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MICHIGAN STATE
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Title: To Increase Michigan State University's Capability in Agricultural Economics Related to the Less Developed Countries

Grantee: Department of Agricultural Economics
Michigan State University

Director: Dale Hathaway

A. Statistical Summary:

Period of Grant: June 1970 to June 1975 Amount of Grant \$625,000.00
Expenditures for Report Year \$133,583.11 Accumulated \$208,438.31
Anticipated for next year \$123,100.00

B. Narrative Summary:

Talent sharing with AID operated at a very high level during FY 72, much higher than contemplated at the time of the original 211d grant. Through the combination of grants and contracts to the Department of Agricultural Economics, 87 man months of professional time was provided to AID. Over half was long term talent sharing, one man in Washington, four others in Missions. Coupled with 20 man months supplied in FY 71 by two people on a long term basis, plus additional short term assignments, the talent sharing commitment of 10 man years in the five year period is well ahead of schedule.

The Department continues to improve its competence, to conduct research, and to carry on training in five agricultural development related areas: (1) agricultural administration, (2) policies to increase employment in the rural sector, particularly in Africa, (3) the application of sector analysis and simulation models to programs, policy, and project analysis, (4) integration of production and marketing policy analysis to enhance development, particularly with reference to the food sector, and (5) effects of new technology on income distribution and employment. While some of these areas are supported by specific contracts, the use of 211d funds has supported a comprehensive approach, a wider geographical application, and has accelerated the attainment of improved competence.

Funds from the 211d grant have been used primarily for salaries, that is, the allocation of time of professors and graduate students. During FY 72 this included partial support to 10 faculty and 13 graduate assistants. The output consists of two books in process, more than 25 workshop and seminar presentations by the MSU staff, two week long seminars and several other seminar presentations by visiting speakers, 11 research papers published or in process, 6 theses completed during the year, several bibliographies, a substantial number of working papers on development policy, plus a variety of formal and informal consulting activities. Also, some of the funds have been used for infrastructure support -- teaching, travel, seminar speakers, library resources, communication, printing and copy work.

C. Detailed Report

I. General Background and Purpose of the Grant

This grant was one of several intended to develop and strengthen the competence of cooperating Universities in the field of agricultural economics related to the problems of developing countries, through increasing the number and ability of their staff to contribute to the solution of these problems.

The need for skilled analytical work in agricultural sector problems in the less developed countries grows as agricultural production increases, as movement toward a market-oriented system occurs, and as decisions on alternatives become necessary. Many developing countries are seeking assistance in developing such analytical capacities.

Part of these needs can be met through increasing the capability and interaction between agricultural economists in selected U.S. universities and appropriate individuals and agencies overseas, particularly if there is reasonable assurance that these activities will receive continuing support.

AID has a substantial interest in supporting systematic interactions and the development of analytical capacity; it has recognized that opportunities and incentives must be provided to members of the University's professional staff able and interested in devoting a significant part of their career to work in agricultural development in less developed countries. This grant is an element of this support.

II. Objectives of the Grant

1. Objectives Restated (as listed in the Grant Document)

The grants made to several selected universities in furtherance of the purposes stated in Section I have common objectives. The first of these objectives, which

are listed below will require continuing cooperation among the grantee universities and between them and AID.

- a. To create a framework within which a significant number of U.S. agricultural economists interested in the international aspects of their discipline can work cooperatively on certain research problems of urgent importance to developing countries, thereby increasing the effectiveness of their efforts, and making the most efficient use of scarce research resources; to provide an efficient means for applying the product of this research in a way which will be helpful to the developing countries; and to contribute to the development of professional contacts and collaboration among agricultural economists in the United States and in the developing countries.
- b. To increase the competence of the University in the area of economic development problems, particularly as they relate to the agricultural sector and the relationship between agriculture and other economic sectors, by providing a continuing arrangement for faculty members to conduct research on campus and abroad and to carry on work in developing countries.
- c. To enable the University to provide increased training in economic development and agricultural economics at the graduate level for students from the U.S. and the developing countries.
- d. To provide members of the University faculty the enriching experience of dealing directly with problems of agricultural development in the less developed countries by arranging for them to serve with AID in capacities which will contribute to the development of their professional skills and to their understanding of how to accelerate agricultural growth in the less developed countries and deal with the practical problems involved in the process.

2. Review of Objectives

Cooperation between AID and the Department of Agricultural Economics in the development of a series of research and other contracts represents a heavy emphasis upon objective "a". The process of implementing these contracts has contributed substantially to objectives "b" and "d". Consequently, 211d funds have been the major support for objective "c" and helped maintain a balanced effort among the four objectives.

In addition, as will be evident in the Plan of Work, certain new research areas and comparative studies are being initiated which will further contribute to objective "b".

III Accomplishments

The criteria used to evaluate the program at Michigan State include several of particular relevance to AID and other development agencies and others of standard relevance to the University and academic community.

They are:

1. Talent sharing and interaction with AID
2. Research relevant to the interests of the Department of Agricultural Economics and to developing countries
3. The development of linkages with LDCs
4. Research and training productivity
 - Staff
 - Students
5. Effective dialogue with individuals and institutions concerned with development.

The details below show that much has been accomplished during FY 72. At the same time, not all of the accomplishments are attributable to the 211d grant; some of the progress was supported by research and other contracts, but the combination is a stronger and better balanced program than would be possible

by any one or two activities by themselves. The several sources of funding are indicated where appropriate.

1. Talent sharing and interaction with AID

A complete list of AID consultation and talent sharing assignments are provided in Table III - 1. Long term assignments during FY 72 total 47 man months. Short term assignments came to 40 man months for a total of 87 man months during the year. Forty different individuals participated. During FY 71, the long term talent sharing totaled 20 man months, plus about 10 man months of short term consultation. Thus, through contracts and grants, over nine professional man years have been supplied to AID during the two years this grant has been operative, of which over 7 man years have been to AID missions. The line dividing talent sharing from regular consultation is not clearly drawn, but it appears that at least 6 of the 10 years of the 211d talent sharing commitment have already been supplied.

Some of the assignments to AID are listed below to provide a flavor of the items listed in Table III-1.

Lawrence Witt continued to work in the Office of Agriculture, Technical Assistance Bureau, AID/W to the spring of 1972, thus bringing his contribution to a twenty (20) month total.

Harold Riley continued to serve as a special assistant in the Colombian AID Mission throughout FY 1972, except for short trips to Brazil-Argentina, Costa Rica-Panama, and to Berlin. With his departure from Bogota in August 1972, he contributed twenty-three months of talent sharing.

Ed Rossmiller was assigned to Korea in September 1971 as chief of the sector analysis party, and continues. By June 30, 1972 his talent sharing contribution was ten (10) months.

Thomas Manetsch was assigned to Korea as chief of the simulation modeling party. By June he also had made a ten (10) month talent sharing contribution.

Carl Eicher made several trips to Africa. He and Derek Byerlee participated in a joint research planning workshop on rural employment problems in Ibadan, Nigeria in December 1971. Eicher also visited in Zaire, and spent several weeks in Ghana consulting on agricultural and general development program strategies in that country.

Glenn Johnson, as project leader of both the agricultural simulation contract and the Korean agricultural sector analysis contract spent considerable time in Korea. In addition to staff members serving long term assignments, a number of MSU faculty members served as short term consultants and made important inputs to this work during the fall and winter of FY 72, working with Korean associates. A large number of working papers have been integrated into an agricultural sector analysis and completed within a rigorous timetable. Intensive work on investment analysis began during the spring and was completed during the summer of 1972.

James Shaffer, following his consultation on agricultural marketing with the AID Mission and the cooperative sector analysis team in Korea, went on to Katmandu to consult with Nepalese and AID officials on marketing and development, to participate in the first Agricultural Marketing Conference in Nepal. He then went on to Rome for in-depth discussions with FAO professionals on work planned and in progress and ways to relate MSU and AID sponsored activities with FAO.

Earlier Dr. Shaffer prepared a position paper "On Agricultural Commodity Development Boards as Institutions for Fomenting Economic Development" for the Latin American Bureau, and consulted with AID/Panama on this issue in Panama. He also consulted in Costa Rica on market research and market reform, and is working with students conducting such work.

Kelly Harrison made several trips to Panama, Colombia and Costa Rica to consult with AID Missions on agricultural marketing. Much of his campus time was devoted to preparation for, or follow-up to these visits; to make arrangements for Mike Weber's long term assignment in Costa Rica, and for other short term assignments in Costa Rica and Panama, including Don Ricks and Glynn McBride.

