area at this time.

The SEA/CR research program is carried out mainly by SEA/CR employee (staff), without academic department affiliation, specifically for those activities. Few academic department staff/faculty members have projects under SEA/CR. The academic departments having SEA/CR research support, and whose activities would be relevant to international agricultural and rural development include only Home Economics and Education. These departments

work collaboratively on curricula development and family relation and child development.

The academic programs that are of relevance to international agricultural and rural development are in the departments of Home Economics, Education, Agriculture and Industrial Technology. The staff/faculty members of these departments, however, are limited both in terms of capability and availability. Only one staff member (Home Economics) has had any (research and teaching) experience in LDCs; and, although five (5) of the fifteen (15) staff/faculty members expressed interest and availability for participating in AID's projects and programs, there is no established mechanism (policy/guidelines) by the University for facilitating their involvement; nor have these staff/faculty members shown any evidence of their interest beyond oral expression.

The University has no established program nor organization at this time that could form the basic core for an international development involvement. The units from which this core could be formed are fragmented, without cooperation and/or collaboration among the departments and/or programs. The expressed interest of the administration in participating in international agricultural and rural development, as well as those of the staff/faculty members, could be enhanced by strong leadership and organization which the University seems to be lacking.

Research and Extension Capacity

The research/extension capacity at Langston University is limited to its SEA/CR activities; and research activities of the

departments of Home Economics and Education. There is no international agricultural and rural development research experience and/or program; and the research/extension thrust of the University is domestic, with emphasis in the following areas of relevance to AID's needs:

1. Accumulation of Nitrate in Soil and Water
2. Research in Plant Protection (plant diseases)

Studies in the former concerns basic research without any applicability to date; while the research projects on plant protection concern studies of disease resistance of upland cotton lines in Oklahoma.

The staff/faculty engaged in these research projects and who have expressed interest in participating in AID's projects and programs are grouped as follows:

- | | |
|---|------------------|
| a. Home Economics ----- | 1 (1 Doctorate) |
| (Vocational Home Economist) | |
| b. SEA/CR ----- | 4 (4 Doctorates) |
| (Plant Physiologist, Biochemist
and Plant Pathologist (2)) | |
| c. Agricultural Science ----- | 1 (1 Doctorate) |
| (Animal Scientist) | |
| d. Education ----- | 1 (1 Doctorate) |
| (Educational Psychologist and
Curricula Specialist) | |
| Total | 7 (7 Doctorates) |

Education and Training Capacity

For purposes of international agricultural and rural development, an education and training capacity at the University is non-existent. There is a limited number of disciplines (Agriculture, Home Economics Education and Industrial Technology) within which a program could be developed but the existing programs in terms of

course offering is shallow, with limited staff/faculty interest. Furthermore, the programs are limited to undergraduate training.

Linkages and Other Capacities

The linkages of those disciplines whose activities would parallel those of AID are limited to a few institutions and organizations (i.e. University of Oklahoma, Southern University and North Carolina A & T University). The University also has eligibility for membership to SECID and BIFAD (Title XII). There are no formal or informal linkages of relevance to international agricultural and rural development.

The consultative/advisory service capacity of the University is limited to, perhaps, two staff/faculty members who could be available with 30 - 90 days lead time. Their utilization, however, would be limited due to their lack of experience in LDCs and/or parallel research/extension activities. The lack of strong leadership and/or the establishment of policy/guidelines regarding institutional development work is a constraint to individual staff/faculty participation.

Unique Capacity for International Agricultural and Rural Development

Despite its tradition as an 1890 institution in working on problems of disadvantaged rural poor people, the University, because of its lack of capacity in the areas of AID's needs, has no unique capacity for international agricultural and rural development. Although some staff and faculty members continue to be interested in and are working on problems of disadvantaged rural people, the major thrust of the University's research work is

basic research which has little practical application to international agricultural and rural development.

LINCOLN UNIVERSITY

The thrust of the University's teaching research/extension activities is person-oriented and responsive to the needs of the disadvantaged rural poor people of Missouri. The University functions in the land grant tradition in offering agricultural and vocational training in areas that parallel the needs of AID. Its Cooperative Extension Service contributes to a statewide network, assisting disadvantaged citizens resolve their social and economic problems in environment that parallel those of LDCs. The research/extension program focuses on the needs of the minority and low income citizens. The University's interest in and capacity for international agricultural and rural development is evident in its domestic research/extension and academic training programs which are addressing problems similar to those of LDCs; and in the composition of its staff/faculty in terms of interest, qualification and experience in LDCs. Its administration is supportive of international involvement of its staff/faculty members by providing good management and flexibility for accommodating such involvement and for encouraging participation. Its College of Applied Sciences and Technology, which includes the departments of Agriculture, Natural Resources, Industrial Technology, Home Economics and the Extension Service Program, provides the leadership and the organizational structure for a program in international agricultural and rural development.

The research/extension program involves all the disciplines in the College of Applied Sciences and Technology as well as:

Economics and Marketing in the College of Business Administration and Economics; and Sociology in the College of Arts and Sciences. The program includes: the SEA/CR (USDA) Research; and the Cooperative Extension Service. The areas that have the strongest thrust for involvement in international activities are: Agricultural Sciences which include research in three areas of Human Nutrition, Small Farm Research and Animal Physiology and Endocrinology; and Extension Services which include activities in Home Economics, Industrial Arts, Vocational and Industrial Education and Agriculture.

The educational and training programs which would be most useful in assisting LDCs, AID and other donor agencies, and in which the University has its greatest strength, are in the College of Applied Sciences and Technology -- Agriculture, Home Economics, and Industrial Technology. The disciplines of Economics, Sociology and Marketing in the other colleges could be supplemental. The staff/faculty in these disciplines are well qualified with a wide range of experience in teaching/research and capability in international agricultural and rural development. Several of the staff/faculty members are from LDCs where they continue to maintain interest in their development. Lincoln University has the capacity for training students from LDCs in regular or specialized programs in the disciplines indicated above. International students come from sixteen countries, most of which are LDCs.

Lincoln University's consultative and advisory capacity is small but has depth. A number of staff/faculty members has had experiences in LDCs - West Africa, East Africa and Caribbean

areas - in: livestock improvement programs, including management systems for livestock; and nutrition (levels of nutrition in pregnancy, control of anemia, and nutrition and child development). Several members of the staff/faculty have capability in such foreign languages as: French, Spanish and Arabic. The experiences in LDCs have been through long term and short term assignment of individuals (not sponsored by the University) as well as by virtue of country of origin.

The organizational structure of the University to facilitate involvement in international agricultural and rural development is within the College of Applied Sciences and Technology which coordinates the institution's research thrust as well as its limited international involvement which includes a training program in agriculture for LDC students (supported by AID), and BIFAD (Title XII). There is excellent leadership in the dean of the college who also is dean of Cooperative Extension and Research (SEA/CR). The administration gives strong support to these programs which have the strongest thrust for international agricultural and rural development. The management capacity and capability of the University is sound with an efficient management system, a competent business manager and a progressive office of Institutional Development which provides leadership in grants management and proposal preparation.

The institution recently underwent reorganization which was completed in the 1977-78 school year. The reorganization strengthened and improved the program by reducing the academic units from 25 to 12, and by creating new alliances of academic departments. No degree programs were eliminated as the institution

continues to fulfill its mission of economical, person-oriented services to the needs of those it serves.

Research/Extension Capacity

The University has a sound but small research/extension capacity for assisting LDCs, AID and other donor agencies. This capacity is concentrated in the areas of Human Nutrition, Small Farm Research and Animal Physiology and Endocrinology. The capacity is domestic oriented with emphasis on the problems facing disadvantaged rural people whose socio-economic environment and conditions are similar to those of LDCs. The knowledge and expertise gained from the research/extension activities, therefore, can be useful to LDCs and AID in their projects and programs.

The research/extension projects in the areas identified are as follows:

1. Human Nutrition: identification of human nutrition problems; food habits, anemia, obesity and pregnancy.
2. Small Farm Research: production and management of poultry, swine, agronomic crops, fruits and vegetables operations; and small ruminant production.
3. Animal Physiology and Endocrinology: investigations of physiological mechanisms of control function in domestic animal species.

The Cooperative Extension Services activities include: animal science, plant and soil science; natural resource management; food and nutrition; home economics education; and community health. The activities of (CES) compliment and

supplement those of SEA/CR (research) and provide excellent opportunities for improving the research/extension capacity for international agricultural and rural development.

This capacity can be measured in terms of staff/faculty qualification and availability. There were twenty (20) staff/faculty members expressing interest in international agricultural and rural development and indicating (short-term) availability as follows:

- | | |
|--|--------------------|
| a. Agriculture ----- | 4 (5 Doctorates) |
| (Animal Physiologist (2),
Animal Nutritionist (2),
Plant Physiologist (1)
and Agronomist (1)) | |
| b. Human Nutrition ----- | 8 (4 Doctorates) |
| (Food Nutritionist, Clinical
Nutritionist (1) and
Home Economist (1)) | |
| c. Education ----- | 2 (-----) |
| (Education Pshchologist,
Social Psychologist) | |
| d. Extension/Resource
Management ----- | 1 (-----) |
| e. Sociology ----- | 3 (2 Doctorates) |
| (Socio-Anthropologist,
Rural Sociologist) | |
| Total | 20 (11 Doctorates) |

Of these, five (5) have knowledge in the French language, while one each has knowledge in Spanish and Arabic; four have had experience working in LDCs - Republic of South Africa, Lesotho, Swaziland, Tanzania, Kenya, Ethiopia, Ghana, (Africa); Trinidad, Barbados, Haiti, Guyana, Antigua, Jamaica (West Indies); India and Indonesia.

