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THE LAND TENURE CENTER ANNUAL REPORT

1973-1974

310 King Hall
University of Wisconsin-Madison
Madison, Wisconsin 53706

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SECTION A

STATISTICAL SUMMARY

NARRATIVE SUMMARY

OBJECTIVES OF THE GRANT

211(d) csd-2263 ANNUAL REPORT
July 1, 1974

LAND TENURE CENTER (AID Institutional Grant)
University of Wisconsin
William C. Thiesenhusen, Director

STATISTICAL SUMMARY

Period of Grant:	June 1969-June 1975
Amount of Grant:	$1,705,000.00
Expenditures for Report Year:	$ 336,425.41
Accumulated Expenditures for Report Year:	$1,341,214,77
Anticipated Expenditures for Report Year:	$ 363,785.23

At the outset it must be clear that although csd-2263 is only one source of LTC funding, it is the most basic financial component. Other monies to support the LTC program have come from the Rockefeller Foundation, the Fulbright Hays program, the Agricultural Development Council, AID student fellowships, and the Midwestern University Consortium. These funds have been used, in the main, to give graduate students field experience after their thesis proposals have been carefully drawn up in Madison. The Ford Foundation and AID contract csd-2863 have provided larger amounts than the foregoing and are more strictly research oriented.

Our policy is to seek supplementary funding wherever possible while using grant funds to, in the words of our grant paper, "strengthen the existing competence of the University of Wisconsin Land Tenure Center for a worldwide program of technical assistance, research and training in land tenure, agrarian reform, and related institutional change in less developed nations."

NARRATIVE SUMMARY

This is a very brief overview of Land Tenure Center activities during the reporting year. Readers are referred to the individual sections of the report for further detail.

1. Data are being analyzed from the large panel-design Chilean study and significant conclusions are emerging. Some of them are

described in Section B of this report.

2. Data from a similarly designed study of four Colombian communities are also being analyzed and a number of publications have resulted. Some of these results are also described in Section B. A new Colombian agreement is also included in Section B.

3. The analysis of how four Chilean land reform projects changed over a six-year period has been published in both English and Spanish.

4. The relationship with Kyoto University went into effect. A Kyoto faculty member spent a semester at the Land Tenure Center and a special publication resulting from that visit is in manuscript form.

5. A research project dealing with opportunity structures in a rural area of Japan has been initiated. Two Japanese graduate students are associated with the Land Tenure Center.

6. A contract was implemented with USAID/Ethiopia to train officials of the Ethiopian Ministry of Land Reform and Administration. Two trainees spent a semester at the Land Tenure Center. Results of their research are described in Section B of this report.

7. A staff member left for a two-year stay in the Philippines. He will serve as Agrarian Reform Advisor with USAID/Philippines.

8. A contract was signed with USAID/Honduras to supply the Agrarian Reform Service in Honduras with research and analyses. A Land Tenure Center staff member will leave for a 14-month stay in Honduras during the next reporting year.

9. Three Land Tenure Center faculty constituted the planning committee for an international conference on group farming experiences in various world regions. The conference, which will be held in the 1974-75 academic year, is co-sponsored by the Research and Training Network Program of the Agricultural Development Council and the Land Tenure Center.

10. An agreement was signed with the Fundación para el Desarrollo de la Región Centro Occidental de Venezuela (FUDECO) which establishes a joint program of research and training.

11. Short-term restudies of the effects of land reform in Bolivia and Peru have been completed. Results of the Peruvian study have been published; the Bolivian results are in manuscript form.

12. The Land Tenure Center Library's volume, Agrarian Reform in Latin America: An Annotated Bibliography, is complete. It contains more than 5,000 entries along with author and subject

indexes. Publication as a Land Economics monograph will be in 1974.

13. The manuscript for another book, Land Tenure and the Peasant in South Asia, is currently being edited. Publication will be in 1975.

14. A new film, "Counterpoint of the Agrarian Reform, Chile, 1973," was issued in both Spanish and English.

15. Eight students received the Ph.D. in Development degree. Their job status is reviewed in Section C of this report and abstracts of their theses may be found in Appendix C. Five new students were admitted to the degree program.

16. A study of the economic and legal variables in farm-level marketing of selected agricultural products in the Pampean region of Argentina is nearing completion.

17. Work has begun on studies of: communal land ownership in the Ethiopian province of Eritrea; potentials for development of non-traditional agriculture in Central America; the prospective roles of labor-intensive methods of agriculture, technology, and rural industries in the regional development of Mexico; income distribution in Sri Lanka; and the income and social consequences of technological change in agriculture in the less developed countries of Asia.

18. Fieldwork has been completed and data are being analyzed for two studies of cooperative production units in Chile and El Salvador and one on adoption of new corn-growing technology in El Salvador.

19. A Land Tenure Center faculty member led a task group involved in an applied system study of world climate variation in relation to food production.

20. Fourteen Land Tenure Center students (13 of them from outside the U.S.) received the Master's degree; five, in addition to the Ph.D. in Development students, received the Ph.D. Three of these students were from outside the U.S.

21. Land Tenure Center faculty on campus advised 135 advanced students, well over half of them from outside the U.S. Land Tenure Center faculty abroad also advised some students.

22. Twenty-six courses were taught by Land Tenure Center faculty on campus. Courses were also taught by faculty members who are out of the country.

23. Land Tenure Center faculty responded to requests to do consulting work in the following countries: Philippines, Honduras, Guatemala, Peru, Venezuela, Colombia, Mexico, Japan, Ethiopia, Jamaica, Kuwait, Egypt, Chile, El Salvador, India, Bangladesh, Thailand,

and Indonesia. They responded to specific requests from: Inter-American Foundation, USAID/Philippines, USAID/Honduras, the National Planning Council of Guatemala, FAO, UNDP, FUDECO, Centro Interamericano de Desarrollo Rural y Reforma Agraria (IICA-CIRA), CIMMYT, Centro de Investigaciones Multidisciplinarias en Desarrollo (CIMDER), Michigan State University, OAS, Organization of Arab Petroleum Exporting Countries (OAPEC), USAID missions to Central America, Honduran Institute of Agrarian Reform, World Bank, Inter-American Development Bank, the United States Ambassador to India, Philippine Agrarian Reform Institute. No requests for consulting were turned down.

24. Land Tenure Center faculty participated in 80 national and international meetings and conferences, giving speeches at many of them.

25. The Land Tenure Center sponsored 30 informal seminars during the reporting year. Attendance averaged between 20 and 60 persons, with a total attendance for the year of over 1,000 persons.

26. More than 122 visitors from approximately 40 countries came to the Center to use its Library, consult with faculty members, and obtain publications. Among them were: Gerhard Tschannerl, Deputy Director of the Tanzanian Bureau of Resource and Land Use Planning; Orlando J. Sacay, Undersecretary of the Philippine Department of Local Government and Community Development; and J. Mario Ponce C., Director of the Honduran National Agrarian Institute.

27. The Land Tenure Center Library added approximately 8,500 new items to its already outstanding collection; about 1,000 of these were materials on Latin America which were donated to the Library by various sources. Of the 7,500 purchased items, 28.9 percent dealt with Africa, 28.1 percent with Latin America, 26.8 percent with Asia, and 16.2 percent were of general interest.

28. The Library staff prepared one new addition to its Training and Methods series and two supplements to previously issued items in the series.

29. One-hundred-and-thirteen research publications were prepared by the Land Tenure Center Executive Committee and associates.

30. Fifty-three new publications were added to the Center's publication series during the reporting year, and approximately 137,000 individual items were distributed. The 4,000-entry mailing list was computerized and a new advance mailing system instituted.

OBJECTIVES OF THE GRANT

Objectives Restated*

This grant is designed to strengthen the existing competency of the University of Wisconsin Land Tenure Center for a world-wide program of technical assistance, research and training in land tenure, agrarian reform, and related institutional change in the less developed nations. The grant will help to provide secure, long-term support for an expanded core program including salaries of key staff members engaged in original research, integration of findings of previous research, teaching, and developing new curricula. It will also provide support for graduate students and for library acquisitions. It will make possible the creation of additional professional strength and competence in the area of land tenure and reform, and will provide the necessary analytical foundations for the resolution of land tenure problems. It will provide for expansion of the University's present focus on Latin American land tenure problems to include Asia and Africa.

The University of Wisconsin expects to be able to continue its present level of financial support as well as to provide:

1. Necessary space for faculty members and students.

2. Use of library, equipment, supplies, and other necessary facilities.

3. Normal administrative and technical supervision by department heads, deans, and the Dean of International Studies and Programs.

4. Advice and consultation with all faculty members who by virtue of special competence and experience can bring wisdom to the program.

Under the grant:

1. The University will expand its permanent, full-time professorial core staff which, under the Director of the Land Tenure Center, will be responsible for the Land Tenure Center activities of the University. These activities will include organizing interdisciplinary courses of study in land tenure and related rural institutions at the graduate, undergraduate, and special short-course levels for both U.S. and foreign students. This will involve the development of new courses and the restructuring of some existing courses as required to round out the instructional program in this field.

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*These are excerpts from the final proposal to AID dated March 28, 1969, signed by AID and the University of Wisconsin in June 1969.

2. The University will expand library and public information services on all aspects of land tenure and related institutional development.

3. The University will expand its research into geographic regions other than Latin America to provide interregional comparative analyses essential to the development of a world-wide land tenure competence.

The Land Tenure Center has gathered an outstanding group of scholars who are equipped to research and deal with these complex issues, which are broken down into the following areas:

Area I:* Tenure arrangements, systems of property and their broad effects

This area includes issues related to private farms, communal properties, collectives and mixed systems, and their social, economic and political effects. Studies are encouraged which examine innovative tenure arrangements (like group farming or production cooperatives) in areas of major agrarian reforms as well as tenure conditions in areas of colonization and new land settlement. Related problems which interact with tenure systems such as land titling, title registration and taxation are included. Studies are needed in many Asian and African countries on the effects of present land tenure systems and associated institutions in furthering or hindering agricultural development. Much of this information is already available on Latin America. In addition, this area includes building a comprehensive body of knowledge dealing with land and water tenure, agrarian structures, and the formal and informal rules, sanctions and enforcement institutions related to agricultural production.

Also encompassed by this area are studies of the legal framework which regulates economic and social activities in the rural sector. This includes describing and evaluating the legal and administrative machinery for planning and carrying through agrarian reform, land settlement, and development schemes. Evaluations of implementation strategies and mechanisms used by existing projects are of special interest.

Area II: Community organization, services, supplies and local controls

This area includes investigation of the nature and extent of change in local organizations, voluntary associations and public service activities to effectively draw more people into the mainstream of development.

As a result of new technology, further attention needs to be given to the organization and operation of agricultural supply systems for making

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*Note: these areas and how specific programs fit into them will be referred to in Section B on research.

inputs available to small producers. This includes rules and incentives of service organizations or the role of peasant organizations in reorganizing agriculture in the developing nations.

Of particular interest are studies which indicate how local people have been able to organize effectively to plan, finance, build and maintain local infrastructure. Comparative studies which illustrate how agricultural service agencies, local governments, and community enterprises have been created or organized would be helpful.

Additional work is needed in most developing countries to analyze the problems of agricultural research, extension and information programs, marketing organizations, credit institutions, transportation, and local planning and administration. The types of services available to large and small scale producers are not well documented or understood. A study of the relationships among local government, political organizations and the formal law would yield valuable data for development programs.

Area III: Technology, employment and income distribution relationships

A broad range of studies are needed concerning the consequences of modernization, such as the impact of changing technology (like green revolution inputs and mechanization) and related measures of rural modernization on employment creation and income distribution in rural areas. This also includes the attendant problem of the economic, social and political consequences of rapid rural to urban migration and employment shifts.

Changing technology in agriculture frequently results in institutional adjustment but can also create the need for direct intervention to achieve institutional change. The secondary effects of technology also need to be studied in terms of tenure conditions, market controls, new forms of community influence and the changing structure of training and employment opportunities for young people.

Of particular concern are uneven effects of the new technology in agriculture. A great deal more needs to be learned about how small scale farmers and new settlers can benefit from new crop varieties, mechanization and pest controls, and how they can maintain their relative positions after broad scale technical changes have been introduced.

This area of work will also address a variety of problems concerned with the development of new technology itself and with its dissemination from centers of research to agricultural producers. The creation of institutions for technical study and the design of service delivery systems should be key elements in this study.

In a word, Land Tenure Center research continues to be focussed upon rural and agrarian institutional problems investigated within an

interdisciplinary framework. The three research areas outlined above a: closely interrelated and overlap at some points.

The executive committee advises the Director on broad policy matte: In the reporting year this committee consisted of:

On Campus

Marion Brown
Associate Professor
Agricultural Journalism

Peter Dorner
Professor and Chairman
Agricultural Economics

Mohammad Douglah
Associate Professor and Chairman
Agricultural and Extension Education

Herman Felstehausen
Associate Professor, Agricultural Journalism and
Institute for Environmental Studies

William Flinn
Associate Professor, Rural Sociology and
Extension Sociology

Robert Frykenberg
Professor and Chairman, Indian Studies
(also History)

A. Eugene Havens
Professor, Rural Sociology

Don Kanel
Professor, Agricultural Economics

Kemal Karpat
Professor, History

David King
Visiting Assistant Professor
Agricultural Economics

Kenneth Parsons
Professor Emeritus, Agricultural Economics

Raymond Penn
Professor Emeritus, Agricultural Economics,
Urban and Regional Planning, and
Institute for Environmental Studies

David Stanfield
Visiting Assistant Professor, Sociology

John Strasma
Professor, Economics and Agricultural Economics

William Thiesenhusen
Director, Professor of Agricultural Economics
and Agricultural Journalism

Joseph Thome
Professor, Law

Eugene Wilkening
Professor, Rural Sociology

Off Campus

Duncan Harkin
Associate Professor, Agricultural Economics
and Resource Policy Center
(Philippines)

James Scott
Professor, Political Science
(France)

Robert Seidman
Professor, Law
(Zambia)

Other Madison-Based Faculty

Fritz Albert
Professor, Agricultural Journalism

Carl Bögholt
Professor Emeritus, Philosophy

Administrative and Staff Personnel of the Land Tenure Center

Madison

Teresa Anderson, Librarian
**Laura Brewer, Annual Report Typist
*Beverly Cusimano, Stenographer
Jane Dennis, Manuscript Typist
*Gretchen Dihoff, Library Cataloging Specialist
Donald Esser, Administrative Assistant
**Linda Frey, Library Typist
*Gail Gregg, Library Acquisitions Assistant
*Douglas Horton, Specialist

*Sandra Kalscheur, Editorial Specialist
Dr. Jane Knowles, Editor
Charlotte Lott, Assistant Librarian
*Shaukat Naeem, Library Processing Assistant
Rodrigo Parra, Research Associate
Richard Puhek, Library Serials Assistant
Barbara Rhem, Student Program Specialist
Linda Romero, Technical Typist, Rural Migration Project
Julia Schwenn, Program Coordinator
JoAnn Steinberg, Accounts and Publications Assistant
Elizabeth Steinhagen, Program Specialist
Gerry Strey, Library Publications Assistant
**Melanie Strub, Typist
*Michael von Schneidemesser, Specialist/Programmer

*Part time
**Part year

Santiago, Chile

Silvia Bascour de Cabezas, Administrative Assistant

Bogotá, Colombia

Olga de Manos, Administrative Assistant

SECTION B

LAND TENURE CENTER RESEARCH ACTIVITIES

CURRENT RESEARCH PROJECTS: LAND TENURE CENTER FACULTY AND FELLOWS

Below is a description of research projects currently being conducted by Land Tenure Center Faculty and Fellows. These projects are in various stages of completion, and, where possible, the descriptions include information on research results. Each research project falls into one or more of the areas of Land Tenure Center research focus described in the introduction to this report. These summaries may be supplemented with full studies on a loan, gift, or purchase basis for any interested person who writes for more detail to the Land Tenure Center.

Area I: Tenure Arrangements, Systems of Property, and Their Broad Effects

Argentina

The dissertation of Mario J. Del Fa (Argentina: Ph.D. student in Agricultural Economics and Law) will treat economic and legal variables in farm-level marketing of selected agricultural products in the Pampean region of Argentina. Particular emphasis is given to the financing of transactions through a "trade credit" system distorted by the practice of delayed payments. The study is based on primary data from the period 1967-7 gathered through a questionnaire. One hundred and twenty farms were randomly selected for the survey; these farms were equally divided in number among three politico-legal units and proportionally stratified according to farm size. Similarly structured questionnaires were administered to private agricultural marketing agencies, banks and other financing agencies, transportation agencies, federal and local regulatory agencies, and courts and private law offices.

Preliminary analysis of the data indicates that more than 85 percent of farm-level marketing transactions involve delayed payments to the farm sector, and there is no evidence of shadow interest, i.e., a relationship between price paid for the commodity and length of delay in payment. This system of delayed payments discriminates against the seller of farm commodities. He becomes an unwilling creditor for the buyer, and stands to lose 3-7 percent per transaction, particularly in periods of substantial inflation; self-generated farm investments are consequently affected. With few exceptions, farmers have little control over the length of this delay in payment and little likelihood of predicting it accurately. Deficiencies in the legal structure, such as conflicting statutory rules, the lack of legal facilities in rural areas, and legalities which delay the process of law, are instrumental both in the development and severity of delayed-payment problems and in their resulting negative effects on the certainty and security of transactions at the farm level. Field research and part of this study were supported by the Ford Foundation.

Bolivia

The Land Tenure Center has received a final report from the LTC/CIDA (Interamerican Committee of Agricultural Development) study team, which conducted an intensive investigation between 1965 and 1970 of the Bolivian agrarian reform. This material is currently being translated and edited for a book, with publication tentatively scheduled for early 1975. In addition to the LTC/CIDA team report, this study produced many written materials, published and unpublished, in both English and Spanish, in the form of case studies, articles, field notes, and other background data on the Bolivian agrarian reform. This material is available at the Land Tenure Center Library and lends itself to studies in all three research areas. In an effort to make use of this material and to facilitate its further use by interested parties, two Land Tenure Center fellows, Peter Graeff and Joseph Dorsey, working under research assistantships from the Land Tenure Center and the Department of Agricultural Economics, have continued during the reporting year to research selected parts of the material.

Before leaving the Land Tenure Center to work with the Instituto Inter-Americano de Ciencias Agrícolas (IICA) in Costa Rica, Graeff completed a research paper on the question of whether landlords should be allowed to retain a portion of their holdings which they may continue to work in the post-reform period in the midst of their ex-laborers and sharecroppers. Evidence from the case studies and other material tends to indicate that the consequences of allowing this to occur are generally negative, tending to defeat goals of the reform. Economic, social, and political relationships between different social groups are difficult to change and are not likely to be significantly altered unless those who have for so long manipulated the system to their advantage are removed from the scene.

Important manifestations of the persistence of exploitative relationships after the reform are the devices employed by landlords to secure manual labor through sharecropping, tractor service exchange, and other arrangements. The relative strength of local agrarian unions is seen as a major factor affecting the bargaining position of the campesinos in dealing with the pressure applied by the old landlords. Areas where landlords remained on part of their land are compared with those where they were prevented by legal or other means from remaining. This paper will be issued in the fall of 1974 as Land Tenure Center Paper No. 103.

Dorsey spent July and August of 1973 on a field assignment in Bolivia which he undertook on behalf of the International Bank for Reconstruction and Development (IBRD) and the Land Tenure Center. His assignment was to update existing information on the results of the agrarian reform by gathering data both at the national level and the local ("case study") level. He is presently preparing for comparison with sample data gathered in 1967 new cross-section data collected in the Cochabamba Valley.

Dorsey completed a research paper in June on fertilizer usage in Bolivia. He concluded that nearly all fertilizer was employed by campesino farmers in traditional areas of the country rather than on large commercial farms in the lowlands, and that production of nitrogenous fertilizer is feasible in Bolivia at the present time and would provide a major

stimulus to increased fertilizer usage.

During the course of the summer, Dorsey will prepare a final report and set of case studies based on data gathered in Bolivia and additional material supplied by IBRD. His report is one of five country studies which form the data base for an examination of land reform and new reform enterprises, financed by IBRD. Of the five countries studied, Bolivia, Chile, Mexico, Peru, and Venezuela, the Land Tenure Center is furnishing personnel and financial support for research on Bolivia and Peru. [For reference to the Peruvian study, see Section B, pages 40-41.]

Chile

Work continued during the reporting year on a longitudinal study of economic and social change in a sample of very large farms in Chile's Central Valley. In its simplest terms the project can be described as a "before-after" study of the Frei reform. 1/ It began in 1965 with a survey of a random sample (panel) of 105 haciendas that were larger than 80 Basic Irrigated Hectares (BIH) 2/ and therefore expropriable because of their size. This base-line survey was completed before expropriation began on a large scale under Frei's Agrarian Reform Law. It documented existing conditions and provided the basis for monitoring the reform process over time.

The "after" phase of the study began in 1970, and focused on the agricultural year 1970-71. Briefly, it consists of a re-survey of the same farms studied in 1965 as well as new units of various types which emerged after 1965 as a result of expropriation and private subdivision of some of the farms in the sample. There were 215 such units by the end of the agricultural year in question (May 1971). Data were gathered concerning the operation and management of the "central enterprises" of each of these units, as well as various "satellite enterprises," such as land rented out, sharecropped, or granted to workers and reform beneficiaries as partial remuneration for their labor. 3/

Questionnaires were also administered to a 25 percent sample of the permanent resident workers on each farm unit, a total of some 1200 individuals.

1/ A complete description of the methodological design is available in David Stanfield's unpublished paper, "Methodological Notes on Evaluating the Impact of Agrarian Reform in Chile's Central Valley."

2/ A BIH is an abstract unit which represents productive potential rather than raw size. See page 10 for a fuller discussion.

3/ By central enterprise we mean lands and other resources controlled directly by the owners of private farms and by the production cooperatives on reform units, as opposed to smaller portions of land managed by individual workers and their families ("satellite enterprises").

The project was severely affected by the military coup d'etat of September 11, 1973 and by economic and political conditions immediately preceding and following it. However, thanks in part to timely assistance and support from AID/Chile, it was possible to keep the office open and revive the project shortly after the military takeover.

Virtually all data collected on the panel farms during the 1970-71 agricultural year have now been tabulated. Computer files have been constructed and are being used both in Madison and Santiago for detailed analysis of the various paths of structural and social change that occurred on the sample farms during the period 1965-1971.

Some preliminary findings regarding basic shifts in tenure and patterns of ownership were presented in last year's Annual Report, and are available in mimeograph form in a paper by Professors Stanfield and Brown entitled "Evolution of Tenure Structures in the Large Haciendas of Chile's Central Zone Between 1966 and 1971."

In this section we will discuss some basic historical antecedents to the Frei and Allende reforms and summarize findings that have emerged during the past year concerning two basic aspects and consequences of the reform process: 1) Expropriation policies with respect to the amount and quality of lands affected; and 2) Changes in resource use and production. Some employment consequences of the reforms are summarized in Research Area III.