Garland Wood made two trips to Costa Rica early in FY 72 in connection with proposed work in agricultural administration. Field work under this new AID contract began in February 1972 when a five man, multi-disciplinary team from MSU worked jointly with a multi-nation IICA team in pretesting and taking questionnaires. Approximately a month was spent in Central America.

Vernon Sorenson participated in an AID survey mission to Zaire on means of strengthening and developing an economic intelligence program in agriculture.

John Brake consulted with AID/Manila in agricultural credit and agricultural development operations.

Glenn Johnson participated in the Nigerian National Agricultural Development Seminar working with the Ministry of Food and Agriculture and with other officials.

His contribution was both in relation to general agricultural development strategy and on how the simulation model might provide better analyses of program, policy, and project alternatives.

Mike Abkin advised with AID/Lagos and the Ministry of Food and Agriculture on the possible use of the agricultural simulation model: Earl Kellogg advised with some of the same people on the livestock portion of the model and other aspects of simulation. Samson O. Olayide joined the MSU team as a consultant.

Table III-1 Consultation and Technical Assistance Assignments of Michigan State University Personnel on AID Related Grants and Contracts of the Department of Agricultural Economics

Fiscal Year 1971-72

Name and Department, if other than Ag. Econ.	Country	Time Input in weeks	Source of Funding Contract No.
Mike Abkin Systems Sc. & Ag. Econ.	Nigeria	5 weeks	2975
Raleigh Barlowe Resource Development	Korea	4 weeks	184
Al Beegle Sociology	Korea	4 weeks	184
Mel Blase U. of Mo.	Costa Rica	4 weeks	3132
John Bruke	Korea Philippines	4 weeks 2 weeks	184 AID/Manila
Derek Byerlee	Korea Nigeria	2 weeks	184 3625
Thomas Carroll	Korea	3 weeks	184
Robert Deans Animal Husbandry	Korea	1 week	184

Hartwig De Maen	Korea	7 weeks *	2975
Carl Eicher	Nigeria, Zaire Ghana	4 weeks 2 weeks	3625 non-AID
John Ferris	Korea	7 weeks (cont.)+	184
Carl Frost Psychology	Korea	3 weeks	184
Robert Gustafson	Korea	5 weeks	184
William Haley	Korea	7 weeks (cont.)+	184
Kelly Harrison	Panama/Colombia Colombia Costa Rica Colombia Colombia/Panama	2 weeks 1 week 2 weeks 1 week (cont.)+ 3 weeks	364 514-129-T 515-234-T 514-129-T 364
Dale Hathaway	Korea	4 weeks	184
Marvin Hayenga	FAO/Rome Korea	2 weeks 4 weeks	2975 184
Donald Henley College of Business	Costa Rica	2 weeks	364
William Herzog Communication	Costa Rica	4 weeks	3132
Glenn Johnson	Korea Nigeria Rome/Ethiopia	7 weeks 3 weeks 2 weeks	2975/184 AID/AFR 786 2975/non-AID
Jeung Han Lee	Korea	7 weeks *	2975
Earl Kellogg University of Illinois	Nigeria	3 weeks	2975
Leonard Kyle	Korea	4 weeks	184
Henry Larzelere	Korea	4 weeks	184
Larry Libby	Korea	7 weeks (cont.)+	184
Thomas Manetsch Computer Science	Korea	41 weeks	2975/184
Glynn McBride	Panama	1 week	364
Mason Miller Extension Service	Korea	4 weeks	184

Winston Oberg College of Business	Costa Rica	2 weeks	3132
Harold Riley	Colombia	48 weeks	514-129-T
	Costa Rica	2 weeks	515-234-T
	Argentina, Brazil		
	Peru	2 weeks	364
Don Ricks	Costa Rica	2 weeks	515-234-T
	Panama/Colombia	2 weeks	364
Ed Rossmiller	Korea	41 weeks (cont) +	184
James Shaffer	Korea	3 weeks	184
	Nepal-Rome	3 weeks	211d
	Costa Rica	2 weeks	515-234-T
	Panama	2 weeks	211d
Vernon Sorenson	Korea	4 weeks	184
	Zaire	5 weeks	211d(partial)
George Tolley University of Chicago	Korea	1 week	184
Pablo Torrealba	Colombia	40 weeks (cont.)*+	211d/514-129-T
Warren Vincent	Korea	9 weeks	184
Mike Weber	Costa Rica	13 weeks (cont.)*+	515-234-T
J. Williams	Korea	26 weeks (cont) +	184
Lawrence Witt	AID/Washington	44 weeks	direct hire AID
Sylvan Wittner Michigan Agr. Exper. Station	Korea	2 weeks	184
Gar Wood	Costa Rica	4 weeks	3132
	Costa Rica & Guatemala	3 weeks	3132
Karl Wright	Korea	10 weeks	184
Irving Wyeth	Costa Rica	<u>4 weeks</u>	3132
Total Talent sharing and consultation		200 weeks - Long Term	
		<u>178 weeks</u> - Short Term	
		378 weeks or 7+ man years	
Training		67 weeks or 1+ man years	

* Training input, not talent sharing

+ Assignment continued after June 30, 1972

2. Research relevance

This criteria relates to the congruence of interests of the University and Department on one side and of the LDC and AID on the other. The first is related to the ongoing program of the institution conducting the research, i.e., the MSU Department of Agricultural Economics. The second is related to the problems existant in the countries and institutions to which the results of the research apply. To evaluate the first, one must have an understanding of the competence and interests of the research institution. For this reason, the next few pages identify the main research and program thrusts of the MSU Department of Agricultural Economics. The evaluation of the second comes from analysis of the problems which developing countries face and is provided by a variety of analytical and other experiences. While the Department believes its research is relevant in these terms, such judgements ultimately derive from interaction with AID and the LDC users and potential users of the results.

a. Domestic areas of competence:

The Department has staff competence to deal with a wide range of domestic problems which support and complement its ability to perform abroad effectively. These domestic areas include: TELFARM, a computerized farm management service to Michigan farmers; New Horizons Study Program (an adult education program for county and community leaders); Marketing analysis and extension programs for farmers, assemblers and processors of Michigan commodities; Food Systems Management programs involving joint activities between the College of Agriculture and Natural Resources and the College of Business Administration and including research in production economics, marketing and management; Public Affairs Management programs operating jointly with the College of Social Science, and including research on housing, medical delivery services and welfare programs

in non-urban Michigan; A research program on public policy, organization, administration, and institutional adjustments; and A large graduate program operating in most of these areas. Work on ecological and waste disposal is expanding.

b. Areas of competence in international development:

Sector analysis and simulation: Current activity is supported largely by two AID contracts, one on sector analysis with the Korean mission (ead-184), the other on simulation application with TAB in AID/Washington (csd-2975). This activity stems from early work to model the United States agricultural economy, and later work in Nigeria to develop an agricultural sector analysis. More recently, in order to reduce the costs of comprehensive sector analyses, a generalized simulation model was developed under an AID/Washington contract (csd-1557). Under the new contract, the results are now being operationalized in several countries and particularly in Korea, where the model is being used to identify the consequences of various agricultural policy alternatives upon the production and consumption of designated commodities, international trade, levels of income, rural employment and the operations of specified Korean institutions. A software library is being developed and basic developments are being sought in both economic and systems theory to advance further the ability to simulate agricultural sectors.

Employment creation in Agriculture: This work (csd-3625) stems from a concern with the distribution of benefits from economic development, the current rapid increase in the LDC labor force, consultation discussions with personnel in the African Bureau, AID/Washington, and with the almost total absence in Africa of micro or farm level data on how various policy alternatives affect

the onfarm and rural nonfarm use of labor. The project design will develop such data and use them to analyze the impact of alternative agricultural and economic policies upon the demand for labor. It will assess the possibility that a major share of future additions to the labor force can be productively employed in rural areas, and identify policies to facilitate such absorptions.

Agricultural Marketing: Previous research at home and abroad has indicated strongly that marketing improvements to facilitate development must consider the entire food production and marketing system. The Latin American Bureau has helped support this work with grants to LAMP (Latin American Marketing Program) (1a-364) and a series of country contracts (currently 514-129-T and 515-234-T) to carry out diagnostic studies and make recommendations for marketing improvements. Personnel is drawn both from the College of Business and from the Department of Agricultural Economics. They are now, partly through 211d, broadening their base of operations to other parts of Latin America and to Asia and extending the research to problems of program organization and implementation.

Effective Administration of Agricultural Programs: The interest in this work evolved out of experience in analyzing U.S. agricultural programs, in several institution building contracts with AID and the Ford Foundation, and with short term assignments in Pakistan, Bangladesh, Korea and Zaire. It is all too clear that many well conceived programs at the national level fail to function effectively because agricultural public administrators cannot or do not have the capacity to translate these programs into community level actions in either the private or the public sector. A current AID/Washington contract (csd-3132) is seeking to identify, cooperatively with IICA, procedures to improve

agricultural administration in Latin America.