Education and Training Capacity

The academic disciplines identified as important and relevant to international agricultural and rural development are those within the Colleges of Applied Sciences and Technology; and the disciplines of Economics, Marketing and Sociology. These disciplines offer sound programs leading to the B. S. degree and/or specialized programs leading to a certificate. The staff/faculty of these disciplines are well qualified and are distributed as follows:

a. Animal Science -----	6 (5 Doctorates)
b. Applied Social Science -----	6 (2 Doctorates)
c. Crop Protection -----	6 (3 Doctorates)
d. Human Nutrition -----	14 (5 Doctorates)
e. Technology and Industrial Education -----	10 (1 Doctorate)
f. Home Economics -----	7 (1 Doctorate)
Total	49 (17 Doctorates)

The areas of Human Nutrition and Applied Social Science offer the masters degree.

The international student body number over 200 students of which 80 are Nigerians, 21 Ethiopians and 70 Iranians. Almost all the foreign students, with one or two exceptions, are from LDCs; and about 50 percent are enrolled in the disciplines in which the University has its greatest strength for international agricultural and rural development.

The educational and training programs (academic) are well integrated with the research/extension activities and so students have the opportunity to receive a good deal of practical experience in their training. The "hands-on" approach (learning by doing) is

emphasized without neglect to the theoretical approach.

The educational and training capacity, of course, has its limitation in international agricultural and rural development since all of the programs are domestic oriented. Nevertheless, there are parallels and similarities of these programs to those of LDCs; and, therefore, they can be quite valuable and useful to LDCs, and AID projects and programs.

Linkages and Other Capacities

The University's international linkages are limited to: its association with SECID; its eligibility for participation under BIFAD (Title XII); its LDC staff/faculty members who maintain relations with and interest in their countries of origin; and the students from LDCs. There are no formal or established linkages with LDCs or international organization.

Through its membership to SECID, the University has access to the resources of the other 1890 institutions and several 1860 institutions. It also maintains a close working (extension/research) relation with the University of Missouri.

Lincoln University has a usable advisory/consultative services capacity in the disciplines identified. A sizeable number of its staff/faculty members would be available for short term consultative/advisory services. There are at least four (4) staff/faculty members with experience in LDCs; and about (6) with foreign language (French, Spanish, Arabic) capability. There are several staff/faculty in research/extension whose experiences from working on problems of the disadvantaged rural people in Missouri could be quite useful to AID in its LDC projects and programs.

These are those that have expressed interest and are available for short term services. The areas of expertise would be Human Nutrition, Small Farm Research and Livestock Reproduction and Management.

Unique Capacity for International Agricultural and Rural Development

Lincoln University has a unique capacity for international agricultural and rural development in the areas of Human Nutrition and Livestock Reproduction and Management. Its staff/faculty capability has been developed from research/extension experiences under domestic environments and conditions quite similar to those of LDCs; and from resolving problems of the disadvantaged rural people of Missouri that are similar to those of LDCs. The University's research/extension activities are well supported, and the administration allows flexibility in its research/extension program that would permit its staff/faculty to effectively participate in AIDs projects and programs in LDCs. Those activities that parallel AID's needs are well managed and the leadership capability of the institution provides a forte for a program in international agricultural and rural development.

UNIVERSITY OF MARYLAND/EASTERN SHORE

The international agricultural and rural development capacity of the University is very limited in terms of number of staff/faculty members with capability (experience) in LDCs and availability for participating in international development activities. The thrust of the University is in teaching with research/extension activities that have some relevance and applicability to LDCs. Its agricultural program consists of agricultural education and general agriculture with animal science and plant sciences having the major dimensions for activities that would be relevant to AID projects and programs. Research in agriculture is carried out under the SEA/CR (USDA) program with emphasis on soybean varieties and nutritional qualities, and soci-economic problems of small rural farmers. Extension activities are coordinated with agricultural research and the activities of the Department of Home Economics on problems of the rural disadvantaged people of Maryland. Education and training activities in areas of relevance to AID are limited to the disciplines of Agriculture, Industrial Technology and Home Economics. Neither of these disciplines has any program geared toward international development.

The SEA/CR research program is administered independently of academic departments, but staff/faculty members of academic departments participate in its research activities which have a major agricultural thrust and include activities that are relevant to LDCs. The departments and/or functional units that are engaged in these research activities are: Agriculture, Business and Economics, Home Economics and Natural Sciences.

The academic programs that are of relevance to international agricultural and rural development are in the departments of Agriculture, Home Economics and Industrial Technology. The staff/faculty of these departments, however, are limited both in terms of capability and availability for assisting AID in its projects and programs; but they possess a good knowledge base of subjects and domestic activities which have international applicability.

The University has no established international mission and scope for involvement in international agricultural and rural development; nor does it have the functional or structural framework for becoming involved. Its administrative and management capacities appear sound. Its leadership in those areas identified as having capability for providing the core of an international program lacks demonstrable signs of interest with preoccupation entirely in domestic activities.

Research and Extension Capacity

The University of Maryland/Eastern Shore has no international agricultural and rural development research/extension capacity. However, its domestic research/extension activities, which are concerned primarily with disadvantaged rural poor people, have relevance and applicability to LDCs. Its research thrust, through its SEA/CR (USDA) program, is on problems of the poor rural farm families in Maryland, and it combines the disciplines of Agriculture, Home Economics, Economics and Natural Sciences (Biology, Chemistry) in its approach to solving these problems. The main research activities of relevance to LDCs are on: Optimum resources combination for small farmers; delivery of social services in rural

areas; and improved nutritional qualities of food to rural poor people. The activities supplement those of research; and the extension staff work collaboratively and cooperatively with staff/faculty members of the departments of Agriculture and Home Economics.

Of the staff/faculty members expressing interest in participating in AIDs projects and programs, there are only two with research/extension experience in LDCs. Those with domestic experience in areas of relevance to LDCs (including the two with LDC experience) are grouped as follows:

- | | |
|--|------------------------|
| a. Agricultural Science/Extension | -----10 (7 Doctorates) |
| (Agronomist, Livestock Specialist (3), Crop Breeder, Plant Physiologist, Agricultural Educationist and Agricultural Engineer Extension Specialist (s)) | |
| b. Home Economics | ----- 3 |
| (Food Nutritionist) | |
| c. Industrial Technology | ----- 5 (2 Doctorates) |
| (Building/ Mechanical Specialists) | |
| d. Other | ----- 4 (4 Doctorates) |
| (Economist, Education Specialists (3)) | |
| Total | 22 (13 Doctorates) |

There were thirteen research projects identified in three areas of relevance to LDCs: three in Agricultural Production (optimum resources combination); two in Social Services in Rural Areas; and eight in Improved Quality of Food and Nutrition to People in Rural Areas.

Education and Training Capacity

The University's education and training capacity is limited

for assisting AID in international agricultural and rural development. The departments of Agriculture, Home Economics and Industrial Technology could offer limited training with their present capacities in the areas of animal science, food technology and nutrition and building construction and mechanical arts. The department of Agriculture has six faculty members of which five have the doctorate degree; Home Economics has four full-time staff members of which one has the doctorate degree; while Industrial Technology has five staff/faculty members with two doctorates. The education training programs of these departments emphasize academic as well as practical training; and the research/extension activities, combined with the academic thrust, give a balanced approach that would be meaningful to LDC students.

Student enrollment in these departments are small with the average size graduating class ranging from six (6) in Home Economics to twelve (12) in Agriculture (1977). The foreign student enrollment in these disciplines is also very small.

Linkages and Other Capacities

International linkages of the University are non-existent and the domestic linkages are confined to state institutions (i.e. University of Maryland/College Park and others), Federal agencies such as SEA/CR (USDA); and SECID. The University's consultative/advisory capacity is limited to two staff/faculty members with experiences in LDCs (Africa and India). Their availability, as well as the availability of others expressing interest in participating in AID projects and programs, is uncertain in view of their domestic commitments and the absence of University guideline and/or policy

pertaining to such participation.

Unique Capacity for International Agricultural and Rural Development

The tradition of working with disadvantaged rural poor people and the present domestic research/extension capacity in agriculture give the University a capacity that could be useful to AID in its projects and programs in LDCs. The existing capacity, however, would need improvement and the University would have to take action in institutionalizing its expressed interest in international agricultural and rural development.

NORTH CAROLINA A and T UNIVERSITY

North Carolina A and T University has a strong capacity in international agricultural and rural development. This capacity has been developed through years of domestic teaching, research/extension activities in the land-grant tradition, and international research/extension activities in LDCs. Its agricultural and technical education thrusts directed at problems of the disadvantaged rural poor date back to decades and embrace a broad spectrum of collaborative activities with community based voluntary organizations, local and state government agencies and other organizations. And, in recent years, the University has expanded its scope of agricultural and rural development activities to research and extension in LDCs. These include technical assistance projects, student intern programs, faculty consultations, participant training for regular degree students and short-term visitations of LDC personnel.

Its international agricultural and rural development capacity has a strong base, developed from teaching, research/extension in domestic environments which have striking similarities to LDCs in problems of rural development. Its scope of activities are educational, research/extension with concentration in the areas of Small Farmer Technology and Marketing Analysis for Rural Development. The main thrust of the University's activities, paralleling the priorities of AID, is in the academic areas of Agricultural Economics, Economics, Rural Sociology, Anthropology, Agricultural Education and Agricultural Extension. The strongest of these disciplines in terms of capacity, depth

experience in LDCs and availability are Agricultural Economics and Economics.

The department of Economics offers an undergraduate major in Economics and Agricultural Economics, and expects to have a graduate (Masters) program in Agricultural and Applied Economics. There are fourteen faculty members in the department; six with the doctorate in Agricultural Economics, including specialist in Economic Development, Human Resource Development, Marketing, Research Economics and Manpower; five with the doctorate in Economics; and three have completed work at the doctoral level.