Some Historical Antecedents: Chile's agrarian structure is largely a legacy of the colonization policies of the Spanish Crown. An important aspect of these policies with implications for modern landholding patterns and labor relations as well as recent reforms was the encomienda system. The encomienda (literally "trust") placed enormous tracts of land under the control of conquistadores and other Spanish families, together with the charge to care for, protect, and Christianize the indigenous population. Property rights were vague, but the encomiendas became de facto haciendas with virtually total control over both the land and the conquered Araucanians (now called Mapuches) who lived on it.

In addition to encomiendas there were outright grants, called variously mercedes, repartimientos, or composiciones. 4/

These various forms of grants, trusts, leases, and sales differed in terms of security of proprietorship and degree of control over resources and labor. Colonization was not a simple transfer of land and water rights from the Spanish Crown to favored Spanish colonists. From the time of the conquest there were complex and conflictive situations not only

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4/ For a detailed discussion of the emergence of the traditional structure of rural property in Chile see Jean Borde and Mario Gongara, "Evolución de la propiedad rural en el Valle de Puange," Editorial Universitaria, 1965.

because of the protracted war between the Araucanians and the Spaniards, but also because of a power struggle among the Spaniards themselves. These conflicts involved access to and control over labor as well as over land. During the fifteenth and sixteenth centuries a complex and confusing structure of laws and proclamations emerged which enabled a few privileged and politically strong families to amass ever larger tracts of land and increase their control over the lives of the indigenous population and less fortunate immigrant families. By the early 1800s most of Chile's good farm land had been consolidated into very large estates. For the most part these were cattle ranches producing for the domestic market.

Late in the same century, new export markets opened up, especially in Peru, and many hacendados began to shift from cattle to wheat. This required more labor, so the landowners sought to establish large resident labor forces on their properties. This, according to Gongora, was the beginning of inquilinaje, an institution which has, together with the "Mapuche question," formed a central part of the Chilean rural structure for nearly a century. 5/

The inquilinos (literally "renters") were attracted to the haciendas through a variety of arrangements ranging from simple rental contracts to sharecrop tenancy. Chilean historians are divided as to the social and racial origins of this group, but the prevailing view 6/ seems to be that most were of largely European descent; the "foot soldiers" of the conquest and members of downwardly mobile Spanish families who lost out in the early scramble for land. Families which were not able to garner a "critical mass" of land and other wealth were unable to follow the prevalent tradition of mayorazgo; that is, to pass all family lands from one generation to the next without subdividing them among heirs. Unable to establish multiple heirs in lucrative professions or to subsidize them adequately from their rural wealth base, they were forced to divide their lands, giving rise within a few generations to minifundia and a growing proportion of landless families. 7/

These, according to Gongora, settled on the large estates in increasing numbers as "renters," displacing day laborers (peones and slaves) who in turn became temporary and migrant workers (afuerinos). Initially the inquilinos were renters in the conventional sense, paying in cash or shares for the use of hacienda lands. They were not wage laborers but entrepreneurs in their own right. However, as their numbers increased, and as a combination of opportunities and economic pressures stimulated

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5/ Ibid.

6/ See Gongora.

7/ For a discussion of this process see Brown, "Private Efforts at Reform," in Peter Dorner, ed., Agrarian Reform in Latin America: Issues and Cases, Land Economics Monograph no. 3 (Madison, Wisconsin, 1971).

the hacendados to take over more direct control of their lands, the inquilinos began to lose their relatively independent status. Gradually their bargaining power eroded until they were, in fact, laborers who received a part of their pay in the form of a subsistence plot and the right to pasture a few animals within the hacienda's boundaries.

It is important to note that the majority of inquilinos probably were not of peon or "working class" origin. This point is critical to understanding the dynamics of the rural labor movement which preceded and greatly affected the reform process. It is also a crucial point in what has been characterized as the "new class hypothesis," which depicts the reform beneficiaries (mostly inquilinos) as having failed to maintain a united front with other sectors of the rural work force once they had received their land. It could be persuasively argued that inquilinaje was, from the outset, a middle class institution and that inquilino families constituted a constantly growing if increasingly harried and downwardly mobile rural middle class. They were geographically isolated on haciendas, having little contact with those on another. Furthermore, they felt themselves somehow apart from other members of the agricultural working class who came and went on an hacienda while the inquilinos remained in one place. Failure to consider the very real possibility that the self-perceived social identity as well as the concrete economic and political interests of inquilinos have rarely if ever been identical to those of minifundistas (subsistence farmers), afuerinos, and Mapuches may be responsible for a great deal of erroneous analysis and a lot of unrealistic expectations on the part of both social scientists and political activists in Chile. Whatever the cause, unfounded expectations concerning campesino solidarity were especially salient (and tragic) during the Allende years.

By the time Chile gained its independence in the early nineteenth century, the landed aristocracy had consolidated its power in both rural and urban areas. For more than a hundred years their power remained virtually intact. They were able to legislate and govern in their own behalf to protect their rural property and their virtual domination of the entire Chilean political process. More successfully than most rural elites in Latin America, they were able to absorb new elements, adapt to changing conditions, and accommodate industrialization and urbanization. The integrity of the landed aristocracy as the undisputed ruling force in Chilean politics remained intact well into the present century. It was not until after World War I that land reform became even an issue of any real political importance. And even after land reform became a plausible threat to their hegemony, the landed aristocracy was, time and again, able to deter efforts to change the rural structure by making minor concessions and "deals" with the growing urban middle class and reformist or anti-establishment groups and political parties. Urban pressure groups, unions, and virtually every other political entity in Chile entered at one time or another into open or tacit alliances with landed interests. The principal outcome of these alliances was that throughout more than half of the twentieth century the rural order remained essentially unchanged at the same time that a highly credible image of democratic rule was established and carefully maintained. Even so, the hacendado's ability to resist mounting pressures for change were, with each concession and each

new alliance, gradually eroding. By 1964 the system of rural property was under serious threat. At this point the long struggle to wrest control of the country from the landed aristocracy came into rather sharp focus. To many the highly visible pressures for reform seemed to have emerged suddenly and largely as a result of "agitation" of the campesinos by urban organizers. 8/ Actually the agrarian crises of 1964, 1970, and 1973 were all manifestations of a continuous 50-year struggle.

The stability of the existing rural order in Chile, after the turn of the present century, depended in large part on the ability of the landed class to forestall substantial reforms of the tenure structure. They compromised with urban interests on industrialization issues and won support (even from the Communist and Socialist parties) for a policy of "benign neglect" of the peasant sector. Perhaps most importantly they won state support for the systematic suppression of the rural labor movement. 9/

The terms of these "deals" and compromises were rarely stated openly, and of course they were observed in the breach by all parties concerned to one extent or another. And, of course, the campesinos themselves were never a party to the bargain. Rather, they were its primary victims, and they constantly challenged the existing "stabilizing arrangement" by pressing for their right to organize large-scale, effective labor unions. This is still a little recognized fact. Most recent analyses of the rural labor movement tend to characterize the campesino as complacent and acquiescent. The credibility of this image speaks convincingly of the remarkably successful "low profile" suppression of the movement by the landowners, aided by urban groups who until the 1960s had little to gain by allying themselves with the rural poor.

With the electoral reforms of 1958, the balance of voting power shifted markedly in favor of the campesinos and the basis of the old "stabilizing agreement" was destroyed. They now represented a significant voting block, and their support was vigorously sought by various urban-based groups and parties, especially the Christian Democrats (PDC) and the Marxist coalition, then known as Frente de Acción Popular (FRAP).

At the time of the 1964 elections, Chile's agriculture was in disarray. It was characterized by exaggerated concentration of land and income, underutilization of resources, lagging production, and severe underemployment. At the beginning of the Frei administration 2 percent of the farms accounted for nearly 70 percent of the land. The legal minimum rural wage, including the value of payments in kind, was less than 75 cents per day. Nearly 42 percent of the irrigable land in the Central Valley was in unimproved natural pasture. Agricultural output had increased by an average of only 1.8 percent per year since 1930, while the

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8/ For a detailed discussion of the campesino movement in Chile see Marion Brown, "Peasant Organizations as Vehicles of Reform," in Dorner, ed., Land Reform in Latin America, pp. 184-206.

9/ Ibid.

population had grown by nearly 2.5 percent per year during the same period. Rural underemployment was estimated at 30 percent and some 685,000 people (29 percent of the 1950 rural population) had migrated from farm to city during the previous decade. Despite this massive rural-urban migration, the rural labor force continued to grow in absolute terms resulting in underemployment in the large farm sector and accelerated subdivision of small holdings. Statistics on rural education, literacy, nutrition, infant mortality, housing, sanitation, and health care showed that the quality of life for the majority of farm people in Chile was low by virtually any standard, and continuing to deteriorate.

Proposed solutions to these problems took two essential forms:

a. The classical or neo-classical approach, which emphasized technological change, and which attempted to promote economic growth within the present social and political structure, utilizing the market and growth of demand to guide investment, and assuming that marginal groups would eventually benefit.

b. The reformist approach, which emphasized structural change to ensure greater redistribution of income and more direct political, economic, and social participation by the majority of the population in the development process.

According to classical and neo-classical dual economy models, the "unlimited supply of labor" in traditional agriculture will, theoretically, be absorbed by the expanding modern capitalist sector. Those who support the reformist position contend that classical economic predictions of labor absorption were not being borne out and that a continuation of conventional modernization policies (with their great emphasis on technology) would result in the further deterioration of the already precarious situation of the rural masses due to decreased employment and intensified concentration of power and wealth. Reform theorists painted a paradoxical picture of dramatic technological success on the one hand and serious social disequilibria on the other. 10/

Frei was elected on an essentially reformist platform which committed the Christian Democrats to an ambitious program of land expropriation and redistribution. This commitment was severely tested during the six ensuing years by the opposition and by the disagreements and conflicts within the PDC. The result was a compromise "populist"

10/ See, for example, Solon Barraclough and Jacobo Schatan, "Technological Policy and Agricultural Development," forthcoming in Land Economics; J.R. Harris and M.P. Todaro, "Migration, Unemployment and Development: A Two Sector Analysis," American Economic Review 60 (March 1970): 126-42; Peter Dorner and Don Kanel, "The Economic Case for Land Reform: Employment, Income Distribution and Productivity," Land Reform, Land Settlement and Cooperatives, no. 1 (FAO, 1971), also available as LTC Reprint 74; and William C. Thiesenhusen, "Latin America's Employment Problem," Science (1971), also available as LTC Reprint 70.

strategy which combined reformist and more classical modernization policies. Large unproductive farms and farms experiencing intense labor conflicts were expropriated while better managed and socially stable units were encouraged to modernize along conventional lines. This dual policy is reflected in Frei's land reform law, and even more so in his actual expropriation policies, which exempted many owners outright and allowed others to subdivide their farms privately, to keep a larger reserve and to receive greater compensation if their farms were especially productive. It was also reflected in highly subsidized credit and machinery importation policies for the modernizing commercial sector. One study reported an increase of 164 percent in machinery and equipment on a sample of private farms between 1964 and 1969. 11/

By September 1970, near the end of Frei's term, the reform sector included 1,364 formerly private farms comprising about 12 percent of Chile's irrigated land. Approximately 25,000 families had been settled on this expropriated land, which represented about one-fourth of Frei's original goal.

Frei's reform units are called asentamientos and are organized and operated along quasi-cooperative lines. The asentamiento typically corresponded to the expropriated farm, less any reserve left to the former owner. The beneficiaries were, in most cases, the former inquilinos of the expropriated farm.

The asentamiento was set up as a temporary arrangement by which the state land reform agency (CORA) and a local peasant committee jointly manage expropriated properties during a three-to-five-year transition period. According to the law the peasants on each asentamiento (which averaged about 30 families) decide at the end of this period whether to continue with cooperative ownership and management, to divide the land into individual units, or some combination of the two. The Frei government encouraged cooperative and mixed options, and most of the asentamientos which matured during his term have chosen accordingly.

Frei's combination of classical and reformist approaches in different sub-sectors of a relatively homogeneous area (Chile's Central Valley) provides an empirical basis for testing a number of assumptions and predictions concerning the relationships of productivity, technology, and employment under different structural and institutional arrangements. This is the aim of the present panel study outlined earlier. Some salient findings of that study are presented in the remainder of this section and in Research Area III.

11/ Wayne Ringlien, "Economic Effects of Chilean National Expropriation Policy on the Private Commercial Farm Sector, 1964-1969," (Ph.D. Diss., University of Maryland, 1971).

Expropriation Concepts and Policies: Chile's first major agrarian reform law was passed during the regime of Jorge Alessandri in 1962. This law provided for expropriation, only where very low productivity or virtual abandonment could be proven. Even this limited power was not implemented to any extent until Frei came into office in 1964. The Christian Democrats immediately began applying the Alessandri legislation law at the same time that they pressed Congress for a more liberal law which greatly increased expropriation powers.

Two years passed before the Frei law was approved. During this period the reform proceeded on the basis of negotiated "purchases" of lands, many of which were offered by their owners. With the prospect of a tougher law, some hacendados preferred to sell under the terms of the Alessandri legislation. As it turned out, they did get a better deal than those who waited, benefitting from relatively more liberal assessments, higher land prices, larger down payments, and greater likelihood of keeping a sizeable reserve.

As pointed out earlier, the panel of farms involved in the present study were prime candidates for expropriation. The economic importance of these farms and of the universe from which they were drawn is reflected in Table I.

Farms were selected from this universe on a random basis so that expropriations, subdivisions, and other changes occurring within the sample would be taken as representative of transformations occurring throughout the hacienda sector.

Expropriation and Land Quality: The 1967 reform law created a new unit of land measurement called the Basic Irrigated Hectare, in an attempt to devise a fair system for fixing the "size" of a farm for purposes of taxation and/or expropriation. This was done on the basis of an aerial survey of the entire central zone. Some characteristics of the soil itself were taken into consideration, but the most crucial distinction was between arable lands that were situated below existing canals, and lands that were neither arable nor irrigable. Irrigation is crucial to production in all of the nine provinces of the central valley which were included in the study.

On the basis of the aerial survey, the country was divided into zones and "coefficients of equivalence" were derived for each zone. The standard for the BIH was "one hectare of high quality irrigated land in the Maipo river basin." 12/ The coefficients were designed to take productivity into account, and were then used to adjust the gross size of a given farm accordingly. Thus a very fertile farm of 50 hectares with plenty of water might be judged expropriable (equivalent to more than 80

12/ This is an extremely fertile valley near Santiago.

TABLE I: SOME CHARACTERISTICS OF THE UNIVERSE SAMPLED

rovince	Total No. of very large Haciendas (a)	Large Haciendas as a % of all properties in each province	Total Area in very large Haciendas (in BIH)*	Area of large Haciendas as percent of area in province (in BIH)
concagua	45	1.2	12,503	34.7
alparaiso	50	1.2	16,053	56.0
antiago	272	3.3	84,380	54.6
'Higgins	188	2.2	62,860	54.0
olchagua	121	2.1	33,004	44.3
uricó	45	1.4	10,477	29.3
alca	130	2.6	41,199	50.1
inares	128	1.9	53,825	49.6
uble**	88	0.47	20,771	26.3
TOTAL	1,067	1.7	335,072	47.0

OURCE: (a) CIDA, Table XI-3, p. 148

*BIH is Basic Irrigated Hectares, a measure of farm size approximately that used in the law passed in 1967.

**In Ñuble two-thirds of the province could not be included because of lack of basic data; therefore, these percentages are not comparable with the rest.

BIH), whereas a farm of several thousand unirrigated hectares might not be considered a latifundio. 13/

The sample studied can be broken down into four basic types in terms of expropriation: 1) Latifundios that were not expropriated or subdivided; 2) those that were expropriated in their entirety; 3) those that were partially expropriated; and 4) those that escaped expropriation through private subdivision prior to passage of the 1967 law. By the end of Frei's term in 1970 the sample of 105 haciendas had changed considerably, as can be seen in Tables II and III. The fundos 14/ where expropriation occurred were clearly the larger farms.

The unexpropriated and undivided fundos had, on the average, more dry land than the subdivided fundos, but in BIH units, the latter type of farm had more productive potential.

For analytical purposes, the relationship between physical hectares and BIH for a given farm was used as an index of land quality. Actual physical area was divided by BIH. Table IV shows the average quality of land for the four types of units.

Note that the 27 subdivided fundos had the highest quality of land on the average. The partially expropriated fundos have high irrigated land quality, largely because of the eight farms with reserves expropriated in the Aconcagua Valley, where the coefficient for first-quality irrigated land is 2 (i.e., one-half hectare equals one BIH). This valley also has a large amount of mountainous land, which is reflected in the fact that this category contains over 35 percent of all the dry land in the sample. The average is 2,376 dry hectares per farm. The completely expropriated fundos had the lowest average largely because of the relatively large amount of dry land in these farms.

Tables IV and V also show asentamientos created from partially expropriated farms had better quality of land than those formed from the completely expropriated latifundios. The relevant figures are the .99 of Table V which contrasts with the .79 of Table IV for irrigated land and .51 which compares with .45 for total farm area. On the other hand, parcels that were not expropriated seem to have poorer quality land than their counterparts on the subdivided fundos (.79 against .97 for irrigated, and .64 against .71 for total land). Neither the asentamientos nor the parcels, however, show much change in land quality when their indices are compared with those of the farms as a whole as they existed in 1965.

13/ This word, which in common usage simply means "large farm," became a precise legal term with passage of the law, which defined it to mean "more than 80 BIH" and consequently subject to expropriation.

14/ Fundo means "large farm"; it has become synonymous with latifundio.

TABLE II: FARM SIZE BY TYPE OF FARM

	(n)	Mean Irrigated Area in Physical Hectares	Mean Irrigated Area in BIH	Mean Dry Area in Physical Hectares	Mean Dry Area in BIH	Mean Total Area in Physical Hectares	Mean Total Area in BIH
Unexpropriated Undivided Fundos	(41)	353.1	251.1	791.0	36.6	1,144.1	287.7
Completely Expropriated Fundos	(19)	869.8	538.4	1,781.3	65.9	2,651.1	604.4
Partially Expropriated Fundos	(18)	539.6	589.2	2,375.7	52.9	2,915.2	642.1
Subdivided Fundos	(27)	378.1	330.5	421.9	19.4	800.0	349.9
TOTAL	(105)	485.0	381.5	1,146.9	40.3	1,632.0	421.7

TABLE III: FOUR PATTERNS IN LAND TENURE THAT EVOLVED BETWEEN 1966 AND 1971 FOR THE SAMPLE OF LARGE HACIENDAS

	Total Area		Irrigated Area		Area		No. of Farms in 1966		No. of Farms in 1971	
	In Physical Hectares	%	In Physical Hectares	%	in BIH	%	No.	%	No.	%
1. Completely Expropriated Haciendas	50,372	29.4	16,527	32.5	11,484	25.9	19	18.1	22	10.2
2. Partially Expropriated Haciendas, where part of the land remained in unexpropriated parcels or in reserves	52,474	30.6	9,712	19.1	11,557	26.1	18	17.1	55	25.6
3. Subdivided haciendas, where no parcel was expropriated before May, 1971	21,602	12.6	10,210	20.0	9,447	21.3	27	25.7	97	45.1
4. Haciendas with the same boundaries as in 1965-66	46,909	27.4	14,478	28.4	11,795	26.6	41	39.1	41	19.1
TOTAL	171,357	100.0	50,927	100.0	44,283	100.0	105	100.0	215	100.0

TABLE IV: LAND QUALITY BY TYPE OF FARM

	(n)	Quality of Irrigated Land BIH/ /Physical Hectares	Quality of Dry Land BIH/ /Physical Hectares	Quality of Total Area BIH/ /Physical Hectares
Unexpropriated, Undivided Fundos	(41)	.76	.04	.51
Completely Expropriated Fundos	(19)	.79	.04	.45
Partially Expropriated Fundos	(18)	1.01	.04	.48
Subdivided Fundos	(27)	.97	.03	.71
TOTAL	(105)	.86	.04	.54

TABLE V: TENURE PATTERNS ON THE 18 PARTIALLY EXPROPRIATED FUNDOS

	(n)	Quality		Quality		Quality	
		Irrigated Land	Compared with original farm in 1965	Dry Land	Compared with original farm in 1965	Total Area	Compared with original farm in 1965
Asentamientos	(19)	.99	-.01	.05	+.01	.51	+.05
Reserves	(16)	1.25	+.05	.02	-.01	.95	+.40
Parcels	(20)	.79	-.03	.06	-.02	.64	+.06

Reserves show the highest land quality and the greatest difference with reference to the over-all index of their respective "mother units" as of 1965. It is quite clear that the better quality land on partially expropriated fundos stayed in the hands of the old owners. When reserves were allowed, the owner usually kept his house, the adjacent outbuilding, and a fairly sizeable parcel, which was most often the heart of the farm, near the barns, house, and the main irrigation canals. In some cases, the owner kept only the house, and in some others all the land and buildings were turned over to the asentamiento. But the data accurately reflect the general trend which was for the most important and productive part of the hacienda to remain in the hands of the original owner where reserves were granted.

Rate of Expropriation: The Pace of the Reform: Since the original sample was composed entirely of "expropriable" farms, a yearly breakdown of the number and types of farms expropriated can be calculated to show how the pace of reform varied over time under different laws and regimes. Table VI shows that the first two years of the Frei period yielded relatively few expropriations affecting only 6.58 percent of the land in the sample. In 1967, however, a number of large farms were expropriated, accounting for 21.3 percent of the sample. A relatively low percentage of the land was left in reserves.

After this initial push, the rate of expropriation dropped off steadily until in 1970 only 7.5 percent was actually affected. However, the pace picked up again when Allende came into office and began applying the Frei legislation more forcefully. The rate of expropriation increased significantly and the percent of land left in reserves declined, compared to the 1969-70 period of the Frei administration.

Many observers of the Chilean reform were surprised by the decelerating pace of reform during the last three years of Frei's regime. The explanation for this decline probably lies in the changing political situation. The prevailing view is that the right-center political alliance from which the PDC derived much of its power broke down as the reform began to affect not only the largest and least productive farms, but well-managed ones as well. Relatively conservative elements both inside and outside the party argued that the program had become too responsive to campesino demands and too little concerned with due process and careful economic planning. The upshot of these debates was political crisis in the party and a policy paralysis in the field. As the expropriation rate dropped off, so did party support for the rural labor movement which was creating very strong pressures for more expropriation, fewer reserves, and a general acceleration of the reform process.

In 1969 a substantial wing of the PDC broke away and formed a new party (MAPU) which then allied itself with the Socialist and Communist parties and helped bring about the election of Salvador Allende in 1970.