Impact of Common Market and Customs Unions: This work to date has been largely concerned with the effects of the European Common Market, upon agriculture, especially the grain-livestock sub-sector, first among the original six, and more recently among the new members as they become incorporated into an enlarged market. This work has been supported largely by the USDA, with some Foundation assistance in the early stages.

Agricultural Mechanization and Employment: This problem area is being explored by the Departments of Agricultural Engineering and Agricultural Economics. On the engineering side, the interest is in identifying the point in the production process where improved tools or machine design are most critical, and consequently where the production expansion effect is likely to be greatest and adverse effects upon employment minimal. On the economic side, more emphasis is on quantifying the employment and income distribution effects once the likely effects on production are identified. Consultation and joint efforts between the two disciplines continue.

Other items: The effects of technological change upon the level and distribution of income is also an area of concern and attention, with a recent focus on Pakistan, Bangladesh, and South India.

Geographical focus: Major geographical attention is being given, because of previous faculty experience, to Brazil, Colombia, Central America, West and Central Africa, Korea, Pakistan, Bangladesh, and to Western Europe. Some experience and attention also relates to the Philippines, Thailand, India and Ethiopia.

3. The development of linkages with the LDCs:

Several kinds of linkages with the LDCs have developed. These include visiting African economists and agricultural economists spending their sabbatical year at the Department of Agricultural Economics. They include junior professionals from LDCs pursuing Ph.D. study programs. Many of them have participated in ADC seminars. Most important, it includes joint research with scholars in the developing nations.

Each of the research contracts has a substantial element of joint planning and joint operation with cooperating institutions or individuals in the LDCs, each contract on a somewhat different basis. A number of former students have been drawn in as consultants in several research contracts. Foreign students from Malaysia, Taiwan, Germany, Chile also are participating in third country research projects. The rural employment research in tropical Africa brings together a multi-national team focusing on a number of within nation problems that are common for each of the participants.

Other types of linkages include international conferences and workshops with multi-national participation. These include a number of ADC seminars, several SEADAG meetings, several international conferences in Bellagio, the contacts of Carl Eicher through the Overseas Liaison Committee of the American Council on Education, IBRD conferences and the TransAtlantic Committee on Agricultural Change. Several in-depth discussions have taken place with FAO in Rome, another in a joint German-FAO Conference for developing countries.

Hansa Alavi, Peter Bertucci and Robert Stevens conducted a Pakistan-Bangladesh workshop on rural development during June-July 1971 which brought together a multi-national group of scholars.

One less direct type of linkage operates via other institutions who then link with LDCs. Thus, some part or all of the simulation model have been provided to Al Halter, of Oregon State, for work in Venezuela and to a Canadian group for work in Kenya. Another example is the anticipated participation of a Cornell graduate student in the Rural Employment Study.

Further specifics of research contract linkages are presented elsewhere in this report, and in detail in the separate reports for each contract.

4. Research and Training Productivity:

The items to be reported under this heading are separated into several categories. One separation is between faculty and students, another is among research, training materials, and the use of training materials. A third is between activities supported in whole or in part by 211d (emphasized) and those supported by contract, fellowships and other funds (highlights only). We start with staff research supported by 211d.

A. Staff Research:

The materials from the June-July 1971 workshop on rural development in Pakistan/Bangladesh have been edited into a book, which has been submitted for publication. Part of the salary costs of time for editing were supported by 211d; the workshop and participant costs were funded by the Ford Foundation.

Work on rural development is being pressed in other directions also, with several papers on small farm development strategies, thesis work on income distributional impacts of high yield varieties, and analysis of the implication of the Comilla-Bangladesh experiences for the management of rural and agricultural development programs. Titles for these and other research publications are shown in the Appendix.

Another set of research reports center around the sector and subsector analyses, in one case drawing on Nigeria and Korean experiences in simulation and sector analysis models, in the other dealing with aspects of the rural employment problem with a focus on tropical Africa.

The first consists of a series of working papers, subsequently incorporated into an agricultural sector analysis for Korea. These papers are part of the output of research contract 184, and are not reported here. One paper related to this area, and with 211d inputs, was produced by Derek Byerlee (and A.N. Halter), entitled "A Supplementary Simulation Model of a National Economy for Agricultural Sector Analysis".

The subsector analysis on rural employment has both a contract (3625) and a 211d input. The major non contract publication was prepared in FY 72 for delivery to the International Economics Association meeting at Bad Godesberg, Germany, as part of a conference on the "Place of Agriculture in the Development of the Developing Countries". Prepared by Derek Byerlee and Carl Eicher, its title is "Rural Employment, Migration and Economic Development: Theoretical Issues and Empirical Evidence from Africa".

Another set of publications relate to the food marketing sector, and policy issues related thereto. Some of these have their origin in research sponsored by the Latin American Bureau of AID through the LAMP center. However, most of this work was country specific and conducted under great time pressure. Some of the 211d funds are being used to prepare more comprehensive summary reports, to explore additional hypotheses developed during the work, and to suggest further opportunities for program development. This involves both staff and student research. Recent publications are listed in the Appendix. In addition,

major inputs but still short of publication have been made by Kelly Harrison, Harold Riley, James Shaffer and Don Henley into a monograph on "Marketing in Latin America".

Another unlisted report supported in part by 211d is represented by Vernon Sorenson's participation in an AID mission to Zaire in March 1972 and his contribution to the overall mission report.

B. Staff-Training Activities:

An agricultural development administration workshop was held early in the year to discuss means by which management of agricultural program operations could be improved. Participants included AID, IICA and MSU professionals.

Gar Wood and other faculty members developed a set of training materials on middle management training. These were discussed at an ADC seminar at the East-West Center and are being utilized during FY 73.

James Shaffer, Gar Wood and others developed materials on institutions, organization and management for a Management in Rural Development workshop with AID in October 1971.

A variety of materials have been assembled or written for the several undergraduate and graduate training courses.

Preparation for each of these training activities drew on 211d support.

C. Graduate Students:

The following list carries the detail on student thesis, research or teaching assistance inputs into the program. Only one thesis completed during

FY 72 drew in part on 211d support. Three more to be completed early in FY 73 were partially supported by 211d. Nine other students made inputs into theses or Department service during FY 72, some of which will produce theses later. The following listing presents first the completed theses, then those in process, and finally areas of work which contribute to the Department's program and which may or may not become thesis subjects. Where 211d has supported their work, it is indicated; in most cases this is only partial support, sometimes only three (3) months of a four year program.

Relevant theses completed in FY 1972 (For abstracts, see Appendix):

Refugio Rochin - "A Micro Analysis of Smallholder Response to High-Yielding Varieties of Wheat in West Pakistan" (211d)

Michael Weber - "Problems of Reorganization of Cali Food Retailers' Procurement Activities in the Planning of a New Wholesale Market Facility"

David A. G. Green - "Agricultural Mechanization in Ethiopia: An Economic Analysis of Four Case Studies"

K. James McKenzie - "An Economic Analysis of Selected Agricultural Extension Programs in Colombia, South America"

Earl Kellogg - "A Temporal and Spatial Model to Assist in Evaluating Investments in the Nigerian Beef Distribution System"

Michael Abkin - "Policy Making for Economic Development: A System Simulation Model of the Agricultural Economy of Southern Nigeria"

Relevant theses in advanced stage of completion:

Norberto Frigerio - "Wholesaling of Fresh Fruits and Vegetables in the Buenos Aires Metropolitan Area"

Clyde Swenson - "Impact of Increased Agricultural Production on Employment and Income in South India" (211d)

Sheng-Chen Chi - "Economic Role of the Taiwanese Tourist Industry"