North Carolina A & T University is firmly committed to international agricultural and rural development. Its past activities in international development date back to 1971 when, under a consortium arrangement with Ohio State University and West Virginia University, it was involved in providing technical assistance to the University of Makerere, Kampala, Uganda under a USAID contract. One faculty member from A & T's Economics Department assisted in developing a post-graduate program in Agricultural Economics and also was engaged in teaching and research activities. Two other faculty members from the School of Agriculture served separate periods as institutional director of a program under contract with USAID and in consortium with West Virginia University to assist the Tanzania Ministry of Agriculture in training essential agricultural manpower. More recently under its USAID 211(d) grant program implemented in 1977, the University has explored linkage possibilities with a number of LDCs in the West Indies and Africa. Several of its staff/faculty members have had overseas

experience in research and consultative/advisory services in such LDCs as Jamaica, Trinidad, Niger, Nigeria, Sierre Leone, and Indonesia.

The University's AID 211(d) program is to develop a response capability and multidisciplinary capacity to assist LDC's in the areas of Small Farm Technology and Marketing Analysis for Rural Development. The departments involved in the multidisciplinary approach are Economics, Agricultural Economics, and Rural Sociology, and to a lesser extent Anthropology, Agricultural Extension Education, and Industrial Education and Technology.

The University's research/extension thrust and its international development interests and involvement are coordinated and administered by the Office of Research Administration which administers all federally sponsored projects. Three distinct program areas which come under this office are: the Institute for Research in Human Resources; Manpower Research and Training Center; and the Transportation Institute.

The Institute for Research in Human Resources is concerned with people under conditions of cultural, social economic and educational deprivation. Its activities are domestic but have relevance to LDCs since the problems investigated are quite similar to those of LDCs. The departments involved in its activities form the nucleus of the international agricultural and rural development thrust of the University. They include: Economics, Agricultural Economics, Sociology, Psychology, Political Science, Business Administration and Education, Architectural Engineering and Education.

The Manpower Research and Training Center concentrates on manpower problems, including manpower planning, manpower administration and manpower program evaluation. The participating academic departments include: Business Administration, Economics, Industrial Technology, Psychology and Sociology.

The Transportation Institute draws staff/faculty members from a number of different departments to create a multi-disciplinary unit for training and research program in transportation. Its research program covers a wide range of projects including the transportation needs of the poor, system models and rural transportation problems.

This component of the University provides a vehicle for stimulating meaningful and constructive changes in the lives of rural disadvantaged people. The Home Economics divisions of Human Development, Family Resource, Management, Food and Nutrition are especially appropriate for assisting in the area of international agricultural and rural development. Its activities complement and supplement those of research and training and are quite relevant to addressing development problems of LDCs.

A and T's research/extension programs are well managed with capable leadership. The institution itself has a firm commitment to international agricultural and rural development and has taken positive steps in institutionalizing its international involvement. Two such steps are the establishment of the Chancellor's Committee for International Affairs and the creation of a position in the School of Agriculture for an Associate Dean for International Programs. The former advises the Chancellor and gives internal impetus to international programs; while the latter

has direct responsibility for international programs involving agriculture.

Academically, the University provides an excellent education and training program which has had a long history of experience and has developed an effective level of expertise to relate, communicate and work in various aspects of rural development. The departments of Economics, Agricultural Economics, Sociology, Home Economics, the Agricultural Extension Program and Agricultural Sciences offer excellent training programs at the intermediate level for students and personnel from LDCs. Special programs also are offered by some departments to meet the needs of their students.

The staff/faculty members of those departments which provide the nucleus for the institution's agricultural and rural development program are well qualified in their respective areas to teach and train LDC personnel and to develop curricula and programs which would be relevant in meeting the needs of LDCs.

The management capacity of the University is quite capable in handling international agricultural and rural development activities. The University has sound leadership with policies and guidelines that are conducive to and can facilitate international development projects and programs. Its policies and guidelines provide flexibility for its staff/faculty members to participate in consultative/advisory arrangements with AID and other donor agencies.

Research and Extension Capacity

North Carolina A and T University has a sound knowledge base in research and extension activities with a sizeable number of its staff/faculty members expressing interest in international agricultural and rural development. Those expressing interest are grouped as follows:

a. Agriculture -----	19 (14 Doctorates)
(Animal Scientist (4), Plant Scientist (3), Horticulturist (1), Educationist (4), Agricultural Economist (7))	
b. Education -----	11 (10 Doctorates)
c. Sociology -----	7 (4 Doctorates)
d. Industrial Technology -----	8 (1 Doctorate)
e. Economics -----	7 (4 Doctorates)
f. Home Economics -----	10 (5 Doctorates)
g. Other -----	16 (7 Doctorates)
(Biologist (4), Foreign Languages (2), Health (5), Business Administration (5))	
Total	78 (45 Doctorates)

Of the seventy-eight staff/faculty only nine have had experience working in LDCs which include Uganda, Nigeria, Sierre Leone, Tanzania, Indonesia, Jamaica, Trinidad and Barbados. Of the seventy-eight staff/faculty expressing interest, the following are available to become immediately involved in international agricultural and rural development projects and programs:

(a) Agricultural Economist -----	6 (6 Doctorates)
(b) Agricultural Educationist -----	3 (3 Doctorates)
(c) Human Nutritionist -----	2 (2 Doctorates)
(d) Agricultural Scientist -----	5 (3 Doctorates)
(e) Sociologist -----	2 (2 Doctorates)

Environmental Improvement

The research activities are not immediately relevant to LDCs. They concern environmental effects of animal waste disposal.

The research activities cited are domestic in nature but they are carried out in environments and under conditions similar to those of LDCs. The expertise developed by the staff/faculty could be quite useful in assisting LDCs, AID and other donors in their project design, analysis and evaluation. The research activities are supported under the University's SEA/CR (USDA) program and funds from other donors (federal and foundations).

A recently (1977) funded US-AID 211(d) grant program for developing the University's response capability and multidisciplinary capacity to assist LDCs in the area of small farm technology and marketing analysis for rural development involve staff/faculty of the departments of Economics, Agricultural Economics and Rural Sociology. The research activities include:

1. Return to Scale and Economics of Size in LDC's Agriculture.
2. Feasibility and Returns to Storage Facilities in Reducing Post Harvest Losses.
3. Socio-economic Factors Affecting Transfer and Adoption of Technology in LDCs.
4. Credit Utilization in Marketing Products of Small Farmers.

The University hopes to establish linkages with LDCs in which these projects can be carried out and where the capability of its staff/faculty can be improved. The research/extension knowledge base of

A & T University, in terms of staff/faculty training and experience, is strongest in the disciplines or departments in which the 211(d) program is concentrated (Agricultural Economics, Economics and Sociology).

Education and Training Capacity

The education and training capacity of the University is quite capable of assisting AIDs in its projects and programs. The academic staff/faculty members in the areas of relevance to international agricultural and rural development are well trained in their respective field and the University offers a curricula that is diverse and yet comprehensive enough to accommodate LDC students and personnel for education and training that can be beneficial to them in assisting their country's development. The disciplines identified as important and relevant to international agricultural and rural development are: Agricultural Economics, Economics, Sociology and to a lesser extent Home Economics, Industrial Technology and Agricultural Sciences. The staff/faculty members of these disciplines are equally equipped to develop educational and training programs in LDCs.

The curricula in these departments are undergraduate, but a masters program in Agricultural Economics is to be implemented with a concentration in international agricultural and rural development. The AID 211(d) grant funds are being utilized for improving the education and training capacity, which will include curricula revisions, student support and staff/faculty improvement.

In addition to formal courses, the relevant departments offer seminars, short courses and workshops on problems of development in LDCs. The University also provides flexibility in its curricula to offer special training courses when these are desired by its students.

The educational and training programs are well integrated with the research/extension activities and this provides students with the opportunity to receive a good deal of practical experience in their training and for education.

Many of the staff/faculty members responsible for the thrust of the education and training program in international agricultural and rural development have had experience in teaching in LDCs as well as in conducting research projects. All of the "core" staff have the doctorate degree and are well experienced in the areas of Agricultural Economics, including Marketing, Economic Development and Human Resource Development; Economics; and Rural Sociology.

North Carolina A & T University has over 175 foreign students enrolled in its programs. Most of these students are from developing countries of Africa, the Caribbean and South America. Many of these students take advantage of the development and related courses which will be useful to them upon returning to their home countries; and most of them do return after their period of study has ended. Despite the domestic orientation of most courses, there are parallels and similarities of the programs to those of LDCs and, therefore, they are quite valuable and useful in preparing students for assisting in their country's development. The University currently has sixteen

Nigerian students enrolled in a special (intermediate technology) program.

Linkages and Other Capacities

The University's linkages with LDCs and international organizations are currently limited to Tanzania. However, its eligibility to Title XII, its association with SECID and its AID 211(d) grant program provide means for establishing greater international linkages. Recently (1978), it has been exploring linkages in the Caribbean (Barbados) and Africa (Gambia). Its increasing number of students from developing countries and LDC staff/faculty also give it opportunities to form linkages with LDCs. A & T's domestic linkages are well established with state and local government, federal agencies, foundations, and colleges and universities.

A & T has a potentially strong advisory/consultative capacity with capability in its staff/faculty members of those disciplines identified with domestic activities having relevance LDCs and/or involved in international agricultural and rural development activities. The staff/faculty members in Economics, Agricultural Economics, Sociology, Industrial Technology, Home Economics, Agricultural Education and Extension, who have expressed interest in becoming involved in AID's projects and programs, have the skills and expertise to assist in consultative/advisory activities in LDCs. Over twenty-five staff/faculty members are available to become immediately involved in LDCs activities. Nine or more staff/faculty members have had research and other experiences in working in LDCs; and several other qualified staff/faculty members have had LDCs experience

by virtue of their country of origin. Staff/faculty members with expertise in such fields as economic development, industrial (intermediate) technology, agriculture (plant science, extension and economics) have worked in such countries as Uganda, Nigeria, Sierre Leone, Niger, Indonesia and Jamaica. At least four members of the staff/faculty having interest in AID projects and programs have foreign language capability in french, spanish, and hindi.