Expropriation policies as related to land quality seem to lend some support to the notion that the reform was affected by the so-called right-center alliences of the PDC. Table VII shows that many farms were expropriated during the Frei administration under articles of

TABLE VI: RATES OF EXPROPRIATION OF LAND FOR THE SAMPLE OF LARGE FARMS

Year	(A) BIH available* for Expropriation	(B) No. of farms Expropriated	(C) Average No. of BIH per Farm Expropriated	(D) Total No. of BIH Expropriated	(E) Total BIH left in Reserves	(F) Percent of Expropriated Land left in Reserves (E/D+E)	(G) Percent of Expropriable BIH actually Expropriated (D/A)
1965 & 1966	44,283 BIH	6	383.8 BIH	2,303 BIH	0	0%	6.58%
1967	41,980	13	689.5	8,963	61	0.68%	21.35%
1968	32,956	9	338.9	3,050	501	14.31%	9.25%
1969	29,405	8	406.1	3,249	656	16.80%	11.05%
1970	25,500	7	273.1	1,912	212	9.98%	7.50%
1971	23,376	31	243.6	7,553	378**	4.76%	32.30%
1972	15,445	42	190.2	7,987	252**	3.06%	51.71%
1973	7,206	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SUMMARY	44,283	116	301.9	35,017	2,060		79.08%**

*The total area in the sample is 44,283 Basic Irrigated Hectares, all of which in 1965 was expropriated according to the law's maximum farm size of 80 BIH. The total available for expropriation each year is the total available in January of the previous year minus the area expropriated and minus the area left in reserve that year.

**Estimated as of January, 1973.

expropriation relatively favorable to owners, indicating a possible conservative influence. This table also shows the relative quality of the lands which were taken in accordance with the most lenient provisions of the law. Comparable figures for the Allende period are also shown.

It is clear from Table VII that the bulk of the expropriations under Frei (93 percent) were carried out under the Articles which were relatively more favorable to owners. Allende was somewhat harder on the owners. Twenty-eight percent of the land expropriated during the first two years of his administration cited the less favorable articles. However, the main difference in the two regimes was in the pace of expropriation rather than in the relative harshness with which the law was applied.

The difference in the quality of land expropriated during the two administrations is also of interest. It is apparent that Frei generally affected farms of lower land quality than did Allende. This suggests that the owners of better quality farms (which also tended to be better managed) had more bargaining power with Frei than they did with Allende. Many more progressive owners were, in fact, members or supporters of the PDC.

Shifts in Resource Use and Production: Changes in agricultural resource use and production are usually analyzed from a macro, or aggregate viewpoint. This approach is useful where the agrarian system is reasonably homogeneous and stable over time. In such a situation the functioning of the system and its parts is well documented. Response to changes can be predicted within acceptable bounds, and plans can be made with some degree of confidence.

Under a situation of agrarian reform, however, these conditions do not hold. The basic character of the agrarian system--the organization and functioning of the farming institutions--is undergoing profound change. It is not clear what the dominant form or forms of agricultural enterprise will be. Thus it is now useful to focus on the emerging types of agricultural enterprises to: determine the productive capacity of agriculture, as well as the nature and direction of the changing sources of farm output; examine the social and political implications of the changes taking place; and provide both a bench mark for looking ahead and a basis for the economic analysis of the production responses to the change. This study uses the micro-level approach to examine the consequences of this agrarian reform.

The key questions asked are: what are the different types of agricultural enterprises that are evolving from the process of the agrarian reform; how do they function; how has the manner of functioning changed from that of the pre-reform enterprises; and how may these new enterprise types be expected to operate in the future?

These questions must necessarily be asked within the context of Chile's agricultural problems. Thus, the present analysis is an empirical work which looks at the connection between agrarian reform and agricultural development. More precisely, it looks at the effects of agrarian reform on some of the basic processes and variables involved in the

TABLE VII: TOTAL AREA AND AVERAGE QUALITY OF LAND EXPROPRIATED BY FREI AND ALLENDE ACCORDING TO TYPE OF ARTICLE CITED IN THE EXPROPRIATION DECREE

	Frei			Allende		
Articles	(n)	Total Area Expropriated in BIH	Average Quality of of Land Expropriated	(n)	Total Area Expropriated in BIH	Average Quality of Land Expropriated
More favorable to owner	(39)	9,580 (93%)	.48	(48)	10,489 (72%)	.70
Less favorable to owner	(2)	675 (7%)	.32	(20)	4,099 (28%)	.52
TOTAL	(41)	10,255 (100%)	.47	(68)	14,588 (100%)	.64

development of agriculture. Some of these basic processes are the changing sources of farm output, which encompasses input substitution; changing farm organization; and changing systems of farming.

The basic hypothesis behind this study is that the character of the new agrarian structure--specifically, the several types of farming institutions--will provide an explanation for both cross-sectional differences and cross-time changes in the farming systems, intensity of operation, and factor use on the sample farms. The major focus is differences between the reformed sector (made up of expropriated farms) and the private sector. But there are also tenure variations within these sectors which are considered significant. Thus, the investigation entails comparisons across the tenure types within each sector, as well as between the reformed and private sector. It also attempts to document and explain changes over time by comparing the performance of "new" (post 1966) units with the original farms from which they were created during the period encompassed by the study. A number of changes did occur. They will be discussed in depth later in this section of the analysis, but they can be summarized here as follows:

- crops that were grown changed;
- degree of orientation to livestock changed;
- differences in intensity of operation among tenure types are negligible;
- there were differences in resource packages used among tenure types.

It is possible to identify four major differences between the private and reformed sectors which may help to explain these variations in their performances.

First, they may be operating in different "service" settings within the national economy, i.e., they are not being affected either by similar economic forces or to the same degree by those economic forces. For example, the farms in the private sector are well integrated into the privately owned and operated commercial channels of credit, input supply, and marketing. The asentamientos, on the other hand, are not likely to have such contacts, at least initially, and must depend on the Agrarian Reform Corporation (CORA) to either help establish them, or to supply what is necessary. And in the latter circumstance, a key factor governing the amount of help received may very well be the type of relationship each asentamiento has with CORA.

A second reason for expecting differences between reformed and private farms is the low level of managerial experience of reform beneficiaries. The asentados (beneficiaries) on the whole had farm management experience only on small subsistence plots, usually less than one hectare. A few have gained greater management experience through sharecropping or through similar share arrangements with livestock. But most reform beneficiaries have no prior experience in managing large units or in dealing with off-the-farm agencies and institutions.

A third possible explanation of difference is the different types of management schemes under which the asentamientos and the various types of private farms operate. On private farms decision-making responsibility and power resides in an individual, either the owner-operator or an administrator. Asentamientos, on the other hand, are run by committees. This alone could lead to differences in resource use.

But the method of decision-making is not so important as the goals of the decision-making unit. It is probable that the managerial units of the different tenure types define their problems differently, i.e., that they have different goals or objectives ("goods" to be attained and "ills" to be avoided); that they acquire different normative information; and that they analyze the information differently.

The basis for this assumption is found in the reasons for which the asentamiento type of organization was created. The asentamientos were conceived in part with the hope that they would help the beneficiaries gain experience in farm business management.

Thus, the asentamiento emphasized democratic participation in management. This would supposedly best serve the government's desire to motivate and educate the beneficiaries and help to eliminate internal social stratification, as well as maintaining production. Hopefully, these cooperative enterprises would function for "the benefit of the community," unlike the traditional (private) enterprises, which function to the primary benefit of the entrepreneur, or owner.

Fourth, the variations within each general tenure type--reformed and private--may also exhibit differences in farm organization. The reformed sector has two sub-types: asentamientos which were formed from entirely expropriated fundos; and asentamientos created from partially expropriated fundos, where a reserve and/or private parcels were left to the original fundo owner(s). The latter differs from the former because the proximity of the reserve sometimes leads to some sort of continuing personal and/or economic interaction with the fundo owner. As we saw earlier, when a fundo owner was allowed a reserve he kept the best land, which probably also included whatever orchards and vineyards existed at the time, as well as the basic farm infrastructure. These asentamientos were thus left with the poorest land, devoid of buildings, roads, irrigation works, and houses for resident workers which forced some asentados into a continuing dependency relationship with their old patrons.

Within the private sector there are four potentially interesting subtenure types. Three are distinct; the fourth is a sub-category of the third. One is the original fundo unchanged in area from 1965/66. Reasons for expecting these farms to operate differently from the other private tenure types have already been presented. The second private tenure type is the reserves. This type may operate differently for a number of reasons: the carryover of ownership implies a continuation of management practices, which were probably reasonably modern; reserves are composed almost entirely of high(er) quality land and are heavily capitalized.

The third private tenure type is comprised of the hijuelas (parcels) resulting from private subdivision of the original fundos which were not affected by expropriation. There are several reasons for considering the hijuelas as a separate tenure type. They are usually owner-operated small to medium sized farms, which means that they tend to be more intensely managed than were the original fundos. Another reason is the origins of these farms and their owners. Since most hijuelas were created as purely legal divisions to avoid expropriation, they often continued for some time to be operated jointly, just as they had before the legal division was culminated. This usually meant that management remained in the same hands. Even when forced by law and continued threat of expropriation to become self-contained operations, the goals and objectives of the hijuela owner, and thus his method of operation, could be expected to remain relatively constant. Also, when separate operation did begin, the major farm buildings and infrastructure would usually be located within only one of the hijuelas. This would necessitate either considerable investment and/or changes in the farm's orientation.

Alternatively, some hijuelas were sold to persons outside the family of the fundo owner. The expectation was that such new owners would be likely to be profit maximizing entrepreneurs, and to organize the farm business more intensively.

The fourth tenure type in the private sector is comprised of those hijuelas which were left after other parts of the fundo were expropriated. The reason for separate consideration here is that they were in the hands of bona fide campesinos, or that their level and method of production and management must have been high, at least relative to the expropriated hijuelas, or they too would have been taken.

The general analytical framework used here is built around two basic concepts. One is the intensity of the farm business, considered from the angles of value of production and intensity of factor use. The other is the process of mechanization and its effects upon the operation of the farm business. A third major issue, employment, and its relationship to changes in tenure and farm operation, is discussed in Section III.

Variables: The major variables to be used in the analysis are listed below. A discussion of them will follow.

1) Total days of labor/Basic Irrigated Hectares (BIH);
2) Total days of non-resident (seasonal) labor/BIH;
3) Total days of resident labor/BIH;
4) Total number of permanent resident workers/BIH;
5) Total number of temporary resident workers/BIH;
6) Number of tractors/BIH;
7) Total tractor horsepower/BIH;
8) Number of work animals (horses, oxen, mules)/BIH;
9) - 15) Percent of cultivated hectares planted to field crops; industrial crops; vegetables, spices and flowers; fruits, nuts and nurseries; seed crops; improved pasture; natural pasture;

16) Value added (1971 constant value) by crops/cultivated hectare or BIH;
17) Number of crop value added units 15/ /cultivated hectare or BIH;
18) Total number of animal units/cultivated hectare or BIH;
19) Value added (1971 constant value) by livestock/cultivated hectare or BIH;
20) Number of livestock value added units/cultivated hectare or BIH;
21) Total number of hectares/BIH;
22) Total number of irrigated hectares/BIH;
23) Tenure.

All the variables are aggregated at the level of the central enterprise, as defined earlier.

Preliminary Results: Farming Systems as of 1971: Table VIII presents the general crop farming systems employed by each tenure category in 1970. The systems are described as the mean percentage that each crop category is of the total cultivated hectares on a farm. The F- Statistics and levels of significance indicate some clear differences among the tenure categories in the crop farming systems employed.

The most significant differences occur in the field crop and seed crop categories. Over 50 percent of the cultivated hectares on both the asentamientos and hijuelas are occupied by field crops. Seed crops occupy negligible amounts of land on these two tenure types. The reserves devote by far the lowest percentage of cultivated hectares to field crops (23.2 percent), with the fundos devoting an intermediate amount--less than 38 percent. The field and seed crop categories are primarily composed of cereals and grains. They are extensive crops (using relatively lower amounts of labor) and are of generally lower value than the other crop categories, except for improved pasture.

Differences in the percent of cultivated area in industrial crops (sugar beets, sunflower, linseed, rapeseed, tobacco) are marginally significant at the .10 level. The fundos engage most heavily in these lines of production, planting over 5 percent of their cultivated area to these crops. Industrial crops occupy approximately 3 percent of the cultivated area on both asentamientos and hijuelas, and only 1 percent on reserves.

Another significant difference in crop orientation between tenure categories is the percentage of cultivated area in vegetables, spices, and flowers. These crops have the highest value and are also the most labor intensive. The asentamientos devote by far the largest percentage of cultivated area to these crops. Reserves plant about two-thirds, and hijuelas about one-third as much of their cultivated hectares in these

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15/ This variable and the livestock value added unit variable are indexes of value added. Their construction and interpretation will be discussed later.

TABLE VIII: CROP FARMING SYSTEMS 1970 BY TENURE CATEGORY -- HAS. OF CROP CATEGORIES AS A PERCENTAGE OF TOTAL CULTIVATED HECTARES

Tenure Category	% Field Crops	% Industrial Crops	% Veg., Spices, Flowers	% Fruit, Vineyards	% Seed Crops	% Improved Pasture	N
Fundo	37.6	5.2	4.3	14.1	3.9	33.7	41
Asentamiento	51.5	3.2	12.0	8.3	.5	22.0	39
Reserve	23.2	1.0	7.8	14.5	1.7	33.1	16
Hijuela	53.6	2.8	4.5	8.0	.1	27.8	113
Entire Population	47.7	3.2	6.1	9.7	1.1	28.3	209
F-Statistic	6.658	1.895	2.321	1.245	5.289	1.291	
Level of Significance (5,203)	>.001	>.10	>.05	-	>.001	-	

crops as do asentamientos.

There are [illegible] statistically significant differences between tenure type with respect to the percentage of cultivated hectares devoted to fruit and vineyards, and improved pasture. Nevertheless, some interesting trends do show up in Table VIII. The fundos and reserves both have over 14 percent of their cultivated hectares in the former crops, while asentamientos and hijuelas have only 8 percent. With respect to improved pasture, the asentamientos devote considerably less area to this crop than do the fundos and reserves (22 percent vs. 3[illegible] percent). The hijuelas occupy an intermediate position, with 27.[illegible] percent of cultivated hectares in improved pasture.

There are several possible explanations for the considerable difference in orientation toward industrial and seed crops. One is that this group of fundos was engaged in a similar line of production in 1965/66, and simply maintained the cultivation of these crops. This is borne out by data from the earlier sample, where the percentage of cultivated area devoted to seed and industrial crops is almost the same. This previous orientation toward industrial crops may also have contributed to these fundos' ability to avoid expropriation up to the time of the study. These crops are nontraditional, and their cultivation is an indication that the farm is likely to be of a relatively more modern, profit-maximizing type. The cultivation of these crops is also important to Chile's national development plan. Farms engaged in their production would be less likely to be expropriated.

A second reason is that the continuity of ownership of these farms would also work in favor of industrial buyers maintaining contact, and contracts, with the fundos. The changing structure, size, and ownership of the other farms would be a basis for contacts being broken with industrial buyers. There was, in fact, a considerable decrease between 1965/66 and 1970/71 in the percentage of cultivated hectares devoted to these crops by the other tenure categories (see Table IX). A third reason, which is closely related to the first two, is that the production of these crops requires a higher level of knowledge, or management, than most other crops. This point is particularly relevant to the asentamientos and hijuelas, where the ownership and management changes were from relatively experienced farmers to those with much less, or no, management experience. Thus, it might be expected that production would be oriented toward lines which required less management input and/or lines with which the farmers were previously familiar.

The basis for the differences in orientation toward vegetables, spices, and flowers can also be partially traced to the farming systems existing on these farms in 1965/66. The fundos which became asentamientos and reserves had slightly higher percentages of vegetables than the fundos which remained fundos (3.4 percent to 2.8 percent). And the fundos which became hijuelas devoted none of their cultivated hectares to these crops.

Changes in Farming Systems: 1965-1970: Table IX shows that there have been considerable overall increases in the percentage of cultivated hectares devoted to vegetables since 1965/66. Furthermore, the

TABLE IX: CHANGE IN CROP FARMING SYSTEMS (1970-1965)*:

Difference in the Percentage of Cultivated Hectares Devoted to Each Crop Category.

Tenure Category	Δ Field Crops	Δ Industrial Crops	Δ Veg., Spices, Flowers	Δ Fruit, Vineyards	Δ Seed Crops	Δ Improved Pasture	N
Fundo	.3	-2.7	1.5	1.6	2.2	-4.0	41
Asentamiento	7.3	-2.5	11.5	2.5	-2.4	-19.6	32
Reserve	-14.0	-3.1	6.7	9.6	-2.0	-16.1	16
Hijuela	2.5	-2.5	4.5	1.4	-.2	-8.2	110
Entire Population	1.5	-2.6	5.2	2.3	-.2	-9.8	199
F- Statistic	1.67	.016	2.411	1.094	2.840	1.838	
Level of Significance (5,193)	>.20	-	>.05	-	>.025	.10	

*The values in this table have been calculated by subtracting the percentages devoted to each category on the 1965 farms from the percentages on the 1970 farms which evolved from each fundo.

differences in the changes among tenure types are highly significant, which leads to the significant differences in 1970/71. The fundos which were not expropriated showed very small increases (1.5 percent), while the asentamientos had an average shift of 11.5 percent. (This is not an 11.5 percent increase, but a difference between 1965/66 and 1970/71 in the percentage of cultivated hectares devoted to these crops.) The hijuelas increased from no land in vegetables to 4.5 percent, while the reserves increased their hectareage to 6.7 percent.

The overall increases in percentage of land in vegetables may be attributable to increased demand and the high value of these crops. In the cases of reserves and hijuelas, the considerably smaller size of these farms compared to the fundo from which they evolved (and compared to remaining fundos) would be an added incentive to move into high value crops in order to maintain income levels.

There are several related explanations for the large increase in vegetable cultivation on asentamientos. One may undoubtedly be the price factor. Another may be that the asentados had, as inquilinos, traditionally devoted most, if not all, of their small parcels to vegetables. So, they are quite familiar with the method of cultivation, as well as the high market value. Thus, when more land became available, they could be expected to increase cultivation of these crops. The marketing of vegetables, spices, and flowers may be another reason for increased orientation to these crops. The asentados are familiar with the marketing of these products from having sold meager surpluses from their pre-reform plots. But more important, vegetable marketing is the least concentrated of produce markets. To market other crops, the asentados would have to establish contact with and operate in a system that was oriented toward, if not controlled by, the former fundo owners. By producing vegetables, the asentados can avoid much of a system which is largely foreign to them, and which may even work actively against them.

The differences between tenure types in the orientation toward field crops appears to be based on three factors. The major factor is the similar orientation of these farms in 1965/66, although the differences were not statistically significant. Another is that the positive change on asentamientos and hijuelas may be, again, a result of preferring to grow crops which are familiar and which do not require more sophisticated management. The third may be what we have already seen to be high concentration of resources and capital in the reserves. Making comparisons in the percentage use of cultivated hectares between reserves and the fundos from which they evolved may be misleading. Much of the type of land that was in field crops on the fundos is not within the boundaries of the reserves. Thus, it may be expected that the percentage devoted to field crops would be low, and that there would be a negative change in the percentage. This final point may also explain the relatively high percentage of fruit orchards and vineyards on reserves, as well as the large change in these crops on reserves compared to the other tenure categories.

In summary, Table VIII indicates that statistically significant differences in crop farming systems exist among the different tenure types in 1970/71. Table IX indicates that some of the changes from 1965/66 to

1970/71 in crop farming systems are also significantly different across tenure type. The crop farming systems employed by the unexpropriated fundos have remained almost unchanged from what they were in 1965/66. The farms which resulted from subdivided fundos--the hijuelas--show changes of approximately the same magnitude as the fundos. An important exception is that these farms have increased the amount of their cultivated land in the high value, labor-intensive crops of vegetables, spices, and flowers from 0 percent in 1965/66 to 4.5 percent in 1970/71. The crop farming system on the reserves is varied, and may derive mainly from the process which allowed an expropriated fundo owner to choose the land he kept. While having the lowest percentages of extensive field crops and the highest combined total of the high valued vegetable and fruit enterprises, the reserves also have a high percentage of land devoted to improved pasture. The asentamientos are second only to reserves in percentage of cultivated hectares devoted to vegetables and fruits combined. And they have by far the largest percentage of land in vegetables, spices, and flowers alone--the highest valued and most labor intensive crops. This orientation toward vegetables has come about mainly since 1965/66, according to the changes shown in Table IX. The asentamientos also have the lowest percentage of land in improved pasture and have the largest decrease in land in this category. These farms also increased their percentage of field crops more than the other tenure categories. On the whole, the asentamientos appear to have made a distinct shift from extensive, lower valued crops to more intensive, higher valued crops. This is true also of the reserves. But the import of the latter is open to debate.

The second major aspect of the farm business, besides the crop farming system, is the degree of orientation toward livestock. Table X, column 3, presents the percentage that livestock value added is of total value added (in constant 1971 escudos) per basic irrigated hectare (BIH) controlled by the central farm enterprise. 16/ Column 4 shows the changes that occurred from the 1965/66 fundos to the 1970/71 farms. For both variables the differences among tenure type are highly significant.

The reserves have by far the largest percentage of livestock value added (31.5 percent) of total value added. Asentamientos received only 8.8 percent of their total value added from livestock, while both fundos and hijuelas received 19.4 percent. Column 4 of Table X indicates that this low degree of livestock orientation on asentamientos has occurred since expropriation. The difference between 1965/66 and 1970/71 in percentage of total value added contributed by livestock is almost 22 percent. Decreases in this variable also occurred on all the other tenure categories. There was an approximate 6 percent decrease on fundos and 2 percent on hijuelas, and a negligible .7 percent decrease on reserves.

The degrees of orientation toward livestock, and the changes in the orientation from 1965/66, correspond roughly to the percentage and changes

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16/ This BIH figure is total BIH minus the BIH equivalent of land given over to sharecropping, raciones, cercos, and other minor non-central farm uses.

TABLE X. LIVESTOCK VALUE ADDED 1970/71 AND CHANGE (1970-1965)* IN LIVESTOCK VALUE ADDED PER BIH CONTROLLED BY CENTRAL FARM; PERCENT 1970/71 AND CHANGE (1970-1965) IN PERCENT LIVESTOCK VALUE ADDED OF TOTAL VALUE ADDED (ALL VALUES IN E° OF 1971)

Tenure Category	(1) Mean Livestock Value Added/ BIH (1970-71)	(2) Mean Change Live-stock Value Added (1970-1965)	(3) Mean Livestock Value Added/ Total Value Added	(4) Mean Change Livestock Value Added/ Total Value Added
Fundo	1,580	-641	.194	-.059
Asentamiento	422	-991	.088	-.217
Reserve	2,134	769	.315	-.007
Hijuela	1,732	679	.194	-.022
Entire Population	1,490	182	.184	-.057
F- Statistic	.668 (3,203)	1.023 (3,189)	3.940 (3,202)	4.302 (3,187)
Level of Significance	-	-	.01	.005

*These changes, and those in Table XI, have been calculated as in Table IX, by subtracting the value for the 1965 fundo from the value for the 1970 farm which evolved from the fundo.

in percentage of cultivated hectares in improved pasture (Tables VIII and IX). The asentamientos had both the lowest percentage of cultivated hectares in improved pasture and the largest decrease. On the fundos and hijuelas relatively moderate decreases in improved pasture took place, accompanying similar changes in the percentage that livestock value added was of total. Again, the reserves appear to follow a peculiar pattern. While there was essentially no change in livestock's contribution to total value added, the percentage of cultivated hectares in improved pasture decreased dramatically. A closer look at the hijuelas reveals a similarity to the reserves. The decrease in improved pasture was considerably larger than the decrease in livestock's contribution to total value added.

