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TUSKEGEE INSTITUTE 211-d ANNUAL REPORT  
(Final Report)  
July 1, 1972 - December 31, 1977

To

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

Washington, D. C.

GRANTEE:

Department of Agricultural Sciences  
Tuskegee Institute  
Tuskegee Institute, Alabama 36088

211-d Annual-Final Report  
 ID/CSD - 3676  
 July 1, 1972 - Dec. 31, 1977

Title: Expansion of Competency in the Design and Execution of Ruminant Livestock Development Programs for the Tropics: With emphasis on Design and Organization of Systems to Integrate Technological Information and Disseminate it along with needed physical inputs.

Grantee: Department of Agricultural Sciences  
 Tuskegee Institute  
 Tuskegee Institute, Alabama 36088

Director: Dr. M. A. Maloney, Jr., Head, Department of Agricultural Sciences  
Campus Coordinator: Dr. G. E. Cooper and Dr. E. T. Braye

A. Statistical Summary:

Period of Grant: July 1, 1972 - June 30, 1977 (extension through Dec. 31, 1977)

Amount of Grant: \$500,000.00

Expenditures: Note Tables I and II

Accumulated: \$194,259.46

B. Narrative Summary:

The member university involved in the 211-d livestock consortium, initiated efforts in West Africa and completed data analysis associated with efforts in Guyana, South America which assisted in the accomplishment of the overall grant objectives - "Expansion of competency in the design and execution of ruminant livestock development programs for the tropics".

Efforts involved the collection and summarization of data through a multi-disciplinary effort for the development of a comprehensive "systems model" for ruminant livestock production. Tuskegee Institute personnel contributed primarily in areas related to livestock extension components and social factors important in the development of national livestock production and development policies.

TABLE I

DISTRIBUTION OF 211(d) GRANT FUNDS AND CONTRIBUTIONS FROM OTHER  
SOURCES OF FUNDING

Reporting Period July 1, 1972 through December 31, 1977

<u>211(d) Expenditures</u>			
Grant Related Activities	Period Under Review	Cumulative Total	Non 211(d) Funding Amount
Research	21,935	112,926	61,160
Teaching	65,806	267,427	99,459
Libraries	208	4,155	300
Consultation	2,846	12,834	1,000
Publication	1,411	4,616	1,000
Other	17,740	92,301	15,000
<b>Total</b>	<b>109,946</b>	<b>494,259</b>	<b>177,919</b>

TABLE II-A

211(d) EXPENDITURE REPORT, ACTUAL SUMMARY. UNDER INSTITUTIONAL  
GRANT #AID/CSD-3676

	Expenditures to Date Reporting Period	Cumulative Total
Salaries	87,072	383,722
Travel		
Foreign	6,626	29,231
Domestic	2,403	23,380
Equipment	-0-	7,258
Other	13,845	52,676

## TABLE II-B

211(a) EXPENDITURE REPORT, REPORTING YEAR DETAIL UNDER INSTITUTIONAL  
GRANT #AID/CSD-3676

## I. Salaries

## A. Academic - \$53,083.00

Dr. E. Braye - 20%	Dr. D. Libby - 80%
Dr. G. Cooper - 25%	Dr. M. Maloney - 10%
Dr. J. Diehl - 50%	Dr. R. Noble - 100%
Dr. G. Howze - 25%	Dr. D. Oliveria - 25%

## B. Other

Clerical - \$3,921.00: Ms. K. Davis - 100%  
Other Non-Professional - \$5,100: Mr. W. Adams

## C. Fringe Benefits: \$4,412.00

II. Student Support: The average amount of support per graduate student was \$1,500.00 whereas the average amount of support per undergraduate was \$750.00

Graduate Students

Anthony Archibong	- Nigeria	Irving W. McConnell	- U. S.
Aaron L. Ashley	- U. S.	Dyremple Marsh	- Jamaica
C. Yu Chi	- Taiwan	Lurline Marsh	- Jamaica
Alphonso Elliott	- U. S.	Jacob K. Orogun	- Nigeria
Gregory VanGelderne	- U. S.	Christopher Robinson	- U. S.
William Joe	- Taiwan	Ervin G. Wilson	- U. S.

Undergraduates

Olukunmi Adeyemo	- Nigeria	Nyle Niaga	- Gambia
George Bulls	- U. S.	Peter Palmer	- Jamaica
Brenda Finch	- U. S.	George Polee	- U. S.
Sheri N. Gregory	- U. S.	Dorothy Raybon	- U. S.
John Gumbs	- U. S.	Gail Scott	- U. S.
Deborah Griffith	- U. S.	S. Shamburger	- U. S.
Frank Harris	- U. S.	Susan St. Jean	- U. S.
Percy Jenkins	- U. S.	Cynthia Shipley	- U. S.
Gizele H. McField	- U. S.	James W. Smith	- U. S.
Henry Noville	- Jamaica	Weyman Abdullah	- U. S.
		Alvin Williams	- U. S.