Unique Capacity for International Development

North Carolina A & T University is one of five 1890 (Minority) Colleges and Universities to have received an AID 211(d) grant program which focuses on Small Farmer Technology and Marketing Analysis for Rural Development. This program, together with its domestic research/extension activities focusing on the problems of small rural disadvantaged farmers and non-farmers give the University a unique capacity for international agricultural and rural development. Furthermore, its staff/faculty capability has been developed from activities carried out under domestic environment and conditions quite similar to those of LDCs. Their experiences, therefore, are unique to LDC conditions and can be useful in assisting international development.

The University's domestic research/extension activities as well as its international activities are well supported and managed. The administration has a strong commitment to international agricultural and rural development with policies and guidelines allowing its staff/faculty numbers to participate in international projects and programs.

PRAIRIE VIEW A and M UNIVERSITY

The University's international agricultural and rural development capacity is small but has excellent potential for expansion in number and capability of its staff/faculty members. The existing capacity has been developed through its domestic teaching, research/extension activities in environments and under conditions that have striking similarities in development problem to those of LDCs and require similar techniques for their solutions; and through its USAID 211(d) tropical soils grant extension program in "Delivery System for the Transfer of Agricultural Technology."

Its domestic teaching, research/extension activities are carried out in the land grant tradition, and are geared toward assisting rural poor people in their development effort. These activities are in keeping with the University's mission of providing solution to the problems and improving the quality of life for that segment of society (the rural poor and minorities) which has been neglected. Its USAID 211(d) grant extension program interfaces with the domestic activities but embraces the international development thrust of the institution as well. The techniques and methodologies used in executing domestic projects and programs have been telescoped to LDCs for development assistance; and for improving the institution's knowledge base, and sharpening its professional skills for assisting AID and LDCs in project design, analysis and evaluation.

The University's interest in and capacity for international agricultural and rural development are to be found in the

College of Agriculture and its Cooperative Extension Program. The departments within these are: Agricultural Education, Agricultural Economics and Rural Sociology, Animal Science, Plant Science, Soil Science and Agricultural Engineering (Farm Mechanics). Only two of these departments, however, have capacity in number of staff/faculty members to participate in international development programs. These are the departments of Soil Science (4 staff members), and that of Animal Science (6 staff members). The Cooperative Extension Program is well staffed but lacks available personnel for international involvement. However, despite these limitations, the College of Agriculture/Extension provides a sound basis for a program in international agricultural and rural development.

Supplementing the College of Agriculture/Extension are a number of departments with capable staff/faculty members having interest in becoming involved in international development. Among these are the departments of: General Home Economics, Food and Nutrition, Economics and Geography, Mechanical Engineering, Electrical Engineering, Industrial Education, Vocational Education, and Industrial Technology. These departments collaborate with those of Agricultural/Extension in research/extension and other activities. The departments mentioned above are the ones with activities most relevant to LDCs and/or those most likely to fulfill the needs of AID and/or other donors in international development.

Of the departments supplementing the activities of Agriculture/Extension, those of Engineering are strongest for

providing a sound assistance program for education and training, and/or for consultative/advisory services. The College of Engineering is, perhaps, the most organized and well managed of any College (School) at any of the 1890 institutions and Tuskegee Institute.

Prairie View A and M University has well structured programs in those areas having interest and capability in assisting AID in its international agricultural and rural development thrust. However, the leadership in these areas, though quite well qualified, are somewhat restrained by the size of their programs relative to the small size staff/faculty to execute them, and by certain administrative bottlenecks. The University administration has expressed interest in and voiced commitment to international agricultural and rural development, but firm policies and guidelines have not been established to reaffirm these expressions.

The organizational structure of the institution to facilitate its international involvement comes under the Office of University Research and Special Projects, administered by the Vice President for Research and Special Projects. This office is supported by the University Research Council whose members, appointed by the Deans of the respective schools and colleges, usually serve as the director of research in the respective school or college. Thus, the School of Agriculture which administers the University's 211 (d) grant extension program serves as the focus (managing body) for the existing international program thrust of the University.

The University offers strong academic and training programs in those areas that are relevant to LDCs. But although the programs

are comprehensive and quite suitable for meeting the needs of LDC personnel, the capacity, in terms of staff/faculty size and depth, is limited in some areas of agriculture. However, the staff/faculty members that are available are well qualified in their respective fields to offer meaningful education and training curricula to LDC personnel.

Research/Extension Capacity

The research/extension of the University has a broad base but a small capacity in terms of personnel available for assisting AID in its projects and programs. Its research/extension includes research programs and projects supported by USDA (SEA/CR), AID (211(d)), Foundations, National and state organizations. This capacity is concentrated in the areas of: Food and Nutrition; Environmental Quality in Rural Areas; Technical and Economic Assistance to Small Farmers (Agricultural Technology Delivery System) and Livestock Production.

These research/extension projects involve several disciplines: Soil Science, Engineering, Home Economics, Rural Sociology, Agricultural Economics, Economics, Animal Science, Plant Science, Industrial Education and Technology and Agricultural Education. However, the disciplines in which expertise has been developed to meet the needs of AID and from which staff/faculty are most readily available are: Animal Science and Soil Science, and to lesser degrees Engineering and Home Economics.

The staff/faculty members engaged in these research projects and who have expressed interest in participating in AID's projects and programs are grouped as follows:

a. Agriculture -----	14 (9 Doctorates)
(Educationist (2), Vet. Medicine (1), Soil Scientist (4), Animal Scientist (3), Farm Management Specialist (1) and Plant Pathologist (2))	
b. Economics -----	2 (1 Doctorate)
c. Home Economics -----	1 (1 Doctorate)
(Food and Nutrition)	
d. Engineering -----	1
Total	18 (11 Doctorates)

Of these, five (5) have had research and other work experiences in LDCs (Sierra Leone, Cameroon, Upper Volta, Ghana, Niger, and Jamaica); and three (3) have some knowledge in the foreign language - French.

The research experience has been the most substantive in Ghana, where the institution has a linkage program with the Ghana Soil Research Institute. This program involves the testing of a delivery system model through which agricultural technology can be transferred to limited resource - small farmers in LDCs. This test model employs the one-to-one concept, which involves the employment of a local, successful, indigenous farmer as a para-professional member of the delivery team. The para-professional is responsible for working on a one-to-one basis with hard-to-reach farmers to establish a working relation, assisting in identifying problems, setting realistic goals, developing and planning activities and assisting in the day-to-day farm activities. Prairie View A and M University's program has been quite successful domestically but no information concerning its success in Ghana was available.

Most of the staff/faculty members engaged in research also have teaching and other University commitments and, perhaps, would not be readily available for participating in AID's projects and programs in LDCs. The departments in which the international agricultural and rural development thrust exist are short-staffed and, therefore, the existing capacity is limited.

Education and Training Capacity

The education and training capacity of the University in terms of meeting AID and LDCs needs is quite capable. Its academic and training programs are well structured and provide flexibility to accommodate the needs of students and personnel from LDCs.

The education and training programs in those disciplines which have been identified as relevant to serving AID and LDCs needs are quite comprehensive with adequate and qualified staff/faculty members and facilities. These include: the School of Engineering which offers curricula in all areas of engineering and which has excellent staff/faculty and facilities; the School of Agriculture and Cooperative Extension Program whose curricula emphasize the hands-on approach which offer tremendous opportunities for LDC students and personnel to learn by doing; and, to lesser degrees others such as Industrial Education and Technology, and Home Economics.

The School of Agriculture offers undergraduate as well as graduate training in its program areas of Education, Economics, Animal Science, Plant Science and Soil Science. These graduate programs provide the opportunity for the school to integrate

its research/extension activities with those of teaching, and this provides students with the opportunity to receive a good deal of practical experience in their education. Students from several LDCs are enrolled in the undergraduate as well as graduate programs.

The staff/faculty members responsible for the thrust of the international agricultural and rural development program at the University have had some experience in teaching in LDCs (i.e. Cameroon, Sierra Leone, Jamaica) and this could be useful in terms of sensitivity to the needs of LDC students and appropriate curricula for such students.

The staff/faculty members in the schools of Engineering and Industrial Technology are well trained and experienced in the teaching and practical application of intermediate technologies that are appropriate for LDC development. Though these staff/faculty have limited experiences in LDCs, their domestic knowledge and expertise are easily transferrable to LDCs.

Linkages and Other Capacities

Prairie View A & M University's linkages with LDCs, international and national organizations are fairly well established. Its international linkages are with its program in Ghana, through staff/faculty interests and relationships with LDCs, and through students, past and current. Its domestic linkages embrace private foundations, federal and state government (i.e. USDA-SEA/CR). The institution is also a member of SECID and has eligibility to Title XII program.

The consultative/advisory capacity of Prairie View is limited to a few staff/faculty members with LDCs experience and availability. There are five staff/faculty members with LDC experience who expressed interest in participating in AID's projects and programs. Of these: three are soil scientist with experiences in Sierra Leone, Ghana, Niger and Jamaica; one agricultural economist with experience in Cameroon; and one plant breeder with experience in Upper Volta.

Staff/faculty members with extensive domestic experiences in solution to problems of small rural disadvantaged farmers and non-farmers are also available for consultative/advisory services. They are mainly from the schools of Engineering and Industrial Technology, and the departments of Economics, Food and Nutrition and General Home Economics. These offer expertise in such areas of intermediate technology (i.e. construction, automotive, carpentry, electricity, masonry and machinery), nutrition and home management and economic development.

Unique Capacity for International Development

Prairie View A & M University has a unique capacity in its 211(d) program of "Delivery System for the Transfer of Agricultural Technology." This program together with its domestic research extension programs aimed at improving the welfare of the small rural disadvantaged people give the University a unique capacity for international agricultural and rural development. This capacity is limited with its current staff/faculty members but the University has potential for improving the capacity.