This pattern of pasture-livestock changes on the reserves and hijuelas may indicate considerably improved management practices, including increasing the carrying capacity of pasture and supplemental feeding, in the case of cattle. It may also mean that these farms have changed from more extensive cattle-raising to more intensive hog and/or poultry enterprises. Both processes are plausible, in light of the relatively small size of the reserves and hijuelas. Columns 1 and 2 in Table X support the observation of increased livestock intensity. Column 1 shows reserves and hijuelas with higher average values for livestock value added per BIH than have the fundos or asentamientos. And column 2 shows that the former two tenure categories have increased the intensity of livestock exploitation, while on the latter two a decrease has taken place.

The basis of these changes in livestock orientation may have been conscious decisions on the part of the farm management. This explanation is more plausible for the fundos and hijuelas than for the reserves and asentamientos, however. For the latter two tenure categories the expropriation process may be the major factor. An expropriation includes only the land (and fixed capital, for which "just" compensation must be paid). The fundo owner is free to dispose of moveable capital and livestock. In the case of complete expropriation, these assets are usually sold at public auction. When a farm is partially expropriated, i.e., a reserve is left, it is often the practice for the owner to shift the livestock and moveable capital to the reserve. The result is a reserve with greatly increased amounts of livestock and machinery per unit of land, and an asentamiento with few or none of these assets. And the limited resources of the new asentados, as well as CORA, preclude any short-run restocking.

In summary, the information in Tables VIII through X reveals statistically significant differences among tenure categories in the overall farming systems employed by the central farm enterprises. The asentamientos rely on crops for over 90 percent of their income. This pattern appears to be a response to the way expropriation proceeded, leaving the asentamientos largely decapitalized. The income of the reserves is split approximately two-thirds from crops and one-third from livestock. The fundos and hijuelas have identical orientations of 81 percent crop and 19 percent livestock of total value added per BIH.

Intensity of Operation: Another approach to the investigation of the farm business is examining the intensity of operation. The variable which

will be used in this examination is the value added to the central farm enterprise by the crop and livestock sub-enterprises. The interpretation of value added in this case is that of value added by the resources (input factors) which are under the control (management) of the farm business. The variables have been calculated by subtracting from the gross value of production of each crop or livestock enterprise the value of the purchased inputs. For crop enterprises the value of seeds, fertilizers, pesticides, and herbicides was subtracted. The value of feed was subtracted from livestock enterprises.

Table XI presents the average crop and total value for 1970/71 and the changes which occurred between 1965/66 and 1970/71, broken down by the four general tenure categories. Table X, presented earlier, shows the same information for livestock value added. With respect to crop value added, the fundos have the highest average, but the differences between the tenure categories are almost negligible. The asentamientos have considerably lower averages of livestock and total value added per central farm BIH than do the other tenure categories. More important, however, these tables reveal that there are no significant differences among tenure type with respect to intensity of the farm business. This holds true for total and livestock value added, as well as for the crop component.

The statistical implication of this result is that the variances within the tenure categories are too large to permit generalizations concerning some seemingly large differences between the tenure categories. However, within the context of the investigation of the operation of the farms in different tenure categories, the lack of significant differences in value added is interesting. Assuming that the farms in the sample made use of available modern technology, 17/ the value added averages for the population can be considered as average potentials for the region. Then, the significant differences in farming systems employed, both between crop and livestock systems and within crop systems, appear to reflect adjustments which were made in order to take maximum advantage of different resource (input factor) packages existing within each tenure category.

The study provides conclusive evidence that different resource packages did exist on the different tenure types. There are significant differences among tenure categories in land quality, labor, and machinery. The earlier section of this report showed that land quality, measured as a ratio of total physical hectares to total basic irrigated hectares, differed significantly among tenure categories. The asentamientos had the poorest land, the reserves and hijuelas had the best, while the fundos had land of intermediate quality. And the analysis of labor elsewhere in the

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17/ A previous report from this study indicated that this is a valid assumption with respect to the yield increasing inputs of improved seed, fertilizers, pesticides, and herbicides. See Smith, Stanfield, and Brown, "Factor Combinations and Agrarian Reform: Chile 1966-71," a report to the United Nations Research Institute, Land Tenure Center Mimeo, Madison, 1973. Jolly, Brevis, and Le Feuvre maintain that this was also true for the asentamientos in their study. ("Estudio económico de los asentamientos," ICIRA, Santiago, 1970).

TABLE XI. CROP VALUE ADDED 1970/71; CHANGE (1970-1965) CROP VALUE ADDED; TOTAL VALUE ADDED 1970/71; CHANGE (1970-1965) TOTAL VALUE ADDED PER BIH CONTROLLED BY CENTRAL FARM (ALL VALUES IN E° OF 1971)

Tenure Category	(1) Mean Crop Value Added/BIH 1970/71	(2) Mean Change (1970-1965) Crop Value Added/BIH	(3) Mean Total Value Added/ BIH 1970/71	(4) Mean Change Total Value Added/ BIH (1970-1965)
Fundo	6,930	1,087	8,641	431
Asentamiento	6,441	2,432	7,031	1,702
Reserve	6,412	3,424	8,547	4,192
Hijuela	6,144	2,129	7,906	2,822
Entire Population	6,371	2,067	7,934	2,309
F- Statistic	.070 (3,203)	.296 (3,193)	.151 (3,202)	.632 (3,187)
Level of Significance	-	-	-	-

present report shows that significant differences among tenure categories exist in the use of labor. Asentamientos utilize more labor per central farm BIH than do the other tenure categories.

Differences in mechanization are presented in Table XII. The asentamientos have by far the fewest number of tractors per central farm BIH. The fundos have slightly more, while the hijuelas and reserves have relatively high numbers. These differences are statistically significant at greater than the .05 level.

In summary, no differences in farming intensity exist among tenure categories. However, the differences in farming systems and resource availability indicate that the similar levels of intensity are being reached with different combinations of input factors. In particular, the asentamientos are producing at levels equal to the other tenure categories with lower quality land, less machinery, and more labor.

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A separate but closely related study of reform in Chile is that conducted by William Thiesenhusen on four settlements established by a private organization known as the Instituto de Promoción Agraria (INPROA). during the latter part of the Alessandri regime. This, too, is a panel study, which emphasizes changes over time (1964-1970). The following is a brief abstract of the most recent analysis of these units.

Agrarian reform has variable effects on its beneficiaries. In the four settlements studied, gross income per hectare rose at a rate of about 10 percent a year, while overall agricultural production in Chile rose along an irregular path at a rate less than half of that. Mean net family income rose on all four settlements; however, family size grew during the study period, so on a per capita basis, mean net income rose by only 5 percent.

Analysis of income distribution indicates a growing tendency toward family income inequality, but also considerable mobility. A percentage of this differential performance is caused by the varying requirements of dairy and field crop agriculture. However, on all settlements there was evidence that some beneficiaries make considerable income progress, while others stagnate, and some even decline. And it seems possible to have both stagnation and growth with egalitarianism--or without it. The best proxy measure of wealth available in this case was investment in moveable farm capital. Analysis of overall mean family equity bears out the analysis of income distribution, i.e., a tendency toward family income inequality with mobility.

While total disposable income--total net family income less all consumption in kind--increased 91 percent, payments were not made toward either institutional production credit or land in 1970 by the "mean" settler; only about one-quarter were able to make a significant contribution toward land or capital. It seems that settlers are regarding loan funds as a "gift." One should remember that the campesino sector has been discriminated against for long periods of Chilean history and may,

TABLE XII. MEAN NUMBER OF TRACTORS PER CENTRAL FARM BIH ON FARMS IN DIFFERENT TENURE CATEGORIES, 1970/71

Tenure Category	Mean No. Tractors/ BIH
Fundo	.016
Asentamiento	.011
Reserve	.032
Hijuela	.023
Entire Population	.020
F- Statistic	2.502
Level of Significance (5,191)	> .05

at this juncture, deserve a windfall. But if this were repeated countrywide, the government would be subsidizing a small group of beneficiaries while leaving the non-beneficiaries further behind than ever.

In 1964 several standards of average labor use were used, and it was found that by using any of them the beneficiaries of land reform appeared to be utilizing a combination of family and hired labor to a point where its wage bill exceeded the marginal value of the product. Total labor use per hectare was little changed from 1964 to 1970; in fact, the data show a slight drop in labor application per hectare. Since all settlements showed a decline, this trend probably implied that settlers became more entrepreneurial: they utilize family labor more efficiently and hire less.

A number of factors were found to be involved in the relative success or failure of individual farmers. Age of the household head and total effort based on a measure of days worked are not statistically important in determining variation in gross income given the other variables considered. Crop hectares, number of animals owned, number of people being supported, and yield increasing inputs per hectare were highly significant, while education of the husband was less significant. The regression equation using all of these variables was capable of explaining 75 percent of the total variation in the dependent variable.

Colombia

Gustavo De Roux (Colombia: Ph.D. in Development student) completed his thesis during the reporting year, a study on peasant movements entitled "The Social Basis of Peasant Unrest: A Theoretical Framework with Special Reference to the Colombian Case." Until completion of his degree, De Roux received financial assistance from a Ford Foundation grant to the University of Wisconsin on Rural Modernization in Latin America and from the Land Tenure Center. A copy of the dissertation abstract is included in Appendix C.

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Francisco Leal (Colombia: Ph.D. in Development student) completed his thesis during the reporting year. Entitled "Social Classes, International Trade and Foreign Capital in Colombia: An Attempt at Historical Interpretation of the Formation of the State, 1819-1935," this study examines the relationship between capitalism and underdevelopment. Until completion of his degree, Leal received financial assistance from a Ford Foundation grant to the University of Wisconsin on Rural Modernization in Latin America and from the Land Tenure Center. A copy of the dissertation abstract is included in Appendix C.

Ethiopia

During the reporting year, the Land Tenure Center initiated a training and study program funded by USAID/Ethiopia for senior staff members of the Ethiopian Ministry of Land Reform and Administration. The first two participants, Ato Lulseged Asfaw and Ato Hailu Wolde-Emmanuel, arrived in

Madison in August of 1973 for a semester of coursework and research. Ato Lulseged, head of the State Domain and Settlement Department, researched the role of state domain lands in Ethiopia's agricultural development. His study concludes that the different forms of tenure which have resulted from existing and past land grant systems now lack production incentives for small peasant farmers who represent the bulk of the population and who have neither title nor a secure lease-hold to the land they farm. There is an increase in problems arising from population pressure, from eviction of tenants due to lack of tenancy legislation and the introduction of modern technology, and from displacement of farmers and nomads by establishment of different projects. In an effort to utilize state domain lands to alleviate population pressure, the Ministry has drafted a proposal delegating these lands for distribution among the landless and needy. Ato Lulseged proposes immediate identification, demarcation, and land-use zoning of state domain lands, together with their description, including information on cultivation possibilities, rainfall, insect infestation, etc. He advocates special attention to grazing land which is occupied and used by nomads and to state forest lands, which he recommends be transferred to the Ministry of Agriculture in order to prevent the forest from destruction by spontaneous settlers. Unless the present land grant systems are replaced immediately by the proposed legislation, there is a danger that most of the government lands which were difficult to locate will be taken over and exhausted by persons now outside the farm sector. Thus, there is a need to expedite the new state domain land distribution order. Until the order becomes effective, easily accessible regions should be designated official development areas to prevent grants above a certain size, and ownership transferred to present tenants of government land to give them secure title in the interim.

Ato Hailu, head of the Land Tenure and Geography Department, researched land tenure, land-use, and development in the Ethiopian Awash Valley. Traditionally, parts of the valley, which are now considered suitable for irrigation agriculture, were used by nomadic pastoralists for livestock grazing. With the introduction of irrigation in parts of the valley, pastoralists have been alienated from their dry-season grazing areas and from access to the waters of the Awash River. In the area of land tenure, Ato Hailu proposes that compensation be granted for alienated grazing lands and that adjudication and registration of claims be initiated for resident farmers whose claims to cultivated areas have already been recognized. His study of systems in other areas of Africa suggests three tenure possibilities for the Awash Valley: individual or group land ownership; leasing of the land by the Awash Valley Authority--though this alternative is unlikely to be accepted by the Afar farmers, who have already begun to realize the benefits of private control of land; and setting size restrictions on holdings in irrigation agriculture, to prevent undue concentration or fragmentation of the land. State land and grazing areas require demarcation and registration, and, in addition, state land requires land-use zoning. In the area of land-use and development, Ato Hailu recommends an increase in labor-intensive settlements geared to benefit a wider segment of population in the valley. A combination of land improvement and settlement in the watershed regions and on the banks of some of the major tributaries could include the construction of small embankments, terracing, and forestation, in order to

improve production, restore the ecological balance, and provide employment to a greater number of people. Commercial agriculture, as well, should be geared toward the creation of employment opportunities, and a more equitable distribution of income, through partnership arrangements. Ethiopia's total irrigable area is estimated at 3.5 million hectares and most of these irrigable lands are situated in regions which have similarities to the Awash Valley, so that this project could serve as a pilot study for other areas.

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Alemseged Tesfai (Ethiopia: Ph.D. in Development student) began field research in January 1974, in the Ethiopian province of Eritrea, a former Italian colony. He is researching resti (ownership by extended family) and desa (village ownership) systems of communal land tenure in highland districts of Hamasien, Serae, and Akkele-Guzai, by examining court cases, public records, and other documents in which resti or desa holdings were involved, as well as government data on land holdings in these areas. In addition to analyzing the historical evolution of communal land ownership in Eritrea, Tesfai will conduct interviews with peasants in selected villages to determine possible directions for improvement in the system. He contends that communal land ownership is inhibiting to economic development, since population pressure has fragmented communal holdings into economically unproductive units, since the land itself is exhausted, and since fear of eviction has prevented farmers from making permanent improvements in their holdings.

To be effective, however, plans for increased agricultural productivity must take into consideration the existing social framework. Tesfai feels that reform measures can only be successful if the government bases its proposals for change on a thorough understanding of the background of the peasants' attachment to their land and if it both actively participates in attempts aimed at increasing agricultural productivity, and continues to develop the nonagricultural sector so that it can absorb at least a part of the landless peasantry and thereby reduce the pressure on communally owned land. During the past year, Tesfai has received financial assistance from the African American Scholars Council and the Land Tenure Center.

India

During the reporting year, Professor Frykenberg did research on the relationship between social conflict and political stability within the agrarian system of South India. His paper, "The Silent Settlement in South India: 1793-1853: An Analysis of the Role of Inams in the Rise of the Indian Imperial System," will be included in the book he is editing for the Land Tenure Center, Land Tenure and Peasant in South Asia. This research in the tenure systems of South India is primarily concerned with the relationship between political stability in British-ruled India, and policies of the East India Company with respect to the traditional practice of granting privileged lands (inams).

Professor Frykenberg divides these lands, held rent-free on hereditary occupation, into four categories: socio-religious grants, including land given to large religious institutions and individuals of merit, comprising three-fourths of the total privileged land; socio-political grants, including forms of hereditary pay and pension benefits given in lieu of cash salaries to members of the community contributing a service, from warriers to musicians; social service grants, largely charitable provision for travelers; and socio-economic grants, for developing and maintaining irrigation systems. These grants represented roughly one-sixth of the total area under cultivation in South India, approximately one-fourth to one-third of total revenue resources, yet this complex of privileged lands remained tax-free during British rule through an "unwritten" or undefined policy ("Silent Settlement") of officials comprising the British Raj. Hence, the strength and stability of the British political system rested in part on its tacit acceptance of hereditary "landed privilege" which allotted important tax-free concessions to those individuals and institutions having highest claims to social and ritual status and influence.

Japan

Professor King has initiated a study of rural development in Shiga Prefecture, Japan, which focuses on opportunity structures in seven rural communities ordered in terms of three variables: quality of land, the feasibility of double-cropping, and proximity to an urban area. It is his intention to investigate changes over time in the structure of opportunities open to rural family households in these areas, and the effects of federal, prefectural, and local government policies on rural development. Rural development, as distinguished from agricultural development, includes nonfarming opportunities open to rural residents. These opportunities vary according to abilities of the people, available positions, costs involved in traveling between a rural residence and job location, and the requirements of the rural household. The household has been chosen as the unit of study, since opportunities for family members in rural Japan are interdependent, even for individuals no longer residing in the rural area. The study will relate rural development to agricultural development by analyzing the effects of the changing structure of opportunities.

Professor King traveled to Japan in March 1974, for preliminary discussions concerning his research with faculty in the Department of Agricultural and Forestry Economics at the University of Kyoto, with faculty of Shiga Agricultural College at Kusatsu, and with Emeritus Professor Tobata of the Department of Agricultural Economics at Tokyo University. In addition, he conferred with the Prefecture Department of Agriculture at Otsu, Municipal Government offices in eight municipalities of Shiga Prefecture, the Japanese Chamber of Agriculture in Tokyo, Mr. Owada of the Japanese Planning Commission in Tokyo, and the Agricultural Attache's Office staff in the U.S. Embassy in Tokyo. Ryohei Kada (Japan: graduate student in Agricultural Economics) will conduct preliminary field studies in the seven villages during the summer of 1974. Professor King's travel expenses were funded by the Midwest Universities Consortium for International Activities, Inc. (MUCIA).

Nigeria

Yakub Layiwola Fabiyi (Nigeria: Ph.D. student in Agricultural Economics) came to the University of Wisconsin as an AID participant from the University of Ife. He completed his dissertation during the reporting year, titled "Land Tenure Innovations in Rural Development: The Problems in Western Nigeria with Some Tanzanian Comparisons," and received his degree. Fabiyi returned to Nigeria in August of 1974 to conduct field work on innovations and changes in the customary tenure system of the Yoruba in Western Nigeria with comparisons to Tanzania. From interviews with 124 farmers in seven villages and research into local court and administrative records in rural areas, he concluded that few significant changes are taking place in customary land tenure arrangements or in the attitude of customary courts toward the transfer of family lands.

He argues that the limited forms of land disposition permitted by native law and custom are inadequate to meet economic and social requirements of present-day Nigeria, particularly as they work against improvements on the land. Further, the land tenure system itself is counterproductive, since it fosters progressively inefficient fragmentation and exhaustion of the land under increasing population pressure.

Fabiyi proposes a group ownership pattern, with individually held subsistence units and general farming land worked cooperatively, to utilize firmly established corporate descent group rights present among the Yoruba and guard against land speculation. He advocates increased government initiative in agricultural development as well as in the generation of nonagricultural employment alternatives to absorb the rise in population. Fabiyi's field research was funded by the Department of Agricultural Economics and the Land Tenure Center.

Peru

In August of 1973, Land Tenure Center Specialist Douglas Horton initiated three and one-half months of field work in Peru, compiling secondary source data, largely from unpublished reports, and interviewing land reform officials and members of twenty-seven cooperatives and Agrarian Social Societies (SAIS) set up under the land reform program. Data gathered in Peru was used in writing twenty-seven case studies and an issues-oriented paper on defects of the pre-reform agrarian structure, the land reform process, and the new enterprise forms created under the land reform program in Peru.

Mr. Horton's report is one of five country studies which form the data base for an examination of land reform and new reform enterprises, financed by the International Bank for Reconstruction and Development (IBRD).

The report documents pre-reform agrarian structure and recent production trends, aspects of agricultural modernization, and resultant social dislocations. The initiation and course of Peru's land reform programs are related to the pre-reform structure and performance of agri culture and to the development goals of the Belaunde and Velasco

governments.

Special attention is paid to the new property/management models ("reform enterprises") created under the new land reform program. A typology of collective production units is devised, and "performance scores" are calculated for each of 23 units visited. It was found that in general, coastal cropping enterprises and highland livestock enterprises employing wage-laborers functioned well in terms of production, investment, profits, income growth, and worker participation in management. Highland cropping enterprises in which colonos (sharecroppers and labor-tenants) held a significant share of total assets performed less well.

The central conclusion of the study is that technology and environment are important determinants of economies of size and optimal enterprise organization in agriculture, and that these same factors have an important influence in the performance of new reform enterprises created under Peru's land reform program.

United States

During the 1973-74 reporting year, Professors Penn and Wilkening completed an initial two-year study on the social and economic impact of a flood control and recreation reservoir on the Kickapoo River in southwestern Wisconsin. Approximately 2,200 land transfers were documented to obtain information on physical characteristics, access to roads and water, and on present and intended use. Based upon this data, models were developed for testing the relationships between assessed value, equalized value, and market value. This provided the basis for evaluating the current system of property tax administration in a rural area undergoing significant change in land use intensity.

The study of the effect of the reservoir at La Farge upon individuals and communities in the Kickapoo Valley has drawn upon two sources of data. Secondary sources have provided data on population, occupation, retail business, education, health and medical services, recreation, and other community facilities and services in twelve communities. Interviews with leaders in the same communities provided a rating of the adequacy of community services and facilities, and attitudes regarding the proposed reservoir. Both types of data will be used as a baseline against which changes resulting from the reservoir can be calculated.

This study is an attempt to consider the effect of change in land and water resources upon communities, their institutions, and the quality of life of their inhabitants. The methods developed will be useful in evaluating the effects of projects which produce changes in water resources, land use, and land ownership patterns. This is one of the few studies known to explore the consequences of public projects upon the quality as well as the costs of services and facilities.

Findings to date indicate that people and communities above the dam tend to lose land, tax base, and business opportunities while those immediately below the dam tend to benefit from flood control and the increased land value and economic activity. This difference of opportunity has

produced divisions among people in the area, resulting in legal actions and other forms of conflict. There is no structure or procedure for involving local interests in decision-making.

There is consolidation of farm units into larger farms, several times larger than a more typical farm, while some farms are being broken up and sold for residential and recreational purposes. The small uneconomical farms are the ones dropping out, which tends to polarize land holders into small parcel owners and very large farm or ranch operations. Limitations of village sewer systems have resulted in relatively haphazard development of marginal lands throughout the region, straining some municipal services and leading to the neglect of others.

This study found indications that quality of the recreational resource, cost of suitable land, and availability and cost of local services will tend to have a depressing influence on the attraction of new industry. Recreation in the area is least likely to affect health care, which was identified in the survey as in most need of improvement, and the actual purchase of land by the government has at least temporarily hurt school enrollments in the reservoir vicinity. Presence of the dam has stimulated a more aggressive leadership in some of the communities, and generated interest groups which have positively affected the level of local participation but have also contributed to factionalism in the area.