R. Islam Tarefder - "Development of Irrigated Paddy in Bangladesh: Choice of Some Alternatives"

- Pablo Torrealba - "Production and Assembly Market Systems for Fruits and Vegetables (selected mountain areas) in Colombia" (211d)
- Kwong-Yuan Chong - "A Simulation Model of the Nigerian Cocoa Sub-Sector" (211d)
- Josiah C.O. Nwanko - "Costs and Returns to the Poultry Business in Eastern Nigeria"
- Bashir Ahmad - "Farm Mechanization, Employment and Growth: A Case Study of Agriculture in the Pakistan Punjab" (completed in August 1972)
- Bunloe Sutharomn - "A Comparison of the Baht Cost of Foreign Exchange Earnings of Major Agricultural Products"
- Mohammad Noor - "Malaysian Smallholder Rubber Sector Implications of Ethrel Stimulation and New Processing Technology (completed July 1972)
- Rais Udden Ahmad - "Economics of Tubewell Irrigation in Bangladesh"
- Chain Barla - "Cooperative Credit In Rajsatan, India"
- Thomas Zalla - "Economics of Dairy Production and Processing in Tanzania"
- Fred Winch - "Economics of Rice Production" (Ghana)
- James Kocher - "Population Pressure and the Process of Agricultural Development in Tanzania"
- Alvaro Posada - "Simulation Model for the Northern Colombia Beef Industry"
- Francis Idachaba - "Marketing Board Taxation of Nigerian Agriculture--- Some Implications"
- Robert Gray - "Foreign Exchange Consequences of Alternative Proposals to Improve Nigerian Agriculture"
- Olasupo Ladipo - "A Simulation Model of the Nigerian Fisheries Sectors"
- Raphael Shen - "Investment and Disinvestment of Taiwanese Agriculture in its Labor Force"
- Thomas Dickey - "Small Farm Loan Characteristics from the Borrowers Point of View in Costa Rica"
- Ken Schwedel - "Decision Process of the Small Peasant Farmer in Latin America in Reference to the Adoption of a Package Project"
- David Peaceck - "The Adoption of New Agricultural Practices in Northeast Brazil: An Examination of Farmer Decision Making" (completed Nov. 1972)

Selected areas of Research and/or Department Service by graduate students:

T.Y. Pee, Economics of rubber research in Malaysia.

Tirso Paris, Production Economics Research in the Philippines.

Y.C. Lee, Statistical Decision Theory and its application to farm decision making, with special reference to LDCs. (211d)

Marc Johnson, Co-chairman of the Department Seminar Program. (211d)

John Shields, developed a working bibliography on education and human resource development (211d)

Felix Nweke, Agricultural planning in tropical Africa. (211d)

Enyinna Chuta, helped develop a working paper on rural off-farm employment in Africa (211d)

Dean Linsenmeyer, reviewed published material on rural development in tropical Africa. (211d)

Fenton Sands, Migration in Africa: Past, Present and Future. While assisting in this work however, his thesis topic is "Black American Outmigration from the Southern United States." (211d)

Gordon Gernill, Economics of Agricultural Mechanization in Developing Countries (211d)

George McDowell, assisted in teaching several courses. (211d)

David Schoonover, US-USSR agricultural trade relations.

5. Effective Dialogues with the Development Community:

It is impossible to allocate these activities by 211d, contracts, or to other support. In most cases the development of competence leading to invitations to interact was supported by 211d and contract activity; actual travel and subsistence often was paid by the sponsoring organization. But they do represent important opportunities to interact with development experts from other universities, other countries and development agencies.

Among the quantitatively and qualitatively important activities are the ADC (Agricultural Development Council) seminars and workshops. One of these,

on agricultural sector analysis, was organized by Glenn Johnson. Several members of the staff also participated in the seminar itself. Other seminars in which the staff participated include marketing, trade and development, policy and program management, and several dealing with teaching. Carl Eicher continues to serve on the five man advisory committee on the RTN program of ADC. The staff members participating in FY 72 in the seminars, workshops and planning meetings include:

Carl Eicher (2)
 Derek Byerlee
 Kelly Harrison (3)
 Robert Stevens (2)
 Allan Schmid (2)
 Vernon Sorenson (2)
 Glenn Johnson (2)
 Lawrence Witt (via AID, 5)
 Garland Wood
 Marvin Hayenga
 Dale Hathaway
 Ed Rossmiller
 Al Halter, MSU consultant

Most of these participants also presented papers as part of their participation in each seminar. In addition, a number of advanced graduate students have participated when the topic was appropriate to their special field of interest; former students and colleagues now engaged in professional work in their home country also participated.

A multi-disciplinary team drafted materials for a four week training session for personnel of middle management level from the developing countries. These have been evaluated by a group of invited professionals at an ADC workshop at the East-West Center, Hawaii. The Center will be using this material in one training session, the IIRD in another. Following an ADC workshop in the Far East in the summer of 1973, these materials on middle management training will be revised and published.

The Departmental seminar program continued to have a large international dimension, under the leadership of Carl Eicher. Particularly noteworthy were two week-long visitors, Dr. T.W. Schultz, University of Chicago, and Dr. Dudley Seers, Sussex University, U.K., the first speaking on a variety of development and human capital topics, the latter on employment issues. A list of seminar speakers and topics appears in the Appendix.

Carl Eicher participated in several international conferences at Bellagio, Italy, mostly relating to problems of rural employment. Glenn Johnson participated in another Bellagio conference on Tropical Agriculture.

Arrangements were completed to enable Carl Eicher to become director of the International Liaison Committee of the American Council on Education. Effective July 1, 1972 he will spend one fourth time with this Committee.

Derek Byerlee and Carl Eicher took their preliminary research plan on agricultural employment possibilities in Africa to a December conference in Ibadan, Nigeria with a group of African professionals and possible collaborators together to develop a joint research project. The revised statement of this joint research plan now is funded under contract no. csd. 3625.

A number of seminars and discussions were led in AID/W by the leadership of the several contracts, both to present current results from work under the contracts and to discuss possible future lines of activity with interested AID/W personnel. The work in Korea also was reviewed in an intensive seminar in East Lansing drawing on Korean, MSU and AID personnel in Seoul, on AID/W and on MSU/EL personnel.

Interaction with IBRD continued on both an informal office visit basis, and in two seminar discussions on employment and on sector analysis.

Glenn Johnson participated in two meetings of the "Trans-Atlantic Committee on Agricultural Change", one in Dijon, the other in Wisconsin. He joined the North Central Committee workshop on simulation models.

Three members of the Department stopped in FAO, Rome, to lead seminars and discussions on substantive areas of agricultural development and possible lines of collaborative activity. These were Glenn Johnson (2), Marvin Hayenga, and James Shaffer.

Hartwig de Haen, a post doctoral student supported by the West German government, and Lee, Jeung Han, joined the Korea simulation analysis group. A principal substantive result was the development of a recursive linear programming model for Korean agriculture and the creation of a technique for incorporating recursive linear programming into a general simulation model. Components of the simulation model were also provided to Al Halter, an MSU consultant, for work in Venezuela, and to a Canadian group for work in Kenya.

Agricultural marketing personnel also participated in a number of international conferences. Harold Riley and Jerry McCarthy, (Department of Marketing, School of Business) participated in a Latin American Marketing Conference in Cali, Colombia in May 1972. Dr Riley presented a paper on the results of their intensive study of food marketing in the Cali area. He attended a joint German Foundation-FAO conference on the Role of the Entrepreneur in Agricultural Marketing Development and presented a joint paper with Eduardo Polo, manager

of the Carulla Supermarkets in Colombia; the paper was a case study of the Carulla supermarkets. Dr. Riley also visited Panama and Argentina primarily to work with students from these countries who are completing their thesis research. He also visited CICOM in Brazil and officials in Peru on mutual interests in food marketing problems. Other visits of other members of the marketing staff in Costa Rica, Panama and Colombia have been extensive, and have been mentioned previously under AID consulting and talent sharing.

Lawrence Witt participated in two SEADAG seminars and three planning meetings while with AID/W. The two seminars included intensive interaction with Asian social scientists.

Robert Stevens worked with International Voluntary Services personnel on a new program in Bangladesh.

A number of individual visitors from overseas spent 1-5 days in the Department in individual consultation.

Professor Rufus Adegboye of the University of Ibadan spent three months of his sabbatical at East Lansing. While here he led a number of seminars and ad hoc discussion groups, contributing many insights on Nigeria; he also attended a number of workshops and graduate classes.

Professor Germain Ndyunde of the Faculty of Law and Economics, University of Cameroon, Yaounde was a visiting professor April-May 1972.

Professor Dunstan Spencer of the Faculty of Agriculture, Njala University College, Sierra Leone, spent about three weeks in East Lansing to help develop

the project on agricultural employment in Tropical Africa, and later participated in the workshop in Ibadan, Nigeria.

Peter Malton, Ph.D. candidate at Cornell visited the campus in June to develop plans for his field research in Africa. His Ph.D. thesis at Cornell will serve as part of the MSU research on rural employment problems. This is an example of inter-university cooperation that could be expanded.

Glenn Johnson participated in a number of meetings in Addis Ababa, New York and Washington of the National Academy of Science subcommittee on Tropical Agriculture.

IV. Impact of Grant Supported Activities

The scope and strategy of the grant document emphasized problem-oriented research and training, increasing the quality and quantity of undergraduate and graduate instruction, and increasing the supply of agricultural economic talent directed towards LDC problems.