SOUTH CAROLINA STATE UNIVERSITY

This institution had no international agricultural and rural development capacity but has interest in participating in AID's projects and programs to develop a capacity. Its interest embraces research/extension, education and training, and advisory/consultative services.

South Carolina's research/extension activities are centered in the Research, Planning and Extension Division which administers the institutions 1890 programs (USDA-SEA/CR and Cooperative Extension Service Programs). These programs constitute over 90 percent of the research/extension resources at the University and involve a cross-discipline of staff/faculty members who hold teaching positions in academic departments during the academic year and research work during the summer; and a few staff members employed directly in research positions under the Division of Research, Planning and Extension. The academic areas expressing interest in international agricultural and rural development include: the School of Home Economics; Department of Natural Sciences (Chemistry, Biology and Physics); and the School of Education.

Neither of these areas has the potential capacity but, in consortium with the Division of Research, Planning and Extension, a basis could be formed for developing a capacity for involvement in international development. Of course, having lost its agricultural programs to the University of South Carolina in 1972, the institution's involvement in international agricultural and rural development programs would be still quite limited.

The research/extension thrust of the University is directed at the problems of the disadvantaged rural poor and, in particular, their nutrition, health, education and related human needs. In this regard, the Department of Natural Sciences (Chemistry and Biology) play a significant role in the ongoing research/extension activities. The staff/faculty members of these areas collaborate and cooperate with (direct hire) staff members of the Division of Research and Extension in carrying out the research/extension activities.

The education and training thrust of the University is void of agricultural and international development, but the academic programs in the areas of Home Economics and Education, supplemented by relevant aspects of Natural Sciences provide a basis for offering relevant education and training curricula to LDC students and/or personnel. The School of Home Economics offers advanced training in Nutrition Education and Food and Nutrition. The research and teaching activities of the areas of relevance are fully integrated, thus providing students from LDCs with opportunities to receive academic as well as practical training in their education.

The staff/faculty members of those areas identified as relevant to international agricultural and rural development are well trained in their respective fields to offer suitable programs for LDC students or personnel and/or develop curricula that can meet their needs. However, they have no teaching nor research experience in LDCs, except for about two members with

LDC experiences by virtue of their country of origin.

The University has no established policy or guidelines concerning international agricultural and rural development, but this is understandable due to its lack of agricultural program and its limited agricultural related activities. The organizational structure of its current research/extension thrust, in collaboration with the School of Home Economics and relevant departments, could form the leading components for administering an international program. In fact, the Dean of the School of Home Economics serves as the University's trustee to the SECID organization; while the Director of Research, Planning and Extension serves as representative to the Title XII program.

Research/Extension Capacity

Despite the lack of an international agricultural and rural development capacity, the research/extension activities of those areas identified are carried out on problems and in areas that have similarities to those of LDCs and, therefore, the expertise and knowledge developed can be useful to AID and LDCs in their development efforts. The staff/faculty identified with research/extension activities that are relevant to LDCs and who have expressed interest in participating in international projects and programs are grouped as follows:

a. Extension -----	4 (1 Doctorate)
(Extension Specialist (3), Plant Pathologist (1))	
b. Natural Science -----	7 (3 Doctorates)
(Soil Chemist (3), Soil Physicist (1), Biologist (2) and Zoologist (1))	
c. Home Economics -----	5 (4 Doctorates)
(Nutritionist)	
d. Education -----	3 (2 Doctorates)
(Education Specialists)	
Total	19 (10 Doctorates)

Of these, none has had research and/or teaching experience in LDCs, but two have had other work experiences by virtue of their country of origin. Several of these staff/faculty members have expressed the desire to participate in AID's projects and programs in LDCs.

Education and Training Capacity

The University's education and training capacity for international agricultural and rural development is quite small and limited to the areas of Home Economics and Education, supplemented by the Department of Natural Sciences. The graduate Nutrition Program and undergraduate programs in Home Economics offer good curricula with a well trained faculty of seven, four of whom have the doctorate degree. The School of Education offers training in Special Education that can be useful to LDCs.

Linkages and Other Capacities

South Carolina State University has few domestic linkages which are confined mainly to State institutions. It has no direct international linkage; and has only SECID which serves to

link it directly to other 1890 institutions, Tuskegee Institute and 1862 institutions, and indirectly internationally.

Its consultative/advisory services capacity is limited to three or four interested staff/faculty members in areas of relevance (Home Economics, Extension and Natural Sciences). These staff/faculty members have no experience in LDCs but their domestic activities parallel those in LDCs and they could be of assistance to AID in its projects and programs. Their availability, however, may depend upon their time away from teaching (summers) since the institution has no guidelines and/or policy for staff/faculty participation.

Unique Capacity for International Agricultural and Rural Development

Except for the tradition of working with disadvantaged rural poor people and the similarities of their problems with those of LDCs, the University has no unique capacity. Its lack of an agricultural program is regarded as a main disadvantage for developing a sound and unique capacity for international agricultural and rural development involvement.

SOUTHERN UNIVERSITY

Southern University was one of the first minority institutions to receive a US-AID 211(d) strengthening grant in 1972. Its involvement in international agricultural and rural development, dates back to 1970 when, under an AID contract, its School of Agriculture was contracted to establish an Agricultural Economics Department and a research program in Cameroon. Its capacity for international agricultural and rural development, however, is small in terms of size of staff/faculty members, depth and capability in the relevant disciplines, and experience in LDCs. Nevertheless, the University has a strong interest in becoming greater involved in international development; and, with the use of its AID 211(d) grant extension program (1978), it has been pursuing a more substantive program.

Southern University functions in the land grant tradition of teaching, research and extension. Its interest in and capacity for international agricultural and rural development, therefore, are limited to its College of Agriculture and Cooperative Extension Service and two recently established organizations: (1) Employment - Unemployment Institute; and (2) Center for Social Research. Supplemental areas include the School of Home Economics and the Departments of Economics and Sociology.

The College of Agriculture consists of the Departments of Agricultural Economics, Animal Sciences, and Plant and Soil Sciences. These departments are staffed with qualified individuals in their respective fields who have had some working experience in LDCs (i.e. Cameroon, Kenya and Jamaica) by virtue of their country

of origin and through short term consultative services. The research/extension activities of these departments are focused on rural poor farmers and non-farmers who have similar development problems to those in LDCs. The experiences and expertise of the staff/faculty members of these departments are, therefore, relevant to AID and LDCs for assisting them in their development thrust. However, the interest of these departments for greater involvement in international agricultural and rural development has not been highly motivated despite the interests of the institution itself and those of other areas involved in international development.

The Cooperative Extension Service Program of the University complements that of the School of Agriculture in providing assistance to the disadvantaged rural poor people in Louisiana. It also collaborates with the Departments of Sociology and Economics, and the School of Home Economics in their domestic research activities. The Cooperative Extension Service staff members have capabilities that can be useful in assisting LDCs in their development programs; but their interest and availability for involvement are limited.

The Employment - Unemployment Institute, which administers the University's 211(d) grant Extension program, has formed a collaborative arrangement with the Center for Social Research and the Departments of Economics and Agricultural Economics to carry out the thrust of the University's international agricultural and rural development program. About five

individuals from the four areas spend part of their time implementing the program, designed to continue to build the University's capacity in international agricultural and rural development, and to facilitate fuller utilization of this capacity in assisting AID and LDCs. Thus, the 211(d) grant extension program provides the University with an opportunity to build on its domestic experience on the problems of small farmers and their organization; and to develop linkages with other institutions and LDCs and a response capability in analyzing rural unemployment and underemployment problems.

The research/extension activities of the University which are relevant to international agricultural and rural development are supported mainly by the SEA/CR (USDA) program and administered by the School of Agriculture. The projects, however, are carried out by a cross-discipline of staff/faculty members from Agriculture, Sociology, Economics, Home Economics and the Natural Sciences (Biology and Chemistry). Twelve ongoing research projects were identified under the SEA/CR program, with the largest single concentration of projects in action-oriented research on small farm operation (i.e. livestock and crop production, and the institutional and socio-economic forces on marketing of small farm produce). The Social Research focus is on the rural community needs and problems; while that of Home Economics is on the food nutritional needs of the disadvantage rural poor. The Natural Sciences collaborate their research activities with those areas previously mentioned and provide

strong supplementary and complementary support.

The academic (education and training) programs of the University that are of relevance to international agricultural and rural development are to be found in the Departments of Agricultural Economics, Animal Sciences, Plant and Soil Sciences, Economics and Sociology. The faculty and staff members of these departments are well qualified in their respected fields and the curricula offered are quite comprehensive to provide LDC students with programs that could be useful in assisting the development of their countries.

The advisory/consultative capacity of the University is limited to a small number of staff/faculty members who have had working experiences in LDCs, and who have expressed interest in participating in international agricultural and rural development. The staff/faculty identified are in Agricultural Economics, Sociology and Economics. Those expressing interest number about five but their availability for participation is constrained by their teaching and other activities at the University.

Organizationally, the University's international agricultural and rural development program consists of a collaborative arrangement between two recently established organizations (The Employment - Unemployment Institute and the Center for Social Research) and two academic departments (Agricultural Economics and Economics). Other relevant disciplines appear only to be loosely associated with the main thrust of the international program. Moreover, the staff/faculty members of these

disciplines seem preoccupied with their domestic activities. There is, however, a strong domestic base of relevant disciplines that if properly coordinated could help to form a strong international agricultural and rural development capacity.

The University administration's strong verbal expression of interest in and commitment to international agricultural and rural development needs to be institutionalized with firm policy and guidelines for staff/faculty participation.

Information concerning the University's financial management capacity was not available. The University's international program has quite knowledgeable leadership with capability to administer a sound program. However, the University lacks an integrated approach in its program structure and this constrains its capacity in terms of staff/faculty members who could participate effectively in international development activities.