To the extent that this reservoir project will continue to drive up land values and induce rural property owners to sell their holdings, it may contribute to the decline of basic retail services in the surrounding villages. At the same time, publicity about the dam has stimulated increasing numbers of canoeists, bicyclists, and pleasure drivers, for whom other retail services are being created.

The project is supported by an NSF/RANN grant through the Institute for Environmental Studies.

Multi-National (Asia)

Nimal Sanderatne (Sri Lanka: Ph.D. in Development student) completed his thesis during the reporting year, a comparative study of agrarian reform titled "The Political Economy of Asian Agrarian Reform: A Comparative Analysis with Case Studies of the Philippines and Sri Lanka (Ceylon)." Until completion of his degree, Sanderatne received financial assistance from the Agricultural Development Council. A copy of the dissertation abstract is included in Appendix C.

CURRENT RESEARCH PROJECTS: LAND TENURE CENTER FACULTY AND FELLOWS

Below is a description of research projects currently being conducted by Land Tenure Center Faculty and Fellows. These projects are in various stages of completion, and, where possible, the descriptions include information on research results. Each research project falls into one or more of the areas of Land Tenure Center research focus described in the introduction to this report.

Area II: Community Organization, Services, Supplies, and Local Controls

Chile

David Morton (United States: Ph.D. student in Agricultural Economics) returned in November of 1973 from field research in Central Chile, where he traced the development experience of intensive broiler (chicken) and hog production in the hands of former farm laborers and sharecroppers in the nonirrigated region of the coast of Colchagua. This area has seen the establishment and demise of the largest regional campesino cooperative in Chile for marketing, supply, and consumption--Marchigue (1965-71); and, during 1972-73, the establishment and operation of a branch of ENAVI, the National Poultry Enterprise, a state corporation servicing the needs of broiler producers. During both periods significant credit outlays were channeled into the region.

The study focuses primarily at the local level upon two forms of business organization for broiler production, small cooperative production groups (worker owned) and larger collective units (hired workers), operating simultaneously and contiguously under the same service umbrella. In accordance with the generally recognized goals of agricultural development, the primary dependent variables under examination are agricultural production, farm income, and rural employment levels; each per dollar year of credit input.

Preliminary results indicate significant positive impacts on the three dependent variables from the development of the broiler industry: (a) complete facilities existed by August 1973 for the production of 3,400,000 broilers per year, or seven percent of the national productive capacity; (b) average wages were 2.0 times the average regional wage for farm workers in the case of ENAVI employees, and 3.3 times for workers in the collective units, whereas net broiler returns to the cooperative group participants averaged some 4.4 times the average regional wage; (c) the broiler industry provided a combined new direct employment for 470 persons--representing a 10 percent increase for the region.

The family incomes, total products, and enterprise mixes of the nonparticipants had remained virtually unchanged between 1967 and 1972, in

spite of sizeable amounts of credit received for annual crop inputs.

In two important measures of technical efficiency the collective units significantly outweighed the smaller cooperative units, averaging 40 percent lower chick mortality levels, and 20 percent higher intensity of use of housing. The cooperative units also rated some 44 percent lower in production per worker, but this appears to be explained basically by the average of 56 percent of time devoted by coop participants to the broilers. (All collective workers were full-time.) The cooperatives, in this way, make some contribution to the rural employment absorption goal stated in the original credit they received.

Despite higher levels of technical efficiency in the collective units, their wages are lower than the returns to cooperative participants because of the concerted program of reinvestment in further construction adopted by these organizations. To explain performance differences between production units, traditional technical inputs are examined along with several other factors. These include occupational and economic background of participants, motivations for group formation, internal work organization, the mechanism for distribution of earnings, the extent of subdivision, and participant withdrawals. During the past year, Morton was financed through a fellowship sponsored jointly by the Midwest Universities Consortium for International Studies and the Ibero-American Studies Program.

Colombia

Robert L. Whittenbarger (United States: Ph.D. student in Rural Sociology) analyzed at a seven-year interval (1962-64--1970-71) a number of socio-economic indicators in three small-farm communities in Colombia to determine the nature and extent of the changes which occurred over time, particularly in the light of the avowed concern on the part of the country's national planners to raise the level of living of the rural poor. The communities had varying types of small farms--independent minifundia in a traditional and declining peasant subsistence area, dependent minifundia whose owners were employed as wage laborers on neighboring large commercial farms, and commercial small farms.

He discovered that while some improvements did take place--specifically in family income levels and in per capita income for some subgroups within the communities--the overall picture worsened: both the actual number of landless families and the number of such families with no access to credit increased; and ownership of land became increasingly concentrated, as did real total family income. Moreover, what limited success did occur was not randomly distributed among the communities, but rather tended to cluster in the commercial small-farm area. Conditions in this area most closely conform to that sector of agriculture for which policy has been most appropriate and therefore has worked the best. Land ownership is less concentrated than in the other two communities, income is higher, there is a strong tendency to adopt innovations (new coffee varieties), and marketing channels linked to the national economy are present.

Whittenbarger's conclusion is that the diffusionist approach to development assumes a degree of homogeneity within the small-farm sector of the economy which does not, in fact, exist, and hence is an inappropriate model on which to base a plan for development of that sector. He argues instead that development must be treated as a dynamic historical process based on the realities of the prevailing productive relationships. This would allow the identification of a series of fixed ends as development projects, ranging from farm-to-market access roads to credit programs geared to the real needs of small farmers.

El Salvador

Donald Jackson (United States: Ph.D. in Development student) began in September of 1973 to conduct field research on production cooperatives in El Salvador. Preparatory to constructing an inventory questionnaire, he interviewed members of three functioning communal cooperatives--La Palma, La Longaniza, and La Oriental--with regard to their relative economic standing in the peasant sector, their technological practices, their problems with credit and marketing, and their overall views on cooperative successes and failures. He also secured government data and interviewed government personnel involved in the agricultural and peasant sectors.

Jackson prepared the questionnaire in December 1973, and conducted his survey. The study focuses on a comparison between communal- and individual-oriented cooperatives. Jackson has also analyzed past records of both the cooperatives and their financial institutions.

Preliminary data indicate that belonging to a communal cooperative has enabled members to plant the more profitable export crops, increase labor input, receive greater technological assistance and credit, and, as a result, make increased use of new technologies. Communal cooperatives are also able to attain contracts to sell their crops to the government agency (in the case of basic grains) and quasi-government cooperative (in the case of cotton); individual-oriented cooperatives, on the other hand, must rely on the open market.

In addition to his dissertation research, Jackson has advised the Union Communal Salvadoreña, a peasant organization to which the communal cooperatives belong. Members of the organization have used Jackson's research results in their current effort to form new cooperatives. During the reporting year, Jackson received financial support from the Midwest Universities Consortium for International Activities, Inc. (MUCIA).

Mexico

Professor Herman Felstehausen and Heliodoro Diaz (Mexico: Ph.D. in Development student) are currently working with the Puebla Project in Mexico to develop methods for improving assistance to small farms and for evaluating changes in service and supply structures. The Puebla Project, sponsored by CIMMYT (International Maize and Wheat Improvement Center) and the State of Puebla, is an attempt to rapidly increase corn yields on small farms. Diaz is analyzing the project's effects on rural services

and institutional structures in the State of Puebla. His work is part of an overall evaluation of the peasant sector, the institutional sector, and performance of the technical staff. Data for the study on farm production came from a survey taken among a random sample of peasant producers. The institutional sector and the technical staff were studied through direct interviews and the detailed monitoring of contrasting cases in order to identify normative changes over time. Diaz is using benchmark data and mid-term evaluation data to study changes in credit supply, technical assistance practices, and the impact of farmer organizations. Institutional data will provide the main material for his thesis.

Findings to date indicate that the effective organization of small-farm producers is as important to development as the introduction of new farm technology. Improvement in the quality and availability of agricultural services required the removal of restrictions on interactions between farmers and service agencies, by counterbalancing agency power with organized farm producer power. In the past seven years, this equalizing of forces has created favorable institutional changes in some agencies, resulting in agency services which appeal to a growing number of campesinos. In some cases, changes have enabled campesinos without individual guarantees to qualify for credit and fertilizer allocation through the use of group guarantees. Other agencies, such as the agricultural insurance agency, have resisted change, thus making their services rigid and less attractive for campesinos. Rigid procedures in several agencies account in part for the lag in growth rate of the Puebla Project's programs.

In general, staff members of the project have successfully resolved technical problems; these include the generation and continuous refinement of new corn planting practices which maximize yields and minimize costs. Diaz' thesis outlines the strategy of the Puebla Project staff in dealing with institutional problems and presents an institutional methodology for rural development analysis. The methodology includes three main approaches. Individual and organizational transactions are carefully monitored to determine the amount of paperwork, time lags, the number and sequence of interpersonal contacts, approvals, signatures, payments, and other steps involved in the process of making a loan. This procedure is coupled with a macro analysis of the same organizations and agencies to determine overall volume of activity, number of clients, and growth and decline in activity. Agency personnel, technicians, and participating and non-participating farmers were interviewed as part of this step for the Puebla Project. Finally, the method includes an analysis of overall economic effects, in the case of the Puebla Project the economic effects of improved technology based on two area-wide random sample surveys which provide a summary of benefit-cost comparisons. The first two steps of this methodology are its unique feature, since many studies do not go beyond an analysis of overall economic effects.

Presentations to groups in the past year included the Second Latin American Seminar on Rural Development in Chapingo, Mexico; review of the Puebla Project after seven years of action in the field by the Rockefeller Foundation Conquest of Hunger Committee; Rural Development Seminar organized by the International Bank for Reconstruction and Development (IBRD); and Cornell University Seminar in International Agriculture for preparing

a special CIMMYT project team to work in Mexico. During the reporting year, Diaz received financial assistance from CIMMYT and the Rockefeller Foundation.

Nigeria

Johnson Ekpere (Nigeria: Ph.D. student in Agricultural and Extension Education) completed his thesis in August 1973. The purpose of the study was to compare factors affecting job performance of local-level agricultural extension workers employed under two approaches to agricultural extension organization--the general extension service and the single-commodity rubber extension service--in the Midwestern State of Nigeria. The Ministry of Agriculture and Natural Resources of the State organized the rubber division to try to find solutions to production problems.

Surveys of extension worker activity revealed that rubber extension workers scored higher than general extension workers on seven of eight indicators of job performance (numbers of: farm visits, demonstrations, farmers meetings attended, farmers associations organized, local leaders identified and trained, farmer visits to extension work stations, special production campaigns, and joint programs organized with members of other agencies). Surveys of farmers indicated that they were generally dissatisfied with extension services, but were less dissatisfied with the rubber extension workers than with those in general extension. Evidence from government records indicated that although both extension organizations planned the same number of programs, the rubber division reported more program accomplishments than the general extension.

Some of these differences in performance were due to such institutional constraints as lack of money and personnel; others were due to inappropriate training schemes and extension worker perception of their own and their supervisors' roles. But the central conclusion of the study is that performance differences were technical, rather than institutional or personal. Where differences in the level of performance existed, they were due to the availability to the rubber division of a steady stream of economically viable and ecologically adaptable technology, supported by an appropriate system of education and supply services.

The formation of a rubber division was important only to the extent that it made the delivery of production, advisory, and educational services more accessible to rubber farmers in the State. Hence, Ekpere concludes that in the absence of sufficient supportive elements, reorganization and the creation of new bureaucratic structures may not make possible desired changes in performance or production.

Peru

David Gow (Scotland: Ph.D. in Development student) is presently in Peru conducting field research on the effect of the 1969 Land Reform Bill on the society and culture of traditional peasant communities in the highlands of southern Peru. His study focuses on four specific communities of Lauramarca, the first hacienda in the Cuzco area to be expropriated. Two of these four communities were once part of the hacienda lands

(Paqchanta and Lauramarca); they are now production cooperatives receiving technical and financial assistance from the government. The remaining two (Pinchimuro and Q'onamuro) are independent freeholding communities, which continue to resist membership in the cooperative; they receive no aid and are unable to petition for more lands.

Sixteen months of field research has resulted in the following preliminary conclusions with regard to land reform, which in this area means the legitimization of existing tenure arrangements rather than a redistribution of land. What change there has been has benefited only the cooperatives, and only a very small portion of their land (4,500 of 70,000 hectares). Cooperative profits are presently used to pay off debts; most of their members are content with the present level of technology, which enables them to live reasonably by puna standards. On cooperative land, the man/land ratio is approximately 14 hectares per person; in independent communities it is less than 1 hectare. Yet independent communities have not received any benefit from the land reform, possibly because radical land redistribution could result in legal problems and increased social tension.

Social factors studied include the civil-religious hierarchy, which though still strong appears to be declining, particularly where mestizo influence is strong. The most important relationship between peasants and mestizos, that of compadrazgo or ritual kinship, is still very strong. There are two systems of prestige at work, one for the "modern" mestizo, where prestige accrues through ownership (of a shop or truck) or special educational opportunities for children, and another for the "traditional" peasant, where prestige results from service to the community and sponsorship of fiestas, as well as some conspicuous consumption (radios, record players, etc.). These systems occasionally clash, yet peasant society and culture are still viable in the alturas because peasants are the only people who have successfully adapted to living at over 4,000 meters above sea level in rural Cuzco and because magic and religion still furnish a strong basis for peasant culture.

Future research will include study of a newly established producer's cooperative, oral history and literature of the area, and documentary research in various archives and libraries. Gow published an article in the Peruvian social science journal Allpanchis Phuturinga, titled "Impact of the Agrarian Reform on the Customary Distribution of Community Responsibility." During the past year, he received assistance from the Foreign Area Fellowship Program.

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Charles Kleymeyer (United States: Ph.D. in Development student) completed his thesis during the reporting year, entitled "Social Interaction Between Quechua Campesinos and Criollos: An Analytic Description of Power and Dependency, Domination and Defense, in the Southern Sierra of Peru." A copy of the dissertation abstract is included in Appendix C.

Sierra Leone

Leon Weintraub (United States: Ph.D. in Development student) completed his thesis during the reporting year, study of a government development project titled "Introducing Agricultural Change: The Inland Valley Swamp Rice Scheme in Sierra Leone." A copy of the dissertation abstract is included in Appendix C.

United States

Professor Felstehausen has recently completed a study of institutional factors affecting the management of land and water resources in Wisconsin, under sponsorship of the UW-Madison Water Resources Center. The study identifies and describes, in a time series, the administrative procedures used over a five-year period in planning and construction of a community wastewater collection and treatment facility on Lake Koshkonong in southern Wisconsin. The sanitary system cost nearly $5 million, of which the community will pay approximately half, with state and federal grants providing the balance. The process involved 72 identified agencies and organizations and 333 officials and technicians. Approximately 5,000 administrative transactions took place. Extensive technical requirements, high capital costs, interlocking local, state, and federal obligations, plus the sheer number of transactions produced a network of activity beyond management capabilities of the local community.

The study concludes that most state and federal assistance efforts tend to deprive local organizations of their autonomy and often reduce rather than expand their ability to solve community-level problems. Administrative, technical, and financial details are shifted to specialists and groups outside of the community with the result that decisions and controls are shifted outside as well, thus reducing the opportunity of citizens to participate in and direct local development. State and particularly federal assistance dramatically increase the cost of the projects by creating additional requirements which must be met. In view of the complex nature of present-day public utility projects, local citizens following traditional procedures will usually not be able to exercise significant control. If they choose to take control of the planning and management, they must develop a technically and administratively competent organization and capture resources to support it.

While located in southern Wisconsin, this project has direct implications for developing countries; land and water resource management at the local level is being made increasingly complex in both the United States and the Third World by a rapidly growing set of rules, regulations, and inter-agency requirements.

* * *

Professor Felstehausen is also studying information practices and citizen involvement in water resources regulation, assisted by Fred Welz (United States: graduate student in Public Policy and Administration). This project is sponsored by the UW-Madison Water Resources Center and is concerned with procedures followed by water resource users and water

resource regulatory agencies in applying for and receiving permits for waste water discharge. The study focuses on administrative and informational problems in the permit system which, if corrected, would enhance operational efficiency and consequently accelerate the rate at which water quality can be improved. Agencies under study are the Department of Natural Resources (DNR) and Environmental Protection Agency (EPA).

The past year has been spent on the collection and analysis of the following types of data: a chronological history of pollution discharge elimination permits, with emphasis on the period following the 1972 Federal Water Pollution Control Act (FWPC); step-by-step flow chart indicating the procedures that have to be followed by an applicant, permit-granting agency, and any interested third party in applying for, modifying and granting a permit; field evaluation of a limited number of permit applicants representing various classes of municipal and industrial users; and an up-to-date file on public notices, public hearings, and printed news articles relating to the permit process.

Preliminary analysis indicates that the "information role" of DNR in the permit system is unnecessarily confused with the "regulatory role." One of the important functions of the permit system is to obtain comprehensive information on point sources and amounts of waste water discharge.

* * *

Eric Abbott (United States: Ph.D. student in Mass Communications) is currently writing his thesis on communication problems in the formation and operation of local sanitary districts in Wisconsin. The thesis is an effort to describe modern-day community communication patterns in decision-making as they developed in a particular district, their institutional limitations, and prospects for improvement. The research included both a case study of the creation and operation of the sanitary district and a mail questionnaire survey of all 962 homeowners in the district.

Preliminary results indicate that the complex technical demands of a modern sewer project--both from an engineering viewpoint and an administrative one--govern project decisions to such an extent that citizens find it difficult to be informed about project outcomes or costs, despite the many laws concerning public notice and participation.

Although citizens could do little to change the many federal and state regulations imposed on the community, they could influence some local project decisions if they were persistent, organized, understood the problem, and recognized financial implications of their recommendations. Finally, public notice and public participation law needs revamping if it is to lead to even limited citizen involvement in public decision-making. Direct mail is recommended as one means of improving communications with the public.

This study is part of a larger research project concerning the Lake Koshkonong region sponsored by the Water Resources Center of the University of Wisconsin, from which Abbott is receiving financial assistance.

Multi-National

Professor James Scott is conducting research in the historical and political experiences of Southeast Asian peasants. This past year he completed a book-length manuscript titled The Moral Economy of the Peasant Subsistence Ethic in Southeast Asia under a grant from the National Science Foundation. This study generates an economic and sociological theory of the subsistence ethic, based on the study of land tenure patterns in Lower Burma and South Viet Nam. Focusing on the relation between owners of land and their tenants, and, in particular, poor tenants who are not far removed from the subsistence level, Professor Scott evaluates the meaning of exploitation as it is experienced by tenants themselves, i.e., a phenomenological theory of exploitation. Results of the study indicate that notions of balanced reciprocity and the right to subsistence form the moral basis of peasant judgements about exploitation. The stability and security of subsistence income are more critical to the tenant's evaluation of the relationship than either his average return or the portion of the crop taken by the landlord as rent. In cases where the level of oppression makes it impossible for them to speak or act openly, Professor Scott demonstrates how it may be possible to find indications in the language, religion, and culture of subordinate classes that their deference is coerced and not voluntary. Professor Scott also examines the development of the state and tenancy systems in Lower Burma and South Viet Nam, and he discusses two major peasant rebellions in colonial Southeast Asia in the thirties, the Sayasan Rebellion in Lower Burma and Nghe-an/Ha-tinh Soviets in Central Viet Nam.

Currently Professor Scott is working on a companion study to the above volume, dealing with the politics of the "little tradition" (local peasant culture and what it means politically) in rural Southeast Asia. The goal of this study is to explain the systematic differences and tensions between folk politics and national politics as being analogous in many respects to the gap between traditional folk religion and formal religion. Through an examination of the tensions between the two political traditions as they are expressed at different levels and in different ways (political parties, administration, and even revolution), the study will attempt to contribute to an explanation of peasant and village politics, as well as to theories of integration and notions of political culture.

Two other articles are emerging from this research, "Legitimacy in Patronage," and "Exploitation and the Growth of Provincial Elites."

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Burton Swanson (United States: Ph.D. in Development student) completed his thesis during the reporting year, entitled, "Training Agricultural Research and Extension Workers from Less Developed Countries: An Examination of Training Approaches Used By The International Rice Research Institute and The International Maize and Wheat Improvement Center." Until completion of his degree, Swanson received financial assistance from IRRI, CIMMYT, and the Land Tenure Center. A copy of the dissertation abstract is included in Appendix C.

CURRENT RESEARCH PROJECTS: LAND TENURE CENTER FACULTY AND FELLOWS

Below is a description of research projects currently being conducted by Land Tenure Center Faculty and Fellows. These projects are in various stages of completion, and, where possible, the descriptions include information on research results. Each research project falls into one or more of the areas of Land Tenure Center research focus described in the introduction to this report.

Area III: Technology, Employment, and Income Distribution Relationships

Brazil

Richard Newfarmer (United States: Ph.D. in Development student) will conduct field research from December 1974 to December 1975 on the process of industrial and capital concentration in Brazil, the role of the multinational corporation (MNC), and its impact on development and social change. The following five hypotheses will be tested with data gathered in Brazil: 1) aggregate and ownership concentration of the Brazilian economy has increased since 1960; 2) market concentration in the manufacturing sector has increased since 1960; 3) those sectors where concentration is high are the areas with the heaviest foreign participation; 4) there is fusion in these sectors of national and international capital effectuated through national and international capital markets, private joint ventures, and government-MNC joint ventures; 5) control of large segments of production is passing out of the hands of private national entrepreneurs to MNCs, as measured in changes in percentages of assets owned, proportion of sales, inputs supplied, foreign patents utilized, and supplies of credit to expand. The verification or falsification of these hypotheses will shed light on the organization of industry, the role of the MNC and the loss of economic sovereignty in Brazil, and its consequent implications for social change theory and development policy. During the reporting year, Newfarmer worked on campus as consultant to the Senate Subcommittee on Multinational Corporations of the Senate Foreign Relations Committee.

Chile

Technology and Structural Change: The purpose of this section is to analyze the effects of the adoption of modern farm technology on factor combinations within the Chilean agrarian reform situation. The primary issue is whether changes in the agrarian structure affect the use of technology and the combination of the factors of production and whether there are significant differences in the impact (both economic and social) of new technology on reformed and unreformed farms. As will be seen in the following analysis, the most important finding is that labor

saving capital increased markedly in the sample. Asentamientos created from wholly expropriated fundos showed a marked decrease in total horsepower per BIH. The remaining types showed varying degrees of increased mechanization. Nearly all units now use yield-increasing inputs, a rather large change from former practices.

The study utilizes data gathered in the Chile research project described in Research Area I of the present report.

The variables included in the present analysis are: 1/

1) Use of improved varieties of wheat and/or corn seed, as a proxy for yield-increasing technology;
2) Number of work animals per BIH;
3) Total number of tractors per BIH;
4) Total tractor horsepower per BIH;
5) Tenure type;
6) Ratio of total hectares to BIH, as a proxy for general land quality;
7) Total hectares.