## III. A. Consultants: None

B. Guest Lecturers: Four for a total of \$600.00

## IV. Travel

- A. Domestic: 20 trips for a total of \$2,240
- B. Foreign: 4 trips for a total of \$6,626

V. Equipment: None

VI. Library Acquisitions: \$208.00

VII. Publications: One annual report: \$1,411.00

VIII. Other: Total amount: \$7,800.00

Periodic meetings were attended with the other consortium members to further define the modeling concept, especially as it related to our Guyana experiences. These meetings provided for discussions relative to the participation in a Workshop which was to be held in West Africa and areas where the 211-d livestock consortium might further become involved in research, design, review and implementation phases of livestock program development. The anticipated experiences in a second country did not evolve to the extent anticipated due to the delays in the establishment of a firm date for the West African Livestock Workshop.

A short field study was conducted in Mali during the summer of 1977, to obtain base line information to be used to modify the systems model input/output developed from the Guyana data. The results were to have been presented at the proposed workshop.

As a result of the Guyana experiences, the Tuskegee Institute Staff is now involved in short and long range research projects and extension activities in goat production. Dr. Doris Oliveria, D.V.M., has assisted in the collecting of information on production, management and herd health and has initiated a research project in management with funds obtained from the Rockefeller Foundation. Additional funds have been obtained from USDA-CSRS for conducting goat research directed by Dr. Arthur Felix and Dr. Oliveria.

A new faculty member, Dr. Arthur Felix has joined the Department of Agricultural Sciences. His experience in research and extension will assist in our overall efforts in international agricultural development. Dr. Felix also has experience in teaching at the college level in Mexico and speaks and reads French and Spanish.

The department is in the process of recruiting a person with a Ph.D. in Agricultural Economics as related to livestock production with the ability to speak at least one foreign language.

Dr. E. T. Braye was elected to serve as chairman of the Consortium during the final grant year (1976-1977), as a replacement for Dr. Cooper who accepted a position with the Winrock International Livestock Center.

C. Detailed Report:

I. General Purpose and Background of the Grant

As the world population continues to grow, the demand for livestock and livestock products will increase. In order that world production can be increased, the developing countries of the world must develop and reach potentials for becoming self-sufficient to produce agricultural products to meet their own needs. It is estimated that annual rise in percapita production in the developing countries of the world is 3%, while nearly 11% in others. As economic development occurs, there will be increased demand for livestock and livestock products. Ruminant animals, due to their ability to utilize poor quality feeds to produce a good quality product for human consumption, will play a major role in self-sufficiency of food production and economic development.

To be certain that livestock productivity is increased in the developing countries of the world, technical assistance is being provided through various agencies from the developed countries; despite these efforts, many problems are still left unsolved.

The primary purpose of the 211-d livestock grant(s) is to strengthen the capability of four U.S. universities in the identification and analysis of constraints associated with the production of

ruminant livestock in the developing tropics. This capability will be developed and strengthened through an integrated, multi-disciplinary team concept, encompassing the scope of ruminant livestock production. Several critical areas are considered in the development of this concept and involve the following discipline areas: Sociology, Extension, Breeding, Veterinary Medicine, Nutrition, Economics and Forage Production.

Tuskegee Institute will specifically be able to strengthen its capability - "to assist in designing and executing livestock development programs for the tropics where social and physical environments are important". It is important to evaluate methods by which relevant information can be disseminated to livestock producers when and as required to bring about positive change.

## II. Objectives of the Grant:

### a. Objectives Restated

The objective(s) of the 211-d grant is to strengthen the capability of Tuskegee Institute, in the total analysis of tropical ruminant livestock production systems, through an involvement with the other consortium universities. This capacity will be further enhanced through involvement within the livestock industry of selected developing countries through activities which will:

1. Identify existing constraints to production.
2. Develop appropriate analytical procedures to evaluate these conditions.
3. Identify opportunities for significant livestock improvement.
4. Provide educational opportunities for students from LDC's as well as U.S. students interested in livestock production and development.

The 211-d grant allows Tuskegee Institute to work in coordination with Texas A&M University, Purdue University and the Uni-

versity of Florida, in selecting problem settings in LDC's and identifying those forces which influence livestock production. The 211-d grant also allows this university to strengthen its expertise in the integrated livestock system concept as it relates to research, instruction, extension and technical assistance programs.

b. Review of Objectives:

Following the establishment of general consortium objectives and obtaining the necessary travel authorization from Washington, D. C. and the developing country, the 211-d universities developed guidelines and prepared to initiate investigations into livestock production in the LDC as they related to the development of the "systems model" and or other needs of the consortium.