Research/Extension Capacity

Southern University's research/extension capacity in international agricultural and rural development is small, but the University has a sizeable domestic base which could help to increase its capacity. This base consists mainly of the disciplines of Agriculture, Sociology and Economics, with the Cooperative Extension Service Program as one supplementing the activities of the others. The international research capacity focuses on small agricultural farm organizations and is supported by an AID 211(d) grant which the University received in 1972 and which was renewed for eighteen months in 1978.

The domestic research/extension activities are supported mainly with funds from USDA's SEA/CR and Extension, and these are concentrated in action-oriented research on small farm operation, community services and development and food and nutrition. Of the twelve research projects identified as current, the ones most relevant to LDCs are in: Small Farm Livestock and Crop Production; and Socio-Economic and Institutional Aspects of Marketing Farm Produce. The relevant departments involved in these projects are Agricultural Economics, Sociology, and Animal Sciences from where about five staff/faculty have expertise for development assistance in AID and LDCs.

The international research activities of the University are carried out under two main areas: The Employment - Unemployment Institute and the Center for Social Research. These are supported by the Departments of Agricultural Economics and Economics. The research activities in small farmer organizations (agricultural production and marketing cooperatives) are focused on income and employment problems. These activities are carried out by four staff/faculty members of the areas mentioned.

The staff/faculty members expressing interest in participating in AID projects and programs can be grouped into disciplines as follows:

a. Agriculture -----	5 (5 Doctorates)
(Agricultural Economist (3), and Animal Scientists (2))	
b. Sociology -----	2 (2 Doctorates)
c. Economics -----	3 (3 Doctorates)
d. Home Economics -----	1 (1 Doctorate)
Total	11 (11 Doctorates)

A number of staff/faculty members other than those above expressed interest but submitted no information concerning their capability.

Education and Training Capacity

The most relevant disciplines for education and training at the University are: Agriculture (Agricultural Economics, Animal Sciences and Plant and Soil Sciences); Economics; Sociology and Home Economics. These disciplines offer a wide range of studies with flexibility in their curricula to accommodate the interest of students from LDCs and enhance their capability to become useful in their country's development. The staff/faculty of these disciplines are well qualified to offer training to LDC students as well as personnel. Their availability for working in LDCs, however, is small. The education and training capacity of the University for international agricultural and rural development is limited to its campuses and to those disciplines mentioned.

Linkages and Other Capacities

With the exception of its linkages with the other 1890 colleges and universities and with the 1862 institutions under SECID, its SEA/CR program with USDA and other federal agencies,

the University has no linkage capacity for international agricultural and rural development. Under its AID 211(d) grant extension program, however, it is exploring possible linkages with Kenya and other LDCs.

Southern University's consultative/advisory service capacity is limited to about eleven staff/faculty members who could be available for short-term consultative services. Of these only three have had working experience in LDCs (Kenya, Cameroon and Jamaica). Their 211(d) grant extension program is designed for further developing the University's consultative/advisory service capacity as well as other capacities.

Unique Capacity for International Agricultural and Rural Development

The University's capacity in international agricultural and rural development is small but it unique. It is the only 1890 institution with an international focus in small farm organization (i.e. agricultural cooperatives). The University's research/extension activities have been carried out in environments that have similar characteristics to those of many LDCs and, therefore, the knowledge and expertise developed by its staff/faculty members could be effectively utilized in LDCs for agriculture and rural development. This is unique to Southern as well as most other 1890 colleges and universities.

TENNESSEE STATE UNIVERSITY

Tennessee State University has a small but sound capacity for international agricultural and rural development involvement. It has no international development program but has staff/faculty capability and interest for international involvement.

The thrust of the University's teaching, research/extension activities is oriented toward improving the economic and social conditions of limited resource people. The University functions in the land grant tradition in offering agricultural teaching/extension curricula and programs but at a reduced level since losing most of its agricultural programs to the University of Tennessee. Its capacity in domestic agriculture activities is, therefore, limited but sound and useful in serving the needs of poor rural disadvantaged people. The problems addressed by the staff/faculty members of agriculture as well as those of the Cooperative Extension Service and other academic disciplines of the University are similar to those of LDCs and, therefore, the expertise and knowledge gained in the activities of these disciplines and/or areas are quite useful in assisting AID and LDCs.

The University's interest in and capacity for international agricultural and rural development is evident in its domestic research/extension activities and in the composition of the staff/faculty members expressing interest in participating in AID's projects and programs. The academic and training programs in agriculture and related areas are also consistent with the interest of the University for greater involvement in international

projects and programs.

The administration of the University is quite supportive of programs that have applicability to LDCs and to staff/faculty members who are interested in participating in AID's projects and programs. However, the University has no policy nor guidelines governing international involvement at the present time; but, this is likely to change with its eligibility for participation in Title XII, its membership to SECID and the interest of AID, other donors and the State of Tennessee involving it in international projects and programs. (The State of Tennessee is interested in establishing economic relations with Nigeria).

The management capability of the programs which are most relevant to LDCs and those which parallel the needs of AID is quite sound. These programs are: (1) Agriculture - Departments of Rural Development, Animal Sciences, Plant Sciences; (2) Engineering and Technology; (3) SEA/CR (USDA) Program; and (4) Cooperative Extension Service. Together they could form the core of an international agricultural and rural development capacity at the University.

The research/extension program involves a cross discipline of Agriculture, Engineering and Cooperative Extension Service staff/faculty. The domestic knowledge base and expertise are on socio-economic conditions of limited resource rural people and technological needs. The Socio-Economic research includes projects on: Changes in Industrialization in Rural Areas; Cost Analysis of Health Education in Rural Areas; Productivity of Resources of Small Farms; and Characteristics of Human Resources.

The technological research includes: Transportation Services and Technology; and Urban and Regional Planning. The SEA/CR (USDA) program serves as the major sources of funds. Other sources include NASA, EPA and other donors.

The University's educational and training programs which would be most relevant and useful in assisting LDCs, AID and other donors, and in which the University has its greatest strength are in: the Department of Rural Development with programs in Agricultural Economics and Agricultural Education; and the School of Engineering with program areas in Transportation Services and Technology, Mechanical Engineering, Industrial Arts Education, and Industrial Technology. These programs have excellent curricula and flexibility for accommodating LDC students and/or personnel; and the staff/faculty, particularly in engineering, are well trained in their respective fields to provide academic as well as field training. Both the academic and research programs are quite well integrated and this provides the students to benefit from research.

Tennessee State University's consultative capacity/advisory is small but it can provide useful assistance to AID and LDCs in international agricultural and rural development. Some staff/faculty members have had short-term consultative/advisory services in LDCs while others have had working experience in LDCs by virtue of their country of origin. The areas of expertise include Agricultural Economics, Livestock Management and Agricultural Education.

No formally structured organization to facilitate involvement in international agricultural and rural development exist at the

University. However, a consortium of areas, including the School of Agriculture (Departments of Rural Development, Plant Sciences and Animal Sciences), the Cooperative Extension Service, the SEA/CR program, and the School of Engineering, could form a viable base for implementing a program in international development. Quite capable leadership exist in these areas; and the administration (office of the president) gives strong support to these program areas.

Research/Extension Capacity

The research/extension capacity for assisting AID in international agricultural and rural development is small but sound. The capacity is domestic oriented with emphasis on problems of limited resource rural people whose socio-economic environment and conditions have similarity to those of LDCs. The knowledge and expertise gained from the research/extension activities, therefore, can be useful to AID and LDCs in their projects and programs.

The research/extension project areas of relevance to LDCs include:

1. Socio-Economic: improving socio-economic opportunities and level of living for rural people;
2. Food and Nutrition: analysis of the nutritional and health status of rural people;
3. Livestock Management: improving the practices for persons with limited resources;
4. Transportation Services and Technology: providing improved services and technology to disadvantaged poor people; and

5. Urban and Regional Planning: planning for urban and rural development.

The research activities (projects) are funded largely through the USDA's SEA/CR program; while those of extension are supported under the USDA's Cooperative Extension Service. Other sources of support include NASA and EPA. The staff/faculty members engaged in the research/extension activities of the University and who expressed interest in international agricultural and rural development are grouped as follows:

a. Agriculture -----	16 (9 Doctorates)
(Animal Scientist (3), Agricultural Education Specialist (2); Agricultural Economist (6), Animal Nutritionist (1), Horticulturist, Agronomist, Soil Chemist and Geneticist (1 each))	
b. Sociology -----	1 (1 Doctorate)
c. Engineering -----	21 (14 Doctorates)
Total	38 (24 Doctorates)

Of these, eight have had working knowledge in LDCs. This knowledge is in: Animal and Nutrition (Jamaica); Livestock Feeding (Senegal, Gambia, Mali and Liberia); consultative/advisory service with USDA (Swaziland, Botswana, and Losotho); Agricultural Education (Sierra Leone); Farm Management and Livestock Practices (India); Engineering Consultative Services (Nigeria, India and Kenya).

Education and Training Capacity

The education and training capacity most developed for assisting AID and LDCs is in the School of Engineering. The School of Agriculture also offers adequate training in Rural Development. The other disciplines and areas are not as strong in offering

relevant education and training for international agricultural and rural development. Their capacities can best serve LDCs and AID by being utilized at home. Staff and faculty members are not readily available for lending assistance to AID in LDC in this category.

The Engineering School offers a wide range of course options from the traditional courses to specialized courses for meeting the needs of its students. The Department of Rural Development offers a graduate program with two areas of concentration: (1) Agricultural Economics (Rural Economics and Community Resource Development); and (2) Agricultural Education. In addition to these, numerous seminars are held on topics of rural and community development and these interface with the research and academic activities to give the students a well balanced education.

Linkages and Other Capacities

The University has well established domestic linkages with other Universities and Colleges and with Federal government agencies, and these serve as important sources of resources for its activities. Federal government agencies such as NASA, EPA and USDA (SEA/CR) provide funds for its research activities; while linkages with other 1890 institutions and 1862 Universities provide a source of human resources that can be useful in supplementing its own resources as it becomes involved in international agricultural and rural development projects and programs. The University, however, has no international linkages except for those that are maintained by staff/faculty members from LDCs.