Variables three and four are proxies for mechanization. With respect to variable one, the analysis includes only farms on which wheat or corn was a major crop. The following pages present both cross-sectional and cross-time analyses. The 1970-71 data are broken down to analyze these variables with respect to tenure type. Cross-time comparisons are drawn in order to assess the "dynamic" character of the processes of technological and structural change.

Yield-Increasing Technology and Factor Use in 1965-66: In 1965, only fifteen farms in the sample reported using either improved wheat or improved corn seed and eleven farms reported that they used unimproved seed. Table I shows the pattern of input factor use for these two groups of farms.

On the whole, it can be seen that farms which used improved seed in 1966 were also more "modern" in the combination of other production factors they used, in comparison to the farms using unimproved seed. The farms using new yield-increasing technology used 125 percent more tractors and 137 percent more horsepower per BIH than did the farms using more traditional technology. The former group also used 18 percent fewer work animals per basic irrigated hectare.

This conforms to expectations concerning the effects of adoption of modern yield-increasing technology within a given tenure structure. Similar results have been shown in other studies. Farm managers who have a propensity to adopt new varieties also are inclined toward the mechanical

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1/ Some of these data have not gone through the final post-coding cleaning and correction process. In addition, variables which could broaden and enrich the analysis have not been included in this report, but will appear in subsequent analyses, which will be made available as they are completed.

TABLE I: MEAN VALUES OF PRODUCTION FACTORS FOR FARMS USING IMPROVED SEED, UNIMPROVED SEED--1965*

	Number Tractors/ BIH	Horse-power/ BIH	Number Work Animals/BIH	Total Hectares/ BIH	Total Hectares Per Farm
Farms Using Improved Seed (N=15)	.0151	.701	.0526	1.973	873.7
Farms Using Unimproved Seed (N=11)	.0067	.329	.0645	4.082	3,749.3
Remainder of Sample (N=79)	.0117	.545	.0787	4.164	1,636.0

*The number of observations used in each calculation is sometimes less than the total number in the group because of missing values for certain variables.

aspects of modern technology. Furthermore, taking full advantage of the production potentials of yield-increasing technology, especially "imported technology," is often easier and quicker with increased mechanization and sometimes actually requires it. Having increased mechanization, the farmers need fewer animals, and also fewer workers, especially permanent, resident workers. One rationale underlying the traditional system of inquilinaje was the need for constant care and attention to draft animals, as well as the more or less steady (non-seasonal) need for labor-intensive operations, including both animal-powered tillage and direct manual jobs. Thus machines replaced workers with their respective draft animals as well as workers per se.

This illustrates an important social effect of the adoption of modern yield-increasing technology within a static tenure structure. The total need for labor does not necessarily drop, and may even rise. However, there is a rapid change in the type of labor needed: from a large force of semi-skilled workers, competent in the breeding, training, care, and use of draft animals and more or less independent production for their own subsistence, to a smaller resident force of somewhat more skilled workers (machine operators and mechanics) and a large "floating" force of unskilled manual laborers, available on a seasonal basis.

The two groups of farms also show interesting differences in the land variables. With respect to land quality--the ratio of total hectares to BIH--land on farms using improved seed is "twice as good" as that of the other group. However, because of the small number of farms, and large variance, the differences are not statistically significant at an

acceptable level. In terms of size of farm, the farms using unimproved seed average more than four times the acreage of the other group. This difference is statistically significant.

In an attempt to derive a general characterization of the technological "modernity" of the overall sample in 1965, and to check on the representativeness of the two seed-use groups, the remainder of the sample (row three in Table I) was compared to the two subsamples. The differences between the means in each seed-use category and the means in row three were not statistically significant. However, the remainder of farms do show a tendency to be somewhat more like the "traditionals" (row 2) than the "moderns" (row 1).

Averages for number of work animals per BIH were higher on these farms than on either of the subsamples, suggesting "traditionality." Land factors were also found to be similar on "traditional" farms and the farms in row three. And "modern" farms proved to be different from the remainder in terms of land quality (again more than twice as good on the modern farms). The remaining farms also averaged twice the total size of the farms using improved seed. Thus in terms of land quality and size they again show a traditional tendency.

It is important to note that the third group includes farms of a variety of enterprise combinations and management orientations. Thus, it is not possible to characterize it as clearly and uniformly similar to either of the seed-use groups, but rather, as a mixed group which certainly includes many very traditional farms, but also at least a few relatively modernized ones on which neither wheat nor corn happened to be a major crop. Even so, the tendency toward traditionality seems worthy of note. 2/

Changes in Technology Between 1965/66 and 1970/71: A major value of a panel study is that each farm serves as its own control, which makes it possible to construct a clearer picture of the ways in which yield-increasing and labor-saving technologies affect factor combinations under conditions of structural change.

By the time of the re-survey in 1970-71, virtually all of the units had become "modern" in terms of the crude seed-use index used to categorize the 1965 sample. Only four farms reported using unimproved seeds. Mechanization had also greatly increased during the interim. Thus it is apparent that both technological modernization and structural change had been occurring rather rapidly and simultaneously within the sample. The structure

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2/ Further analysis, employing different categories for breaking down the sample, will very likely yield a much clearer characterization of the overall sample in terms of technology. However, since the focus of the present analysis includes yield-increasing technology, and since the two examples most widely available in Chile in 1965 were improved varieties of wheat and corn, the present breakdown was chosen over a more complex categorization, which, at the same time that it gave a clearer picture of overall "modernity," may well have obscured differences in, and related to, use of these improved varieties.

of inputs for the entire sample for both 1966 and 1971 is presented in Table II. The most salient finding is that labor saving mechanical power increased markedly in the sample as a whole. The number of tractors per BIH increased by nearly half, while horsepower went up by nearly 70 percent.

TABLE II: LEVELS OF LABOR-SAVING TECHNOLOGY IN 1966 AND 1971; ALL FARMS

	Number Tractors/ BIH	Horse-power/ BIH	Number Work Animals/BIH	Total Hectares/ BIH	Total Hectares Per Farm
All Farms 1966 (N=105)	.0117	.545	.0729	3.842	1,748.5
All Farms 1971 (N=215)	.0170	.9234	.0884	3.174	807.5
Level of Significance	>.01	>.01	-	>.20	>.01

Table III shows the average changes per farm in factor use from 1965 to 1971. Here the farms are categorized into six tenure types. In computing these changes, the value for each variable on the original fundo was subtracted from the corresponding value for the 1971 unit created from that original fundo. These "change scores" for the 215 individual farms were then averaged for each tenure type. A negative score indicates a decrease in the use of a given factor, i.e., the 1965 fundos used more of it than did the 1971 units. With respect to land quality, a negative value indicates that a given category of farms is made up of the poorer lands of the 1965 fundos from which they originated.

The analytical value of this table is that it controls for both varying original levels and tenure changes. In 1965 there was only one tenure type--large fundo. Levels of factor use on these fundos in 1965 are also known. Thus, the relationship of original tenure type, structural changes, and factor substitutions over time can be seen.

There is a notable tendency toward increased use of mechanical power. There is also a relatively larger increase in horsepower than in number of tractors per BIH which indicates that newer and larger tractors with greater labor saving capacity were being acquired. The implication of this trend is continued pressure to displace labor.

Mechanization trends as related to tenure change are of considerable

TABLE III: AVERAGE CHANGE PER FARM IN LABOR-SAVING TECHNOLOGY ON FARMS OF DIFFERENT TENURE TYPE IN THE PERIOD 1966-1971

	Number Tractors/ BIH	Horse-power/ BIH	Number Work Animals/BIH	Total Hectares/ BIH
Fundos unchanged in size from 1965 (N=41)	.00196	.2289	-.0026	
Asentamientos equal in size to 1965 fundo (N=22)	-.00276	-.0530	-.0334	
Asentamientos from farms where reserve left (N=19)	.00082	.2030	.0358	-.13984
Reserves left after expropriation (N=16)	.00766	.4473	-.0349	-.53043
Parcels from partially expropriated, subdivided fundos (N=20)	.01100	.7497	.0056	1.24611
Parcels from subdivided fundos unaffected by expropriation (N=97)	.01128	.6437	.0544	-.07963
Totals (N=215)	.00739	.4790	.0238	-
F-Ratio	1.309	1.134	.554	-
Level of Significance	.263	.345	.735	-

nterest. Asentamientos created from wholly expropriated fundos showed arked decreases in both tractors and total horsepower per BIH: a re-ult of the decapitalization process discussed in the previous section. he remaining tenure types showed varying degrees of increased mechani-ation. The increase was the smallest in the second asentamiento cate-ory, with the fundos showing a slightly larger increase. Increases in oth mechanization variables were substantial for the two private sub-ivision categories, while the reserves showed increases approximately qual to that of the overall sample average.

Reform and Employment: Some employment implications have been ouched on in a summary way in previous sections of the report. Here e intent is to focus directly on the question of how various segments f the rural labor force were affected by the reform process.

The traditional fundo employed several categories of workers. As oted earlier, inquilinos formed the core of the resident labor force. it there were also two other groups of resident workers: 1) empleados upervisory personnel) and 2) voluntarios (temporary or "occasional" borers).

Empleados were typically drawn from the inquilino ranks and enjoyed mewhat higher incomes, better houses, lighter work loads, and consid-able prestige as the representatives of the patrón. Usually they did t belong to the labor unions. For this group, expropriation usually d negative consequences. Where reserves were left to owners, they of-n remained with him, and in some cases they were accepted by the in-ilinos and incorporated into the reform units. However, many if not st of this rather small group found themselves out of a job when their spective fundos were expropriated.

The voluntarios formed a rather large group. Typically, they were latives (usually grown children or in-laws) of the inquilinos who lived the inquilinos' houses as allegados (boarders). Voluntarios filled for inquilinos when they were ill or otherwise unavailable. Some en-rprising inquilinos even hired voluntarios to fulfill a major share their work obligations on the fundos in order to devote more time to eir individual plots. Voluntarios also worked on these family plots, d helped with seasonal jobs on the fundo to earn extra money for the usehold.

Traditionally, if a voluntario caught the eye of the patrón, he was fered a house and other perquisites of an inquilino when he married. vever, in recent years the number of voluntarios who become inquilinos s been declining as owners have sought to reduce social tensions and crease costs by replacing permanent resident workers with machines and/ temporary laborers. Thus, more and more of these young people have n forced to migrate to the cities or join the ranks of the underem-yed migrant farm workers. Instead of moving up to the inquilino egory they have moved down a step to the status of afuerino (literally tsider").

These traditional worker categories have their counterparts within

the reform sector. Inquilinos (and some empleados) became asentados; voluntarios became socios. Rights to individual land plots and other perquisites as well as social and status relationships between the two types are much the same as they were under the traditional hacienda system. Afuerinos also work on the asentamientos on more or less the same terms as on fundos.

Table IV shows the general shifts which occurred within the sample, including the trend away from inquilinaje and toward increased use of temporary labor.

All workers who live and work on a given farm are referred to as permanent resident workers. Temporary resident workers are the voluntarios and socios who do not have full rights to land, housing, and other perquisites within the fundo or asentamiento.

The number of permanent resident workers increased by 26.9 percent in the sample as a whole. The effects of the reform show up clearly. On completely expropriated fundos the number of permanent workers rose by nearly 60 percent and the other reform units showed a 42.2 percent increase. Unaffected fundos exhibited a moderate increase (18.4 percent), and the privately subdivided units indicated a 9.4 percent decline in permanent resident labor. Table V shows similar trends and relationships for the total resident work force, which includes socios and voluntarios.

In sum, the reform seems to have increased resident employment on expropriated farms and may have had an indirect effect on the unaffected fundos. There were both positive and negative incentives for the owners of these farms to intensify their operations and to maintain harmonious labor relations. These influences, especially the latter, were not felt as strongly by the owners of subdivided parcels. Splitting up the farm had the effect of breaking the union, so parcel owners could then hire and fire with a somewhat freer hand. Also, new owners were not bound by the labor contracts of their predecessors.

Table VI shows the labor data in terms of days worked, rather than number of workers. Here the afuerinos are also included.

In general, the trends seen in the earlier tables hold. However, the picture does change where the temporary resident workers are concerned. This can be seen most clearly in Table VII.

The earlier tables showed that the number of temporary workers had increased. Here we see that the number of days worked by this category increased even more rapidly. This suggests that the entire resident labor force is being more fully utilized than previously. Tables VI and VII indicate that the situation changed very little, if at all, for the afuerinos.

Table VIII presents indexes of labor intensity for the various tenure types. The index consists of the number of man-days divided by the number of hectares in the central enterprise.

Asentamientos show the highest man-land ratios, as well as the largest increase in this ratio, compared to the 1965 fundos. As expected, the

TABLE IV: TOTAL PERMANENT RESIDENT WORKERS ON THE SAMPLE FARMS

	(n)	1965-66		1970-71		Difference between 1966 and 1971		
		No. of Workers	$\bar{x}$ per Farm	No. of Workers	$\bar{x}$ per Farm	No. of Workers	$\bar{x}$ per Farm	% Change
Unexpropriated Fundos	(36)	843	23.4	998	27.7	+155	+ 4.3	+18.4
Completely Expropriated Fundos	(15)	544	36.3	866	57.7	+322	+21.5	+59.2
Partially Expropriated Fundos	(12)	460	38.3	654	54.5	+194	+16.2	+42.2
Parceled Fundos	(22)	481	21.9	436	19.8	- 45	- 2.0	- 9.4
TOTAL	(85)	2,328	27.4*	2,954	34.8**	+626	+ 7.4***	+26.9

*F = 2.49, P < .10

**F = 5.17, P < .01

***F = 4.47, P < .01

TABLE V: TOTAL RESIDENT WORKERS, PERMANENT AND TEMPORARY

	(n)	1965-66 No. of Workers	1965-66 $\bar{x}$ per Farm	1970-71 No. of Workers	1970-71 $\bar{x}$ per Farm	Difference between 1966 and 1971 No. of Workers	Difference between 1966 and 1971 $\bar{x}$ per Farm	% Change
Unexpropriated Fundos	(36)	1,317	36.6	1,607	44.6	+290	+ 8.1	+22.1
Completely Expropriated Fundos	(15)	763	50.9	1,128	75.2	+365	+24.3	+47.8
Partially Expropriated Fundos	(12)	568	47.3	848	70.7	+280	+23.3	+49.3
Parceled Fundos	(22)	775	35.2	700	31.8	- 75	- 3.4	- 9.7
TOTAL	(85)	3,423	40.3*	4,283	50.4**	+860	+10.1***	+25.1

*F = 1.16, N.S. at P = .05

**F = 3.56, P < .05

***F = 3.96, P < .05

TABLE VI: AVERAGE NUMBER OF PAID MAN-DAYS PER FARM IN 1965-66 AND 1970-71

		Permanent Resident Workers				Temporary Resident Workers				Contracted Workers (afuerinos)			
	(n)	1965-66	1970-71	Difference	% Change	1965-66	1970-71	Difference	% Change	1965-66	1970-71	Difference	% Change
Unexpropriated Fundos	(36)	5,974.1	6,862.5	838.4	14.9	2,171.8	4,385.8	2,214.0	101.9	1,835.9	1,963.5	127.6	7.0
Completely Expropriated Fundos	(15)	8,997.2	16,232.5	7,235.3	80.4	2,655.3	4,759.4	2,104.1	79.2	1,449.9	1,673.1	225.2	15.5
Partially Expropriated Fundos	(12)	9,378.2	14,758.6	5,380.4	57.4	1,560.1	3,952.0	2,391.9	153.3	5,249.5	1,526.8	-1,112.7	
Parceled Fundos	(22)	5,547.7	5,005.5	-542.2	- 9.8	2,753.0	3,172.1	418.3	15.2	1,645.8	1,279.9	-365.9	22.2
TOTAL	(85)	6,877.7	9,150.1	2,272.4	33.0	2,321.5	4,076.4	1,754.9	73.6	2,200.5	1,674.0	-158.0	
F		(1.69)	(6.03)	(6.32)		(1.02)	(4.05)	(5.79)		(1.80)	(0.57)	(1.84)	
P		N.S.	< .001	< .001		N.S.	< .01	< .01		N.S.	N.S.	N.S.	

TABLE VII: AVERAGE NUMBER OF PAID WORK DAYS PER WORKER IN 1965-66 AND 1970-71

	Permanent Resident Workers		Temporary Resident Workers		Total Resident Workers	
	1965-66	1970-71	1965-66	1970-71	1965-66	1970-71
Unexpropriated Fundos	255.3	247.7	164.5	259.5	222.6	252.2
Completely Expropriated Fundos	279.9	281.3	107.9	271.9	228.9	279.1
Partially Expropriated Fundos	244.8	270.8	173.3	244.0	231.2	264.6
Parceled Fundos	253.3	252.8	207.1	264.3	235.8	257.2
TOTAL	251.0	262.9	180.0	261.3	228.3	262.4

TABLE VIII: AVERAGE LABOR INTENSITY (MAN-DAYS/BIH)

		Permanent Resident Workers		Permanent and Temporary Resident Workers		Contracted Workers (Afuerinos)	
	(n)	1970-71	Average Change in Reference to Original Farm in 1965-66	1970-71	Average Change	1970-71	Average Change
Fundos with boundaries unchanged	(36)	27.39	-.35	16.68	6.79	10.07	+1.30
Asentamientos, boundaries same as fundo in 1965-66	(17)	31.40	+11.98	9.97	3.73	5.85	+1.23
Asentamientos, where part of original fundo stayed in private hands	(12)	67.43	+46.22	22.14	18.12	5.05	-1.71
Reserves	(11)	13.37	-11.76	7.74	2.58	4.08	-.38
Parcels, where most of original fundo was expropriated	(17)	15.29	+3.19	11.17	7.01	4.79	+.68
Parcels, in completely subdivided fundos	(74)	16.85	-2.75	11.42	1.83	7.53	+1.18
TOTAL	(167)	23.85	+2.80	12.91	4.84	7.21	+.85
(F)		(9.61)	(10.91)	(1.23)	(1.97)	(0.47)	(0.08)
p		.001	.001	N.S.	N.S.	N.S.	N.S.

reserves show the greatest decrease, followed by parcels from completely subdivided fundos. Unaffected fundos and parcels from partially expropriated haciendas also showed decreasing man-land ratios. These data show quite clearly that private units that were carved out of the original set of expropriable farms are providing proportionally less employment than are the asentamientos.

Campesino Class Consciousness and Participation: This summary focuses on the determinants of differing levels of political consciousness, group consciousness, and participation in decision-making on the sample farms.

Consciousness: Two central factors are often cited as explanations for changes in political awareness--class conflict and unionization. These factors were tested for relationships with measures of consciousness, cohesiveness, and participation over the whole sample of reformed and non-reformed farms. Experience with class conflict and unionization had little direct relationship to political consciousness. Neither did broad structural features of the farms, such as their size, appear to have an effect. However, changes in tenure were clearly correlated with levels of consciousness. The experience of being on a farm that had passed into the reformed sector seemed to lead to higher levels of "reformism" and "strike solidarity" and to lower levels of perception of the group's differences in work load and wages. Furthermore, reformed farms tended also to have more agreement among their members with regard to socio-political attitudes. That is, group cohesiveness was higher on reformed than non-reformed farms.

Reformed farms and farms with participation indexes tended to show low but consistent levels of dissatisfaction with differences in work loads and wages together with rather high levels of solidarity and group cohesiveness.

Group attitudes about collectivization appear not to be strongly related to the situational variables studied. Why workers on some farms consistantly consider collectivization to be the best means of farm management is not adequately explained by our data.

Farms with workers who predominately favored solidarity with other striking workers and who favored acceleration of the agrarian reform process were likely to be reformed and/or to exhibit high levels of worker participation. On these farms, workers also were likely to have had a father in a union and to have experienced some form of labor conflict.

Participation: It appears that participation in management of farms is related both to positive attitudes about transfers of political power to farm workers and to general agreement of attitudes among members of a farm. The farms where the campesinos participated more in farm management also tended to exhibit higher levels of consciousness and group cohesiveness.

Farms which had had unions prior to 1965 tended to have more types

of meetings in 1970 than did farms with newer unions. In general, length of experience with unions correlated highly with levels of participation in decision-making. Size of farm was also related to participation; larger farms had meetings on more types of issues than did smaller ones.

Consciousness and Participation on Reformed Farms: Analysis of consciousness and participation on the reformed farms alone showed that they were not as strongly related to each other as they appeared to be for the entire sample. Degree of participation was strongly related only to the solidarity aspect of consciousness. Experience with actual labor conflicts was the most important variable for explaining the differences in levels of consciousness and cohesiveness among reformed farms.

Several factors distinguished reformed farms with high participation indexes from those with low indexes. Asentamientos that had been functioning for a longer time tended to exhibit more participation in decisions concerning resource allocations. Large asentamientos also showed greater participation than did smaller ones. In fact the size factor seemed to be more important than the time factor; that is, large units that were also relatively new still tended to have high participation indexes.

Colombia

During the past year, Land Tenure Center research on urban development and migration in Colombia continued under a grant from the Ford Foundation and a contract with the Agency for International Development. Professors Eugene Havens and William Flinn, together with a number of students, are presently analyzing data and publishing findings from this study. The project focuses on the small-farm communities of Cereté (rural and urban), Támesis, and Contadero, each of which possesses different structural characteristics in the concentration of productive resources and in ties to national or international markets. Because of the availability of benchmark data from studies of the same areas made by the Land Tenure Center in 1963, the project was able to develop a panel design study to assess changes in personal and family characteristics of both the migrant and nonmigrant populations.

Field research for the project completed this year was conducted in three stages: a) locating and reinterviewing household heads from the four communities who were interviewed in the original sample in 1963; b) selection of a new random sample in each of the communities to determine inmigration to these areas and to examine the relationship between this inmigration or the lack of it and the presence or absence of public investment; c) locating and interviewing both family and individual migrants who moved from the communities to determine their motives for migration and the effects of the move upon their lives.

For all areas, migrants have been interviewed and data gathered on employment profiles, education, income, and occupational history. In all areas more than 85 percent of the migrants were located and reinterviewed. The data for the study come from these interviews as well as from secondary sources of information on the amount of credit, public investment, and other inputs provided by institutional sources.

A major paper resulting from the study is "The Adoption of Innovations: The Neglected Role of Institutional Constraints," by Professors Havens and Flinn and Professor Michael T. Aiken of the University of Wisconsin-Madison Department of Sociology. Previous studies on the adoption of innovation appear to accept a set of implicit assumptions common to sociological theorizing about change from a pluralist perspective. In effect, they have assumed equal access to resources necessary for the adoption of the innovation and equal positive evaluation of the consequences of the innovation. This paper generates a path model on panel data demonstrating that, in the context studied, Colombian farmers do not have equal access to institutional resources or support for adopting new technology in agriculture. Thus, when structural aspects of the adoption situation are taken into account, both direct and indirect effects of institutional constraints have equal, if not more powerful, explanatory effects than personal characteristics of the innovators.