III. Accomplishments:

a. West African Workshop

The major emphasis during the final year of the consortium's activities was focused on the final stages of the development of the systems model and the presentation of related topics at the proposed West African Workshop on livestock production. In spite of all of the consortium's efforts and assistance from some USAID representatives, the workshop could not be scheduled within the 211-d granting period even as extended through December 31, 1977.

b. Continued Involvement of Students from LDC's

Tuskegee Institute has increased its enrollment of students from developing countries. Of the 430 students in the Department of Agricultural Sciences, 51 are from countries referred to as

"developing nations". During the funding period of this grant, eleven students from four developing countries received financial assistance through the 211-d grant. Financial assistance from the 211(d) grant was combined with Institute funds and/or USDA-CSRS funds to provide support for both students and their research projects.

c. Interactions With Other Consortium Universities to Make And Develop the "Systems Model Concept Involving They Guyana Ruminant Livestock Sector"

Several meetings were held during the past eighteen months in an attempt to strengthen the modeling concept and the overall continued application of the "Consortium" in future needs of developing countries. Although many participating institutions could not be developed. Many of the universities initiated alliances with larger organizations such as the South East Consortium for International Development. The main objective to present a workshop in West Africa by the consortium did not evolve due to lack of cooperative support within and among the various agencies, institutions and countries involved.

IV. Impact of Grant Support Activities in Developing Institutional Capabilities

As a result of 211-d grant funds, reference materials have been added to our library. This has increased the availability of materials on topics related to all aspects of development (animal production, animal health, economics, extension training, development of social institutions, etc.). These reference materials are available for use by all students and departments at Tuskegee Institute and persons within the community.

These funds also enable the faculty to expand the utilization of the institute's centralized "time-share" computer in the processing of data and information related to international development and to incorporate these findings into courses being taught and to be developed. Thus far, eleven courses have been updated and expanded to include information on international problems.

The activities initiated under this grant were modified and a new 211-d program was started under "International Rural Development". The new grant is being directed by Dr. G. Howze who worked as the Sociologist on the Institute's study team. Many of the faculty responsible for the livestock program will also be participating in the new grant, but at a supportive level.

The need for a "foreign language" capability was made clear in many of our efforts; consequently, a plan to make french training available to current faculty is continuing. Greater emphasis in this area is also being used to select future faculty members as well.

V. Utilization of Institutional Resources in Development.

The faculty has continued to serve as host to many visitors from developing countries who show an interest in this institution's past involvement in programs (domestic and international) which assist in the growth and development of activities to assist the rural poor. These are the people often overlooked when development efforts are planned and implemented.

VI. Other Resources for Grant Related Activities.

Tuskegee Institute is providing physical facilities as well as

its computer staff and facilities for the storage of data collected during the conduct of the grant by Institute personnel. Other faculty members have provided their services in reviewing and planning sessions before implementing 211-d activities, at little or no cost to the project. Funds provided for students were used to supplement funds being provided by either Tuskegee Institute or USDA for research and academic programs. The students were associated with seven different USDA research projects and four academic units.

As a result of the ideas and concepts initiated under the 211-d grant, a new consortium is being developed for the promotion and conduct of research related to goat production. These activities will include funds from both the public and private sector.

## VII. Utilization of Institutional Response Capabilities in Development Programs

### a. Request for Assistance

During the reporting period, Tuskegee received only two requests for assistance. One request was from the Peace Corps and the other request was through USAID, Washington. The Peace Corps request was associated with improvements in recruitment of minority students into the Corps and involved one faculty member's visit to two selected countries in Africa. This program failed to evolve into a viable program of recruitment among our students. The second request was associated with the development and implementation of a vegetable and fruit improvement and production program in Yemen. This resulted in a USAID contract by which Tuskegee Institute is providing three full time professionals for the development of a production system in Yemen and four part time faculty are working as back up support.

b. Other Assistance

During the grant period, 22 graduate students from foreign countries have studied in the Department of Agricultural Sciences. Of these students, seven were from India; five were from Jamaica; four were from Nigeria; three were from Guyana; two were from Tawian and one was from Gambia. Approximately ten percent of our 430 undergraduates are from LDCs. The Institute has an average visitation rate of almost one per week with respect to the number of visiting groups or individuals from the LDCs. Through these visitors and the past and future students from the various LDCs, it is hoped that the linkages established through the 211(d) grant will be maintained and strengthened. It should also be pointed out that as a result of the effort put forth in the 211(d) grant and the many other activities related to international development, the Institute has established a half-time administrator for international programs and development.

VIII. Involvement of Minority Personnel and Women

Of the faculty involved with the 211(d) grant, about two-thirds were "U.S. citizen minority" personnel and one was a minority female. These faculty were involved in the major effort of this grant. It should be noted that significant enrollment increases in the Department occurred during the period in which this grant was active. Currently, there are more minorities majoring in Animal Science at Tuskegee Institute than at any other traditionally black college. The improvements in the Animal Science and the Plant and Soil Science programs were due in part to the 211(d) grant. These improvements will assist in the recruitment of a greater number of minority students into the fields of International Agriculture.