The University has a usable consultative/advisory capacity in about eight staff/faculty members who have had research and consultative/advisory service experiences in LDCs. These staff/faculty members have expressed strong interest in becoming involved in a utilization mode with AID and other donors. The University endorses participation by its faculty and staff in project design, analysis and evaluation of AID projects and programs. Two staff/faculty members with expertise in Agricultural Economics and Animal Nutrition have performed consultative/advisory services in such countries as Swaziland, Botswana, Lesotho (Agricultural Economist) and Senegal, Gambia, Mali and Liberia (Nutritionist). One Agricultural Educationist worked in Sierra Leone; while others by virtue of country of origin have had experience in Animal Nutrition and Management (Jamaica), and Farm Management (India), respectively. The availability of these staff/faculty will depend upon the time of year as some have teaching responsibility which serves as a major constraint.

Unique Capacity for International Agricultural and Rural Development

Tennessee State University has no international agricultural and rural development capacity but has a unique domestic capacity for involvement in AID's projects and programs. Its research/extension activities parallel those of LDCs and the capabilities that its staff/faculty members have developed from these activities can be quite useful in assisting AID and LDCs in their projects and programs. The University has a unique domestic capacity in Socio-Economic Research to improve the level of living of limited

resource rural families. Those activities that parallel AID's and LDC's needs are well managed and the leadership capability of these can insure a viable program in international agricultural and rural development.

VIRGINIA STATE COLLEGE

Virginia State College has had a long standing commitment to rural development of disadvantaged poor people both in its past history and its present domestic research/extension and teaching programs and its international agricultural and rural development activities in LDCs.

The institution operates in the land grant tradition of teaching, research and extension. The long tradition of working with rural poor people in environments and under conditions quite similar to LDCs has allowed it to amass a wealth of experience and expertise in dealing with problems of agriculture and rural development which form the basis for its AID 211(d) grant program in 1972 and subsequent extension in 1977.

The main thrust of the College's activities, paralleling the priorities and needs of AID and LDCs, is in the area of Economic Research and Development which, since 1969, has been carried out through its Bureau of Economic Research and Development (BERD). The primary objective of this organization (BERD) has been to develop a capacity for resolving problems of small farm and non-farm business units so as to enhance the quality of life of rural residents.

It is through BERD that the College has developed a capacity for international agricultural and rural development. Utilizing an integrated approach to development, BERD has established a multidisciplinary unit consisting of Economics, Agricultural Economics, Sociology, International Studies, Business Administration and Education; and these form the core of the College's

international agricultural and rural development thrust. In addition, there is an access pool of staff/faculty members with interest and expertise in relevant areas of international development that serve as backstop to the core group and who are available for participating in AID and LDC projects and programs.

The College's international agricultural and rural development capacity is in the areas of: Agricultural Credit and Resources; Agricultural Production and Management; Food and Nutrition; Marketing and Transportation; and Health, Urban and Ecological Studies. This capacity involves the areas of: Agriculture (including education, extension, soil science, plant science and agricultural economics); Economics (including production, development and manpower); Education (including administration, curricula, psychology, media); Business Administration (including marketing and management); Sociology (including rural sociology) Psychology; Industrial Technology; and Home Economics.

The College is committed to international development; and this commitment is reflected in its mission objectives which include the following:

1. to engage in research designed specifically to solve human problems as a means of improving the quality of life;
2. to keep residents in rural communities acquire the knowledge and skills necessary for them to improve conditions in their own communities; and
3. to improve expertise in dealing with problems relating to rural development in Central and Southside Virginia, which can be later translated to similar problems existing in LDCs - an international dimension.

These objectives are consistent with those of BERD, the organization responsible for the College's research and international development thrust. However, the College has not fully institutionalized its BERD nor has it established firm policies and guidelines for its involvement in international agricultural and rural development and in AID's projects and programs.

The organizational structure of the institution for international agricultural and rural development as well as domestic related activities is its Bureau of Economic Research and Development (BERD) which coordinates the institution's involvement in SECID, represents the College in the Title XII program, and manages the AID 211(d) grant (extension) program. It also links the research and extension activities in other areas to form a network of professionals with knowledge and expertise in domestic as well as international development. Operationally, BERD is directly responsible to the office of the president of the college through the office of the executive vice president and, therefore, has less bureaucratic constraints in carrying out its activities. Its staff/faculty members are quite responsive to requests from AID and other donors for participating in international activities (i.e. consultative/advisory services), usually requiring from seven to thirty days response lead time.

Virginia State College has a sizeable number of qualified persons with unique knowledge and expertise for meeting AID's needs. The BERD "core" staff of six professionals have had research and/or consultative services in LDCs (Ghana, Liberia,

Kenya, Upper Volta, Mali, Senegal, Jamaica, St. Vincent and South Viet Nam). Through the College's AID 211(d) program it has formed a comprehensive rural development linkage with the University of Science and Technology in Kumasi, Ghana where its staff/faculty members have obtained a wealth of experience in project identification, design, analysis, evaluation and implementation. BERD has also developed a French language capability in its staff member as well as staff/faculty of other areas of the College and this provides the College with a French language capacity of between S_2R_2 to $S_4 + R_4 +$ with 4 - 5 people. Staff/faculty members in the BERD access pool (or network), who have capability and are available for participating in international agricultural and rural development, also have had working and other experiences in LDCs (Sierra Leone, Ghana, Cameroon, Tanzania, Swaziland, Nigeria, and Tiawan) by virtue of job assignment and/or country of origin.

The research/extension activities of the College which are of relevance to international agricultural and rural development involve the areas (units) of BERD, SEA/CR, Cooperative Extension Services, and the departments of Industrial Technology, Life Science, Home Economics and Agriculture. The BERD research program focuses on rural development. The SEA/CR program and the academic departments projects (supported by SEA/CR) focus on food nutrition and safety. The Cooperative Extension Services Program supplements the research activities and implements the research findings.

The education and training programs which would be most useful in assisting LDCs, AID and other donors agencies, and in which the College has its greatest strength are in Economics, Education, Sociology and Business Administration. The agricultural programs, with the exception of limited activities in soil science, plant science and education, have been lost to Virginia Polytechnic Institute (VPI) but the College is negotiating the return of these programs. The staff/faculty members of these departments are capable of offering excellent training to students from LDC. Several of the staff/faculty members are themselves from LDCs where they continue to maintain interest in their development.

Virginia State College's consultative/advisory capacity for international agricultural and rural development is quite diverse and capable of assisting AID, LDCs and donor agencies. Several members of its BERD core staff have participated in advisory/consultative services in LDC; and a number of the BERD network staff members have had LDC experiences in research as well as consultative services. The areas of expertise are in Rural Development and Agricultural Production, Marketing, Credit, and Resources. There is also capability in the French language.

The University, through its BERD, also has a capacity in information gathering and dissemination which provides useful services to researchers and teachers at the College as well as those in its linkages and networks. It has a sizeable reference center on economics and rural development of LDCs. It also has

a resources staff for searching and documenting information useful to the BERD program and in particular to international agricultural and rural development.

Research/Extension Capacity

The College's research/extension capacity currently is sound but needs to be fully institutionalized to continue to be useful to LDCs, AID and other donor agencies. This capacity is concentrated in the Bureau of Economic Research and Development which administers the international agricultural and rural development program. This program receives financial support under the College's AID 211(d) grant program. The research activities fall under four multiple operational headings:

1. Production/Management, including: crops and livestock production, and management of small limited resource farms.
2. Credit/Resources, including: analysis agricultural credit to small farmers, credit institutions, manpower and other resources in agricultural and related production.
3. Marketing/Transportation, including agricultural marketing, marketing structure conduct and performance, and rural transportation.
4. Food/Nutrition, including: food quality and production and nutritional value of farm crops.

The other research/extension activities of the College are domestic in nature. Those that are relevant, supplementing the

international thrust, are carried out mainly under BERD, SEA/CR and the Cooperative Extension Services. The domestic projects of BERD are identical to those (1-4. above) carried out in LDCs. The AID 211(d) grant to the College was utilized to develop its domestic capacity to be translated into an international agricultural and rural development capacity and, therefore, the similarity in projects are not accidental. The projects under SEA/CR (USDA) include:

1. Protein Quality of Selected Crops;
2. Genetic Control of Disease (Pathology and Parasitology);
3. Food Habits and Nutritional Status of Elderly People;
4. Pesticides Used in Crop Production; and
5. Production and Marketing of Livestock.

The extension activities interface with those of research and supplement the research activities. The focus of the extension program is on the small limited resource farmers and the implementation of programs to assist them in improving their standard of living.

The research/extension capacity can be measured in terms of staff/faculty qualification and availability. Those staff/faculty members expressing interest and who are available for participating in AID's projects and programs are grouped as follows:

a. Agriculture -----	9 (6 Doctorates)
(Agricultural Economist (4), Agricultural Education Specialist/ Extension (4), Agronomist (1))	
b. Economics -----	3 (3 Doctorates)
(Development and Rural Economist, Transportation)	
c. Education -----	6 (4 Doctorates)
(Education Psychologist/ Administrator (2), Curricula Specialist (2), Media (1), Industrial Arts Specialist (1))	
d. Business Administration -----	2 (2 Doctorates)
(Marketing/Management Specialist)	
e. Sociology -----	3 (3 Doctorates)
(Rural Sociologist Community Service Specialist)	
f. International Studies -----	1
g. Life Sciences -----	2 (2 Doctorates)
(Pathologist, Parasitologist)	
Total	25 (20 Doctorates)

The number of staff/faculty members identified are available for consultative/advisory services and for participating in AID and LDC projects and programs.

Education and Training Capacity

The College has an excellent education and training capacity for international agricultural and rural development. Its graduate program in the department of Economics, with an emphasis on development, combined with graduate courses in Agricultural Economics, and Seminars and research training programs in BERD give a well rounded educational program for the masters degree. BERD utilizes its funds for supporting graduate student research assistants and assist in bringing students from LDCs into the University.