The farmers studied grow coffee on small holdings in a mountainous region of Colombia. They were being encouraged by the National Federation of Coffee Growers to adopt two new varieties of coffee--Borbon and Caturra--which produce double yields per acre and are easier to harvest because they ripen more uniformly than older varieties, thus permitting a single harvest. However, there are serious costs involved in adoption: it takes four years after the planting of either variety before there is a harvest; the new varieties require large and expensive applications of fertilizer and weed killers. Most of the land in the region suitable for coffee was already in production, hence adoption required a conversion process, i.e., a farmer had to be willing and able to take some of his land out of production for four years to adopt.

Given the low level of cash reserves that most small coffee farmers have been able to accumulate, it is not likely that they can make such a change without the availability of credit. The availability of credit sources for a given farmer depends not only on institutional judgments about his situation, but also on his perception that credit is indeed available. Adequate credit resources are relatively recent phenomena for small farmers in Colombia. Traditionally, credit was scarce and mainly controlled by large farm owners, but recently the Colombian government has made available to many small farmers a state-sponsored credit program. Yet obtaining credit is still difficult for many small farmers. A complicated system of records and insufficient knowledge about how to prepare proper applications is exacerbated by the low educational levels of most farmers--usually no more than three years of formal schooling. Because of the incomprehensibility of this process to them as well as the judgments of poor credit risk, many small farmers have asked for but not received credit.

It is also important to visualize some of the physical and social constraints that confront the potential user of new agricultural inputs in the coffee-growing regions of Colombia. Coffee is grown on three Andean mountain chains that traverse Colombia. The average climate of the low mountain valleys is too hot for the production of mild coffee, and the high savannahs are too cold, so the steep slopes with their favorable intermediate climate must be cultivated.

Social conditions are seldom favorable anywhere. Penetration roads to the coffee farms are almost non-existent, and the transportation from production site to an available market channel must be accomplished largely by mule or by the back of the producer. Wherever penetration roads are absent, schools, change agents, and other technical assistance and information flows also tend to be lacking. The potential adopter, then, must usually take initiative to gain information and help--no easy task if one imagines this individual who has an average of about three years of education, an average of approximately 15 acres of land, an annual income of about $400, is about 50 years old, barely literate, and with a family of seven residing in three rooms, having to walk about two hours up and down tortuous mountain paths in order to arrive at a center where the major institutions of change (bank, credit agencies, technical assistance agencies) are located.

Several previous studies of innovation have found that a number of personal characteristics are significantly related to adoption, e.g., age, education, exposure to mass communications. The data in this study do not fully substantiate these findings. Rather, three sets of factors were shown to be significantly related to adoption in this Colombian case:

1) Pre-1963 Characteristics

   a) Index of farm adoption, 1963
   b) Use of credit from institutional sources, 1961-63

2) 1963 Characteristics

   a) Index of general knowledge
   b) Resources
      i) Number of acres in coffee, 1963
      ii) Total family income, 1963
      iii) Farm size, 1963
   c) Perception of the Availability of Credit

3) 1963-70 Characteristics

   a) Use of credit from institutional sources, 1964 and 1971

Prior to using credit a farmer must be able to perceive that it is available to him. These data show that such perceptions were directly affected by an individual's use of credit prior to 1964 and by his level of knowledge (i.e., previous adoption of innovations), and indirectly affected by the number of acres he had planted to coffee and his level of education. A farmer's actual use of credit between 1964 and 1971 was directly affected by his use prior to 1964 and his level of knowledge, and indirectly affected by the number of acres he had planted to coffee.

The data reveal further that adoption of the new varieties was directly affected by an individual's use of credit between 1964 and 1971, his perception of the availability of credit, and the number of acres he had planted to coffee. Adoption was indirectly affected by an individual's level of education, use of credit prior to 1964, and level of knowledge.

Hence, three variables have the most proximate and strongest effect on adoption of these new coffee varieties--resources as reflected in the number of acres in coffee, the perception of credit, and the actual use of credit between 1964 and 1971. These variables also serve as filters for the impact of still other variables such as farm adoption, use of credit, and the level of general knowledge.

These variables, given the situation of economic marginality and dependency of the farmers in this study, suggest that availability of credit resources is a critical factor in understanding the adoption of an innovation such as Borbon and Caturra, which can have significant economic implications for the adopter. Those who thought that credit was not available to them and those who did not use credit during the period of study were less likely to adopt this innovation. Despite the fact that the information used in measuring these two variables was provided by individuals, we believe they do reflect the institutional constraints under which these farmers must operate. The length of the conversion process and the magnitude of the economic sacrifices potentially involved demand access to economic resources through credit. Eighty-five percent of the adoptors asked for and received credit prior to their decision to convert all or part of their coffee land to Borbon and/or Caturra. Credit was an essential component of the decision matrix leading to adoption.

Those who obtained credit were more likely to adopt; those who had not obtained credit, and in a number of instances were specifically denied credit, were less likely to adopt. To give a better understanding of these dynamics, we examine here the use of the credit variable in greater detail. Among 27 farmers who asked for and received credit, 22 received all that they had requested while 5 received a portion of the amount they requested. Among the 29 farmers who did not receive credit, 17 had asked for credit but were refused and 12 had not asked for any credit. There were no adopters among the 17 who were denied credit and only 4 adopters among those who did not request credit. Undoubtedly, a primary factor in failure to adopt these new coffee varieties was the denial of credit. However, such an argument does not necessarily explain why those who did not ask for credit were less likely to adopt Caturra and/or Borbon. The answer lies in the perception of credit availability. Mean scores for perception of credit availability for the two categories of credit users are considerably higher than the two categories of credit nonusers. In fact, the mean perception of credit score for the category of those who did not ask for credit is the lowest. Farmers in this category did not ask for credit because they did not think it would be available to them. The 4 adopters in this category had much higher incomes than the others ($\bar{X}$ income for these four adopters was 12,600 pesos as opposed to 5,200 for non-adopters), perhaps suggesting why they did not seek credit. These 4 farmers also largely accounted for the favorable perception of credit for this category. Only 2 of the remaining 8 farmers in this category thought that any credit would possibly be available to them; the perception of credit score for the remaining 10 members of this category is only .3. To summarize, those who had access to credit were most likely to adopt Caturra and/or Borbon (23 of 27) while those who did not have credit available to them were less likely to adopt (only 4 of 29). Seventeen of the farmers in this latter category were not optimistic that credit

from institutional lending sources would be available to them but asked anyway. They were refused, but not one of them adopted these new coffee varieties. The remaining 12 farmers did not request credit nor did they believe that credit was available to them (with the exception of 4 relatively well-off farmers who were adopters). None of the remaining 8 farmers adopted these new coffee varieties.

We have concentrated here on credit from official sources. Three non-adopters did receive 5,000 pesos (500 dollars) from coffee buyers, who charge 20 percent interest, but most small farmers obviously could not afford this rate (the National Agrarian Bank charged 8 percent). The only other non-institutional credit used by farmers came in the form of small loans extended by local storekeepers, but credit from non-institutional sources was by and large negligible.

Any analytic model of the adoption process which failed to consider the role of credit institutions would have excluded one of the key elements in the adoption process. Admittedly the indirect measures used are not as desirable as tracing each request for credit and determining the lenders' reasons for denying or providing it. Such research procedures were impossible, but interviews were conducted with directors of the various credit institutions at national and local levels. When asked, "What do you consider to be the main obstacle limiting credit to small farmers?", the Director of the National Agrarian Bank stated, "The problem is not one of lack of funds. Basically the small farmer does not keep records, so we can't tell how well he farms. Without records he cannot possibly fill out our forms. Many times he can barely write. We reject many applications because they have not been properly prepared."

Following the lead question, the director was asked about any special programs conducted by the bank to help small farmers keep records and fill out the forms. His response was: "We are a bank, not an extension agency. Farmers have to learn these things somewhere else." His response was followed by another question inquiring where else farmers might learn these things. The director stated, "I'm not sure. Maybe through the Secretary of Agriculture, but their technicians don't travel into the mountains very much. Sometimes the priest tries to help, but he doesn't know too much about farm records. I guess these farmers will just have to learn by themselves." This informal interview, others with similar bank officials, and discussions with decision-makers in local credit institutions supplied some confidence in our interpretation of "use of credit" variables.

There is a second aspect to the institutional constraints. The perception of whether credit is available to a farmer is hardly arrived at in isolation. On the contrary, it summarizes a history of individual experiences and general perceptions of the farmer and his friends, neighbors, or persons about whom he has information. As such it is a subjective view of the institutional structure, accurate or not, upon which these farmers base their act[illegible]. These subjective beliefs about the institutional structure can be see[illegible] integral parts of the structure itself.

Even though a resource becomes available, the fact that people do not believe the resource is <u>really</u> available for them is an important comment

on the prevailing social and institutional structure. This sort of difficulty, we reiterate, has not received proper analytic attention in studies on the adoption of innovation.

Finally, even though this research design was a longitudinal one with observations at two points in time (some of which were nevertheless retrospective), we have captured only fragments of what we consider to be the true process. To our knowledge, this is the first study concerned with the adoption of innovation that has employed a path model with panel data. There is probably a continual interactive and feedback process at work here, and these research procedures permit only crude reflections of it. This is not to deny the validity or appropriateness of either our or other analytic models, but simply to indicate our awareness that our procedures and research instruments have not captured completely the adoption of innovation process in this setting.

Green Revolution Technology and Community Development: The Limits of Action Programs by Professors Havens and Flinn:

This paper utilizes empirical data from the project to deal with the specific consequences of institutional arrangements on commercial agriculture. This paper demonstrates that, community action failing to take extant institutional arrangements into account, the farmer's ability to adopt new techniques will determine his income. The community studied, Tamesis, is located in the coffee producing region of Colombia in Antioquia. In the past seven years, two new coffee varieties (Caturra and Borbon) and large applications of fertilizers and weed killers have become available. Of the 56 coffee producers used in the analysis, only 17 had adopted these innovations, due largely to credit restrictions.

Table I presents data on annual net income per family unit in 1963 and 1970 for adopters and non-adopters for the 56 families. Looking at the total number of families and the distribution of income in 1963 and 1970, the Gini Coefficient for concentration was .275 in 1963 and .443 in 1970, showing that income distribution has become more concentrated during the eight-year period. It can be inferred from Table II that a relatively small group increased their control over the income in the community from 1963 to 1971. The adopters' income increased from an average of 6,731 pesos per year to 21,443 while the non-adopters increased from 4,509 pesos to 12,063 pesos. The increase in income for both adopters and non-adopters was statistically significant, but the difference in the amount of increase between adopters and non-adopters was also significantly different. In other words, more of the increase in income flowed to the adopters than to the non-adopters. It is also worth underlining the fact that adopters started at a higher income level in 1963 than did non-adopters.

Table II presents the same data, but 1971 currency is converted to 1963 pesos. The same differences are observed for adopters but the increase for non-adopters rose from 4,509 to 6,274 which is not statistically significant. When income is converted to real terms, therefore, adopters have increased their income significantly but non-adopters have not. Subsequent calculations are all expressed in real terms.

What is the source of this new income? Can it be accounted for by more family members coming of working age and contributing to total family income? The average number of family members who were employed by families adopting the new inputs was 2.1 in 1963 and 2.9 in 1971; for non-adopters the average was 2.2 in 1963 and 3.1 in 1971. These averages are not statistically different, so the notion that more total family members working accounted for the increase in income can be rejected.

Perhaps the best explanation for the increase in income is in successful adaptation of new varieties of coffee. It was thought that monetary return for each acre of coffee in production would give a good measure of "successful adoption." Table III presents these findings. Adopters and non-adopters both began at about the same level of net income per acre in 1963 (290 pesos for adopters versus 222 for non-adopters). But by 1971 the adopters increased net income per acre to 1,642 pesos. Net return per acre for non-adopters increased to only 632 pesos, and the difference in the amount of increase between adopters and non-adopters was highly statistically significant. Thus, there appears to be very little doubt that the change in income levels is largely accounted for by the adoption of the new inputs.

If adopters have increased their income levels, how have they invested their greater surplus? Clearly, part of it has been invested in the changeover to new varieties. But Table IV leads us to believe that some new land was bought by adopters as well; land has become concentrated in fewer hands. The Gini Coefficient of concentration was .706 for 1963 and .859 for 1971. It is also clear that it is the adopters and not the non-adopters who acquire land. The adopters increased their farm size from an average of 18.86 to 33.13 acres while the holdings of the non-adopters decreased from an average of 7.97 to 6.42 acres. It is worth underlining that even in 1963 those who subsequently adopted the technology controlled more acreage. The average farm size was 18.86 acres for adopters and 7.97 for non-adopters.

It has been demonstrated that the distribution of income and land has become more concentrated in the community under study and that the adopters of the new coffee varieties began with the more resources and have enjoyed the bulk of these gains in income and land from 1963 to 1971. Because they have more land to use as collateral, it is quite probable that adopters have had greater access to credit than non-adopters on the average.

Structural Determinants of the Selectivity of Migration in a Declining Economic Area by Professors Havens and Flinn:

This third paper illustrates the use of project data to analyze subsistence agriculture in Colombia. Focusing on Contadero, this study demonstrates the importance of changes in the socio-economic structure of the community of origin of migrants upon the selectivity of migration. The study analyzes the characteristics of the families who sent migrants out of the community, specifically changes in the nature of families who sent migrants. Families from higher socio-economic levels tend to produce individual migrants in times of economic stability, whereas in times of economic stagnation (which is a reflection of changing relationships), individual migrants constituted a random selection from the parent population

TABLE I. CHANGES IN ACTUAL NET FAMILY INCOME FOR ADOPTERS AND NON-ADOPTERS OF NEW COFFEE VARIETIES, TÁMESIS, COLOMBIA, 1963-1970

Income in Pesos	Adopters		Non-Adopters		Total	
	1963 (N=17)	1970 (N=39)	1963 (N=17)	1970 (N=39)	1963 (N=17)	1970 (N=39)
0 to 2,500	5.9	0.0	23.1	5.1	17.9	3.6
2,501 to 5,000	23.5	0.0	41.0	12.8	35.6	8.9
5,001 to 7,500	41.2	11.8	25.6	20.5	30.4	17.8
7,501 to 10,000	17.6	5.9	10.3	17.9	12.5	14.3
10,001 to 12,500	5.9	11.8	0.0	12.8	1.8	12.5
12,501 to 15,000	0.0	17.6	0.0	5.1	0.0	8.9
15,501 to 17,500	5.0	0.0	0.0	5.1	1.8	3.6
17,501 to 20,000	0.0	23.5	0.0	2.7	0.0	8.9
20,001 to 22,500	0.0	0.0	0.0	2.7	0.0	1.8
22,501 to 25,000	0.0	5.9	0.0	5.1	0.0	5.4
25,501 to 27,500	0.0	0.0	0.0	5.1	0.0	3.6
27,501 to 30,000	0.0	0.0	0.0	0.0	0.0	0.0
30,001 plus	0.0	23.5	0.0	5.1	0.0	10.7
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average Income	$6,731	$21,443	$4,509	$12,063	$5,183	$14,910

Difference in total family income between adopters and non-adopters in 1963: $t = 2.336$, d.f. 54, $> .01$

Difference in actual total family income between adopters and non-adopters in 1971: $t = 2.336$, d.f. 54, $> .01$

Changes in actual total family income between 1963-1970 for non-adopters: $t = 3.607$, d.f. 39, $> .01$

Changes in actual total family income between 1963-1970 for adopters: $t = 3.893$, d.f. 17, $> .01$

Changes in the amount of increase or decrease in actual total family income between adopters and non-adopters during period 1963-1970: $t = 4.278$, d.f. 54, $> .01$

The Gini coefficient for income concentration in 1963 is: .275

The Gini coefficient for income concentration in 1970 is: .443

TABLE II. CHANGES IN REAL TOTAL FAMILY INCOME FOR ADOPTERS AND NON-ADOPTERS OF NEW COFFEE VARIETIES, TÁMESIS, COLOMBIA, 1963-1970

Income in Pesos	Adopters		Non-Adopters		Total	
	1963 (N=17)	1970 (N=39)	1963 (N=17)	1970 (N=39)	1963 (N=17)	1970 (N=39)
0 to 2,500	5.9	0.0	23.1	20.5	17.9	14.3
2,501 to 5,000	23.5	17.6	41.0	33.3	35.6	28.5
5,001 to 7,500	41.2	23.5	25.6	15.4	30.4	17.9
7,501 to 10,000	17.6	23.6	10.3	10.2	12.5	14.3
10,001 to 12,500	5.9	11.8	0.0	7.6	1.8	8.9
12,501 to 15,000	0.0	0.0	0.0	7.6	0.0	5.4
15,001 to 17,500	5.9	0.0	0.0	2.7	1.8	1.8
17,501 to 20,000	0.0	5.9	0.0	0.0	5.9	1.8
20,001 to 22,500	0.0	0.0	0.0	0.0	0.0	0.0
22,501 to 25,000	0.0	17.6	0.0	2.7	0.0	7.1
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average Income	$6,731	$11,620	$4,509	$6,274	$5,183	$7,897

Difference in real family income between adopters and non-adopters in 1963: $t = 2.335$, d.f. 54, $>.01$

Difference in real family income between adopters and non-adopters in 1971: $t = 2.479$, d.f. 54, $>.01$

Changes in real family income between 1963-1970 for non-adopters: $t = 1.996$, d.f. 39, n.s.

Changes in real family income between 1963-1970 for adopters: $t = 2.284$, d.f. 17, $>.01$

Changes in the amount of increase or decrease in real family income between adopters and non-adopters during 1963-1970: $t = 3.884$, d.f. 54, $>.01$

TABLE III. CHANGES IN ACTUAL NET INCOME FOR COFFEE PER ACRE OF COFFEE PRODUCTION FOR ADOPTERS AND NON-ADOPTERS OF NEW COFFEE VARIETIES, TÁMESIS, COLOMBIA, 1963-1971

Income per Acre from Coffee Production	1963			1971		
	Adopters (N=17)	Non-Adopters (N=39)	Total (N=56)	Adopters (N=17)	Non-Adopters (N=39)	Total (N=56)
0 to 250	35.3%	41.0%	39.3%	0.0%	15.4%	10.7%
251 to 500	52.9	53.9	53.6	5.9	15.4	12.5
501 to 1,000	11.8	5.1	7.1	17.6	53.9	42.8
1,001 to 1,500	0.0	0.0	0.0	23.5	12.8	16.1
1,501 to 2,000	0.0	0.0	0.0	5.9	2.5	3.6
2,001 to 2,500	0.0	0.0	0.0	35.3	0.0	10.7
2,501 plus	0.0	0.0	0.0	11.8	0.0	3.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average Income per Acre of Coffee Production	$290	$222	$242	$1,642	$632	$938

Difference in net income per acre between adopters and non-adopters in 1963: t = 1.421, d.f. 54, n.s.

Difference in net income per acre between adopters and non-adopters in 1971: t = 7.777, d.f. 54, >.001

Changes in net income per acre between 1963-1970 for non-adopters: t = 4.709, d.f. 39, >.01

Changes in net income per acre between 1963-1970 for adopters: t = 6.437, d.f. 17, >.001

Changes in the amount of increase or decrease in net income per acre between adopters and non-adopters during 1963-1970: t = 9.185, d.f. 54, >.001

TABLE IV: CHANGES IN FARM ACREAGE FOR ADOPTERS AND NON-ADOPTERS OF NEW COFFEE VARIETIES, TÁMESIS, COLOMBIA, 1963-1970

Acres in Farm	Adopters		Non-Adopters		Total	
	1963 (N=17)	1970 (N=39)	1963 (N=17)	1970 (N=39)	1963 (N=17)	1970 (N=39)
0 to 5	17.6%	17.6%	64.2%	64.2%	50.0%	50.0%
5.1 to 10	11.8	17.6	12.8	17.8	12.5	17.8
10.1 to 15	11.8	17.6	10.2	2.6	10.7	7.1
15.1 to 20	17.6	0.0	2.6	2.6	7.1	1.8
20.1 to 25	17.6	16.6	0.0	0.0	5.4	5.5
25 plus	23.6	29.6	10.2	12.8	14.3	17.8
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average Number of Acres	18.86	33.13[a]	7.97	6.42[b]	11.28	14.42

[a]Three farmers accounted for most of this increase. On the other hand five farmers who owned and rented land stopped renting and more intensively farm their own land.

[b]This mean is computed on the basis of 38 farmers. One landless farmer inherited 79 acres and was dropped from the analysis. With this individual included, the average farm size for non-adopters in 1971 was 8.28 acres.

Difference in amount of land between adopters and non-adopters in 1963: $t = 3.503$, d.f. 54, $> .001$
Difference in amount of land between adopters and non-adopters in 1971: $t = 4.021$, d.f. 54, $> .001$
Changes in amount of land between 1963-1970 for non-adopters: $t = .601$, d.f. 32, n.s.
Changes in amount of land between 1963-1970 for adopters: $t = 1.969$, d.f. 17, $> .05$
Changes in the amount of increase or decrease in land between adopters and non-adopters during the period 1963-70: $t = 2.019$, d.f. 54, $> .05$

The Gini Coefficient for land concentration in 1963 is: .706.
The Gini Coefficient for land concentration in 1970 is: .859.

of family units in the community.

The variables analyzed in the present study are admittedly only reflections of the changing relationships that have led to the stagnation of economic circumstances of the family units studied. Nevertheless, the tendency toward declining levels of income and amount of land resources owned is clearly shown in Tables V and VI. Table V indicates that of the complete sample (N equals 69), using the 1963 income distribution as a base and dividing it in quartiles, by 1971, 31 family units remained in the same quartile but 29 fell to a lower quartile. Table VI indicates a similar trend with regard to changes in amount of land owned; 19 remained in the same quartile while 28 fell to a lower quartile. As these changes occurred, different sorts of migration patterns emerged.

TABLE V: CHANGES IN INCOME IN CONTADERO FROM 1963 TO 1971
(N EQUALS 69)

Quartile Distribution in Pesos 1963		1971 I	II	III	IV	Totals
I.	0- 650	7	4	4	3	18
II.	651-1,000	9	1	4	4	18
III.	1,001-2,450	9	2	3	3	17
IV.	2,451 or more	6	0	2	8	16
	Totals	31	7	13	18	69

TABLE VI: CHANGES IN LAND OWNED IN CONTADERO FROM 1963 TO 1971
(N EQUALS 69)

Quartile Distribution in Hectares 1963		1971 I	II	III	IV	Totals
I.	0- .50	15	2	0	0	17
II.	.51-2.49	6	8	4	0	18
III.	2.50-4.50	6	6	2	3	17
IV.	4.51 or more	1	4	6	6	17
	Totals	28	20	12	9	69

It is beyond the scope of the present study to fully explain the underlying relationships that account for the decline of the community of Contadero. Nevertheless, some indication of the changing agricultural production in Colombia is called for. From 1964 to the present, the agricultural policy of Colombia has been to commercialize the agricultural sector. This has been accomplished by providing low interest rate loans for large farm units and relaxing the threat of expropriation of large land units. Moreover, the increasing urban population has created an internal effective demand for foodstuffs and clothing. Favorable prices on the international market for sugar and vegetable oils have contributed to large investments in farm firms on rich valley lands. Thus, the production of basic foodstuffs has been largely left to smaller units on more marginal lands. Growing needs of family units result in land fragmentation, such that the amount of land available falls below the subsistence level; the peasant family will then consume all it produces and still be hungry, and the peasant must seek alternative employment. Obviously, the local area cannot provide these opportunities without a drastic reorganization of productive activities. In a depressed community in which most potential migrants become actual migrants, a process of trading small rural farmers for urban or rural proletariates is a logical outcome.