1. Problem - oriented research and training

In more detail the first emphasis was "to help finance high priority elements of a problem-oriented research and training program". (underlining added) While it was recognized that this would change in time, the priority elements included:

(a) "Theoretical, methodological and selected empirical studies in sectoral analysis...; on public policy alternatives...; and on intersectoral obstacles to increased rates of economic and social development,..." The work supported by AID contracts esd 2975 and ead 184 is directly relevant to this

subject. During FY 72, the contract work functioned primarily in and on Korea and Nigeria.

The 211d and noncontract inputs in this area push in three directions, to explore possible application and adaptation of simulation models and sectoral analysis in other countries, to develop concepts and explore problems within Korea that are outside the contract responsibilities, and to support graduate training.

(b) "Welfare and income redistribution aspects of rural employment...." Some aspects of this problem apply also to item (e) below and will be discussed there. A major planning input on Rural Employment Problems in Tropical Africa was supported by contract AID/csd 3306, which was completed during FY 72. This contract provided an opportunity for detailed joint research planning with a group of African economists. The resulting research proposal was funded to start in June 1972, as AID/csd-3625.

Beyond these contracts, staff and graduate students explored and discussed a number of issues relating to African rural development, usually with 211d support. These include agricultural planning in tropical Africa, a bibliography on education and human resource development, migration in Africa and rural off-farm employment. A number of seminar and workshop presentations also contributed to this subject. Several papers on agricultural mechanization relate both to employment and to rural development potentials.

The nature and quality of effort made possible through the two contracts and the 211d grant made Michigan State attractive to a number of African scholars.

Professor Rufus Adegboye of the University of Ibadan spent three months of his sabbatical in East Lansing. Mr. Simon Mbilinyi, Director, Economic Research Bureau, University of Dar Es Salaam, Tanzania is a visiting scholar for September 1972 to August 1973. Dr. I.A. Khamis, Department of Economics of the same University is a visiting scholar for the Fall term 1972.

(c) "Selected production oriented projects with special emphasis on water resource use...." The output during FY 72 was relatively small. One study of an irrigated area in Ceylon was completed, several other studies were initiated, including irrigated paddy in Bangladesh, rubber in Malaysia, and production economics research in the Philippines. Some of the contract work already enumerated has sub-projects or workpapers which apply to this area also. Almost none of this work draws on 211d support.

(d) "Selected problems in the area of markets and trade...." For a number of years, the Latin American Market Planning Center (LAMP), using personnel from the College of Business and the Department of Agricultural Economics, has been supported by the Latin America Bureau of AID and the Missions in Brazil, Bolivia and Colombia. FY 72 contracts include AID/1a-364 LAMP, AID/514-129-T Colombia, and AID/515-234-T, the latter directly with the Department of Agricultural Economics. Grant funds (211d) have been used to go beyond the contract specifications in several respects. A first step was taken toward testing whether the concepts and findings for Latin America have applications in an Asian setting.

A second 211d input supports thesis research and training for students in Argentina and in Colombia. Discussions of marketing research and programs with other international agencies, represents another 211d input, including CTCOM

in Brazil, FAO in Rome, and a joint German Foundation-FAO conference in Berlin. While the listed contracts supported most of the travel and consultation time spent in Latin America, and a long run assignment in both Colombia and Costa Rica, 211d did make inputs into the campus time salaries of the consultants, thereby assuring a continuing concern and an opportunity to develop materials of longer run usefulness.

The work plans in the trade area developed during the year, partly out of consultation experience in Korea and partly through participation in the relevant ADC seminars. A specific research proposal was made for a FY 73 personnel assignment in Korea, under 211d, which now has been approved by AID.

(e) "Selected economic policy problems related to the inducement, generation and diffusion of new technical knowledge..." Much of this work relates to India, Pakistan and Bangladesh. It has been supported by a combination of 211d funds for salary, and Ford Foundation support including both training grants to individual students and a direct grant to support the Pakistan-Bangladesh workshop on rural development held in June-July 1971.

Thesis research by Refugio Kochin examined the diffusion, impact and response of smallholders to new wheat varieties in dry land areas of northern Pakistan, including the effects upon income and employment. Thesis research by Bashir Ahmad focused on the impact of mechanization on income and employment in the Punjab. Similar research by Clyde Swenson is examining the impact of new grain varieties upon the distribution of income in an area of South India. A series of papers by Robert Stevens examines alternative development strategies

for small farmers, based upon the experience of Bangladesh and particularly Comilla. Also, he is assembling these and other experiences into a textbook on rural development. One other area of work is specifically concerned with Rural Agricultural Program Management, AID/csd-3132, which calls for cooperation for Latin America with IICA in Costa Rica. The 211d grant has supported the development of some training materials, bibliographic research, and time spent in examining experiences in other areas than Latin America.

Policy problems emerge in each of the sub-items listed above. Sectoral analysis work gives major attention to the implications of alternative projects, policies and programs. Welfare and income distribution is fraught with value conflicts and policy consequences even before the subject is opened for discussion. Research on employment opportunities includes the analysis of specific sets of policy alternatives, and so on. The most relevant point, however, is that the combination of activities and the volume of effort provided through the contracts, and the breadth of effort made possible by the 211d grant provides a critical mass which is essential in providing the information and understanding of the consequences of the choices to be made, so necessary for sound decision making.

2. Quality and quantity of instruction

The second emphasis in the scope and strategy was "to increase the quality and quantity of undergraduate and graduate instruction in agricultural economics with an international orientation."

A new undergraduate course "World Poverty, Population and Food Supply" was offered for the first time during the Winter Term, 1972. The enrollment of

55 was excellent for a first time offering. Students were drawn from 26 departments in 9 colleges despite not then being listed in the catalog. Student interest was good. Both classroom materials and a teaching assistant were supported by 211d funds. The experience gained has been used to revise and improve the course; an outline is shown in the Appendix.

Another undergraduate course, "Rural Transformation in Developing Societies" continued to be offered to a mixed group of seniors and graduate students. The materials presented are being improved through the selective use of research and experience gained in the work previously mentioned, and similar work elsewhere.

The "Economic Development of Tropical Africa" again was jointly presented with the Department of Economics. This course appears to have stabilized with an enrollment of between 50 and 65 students. This course benefits from the research work and consulting activities in Africa.

All three of these courses have important roles as devices to attract and develop student interest in international and rural development.

At the graduate level no change occurred in the number of courses offered with an international orientation. These are:

- Agricultural Trade Policies
- Agriculture in Economic Development
- Rural Development Administration I
- Rural Development Administration II
- Workshop on Planning and Implementation of
Agricultural Development

Enrollment in all these courses continues to be substantial; in fact the workshop crowds the upper limit for effective interaction. Both the enrollment and the quality of students has been enhanced through the use of 211d funds for assistantship support, by the general attractiveness of the international activities of the Department, and by the potential for financial support of internationally related thesis research. Thirteen graduate students were specifically supported by 211d funds. A number of others were partially supported for specific activities within a particular research contract. Others, supported by outside funds, chose to come to Michigan State because of contacts, or the variety of international activities and insights.

The context of these graduate courses in relation to graduate objectives was evaluated during the year, with some question on possible overlap of the last two and possible consolidation so that one rather than two courses in rural development administration would be offered. The decision to continue is partly a reflection of anticipated increased enrollment and partly to provide maximum opportunity to utilize in courses the expected results from related research.

3. Increasing the supply of agricultural economic talent

The third strategic emphasis was "to increase the supply of U.S. agricultural economic talent directed at operational or problem-oriented development issues..." The increased number of graduate students just referred to is one element of this strategy, perhaps by as much as 15-20 over what would otherwise have been possible. Moreover, the thesis research opportunities has shifted emphases in a number of cases towards development problems.

A second element of supply is the liberal leave policies and consultation opportunities available to staff members which has permitted many of them to gain greater familiarity and on site experiences in "problem-oriented development issues". Clearly, the volume of consultation during FY 72 both reflects a recognition of competence and helps enhance the quality of this competence.

A third element, attributable to both 211d and normal departmental resources, are the seminar speakers bringing with them views and experiences to broaden the perspectives of both staff and students. Particularly noteworthy were the two week long seminar series presented by Dr. T.W. Schultz, University of Chicago, on human capital topics, and by Dr. Dudley Seers, Sussex University, U.K. on employment issues. A complete list of speakers and topics appears in the Appendix.

In summary, the 211d grant has enabled the Department to broaden its international activities beyond those specifically authorized in the several contracts. It has provided interim support for staff members who expected to participate in contracts and gave them an opportunity to broaden their background. It has facilitated the recruitment of graduate students and it has in many ways enhanced the quality of the teaching, training and competence of the students and staff.

V. Utilization of Institutional Resources in Development.

Since this grant carries no overhead item, a variety of physical facilities and administrative support have been contributed to the overall purposes. This includes seminar rooms, office space, accounting services, access to library

resources plus some time of a number of administrative personnel.