Other areas that can offer training to LDC students and/or personnel include: the Department of Education, including Educational Media; and the School of Business Administration. These areas have expressed interest and have qualified staff/faculty members for offering useful training and education to LDC students.

Linkages and Other Capacities

The College's international and domestic linkages for the purpose of international agricultural and rural development are limited to those of BERD. Through BERD the College has a rural development linkage with the University of Science and Technology in Kumasi, Ghana. This linkage consists of: the exchange of staff members and students; the joint conduct of research projects in Ghana; and the conduct of conferences and seminars in international agricultural and rural development. Other international linkages involve the sharing of information with international organizations and institutions. Domestic linkages and networks include SECID, a consortium of 1890 and 1862 institutions, and consortia with the departments and/or programs areas at the College or at other national institutions.

These linkages and networks provide Virginia State College with a pool of resources that can assist it in international agricultural and rural development. When specialized expertise outside the range of the College's capacity is needed, the Biographical Profiles maintained by SECID that is available to BERD can be utilized to identify additional personnel from

within the consortium membership. Also biographical profiles of professionals at linkage institutions maintained by BERD can be utilized to identify additional personnel.

The College's advisory/consultative service capacity is sound, and it has capabilities in numerous areas of AID's needs. BERD through the College's AID 211(d) program has allocated up to sixteen man-months of its core staff time for advisory/consultative services in international agricultural and rural development. The expertise and knowledge of these staff members include: production/management, credit/resources, marketing/transportation, food/nutrition and health-urban and ecological studies. Staff/faculty members of other departments who have expressed interest in international development involvement are also available for consultative/advisory services.

Unique Capacity for International Agricultural and Rural Development

The College has a unique capacity for international agricultural and rural development in its Bureau of Economic Research and Development whose staff/faculty members have had extensive research and consultative experiences in LDCs. BERD's staff/faculty members also have special expertise in the French language. The domestic research/extension activities carried out by BERD have been telescoped to LDCs where they have been termed successful. These activities parallel the needs of AID, and are effectively carried out by the College to improve the development of people in LDCs.

IV. INCREASING MINORITY INSTITUTIONS' INVOLVEMENT IN AID PROJECTS AND PROGRAMS: AND RECOMMENDATIONS

Statement

Minority institutions' involvement in AID projects and programs has been limited to those having AID 211(d) grants, namely; North Carolina A & T University, Prairie View A & M University, Southern University, Tuskegee Institute and Virginia State College. With the exception of the Tropical Soils Grant to Prairie View, the other 211(d) grants have provided for institutional building. The institutions' involvement in international agricultural and rural development, however, has been limited to the activities of their grant program, and only in the case of Virginia State College and Tuskegee Institute have there been consultative/advisory and contract services performed by these institutions. For the other 1890 (minority) institutions, there has been no active involvement in AID projects and programs but each has expressed interest in becoming involved; and each (like all 1890 institutions and Tuskegee Institute) has eligibility for participation under the Title XII program.

The grant activities of the 1890 institutions and Tuskegee Institute having 211(d) programs are largely domestic in nature, involving small research projects in agricultural and rural development and in education and training of staff/faculty and students. The international activities by these institutions parallel those of their domestic activities but, with the exception of Virginia State College, these international activities presently constitute only a small part of their total grant activities.

These grant activities, however, are specifically for institution building and are not regarded as AID activities (projects and programs) in which academic institutions generally become involved in assisting AID and LDCs. Apart from their institution building activities under AID, the 1890 (minority) institutions and Tuskegee Institute have been omitted from participation in AID projects and programs.

The poor record of minority institutions' involvement in AID's projects and programs has been explained both by personnel of AID and those of the minority institutions as follows:

1. Minority institutions do not have the capacity for involvement - they lack the technical skills, expertise, confidence, qualification, knowledge and experience of LDCs and timely availability of staff/faculty members.
2. Minority institutions lack institutionalization of their available resources for utilization (i.e. the mechanism, policy, guidelines and/or management capability; and identified capacity, including number of staff/faculty members available).
3. Relative to other institutions, minority institutions lack effective communication with AID (i.e. they do not communicate their interest and/or needs effectively).
4. AID is insensitive to the needs and requirements of minority institutions for effective participation.

5. AID's pattern of distribution of its resources (for grants and contracts) has not allowed the maximum participation of the minority institutions.
6. AID erroneously assumes that minority institutions do not have the capacity for involvement in its projects and programs.

It is obvious from these (inexhaustive) sets of explanation that both AID and the minority institutions have had contrasting views as to the reasons for the poor record of minority institutions' participation in AID projects and programs. The interest expressed by DS/AGR/ESP in undertaking this project and the information presented here should help to bridge the knowledge gap and reconcile the contrasting viewpoints of AID and the minority institutions.

In order to increase minority institutions' involvement in AID's projects and programs, there needs to be positive attitude and action by the minority institutions concerning their interest and commitment to international agricultural and rural development, and by AID concerning its sensitivity to the needs and requirements of the minority institutions. On the one hand, these institutions have not had adequate resources to participate nor have they had ample opportunity because of numerous constraints to compete for such resources in order to insure their involvement in AID's projects and programs in a manner similar to that of non-minority institutions. For example, minority institutions do not have the resources to maintain personal contacts with AID personnel for international involvement since

the source of their funds (the State) will not permit this. They cannot demonstrate experience in LDCs since they have not had the grants and/or contracts to establish capacity and/or capability. Furthermore, they can hardly demonstrate commitment to international involvement without first having some assurance that they will be supported financially and/or otherwise. On the other hand, until recently (1972), AID had neglected to consider greater minority institutions' involvement in their activities and to recognize the availability of resources at these institutions which could provide valuable assistance in its projects and programs in LDCs.

As a start, the Title XII program, with its special minority set-aside funds, provides an opportunity for greater involvement of minority institutions in AID activities. However, the mere provision of funds will not insure the development of a useful capacity nor the improvement of staff/faculty capability. There will be the need for careful grant program design for each institution, and effective monitoring and supervision of the grant activities under Title XII. These will require a cadre of AID personnel who will be sensitive to the needs and requirements of each institution and who will effectively assist the institutions in the execution of their program activities.

Regional and other Bureaus should provide staff assistance and opportunities for the institutions to establish visibility in LDCs and to allow these institutions to acquire working (research and other) experiences in LDCs.

Those minority institutions which already have some capacity in international agricultural and rural development will need to be utilized more effectively by AID in consultative/advisory service and other capacities so that their staff/faculty members can acquire the experience, knowledge and confidence to be able to serve AID more meaningfully.

Recommendations

AID should make available short-term (3-6 months) and long-term (1-2 years) IPA appointments of minority staff/faculty members to expose them to the conduct of activities within AID/Washington and AID/field and involve them in international economic development, and simultaneously permitting AID to extend its staff capacity. Opportunities should be provided for minority staff/faculty members to attend AID training seminars and conferences to familiarize them with up-dated techniques and procedures for undertaking agricultural and rural development activities in LDCs.

Interested minority institutions must institutionalize their international agricultural and rural development program, by establishing firm policy and guidelines concerning staff/faculty

involvement and the general administration of their international program without penalization to staff/faculty members. And greater communication (information flow) must be established and maintained with AID personnel by these institutions.

Minority Institutions' administrators must provide flexibility in their program management consistent with the demands and requirements of international involvement. These will include procedures that are unconventional to the normal academic (routine) conduct of operation.

Interested minority institutions must establish expertise in specific fields and/or countries with a good response capacity to meet AID needs and requirements. Where the depth of talent and expertise is shallow, minority institutions must formulate and/or utilize existing consortia and linkages in meeting AID requests for assistance.

AID needs to make a more determined effort to be better informed about minority institutions directly rather than through consortia or other media. This is important for maintaining the identity of these institutions and upholding their dignity and integrity.

Minority institutions need to be given exposure to foreign (LDC) diplomats and/or personnel seeking US institutions' assistance or cooperation through AID. So often minority institutions can offer more meaningful training for LDC students/personnel but they are often overlooked in favor of experienced institutions whose technology, for example, is far too advanced for LDCs.

Aid needs to recognize that minority institutions cannot now compete with the majority of non-minority institutions, but that they do have resource and unique capacities at some institutions for assisting LDCs; and these institutions, therefore, are going to need long term commitment from AID before their capacities can be developed competitively. Once these capacities are developed AID must make every effort to utilize them.

Minority institutions must document and update their expertise and knowledge (capability) in international agricultural and rural development and communicate these (this) to AID Regional Bureaus and offices which are likely to utilize individuals with these expertise and knowledge. Furthermore, they must be explicit about the nature of involvement they wish to have with AID.

Both AID and the minority institutions should jointly develop an inter-personnel exchange program of their staff members on short and long-term bases. Such an exchange would give both sides the opportunity to become better acquainted with the other and assist each other more meaningfully.

Potential Impact

Greater minority institutions' involvement in AID projects and programs is consistent with the policy and guidelines of the agency as well as the letter and spirit of Equal Opportunity Affirmative Action. The participation rate of minority institutions in AID projects and programs is disturbing to most minority institutions' administrators as well as interested staff/faculty members. Every effort, therefore, should be made to encourage and

support the institutions' interest for greater involvement, consistent with the needs and requirements of AID.

Such involvement will provide AID with a unique capacity for utilization in LDCs, and assist in projecting a positive image abroad, reflecting the heterogeneity of the United States. Greater involvement of minority institutions will provide AID with additional resources and give it a broader base from which to select its resource needs. Minority institutions will be brought into the mainstream of activities with non-minority institutions; and they will have the opportunity to broaden their academic as well as research and technical assistance programs to help meet the needs of AID and other donor agencies. Minority institutions' involvement also will help meet the Agency's long-term needs for technical expertise in international agricultural and rural development.