Only a small part of the teaching costs in the internationally related courses have been charged to the grant. Many of the seminar speakers on international subjects received expenses and an honorarium from other Departmental resources. A few were paid from 211d. Most of the 50 foreign students received support from their home government or from international agencies. However, tuition charges by the University fail to cover the complete costs of instruction, even with out-of-state fees. It is estimated that the State of Michigan provides nearly a thousand dollars per student per year towards the cost of education, over and above tuition fees.

We have already referred to the several AID contracts which are generally supportive of research and training activities. The magnitudes are specified in item VI.

Several staff members participated in short term IBRD missions; these too helped our staff identify relevant problems and gain a better sense of economic development issues.

Many staff members participated in ADC seminars and in several other types of conferences. Typically, the university paid salary for the several days and the conference sponsors paid their expenses.

The Pakistan-Bangladesh seminar was partially supported by a grant from the Ford Foundation. Another staff member is partially supported by the Rockefeller Foundation.

The USDA supported completion of work and publication on the impact of the new members of the European Common Market on the feed-livestock complex.

VI. Other Resources for Grant Related Activities

Under item V, resource support from the university and other sponsors were listed. We interpret this section to mean a listing by amount of major sources of outside support.

<u>Title of Project</u>	<u>Contract No.</u>	<u>Budget</u>
Agricultural Analysis and Simulation Projects	AID/csd-2975	\$123,223 FY 72
Korean Agricultural Sector Analysis	AID/cad-184	\$286,621 Aug. 71 to Aug. 72
Research Planning Project on Employment	AID/csd-3306	\$50,000 June 71-March 72
Rural Employment in Tropical Africa	AID/csd-3625	\$760,000 for three years
Rural Agricultural Program Management	AID/csd-3132	\$178,000 for two years
Latin America Market Planning	AID/1a-364	\$38,398 for July-Dec. 1971
Colombia Food Marketing	AID/514-129-T	\$47,691 for FY 72
Costa Rica Food Marketing Project	AID/515-234-T	\$16,030 for April-June 1972
Kellogg Farmers Study Program (International aspects only)	Kellogg Foundation and participants	\$30,000-40,000 annually
Tuition and Subsistence, overseas graduate students	various	\$200,000 annually plus transportation

VII. Next Year's Plan of Work

This plan of work, like section IV, relates to the scope and strategy specified in the grant document; however, we will not present research plans in the same detail by sub-topics.

1. Problem oriented research and training:

The several research projects in Africa, Asia and Latin America will require considerable effort by responsible personnel to meet AID and host country specifications. In addition, they have a responsibility to inform and interact with the MSU staff and each other.

Other research explorations and activities will be continued or initiated under 211d.

One staff member, Lloyd Teigen, expects to begin work in December 1972 on the "Trade and Balance of Payments Effects of Korean Agricultural Development". As the Korean agricultural sector develops, changes in domestic demand, changes in production technologies and resource use will affect the Korean balance of payments. How Korea should allocate its agricultural resources from a trade and balance of payments point of view is an important policy question. Investment and re-investment inputs also will be required as technology changes and as agriculture becomes more commercialized. The study will seek to define and quantify the trade and balance of payment effects of alternative resource allocations policies leading to various levels and mixes of agricultural production.

This area of work has the potential of being relevant in a number of other countries undergoing substantial development. Thus, as experience is gathered,

some adaptation of this work may be initiated in other countries.

Several staff members, Kelly Harrison and Vernon Sorenson in particular, plan to explore further the applicability of their approach to food marketing problems in Latin America to other areas. Work will continue in several Latin American countries; the research findings are being brought together in a comprehensive report. However, as convenient and appropriate, both the analytical approach and the findings will be examined on a comparative basis in other parts of the world. James Shaffer did some of this in Korea and Nepal in FY 72. Dr. Sorenson in Kenya in October 1972 will continue the process in one African setting. Other possible locations will be discussed with AID.

Several members of the Department plan to make significant inputs into a better understanding of the process of rural development. One aspect of this is development strategy for small farms. Robert Stevens and Gar Wood both have a number of students doing thesis research on such problems, in India, Bangladesh and in Latin America. Some of this work also may encompass analysis of the potentials of changed food marketing systems. A number of these experiences, including Comilla, will be examined, and if possible converted into teaching materials and convenient reference reports.

The African dimension of the 211d grant will be reflected in a 10 series workshop on "Rural Development in Africa" to be held during the winter term of 1973. The workshop will bring together faculty and graduate students on rural development in Africa. It will provide background information for a conference on "Rural Development in Africa" which will be held in Ethiopia

in June of 1973. Carl Eicher will be a principal organizer of both the workshop and the conference. Dr. I.A. Khamis and Mr. Simon Mbilinyi of the University of Dar Es Salaam, visiting scholars in 1972-73, as referred to earlier, will contribute to this workshop. Steps are being taken to identify and invite a visiting professor from Africa for 1973-74.

Both of these inputs into rural development will benefit from and contribute to a parallel concern with the towns and small cities of Michigan supported by an ongoing Kellogg Foundation and U.S. Department of Labor program to assist communities to plan for better community services in rural Michigan. This program includes analysis of health programs, rural manpower training program, housing and welfare problems, as well as the special challenges and opportunities that the migration of older americans from metropolitan centers to selected rural counties represents.

The insights from these three activities hopefully will enable the Department of Agricultural Economics to make inputs into AID, IBRD and FAO in their programs of rural development and innovations to deal with the problems stemming from rural-urban migration. The Department would like to develop specific plans for collaboration with FAO, in addition to its present relationships with AID and IBRD.

2. Undergraduate and graduate instruction:

Efforts will be made to increase the number of undergraduate students taking courses in the PAM (Public Affairs Management) curriculum and particularly the two internationally oriented courses. It is planned to revise and improve the quality of the instructional materials. Through these PAM

courses we expect to increase the number of undergraduate majors and thereby contribute to a greater interest in and understanding of the problems of developing countries, and the role of agriculture therein.

The number of graduate students and graduate courses are expected to remain at about the same level. However, a larger number of students will be completing their training during FY 73 and who have been under 211d sponsorship. Other improvements will be in the quality and relevance of their training to the current needs of development agencies. For example, several students will have theses related to simulation techniques and sector analysis, others to the analysis of income and employment problems. Others will contribute to the understanding of food marketing systems. The impact on campus of students who have done theses overseas is always an important aspect of this experience. There should be at least four such students on the campus for 2-4 months during FY 73, plus several others for a shorter period.

3. Increase the supply of agricultural economic talent directed at operational or problem oriented development issues:

This phase of the strategy and scope of the program will continue to be substantially supported through the several AID research contracts which enable the staff to increase their field experience and to face specified operational and problem-oriented challenges. One new staff member, Lloyd Teigen, will start his first overseas professional experience in Korea, under 211d auspices. Another, Derek Byerlee, will begin a long term assignment in Africa. A number of graduate students will complete degrees during FY 73;

at least one of these already has been offered a long term international agricultural development position.

Dale Hathaway, Department Chairman and Director of the 211d grant was given a one-year leave of absence to work with the Ford Foundation. Harold Riley has been appointed as Acting Chairman starting in September 1972.

Several graduate students are expected to be conducting field research after December 1972. In some cases they will be working with staff already overseas on other assignments. In other cases, their major professors will work with them for short periods overseas, as needed, in order to assure that the research design is appropriate to the problem and utilizes the proper methodology.

Carl Eicher, as of July 1, began serving one fourth time as Director of the Overseas Liaison Committee of the American Council on Education. This will enable him to help strengthen linkages among scholars in the LDCs and counterpart scholars and institutions in the United States. It will also support a strong problem oriented program.

We expect to respond to ad hoc requests for workshops and training sessions at the request of AID and other development agencies. Substantial participation in ADC seminars is scheduled to continue throughout the year, an activity in which we all gain from clearer definitions of problems and interchange about the appropriate methodologies.

Also, we expect to continue to interact on a multi-disciplinary basis to bring to bear the power of several disciplines upon particularly important

and difficult problems. For example, Victor Smith from the Department of Economics is being proposed for an exploratory visit in Colombia in December under 211d to discuss whether his programming research on nutrition can contribute to some of the sectoral analytical work.

Talent sharing will continue during this third year of the grant, probably at a somewhat reduced level compared with FY 72. However, specific plans have not been completed.

VIII. Other

Programs under the other three existing 211d grants and two new ones in agricultural economics now have reached the point where all of us need to consult together and do some joint planning. This would include:

1. The broad elements of a six institution program to provide in our area of expertise the information, understanding and technical experts needed in AID (and other international development institutions).
2. The principal role each institution will play in this program, de-emphasizing but not necessarily eliminating duplicative or competing activities (since teaching and training programs require certain common activities on each campus).
3. Improved communication among the institutions on specific projects and assignments where another institution may have interests and capabilities.
4. Some general consensus on geographical along with substantive specialization so that important problems are not overlooked nor excessive emphasis given because each institution competes to service a new problem area.

The two new 211d grants in Economics/Agricultural Economics to Southern University and Virginia State offer some additional opportunities for linkages and complementarities. Michigan State will seek to be responsive to the

needs and requests of these two institutions, whether for staff exchanges, graduate student training, seminar speakers and consultants, or for participation in joint research.

IX. Report on Expenditures

Budget expenditures for FY 71 and FY 72 are shown in the table below. Expenditures during FY 71 were somewhat below the programmed amount, while for FY 72 they were about 107 per cent of the programmed quantity. The major expenditures are for salaries of staff and graduate students, over 90 per cent if fringe benefits are included.

The major share of the salaries item and nearly all of the other direct costs relate to research. Two of the faculty appointments and one of the graduate students have made a primary contribution in teaching. In several cases 2111 salary items directly paid for consultation assignments to AID missions. Several items, such as books and periodicals, travel of consultants, postage and telephone cannot easily be allocated to teaching, research, or service.

Table IX 1
EXPENDITURES
Through June 30, 1972
AID 2111 Grant

	<u>1970-71</u>	<u>1971-72</u>	<u>Total through June 30, 1972</u>
Salaries	\$59,934.80	\$115,845.76	\$175,800.56
Fringe Benefits	4,075.07	9,305.41	13,380.48
Travel	3,344.57	2,814.39	6,158.96
Postage & Telephone	1,629.15	68.77	1,757.92
Printing & copy work	1,795.13	251.71	2,046.84
Supplies & Materials	1,920.65	1,220.00	3,140.65
Computer & contract Service	1,253.41	3,293.27	4,546.68
Equipment	241.75	211.93	453.68
Books & periodicals	8.70	212.53	221.23
Maintenance & Misc.	571.97	359.34	931.31
Total	<u>\$74,855.10</u>	<u>\$133,563.11</u>	<u>\$208,418.21</u>

Table IX-2: Financial Plans for FY 73

<u>Item</u>	<u>1972-73</u>
Salaries	\$104,000.00
Fringe benefits	7,500.00
Travel	4,000.00
Postage and telephone	600.00
Printing and copy work	1,200.00
Supplies and materials	1,800.00
Computer and contract services	3,000.00
Equipment	250.00
Books and periodicals	350.00
Maintenance and miscellaneous	400.00
Total	<u>\$123,100.00</u>

A more detailed report on past and anticipated expenditures under the 211d grant to the Department of Agricultural Economics follows. We reproduce first the allocations to salary for the individuals participating. In this table we identify by T, R, and C whether the principal contribution of the individual is to teaching, research, or consultation. Secondly, we indicate the individuals that will participate in FY 73.

Table IX-3: DETAIL OF EXPENDITURES FOR
Fiscal Year 1973 and Fiscal Year 1972

211d Grant		
Department of Agricultural Economics		
Michigan State University		
	<u>1970-71</u>	<u>1971-72</u>
Salaries	\$59,954.80	\$115,845.76
Faculty: FY 72		
Harrison, R,C	6,394.76	
Dunlop T	3,169.57	
Wood T,C	10,112.31	
Shaffer C, R	11,554.20	
Stevens R	14,681.04	
Byerlee T, R	4,402.26	
Riley C	1,585.52	
Heber C	1,509.59	
Sorenson C	2,853.92	
Pulacki (adm.)	763.76	
Brake C	904.17	
Total	<u>\$57,331.17</u>	

Graduate Assistants: FY 72		
Lee R	4,026.66	
Chong R	4,590.00	
Shields R	1,530.00	
Newke R	3,870.00	
Chuta R	3,780.00	
Linsenmeyer R	3,780.00	
Johnson T	3,586.95	
McDowell T	3,060.00	
Swenson R	3,059.46	
Sands R	2,839.50	
Gemmill R	2,039.64	
Rochin R	1,449.99	
Torrealba R	3,307.54	
Shwedel R	180.50	
	<hr/>	
Total	\$41,100.24	
Clerical and labor payroll	17,414.35	
Fringe Benefits (details for FY 72)	4,075.07	9,305.41
Retirement	5,776.32	
Social Security	2,337.51	
Hospitalization	1,075.52	
Longevity	116.06	
Travel		
Instate	106.55	157.80
Consultants	37.85	692.75
Out-of-state	1,671.21	248.80
Overseas	1,528.96	1,715.04
Postage and telephone	1,689.15	68.77
Printing and copy work	1,795.13	251.71
Supplies and materials	1,920.65	1,220.00
Contract Services	1,253.41	3,293.27
Equipment	241.75	211.93
Books and periodicals	8.70	212.53
Maintenance and Miscellaneous	571.97	359.34
	<hr/>	<hr/>
Total expenditures	\$78,855.20	\$133,583.11

Table IX-4:Estimated Budget for
Fiscal 1972-1973
211d AID Grant

Salaries	\$104,000.00
<u>Faculty:</u>	\$54,000.00
Wood	
Harrison	
Stevens	
Pulaski	
Teigen	
<u>Graduate Assistants:</u>	\$45,000.00
Chong 1/4 of year	
Chuta	
Gemmell	
Johnson	
McDowell	
Lec	
Linsennyer	
Newke	
Torrealba	
Shields	
Swenson 1/2 of year	
Kim	
<u>Clerical:</u>	\$ 5,000.00
Fringe benefits	6,500.00
Travel	4,500.00
Postage and telephone	1,100.00
Printing and copy work	1,200.00
Supplies and materials	1,800.00
Contract services.	3,000.00
Equipment.	250.00
Books and periodicals	350.00
Maintenance and Miscellaneous	400.00
Total	\$123,100.00

Appendix - Materials Relevant
to Purposes of the 211d Grant
(Three copies of materials transmitted)

Table of Contents

- A. List of Seminar Speakers and Topics
- B. Set of Theses Abstracts - Selected Completed Theses
 1. Michael Abkin - "Policy Making for Economic Development: A System Simulation Model of the Agricultural Economy of Southern Nigeria"
 2. David A.G. Green - "Agricultural Mechanization in Ethiopia: An Economic Analysis of Four Case Studies"
 3. Earl Kellogg - "A Temporal and Spatial Model to Assist in Evaluating Investments in the Nigerian Beef Distribution System"
 4. H. James McKenzie - "An Economic Analysis of Selected Agricultural Extension Programs in Colombia, South America"
 5. Refugio I. Rochin - "A Micro-Economic Analysis of Smallholder Response to High-Yielding Varieties of Wheat in West Pakistan"
 6. Michael T. Weber - "Problems of Reorganization of Cali Food Retailers' Procurement Activities in the Planning of a New Central Wholesaler Market Facility"
- C. Outline of Public Affairs Management 260, World Poverty, Population and Food Supply
- D. Published Reports
 1. Harold Riley - "Improving Internal Marketing Systems as Part of National Development Programs", Staff Paper #72-10 Department of Agricultural Economics, M.S.U. Presented at First Interamerican Conference on Marketing and Social Economic Development in Latin America, Cali, Colombia, May 2-5, 1972.
 2. James Shaffer - "Designing Agricultural Marketing Systems in Developing Countries", presented at the Agricultural Marketing Conferences, Kathmandu, Nepal, February 21-24, 1972. Staff paper #72-3, Department of Agricultural Economics, MSU
 3. Robert Stevens and Bashir Ahmad - "Agricultural Mechanization and Rural Welfare in South and Southeast Asia", Chapter of book, Agricultural Mechanization in Southeast Asia, 1971.

4. Robert Stevens - "Rural Development Programs for Adaptation from Comilla, Bangladesh", Agricultural Economics Report-215, MSU, June 1972.
5. Robert Stevens - Selected Bibliography of Major Works About Comilla Rural Development Programs, staff paper #72-12, Department of Agricultural Economics, MSU.
6. Pablo Torrealba - "Agricultural Marketing in Economic Development, An Annotated Bibliography", Research Paper No. 9, Latin American Studies Center, Michigan State University, 1971.

E. Research Reports Completed

1. *Emphasized* Derek Byerlee and Carl Eicher - "Rural Employment, Migration and Economic Evidence from Africa", prepared for delivery to International Economics Association at Bad Godesburg, West Germany, August 26-September 4, 1972
2. Harold Riley and Eduardo Polo - "A Case Study of Carulla and Company, Bogota, Colombia" presented to a joint FAO-German Foundation seminar in Berlin, Spring 1972.
3. Robert Stevens, P. Bertocci, and H. Alavi - "Rural Development in Pakistan and Bangladesh", book in process of publication (copy not included)
4. Robert Stevens and Anwarul Hoque - "The Effectiveness and Financial Stability of the Comilla Agricultural Cooperative System", April 1972.
5. Robert Stevens - "Three Rural Development Models for Small Farm Agricultural Areas in Low Income Nations". For presentation in August 1972 to the American Agricultural Economics Association, Gainesville, Fla.

F. Working Papers

1. Derek Byerlee and A.H. Halter "A Supplementary Simulation Model of a National Economy for Agricultural Sector Analysis"
2. Kelly Harrison - "Approaches to Integration of Rural-Urban Food Marketing Systems in Latin America", ADC Workshop, Lexington, Kentucky, October 7-9, 1971.
3. Kelly Harrison - "Development, Unemployment, and Marketing in Latin America" ADC Workshop in Palo Alto, California, April 13-15, 1972.
4. James Shaffer, Gar Wood - "Institutional Performance in Agricultural Development" and management for agricultural development for an agricultural administration workshop with AID/W, October 26, 1971.

5. James Shaffer - "On the Concept of Agricultural Commodity Development Boards as Institutions for Forming Economic Development" for the LA Bureau, AID/W. Also used in Panama.
6. Robert Stevens - "Tradition and Change in World Agriculture", a book being assembled of country research reports for future publication (not included)
7. Gar Wood - Training materials on "Management in Rural Development".
8. Many other working papers were prepared under contract auspices, or if still, are in too preliminary a stage for reporting here.

Seminar Speakers and Topics

- September 20, 1971 Archibald Callaway, Oxford University. "Unemployment in Africa: Results of 11 Years of Research"
- September 21 Derek Byerlee. "Agricultural Development and Urban Unemployment: A Simulation Analysis of the Nigerian Economy"
- September 21 Sara Berry, Indiana University. "Migration in Nigeria"
- September 22 Dunstan Spencer, Njala University College, Njala, Sierra Leone. "Designing a Research Study of Rice Production in Sierra Leone Under Six Alternative Production Systems"
- September 23 Glenn L. Johnson. "The Quest for Relevance in Agricultural Economics"
- September 30 Richard Donahue, Deputy Director of Program Budget Evaluation Systems, State of Michigan. "Research and Extension Needs for State and Local Budget Problems"
- October 5 Derek Byerlee. "Critical Review of Harris-Todaro Model of Migration"
- October 7 Dan Saks, Economics Department, MSU. "Economic Analysis of Public Assistance in Metropolitan Areas"
- October 13 Michael Todaro, Rockefeller Foundation, New York. "Designing Research Studies of Migration in Developing Countries"
- October 14 Warren Samuels, Department of Economics, MSU. "Welfare Economics--Power and Property"
- October 21 Alan Shelly, Department of Economics, MSU. "Centralization-Decentralization in Planning: A Four-Country Comparison"
- October 22 Wayne Hayenga (Type III). "The Effects of Bank Mergers on Financial Services Available to Rural Michigan Residents"
- October 27 Frederick Harbison, Woodrow Wilson School, Princeton University. "Research Priorities in the Development and Utilization of Human Resources in Developing Countries"
- October 28 Charles Press, Political Science, MSU. "Appropriate Units of Governments--Problems of Consolidation"
- November 2 O.J.E. Abovade, Economic Development Institute, World Bank. "Economic Planning in Nigeria: Implications for Research on Unemployment"

- November 4 Kwong-Yuan Chong (Type III). "A Systems Model of the Western Nigerian Cocoa Subsector: A Policy Analysis"
- November 5 E. Scott Meynes, University of California, Berkeley. "The Power of Consumers: Research and Policy Implications"
- November 11 Andreas Hunt, College of Human Medicine, MSU. "Health Care Delivery for Rural Areas--The Need for Multi-Department Cooperation"
- November 18 Ray Vlasin, Resource Development, MSU. "Research Needs for Resource Development in the 1970's"
- November 24 Rais Uddin Ahmad, (Type III). "Economic Analysis of Pump Irrigation in East Pakistan"
- December 2 Kelly Harrison. "The Impact of Marketing Reforms on Employment in Latin America"
- December 10 Lloyd Telgen (Type III). "Costs, Loss, and Forecasting Errors With An Application to Beef Prices"
- January 7, 1972 Alvaro Posada (Type III). "Evaluation of Alternative Production Systems for Beef in Northern Colombia by Use of a Simulation Model"
- January 13 Alvin House. "Local Government Education and Agricultural Economics"
- January 20 Michael Brewer, President, Population Reference Bureau, Washington. "The Population Variable: Is It?"
- January 24 Theodore Schultz, Professor Emeritus, University of Chicago. "Knowledge, Agriculture and Welfare"
- January 25 Theodore Schultz. "Optimal Investment In College Instruction: Equity and Efficiency"
- January 26 Theodore Schultz. "Human Capital: A Research Opportunities Auction"
- January 27 Theodore Schultz. "Fertility, Children and Population: A New Economic Approach"
- January 28 Theodore Schultz. "Women's New Economic Commandments"

- February 3 Melvin Blase, Visiting Professor, MSU. "Public Sector Development Through Institution Building"
- February 11 Darrel Good (Type III). "Economics of Dairy Waste Management in the Lake States"
- February 11 Djavad Sadeghi (Type III). "An Economic Analysis of Alternative Corn Irrigation Systems In Southwest Michigan"
- February 14 Erik Thorbecke, Economics, Iowa State University. "Iowa State Research in Unemployment in Latin America"
- February 17 Sidney Katz, Director, Health Services, Education and Research, MSU. "Health Care Evaluation"
- February 22 Cheikh Tidiane Sy, Senegal. "Rural Animation (Development) Programmes in Senegal"
- February 24 Gary Seavers, Council of Economic Advisors, Executive Office of the President, Washington, D. C. "Agricultural Policy Issues in 1972"
- February 25 Francis Idachaba (Type III). "Government Taxation of Nigerian Agriculture: Some Implications"
- March 2 Luther Tweeten, Agricultural Economics, Oklahoma State University. "Gaps in Research on Rural Welfare"
- March 7 Princeton Lyman, Bureau for Africa, AID, Washington, D. C. "Political-Economic Interactions in the Development Process"
- March 10 Gerald Campbell (Type III). "An Analysis of Barriers to and Incentives for Selected Vertical Coordination Arrangements in the Hog-Pork Subsector"
- March 10 Vernon Ruttan, Economic Development Center, University of Minnesota. "Induced Technical Change and Agricultural Development"
- March 30 James Carter, Meharry Medical College. "Research and Action Program on Connections Between Improved Child and Maternal Health and Family Planning"
- April 5 Allen Hahn, Cornell University. "The Role of University Research and Extension in Local Public Decision Making"
- April 6 Michael Sunshine (Type III). "Consumer Protection and the 'Magnuson-Moss Act'"

- April 13 Rufus Adegboye, University of Ibadan, Nigeria.
"Customary Land Tenure In Nigeria"
- April 21 Duncan Black, Univ. College of North Wales.
"Lewis Carroll on Collective Decision Making"
- April 27 Patricia Keshel, Office of Economic Opportunity,
Executive Office of the President. "A Critical
Review of the Literature on Migration In the
United States"
- May 2 Lorne Clark, Canadian Embassy. "U. S. - Canadian
Relations"
- May 4 Dean McKee, Deere and Company. "Agricultural
Economists in Industry"
- May 5 Richard Freeman, Economics, Univ. of Chicago.
"Response of Black Students to Improvements
In the Job Market"
- May 11 Ray Supalla (Type III). "Potentials for Increasing
Earned Income of Welfare Recipients In Rural Areas:
A Case Study of Allegan County, Michigan"
- May 12 Robert Evenson, Economics, Univ. of Chicago.
"Agricultural Research Productivity"
- May 16 Kenneth Steen (Type III). "Economics of the
Impact of Multi-Unit Public Housing on Residents,
Neighbors, and Public Services"
- May 18 Delane Welsch, Agricultural Economics, University
of Minnesota. "A Tentative Conceptual Framework
for Analyzing the Impact of Technical Change
on Income Distribution"
- May 30 Dudley Seers, Institute of Development Studies,
University of Sussex. "Unemployment In Developing
Countries"--Lecture 1.
- May 31 Dudley Seers. "Unemployment In Developing Countries"
--Lecture 2.
- June 1 Dudley Seers. "Unemployment in Developing Countries"
--Lecture 3.
- June 2 Dudley Seers. "Unemployment In Developing Countries"
--Lecture 4.