The basic concern of the Colombian project is to develop a clearer understanding of the forces producing out-migration from rural areas of Colombia, specifically areas of traditional subsistence, commercial agriculture and large mechanized farm areas. In order to avoid having just another series of community studies, researchers have attempted to include analyses of the international, national, and local areas and how they interact. Most of these studies are presented in theses by the following students:

William Canak (United States: graduate student in Rural Sociology), "Capitalist Penetration and Uneven Development in Two Colombian Communities."

Carlos Castillo (Cornell University), "The Power Structures of Three Colombian Communities."

Pedro Cortes (Colombia: graduate student in Rural Sociology), "Migration Patterns in Eight Peasant Communities in Santander, Colombia."

Gustavo De Roux (Colombia: Ph.D. in Development student), "The Social Basis of Peasant Unrest: A Theoretical Framework with Special Reference to the Colombian Case." [See Appendix C for an abstract of this dissertation.]

Mario Fandino (Colombia: Ph.D. student in Rural Sociology), "Population Growth and Capitalistic Modernization in Three Agricultural Communities of Colombia."

Susana Lastarria-Cornhill (Peru: graduate student in Rural Sociology), "The Process of Proletarianization in the Agricultural Sector of Colombia."

Francisco Leal-Buitrago (Colombia: Ph.D. in Development student), "Social Classes, International Trade and Foreign Capital in Colombia: An Attempt at Historical Interpretation of the Formation of the State 1819-1935." [See Appendix C for an abstract of this dissertation.]

Humberto Rojas (Colombia: Ph.D. student in Rural Sociology), "Class Consciousness in Three Colombian Communities."

Robert Whittenbarger (United States: Ph.D. student in Rural Sociology), "Socio-Economic Change in Three Colombian Communities." [For further discussion of this research, see pages 44-45.]

Leal's work is a study of international-national interaction. At the international-national-local interaction level are studies by Canak, Castillo, De Roux, Lastarria-Cornhill, and Rojas. Local level studies are those by Cortes, Fandiño, and Whittenbarger.

There are also several sources of data coming to the project through cooperation with other individuals and agencies. Andrew Pearce of the United Nations Food and Agriculture Organization has completed a restudy of Tenza, Boyacá, and has agreed to share the data on migration. Donald Foster, a Fulbright fellow from the University of Illinois, has completed restudy of in-migration to the barrios of Barranquilla. In addition, a survey of 20,000 farms in the agriculture sector was undertaken by the Rural Development and Credit Division of the Agency for International Development and DANE (National Administrative Department of Statistics). The Division agreed to include questions on migration which relate to the Land Tenure Center/Ford Rural Modernization project, and that information is currently being punched on IBM cards and tapes for future joint publications on migration. Migration data from the CEDE sample of Colombia's five largest cities will supplement project data on rural migrants in large urban centers.

This study will be continued through July 1976. Three monographs are projected for the coming year on the importance of basic demographic data for policy-making, the effects of different community structures on rural-to-rural and rural-to-urban migration, and findings from the study as a whole.

* * *

Rodrigo Parra-Sandoval is conducting post-graduate research at the Land Tenure Center on Colombian problems of development. His study is concerned with changes in the occupational structure as they relate to the growth of different regions, and he intends to analyze the system of higher education within the same context, dealing with university enrollment and interregional migration of university students and faculty. These several aspects of the Colombian social and economic situation will be consolidated into a study tentatively titled, "The Division of Labor in a Dependent Society." Parra-Sandoval's research has been funded by the Midwest Universities Consortium for International Activities, Inc. for the 1973-74 reporting year.

* * *

J. Humberto Colmenares (Colombia: Ph.D. in Development student) completed field research in Colombia and returned to Madison in January 1974. Under the auspices of the International Maize and Wheat Improvement Center (CIMMYT), Colmenares initiated a study on the adoption of new techniques in corn production, including an analysis of variables affecting levels of adoption and implications of the study for Colombia's agricultural policy.

Analysis centers around the assumption that technology is location specific, and that the risk involved in using new methods is viewed by farmers according to certain characteristics closely associated with commercial and subsistence forms of agriculture. Primary data, gathered in direct interviews with corn growers on 738 farms localized in three different agroclimatic zones, is now stored on computer tape. Additional post-classification of the data, according to two size groups and three types of tenure arrangement, is in process and should be completed by December 1975. During the reporting year, Colmenares' research was funded by the Land Tenure Center, the Ford Foundation, and CIMMYT.

El Salvador

Jesús A. Cutié-Tula (El Salvador: student in Agricultural Economics and Business) returned in January of 1974 from El Salvador, where he was conducting research in cooperation with CIMMYT-Mexico to determine how new varieties of corn and corn-growing technologies have been adopted in El Salvador. Cutié participated in and supervised a team of researchers from the Ministry of Agriculture and the University of El Salvador, interviewing a random sample of 350 corn-growers. The data, composed of three farm size and two ecology strata, are presently under analysis.

The main thrust of the study involves four questions: To what extent have various classes of farmers adopted the new technologies in maize and wheat? What is the profitability of the new technology as compared with traditional technology? What were the characteristics of the delivery system as the new technology was being introduced? And have special government programs aimed at disadvantaged farmers speeded up their adoption of the new technology? In addition to his dissertation research, Cutié also taught at José Simeón Cañas University, San Salvador. During the reporting year, he received financial assistance from the Ford Foundation and the Land Tenure Center.

Guatemala

Leonel Gonzalez (Guatemala: student in Agricultural Economics and Business) is currently in Guatemala conducting his Ph.D. research. His area of study concerns potentials for development in nontraditional agriculture in Central America with particular reference to Guatemala, and the effect such development would have on employment, income distribution, exports and imports, and capital accumulation. He will attempt to suggest possible agricultural commodities that will benefit the domestic market and also provide year-round agricultural production. Finally, his research will attempt to determine the involvement of state agencies in reinforcing

the development of nontraditional agricultural export crops. At the present time he is identifying crops for analysis, and surveys will be conducted during July, August, and September of 1974. His expected date of completion is August 1975.

Mexico

Cassio Luiselli (Mexico: Ph.D. in Development student) began field research in fall 1973 on the prospective role of labor-intensive methods, technology, and rural industries as a means for regional development and increased employment in Mexico. He has begun a field survey of the "critical agrarian zones" in Oaxaca, Puebla, Tlaxcala, and Hidalgo, all densely populated areas exhibiting unorganized overexploitation of an ill-endowed soil and ecological base. Using the municipio as a unit of analysis, variables under study are the following: population density and demographic trends, under and open employment, fragmentation of the ejido and minifundio, input availability and its cost.

From April to June 1974, Luiselli did field research in the People's Republic of China, analyzing the communes with respect to organization and absorption of labor, local agricultural technology, inputs maximization, simple rural industry, and managerial issues concerning communal agriculture. Comparisons between China and India were made for consideration in the Mexican case. Field surveys are expected to be complete by the end of the year, and Luiselli will return then to Madison for analytical interpretation of the data. Luiselli has been made a senior staff member of Centro de Investigaciones y Docencia Económicas (CIDE); his research was funded during the reporting year by the Mexican government.

Peru

Otto Flores (Peru: Ph.D. in Development student) returned to Peru in February of 1974 at the request of Universidad Nacional Agraria, where he is Associate Professor and Research Coordinator for the Department of Human Sciences. His field research, completed in May 1973, concerns the relationship between agricultural education and training programs in Peru and the maintenance and perpetuation of the hacienda system. His thesis will explore how, in the last seven decades, agricultural research and education have responded primarily to the needs of the agricultural export sector. Data have been collected and fall into two categories: that relating to the economic structure of the agricultural export sector, and that describing the research and training orientation within agricultural institutions. Additionally, he has collected documentary information, including letters, official memoranda, and speeches, which reflect agricultural policy. Data have been analyzed and Flores will complete his dissertation by January 1975. He has received financial support from Universidad Nacional Agraria, Ford, and Rockefeller Foundations during the reporting year.

* * *

John Hatch (United States: Ph.D. in Development student) completed his thesis during the reporting year, entitled "The Corn Farmers of Motupe: A Study of Traditional Farming Practices in Northern Coastal Peru."

During the reporting year, Hatch received some financial support from the Land Tenure Center; for most of the year he worked as a consultant for Development Alternatives, Inc. in Washington, D.C. A copy of the dissertation abstract is included in Appendix C.

Sri Lanka

Gamini Abeysekera (Sri Lanka: Ph.D. in Development student) has initiated a study on "Trends and Sources of Income Distribution in Sri Lanka, 1953-73," utilizing three island-wide sample surveys of consumer finances conducted by the Central Bank of Ceylon in 1953, 1963, and 1973. Abeysekera will analyze income distribution with respect to size, region, function, and occupation. He will discuss causes and consequences of these patterns in order to aid the formulation of public policy. During the reporting year, he received financial support from the Ford Foundation.

Turkey

Professor Kemal Karpat is currently completing research on rural-urban migration and transitional conditions in Istanbul, Turkey. He conducted extensive interviews with 950 rural migrants established in three gecekondu, or transitional settlements, in Istanbul, and interviews and surveys in the rural areas from which the migrants came. From this data Professor Karpat intends to delineate the migrants' adaptation to occupational conditions in the city both individually and collectively (changes in the family structure, attitudes, etc.), as well as their participation in political, social, and economic activities in the urban environment, and interaction between the newly established migrant community in the city and the old residents.

The study aims at providing in-depth information concerning both the causes of migration from villages into cities, with attention to various personal characteristics of the migrants (age, sex, education, occupation, income), and the stages in which adaptation occurs. Included will be analysis of the continuity of the rural culture in the city and its positive and negative effects upon the process of adaptation to an urban mode of existence.

In addition, Professor Karpat will analyze the influence of the migrants upon their villages of origin in terms of economic aid, investment, technical assistance, communication of a wide range of ideas, and the establishment of new achievement goals. It is in this context that the study looks upon migrants as channels of communication with the rural areas, as well as agents of change. Professor Karpat is presently verifying selected data on the rate of population growth and income distribution in the migrants' villages and bringing up to date events in the Istanbul settlements, preparatory to writing the final draft of his manuscript, which will be published by Cambridge University Press.

* * *

Tuncer Arif (Cyprus: Ph.D. in Development student) was planning to begin field research in Turkey in the fall of 1974; however, it is uncertain at this time how the conflict in Cyprus will affect his plans. Data

for the study will consist of population, agricultural, and industrial censuses, national income accounts, consumer surveys, and income distribution studies done by the State Planning Organization. Analysis will focus on trend comparisons in the distribution of income, sources of inequality particularly with regard to socio-economic classifications, and the possibility of intergenerational mobility among groups. Arif's intention is to identify core poverty groups through the use of distribution and employment statistics and thus provide quantified means for determining public policy. During the reporting year he received financial support from the Land Tenure Center and a travel fellowship from the Graduate School.

Multi-National

During the 1973-74 reporting year, Professor Penn headed the Socio-Economic Task Group for a project funded by the Institute for Environmental Studies, "An Applied System Study of World Climate Variation in Relation to Food Production." From an analysis of the impact of climatic variation on food production, the project has as its goal development of a predictive capability adequate for use in making policy decisions on world food supply. Professor Penn's group, including Paul Cox (United Kingdom: Ph.D. in Development student), undertook the description of socio-economic interventions which influence food production, analyzing the following data: global production of foodstuffs; technological change shifting the supply function of each major food item; the national food balance for selected food surplus and food deficit areas; population growth in selected countries compared with indigenous yields, reserves, and imports/exports, to obtain an estimate of per capita food available; and the allocation of food supplies.

Past and present data have been gathered on wheat, maize, and rice production for individual countries, and, in the case of the United States, for each state. With the aid of the United Nations Food and Agriculture Organization in Rome (UN/FAO), selected data were compiled on Italy, India, and the Soviet Union concerning major crops, livestock, and land use, including irrigation, fertilizer use, and crop prices.

In its first progress report, the group provided an historical analysis of institutional factors affecting the establishment of a world food reserve. While some grain has been made available by Canada and more recently by Australia and Argentina, the effective world food reserve has been United States agriculture, and in large amount this means idled United States cropland. This section of the report discusses fundamental issues of financing and control, the rise of typologies of food reserves, gradual introduction of quantitative information and guidelines on stock levels, problems of excessive machinery, and evaluation of the adverse effects of food security plans.

Another facet of the research is an analysis of socio-economic intervention modeling, covering the simple acreage model, farm, regional, and national models, as well as nonlinear price responses. Preliminary analysis suggests that the extremely crude acreage trend models may suffice for underdeveloped countries, where the type of crop planted depends almost entirely on crops planted previously, while the more complex price response

models may be necessary for developed countries.

Data were collected for models on acreage determination, technological inputs to productivity, relevant portions of the world transportation system, and estimate of demand functions. Models of acreage determination constructed to date for United States spring wheat show that only a trend variable is significant; in some cases the price of wheat is negatively related to acreage. Fertilizer has been used as a sufficient proxy for technology, since the use of new varieties and pesticides tends to be associated with high fertilizer usage, and most farm machinery affects labor rather than land productivity. Paul Cox was involved in an effort to model the oceanic transport system by calculating shipping capacities, rates of speed, and distances between major world ports. He received financial support during the reporting year from the Institute for Environmental Studies for his work on the Climate/Food Project.

* * *

Sathyapala Pinnaduwage (Sri Lanka: Ph.D. in Development student) has initiated a study on "Income and Social Consequences of Technological Change in Agriculture," focusing on technological breakthroughs of the late 1960s in the production of major food grains, i.e., rice and wheat, and their impact on income and social structure. The study concentrates on peasant farming sectors of such less developed countries as Sri Lanka, India, and Pakistan where the new technologies have been applied. It will include modifications of factor proportions, the nature of changes regarding land tenure and labor-use arrangements which occur to accommodate new factor returns, the ways in which different social groups confront changes, and a comparison of twentieth-century experiences with those of nineteenth-century Southeast Asia occurring during the commercialization of agriculture under European rule. During the reporting year, Pinnaduwage received financial support from the Agricultural Development Council, Inc.

CURRENT RESEARCH PROJECTS: LAND TENURE CENTER FACULTY AND FELLOWS

During the reporting year, the Land Tenure Center formalized contracts with several agencies and initiated special research and training projects. Below is a description of these arrangements, each of which falls into one or more of the areas of Land Tenure Center research focus described in the introduction to this report.

Area IV: Contracts and Projects

Colombia

While Professor Felstehausen was in Colombia in April of 1974, he finalized an agreement with the Universidad de los Andes, of which the following is an English translation:

UNIVERSIDAD DE LOS ANDES
Office of the President

MEMORANDUM OF AGREEMENT BETWEEN UNIVERSIDAD DE LOS ANDES, BOGOTA, COLOMBIA AND THE UNIVERSITY OF WISCONSIN, MADISON, USA

CONSIDERING:

That, as a result of the exchange of visits by Professors William Flinn of the Land Tenure Center, University of Wisconsin, and Fernando Cepeda, Vice Rector of Universidad de los Andes, a mutual interest on the part of our institutions has been identified for developing means of collaboration on a basis of equality and of mutual consideration.
That, Universidad de los Andes is directing a considerable portion of its research efforts toward problems of transportation, education, health and law in terms of administering these services and of the need for placing them within reach of the majority of our people.
That, at present, those questions related to agricultural economics, agricultural industries, political and legal aspects of development, and environmental problems have been indicated as of interest for training students and faculty, as well as for implementing joint research ventures.

IT IS AGREED:

To draw up the basis for a joint research and training program.
To promote exchange of students and professors for joint teaching and research programs.
To jointly make use of the existing sources of financial aid

in order to submit for consideration research projects involving both our institutions.
That, in the formulation of proposals for research projects, the interested professors will communicate among themselves with respect to all points related to the drawing up of proposals and identifying potential sources of financial support. However, it will be the responsibility of all parties involved to permanently keep the relevant authorities informed of the state of the proposals and project progress.
The funds obtained for financing projects will be administered by the institution involved and not by the interested individuals. Thus, the budget of each proposal must be approved by the corresponding authorities. Both the University of Wisconsin and Universidad de los Andes can nominate, if they deem it appropriate, one staff member who would serve as principal and continuous contact between the two institutions and among the faculty and students. However, this provision would not change the jurisdiction of the principal authorities at either the University of Wisconsin or at Universidad de los Andes.
Our universities will exchange research publications and other materials as they become available.
None of the above constitutes any financial obligation on the part of either institution.

/s/ Eduardo Aldana Valdés President Universidad de los Andes	Glenn S. Pound Dean and Director College of Agricultural and Life Sciences University of Wisconsin
Date: February 5, 1974	William C. Thiesenhusen Director Land Tenure Center University of Wisconsin

* * *

In June 1974, the Land Tenure Center signed a contract with the Agency for International Development to provide research, technical advice, and assistance to both the Rural Development Division of USAID/Colombia and various entities of the Government of Colombia on social science research and policy implications of rural development programs.

Under this contract, Professor Flinn will spend one year in Colombia as Rural Sociologist. His responsibilities will include the identification of social factors which impede or facilitate progress, and assessment of psychological and social impact of programs at the community level. He will function in a team relationship with technical advisors on the following kinds of program: appraisal of capital and grant projects; monitoring and evaluation of activities related to agricultural production and increasing family farm income; development of the Rural Development Division's activities, where socio-economic research relates to agricultural production; and analysis of rural-to-rural migration, of small-farmer production practices and decision-making, and of colonization.

Ethiopia

During the reporting year, the Land Tenure Center initiated a training and study program funded by USAID/Ethiopia for senior staff members of the Ethiopian Ministry of Land Reform and Administration. The first two participants, Ato Lulseged Asfaw and Ato Hailu Wolde-Emmanuel, arrived in Madison in August of 1973 for a semester of coursework and research. Students in this program are individually directed by Land Tenure Center faculty members, and their studies focus on problems relevant to their specific area of responsibility in the Ministry. Ato Lulseged, head of the State Domain and Settlement Department, researched the role of state domain lands in Ethiopia's agricultural development. Ato Hailu, head of the Land Tenure and Geography Department, researched land tenure, land-use, and development in the Ethiopian Awash Valley. [For a more detailed description of their research, see Section B, pages 36-38.]

Ato Aschenaki Tafere, head of the Land Grant Division, will arrive in Madison in August of 1974. In his semester of study, Ato Aschenaki will prepare an evaluation of the impact of Ethiopia's complex land tenure system on tenant farmers in Wello Governerate.

Honduras

In May 1974, the Land Tenure Center agreed to sign a contract with USAID/Honduras to supply the Agrarian Reform Service (INA) in Honduras with research and analysis concerning their on-going reform program. The three general components of this collaboration are as follows: 1) furnishing consultants with special expertise in technical matters of the program, particularly with regard to financing the agrarian reform, agricultural credit, and marketing, and the cooperative farming/individual farming issue; 2) furnishing field reports on the on-going progress of asentamientos established under Decree 8; and 3) furnishing training at UW-Madison for selected members of INA staff.

Work to date has fallen largely in the realm of technical assistance at the specific request of INA. Professors Dorner, Parsons, Thiesenhusen, and Thome traveled to Honduras in May 1974, to serve as a soundingboard for issues under discussion. Professor Strasma performed the same service for financial planning aspects of the reform in May and June 1974, and Professor Thome, for legal aspects in June 1974.

Professor Parsons will begin a 14-month appointment as principal analyst in July of 1974. He will coordinate short-term analysts in the general areas of financing, communications, physical and social planning, national lands policy, and the organization of INA, as specified by Licenciado J. Mario Ponce, director of the Agrarian Reform Service. In addition to his other responsibilities, Professor Parsons will conduct an on-going seminar for Honduras on issues of the reform.

Japan

Two Japanese students are presently attending the University as the result of a cooperative exchange program between Kyoto University and

UW-Madison, negotiated in June 1973 by Professor Parsons. Ryohei Kada and Yukiko Kada are enrolled as graduate students in the Department of Agricultural Economics. Both are working closely with Professor King in his study of rural development in Shiga Prefecture, Japan. [For discussion of this research, see page 39.]

Professor Parsons traveled to Kyoto in January 1974, to discuss the joint research program between the Land Tenure Center and Kyoto University, with particular attention to Professor Motosuke Kaihara's program as Visiting Professor. He also conferred with staff of the National Commission for Agricultural Policy in Tokyo about the role of part-time farming in the current and prospective development of rural Japan, and with staff of the American Embassy in Tokyo regarding recent and prospective agricultural export to Japan.

Professor King traveled to Japan in March 1974, for preliminary discussions concerning collaborative research between the Department of Agricultural Economics and Land Tenure Center of UW-Madison, and the Department of Agricultural and Forestry Economics of Kyoto University. Plans are underway for on-going research programs in the areas of rural development and agricultural development problems and policies.

At the conclusion of these meetings, Professor King accompanied Professor Kaihara to Madison, where he remained for three months as a visiting professor jointly appointed by the Land Tenure Center and the Department of Agricultural Economics. Professor Kaihara is a former Wisconsin graduate and holds a chair in the Department of Agricultural Economics at Kyoto. While in Wisconsin he continued research on the history of agricultural development in Japan since World War II. In addition, Professor Kaihara took part in a special LTC seminar series on Japanese economic development and participated, with Mr. and Mrs. Kada and Professors King and Parsons, in a panel discussion on the same topic for faculty and staff of UW-Platteville. A forthcoming LTC Special Publication will summarize the material in these meetings.

Ryohei Kada will return to Japan for the summer of 1974 to conduct field surveys in seven villages of Shiga Prefecture, review relevant literature, and discuss additional aspects of the research with faculty members at Kyoto University. At the same time, Yukiko Kada will conduct research on the changing role of extension services in Shiga Prefecture. Funded by the Midwest Consortium for International Activities, Inc. (MUCIA), Mrs. Kada will examine the emergence of part-time farming and the predominance of women in the farm labor force, and implications of these conditions for agricultural extension services.

Philippines

At the request of the Philippine center for land reform studies, Professor Duncan Harkin left Madison in September 1973 for a two-year assignment as Agrarian Reform Research Advisor with USAID/Philippines. During the reporting year he has been involved in numerous projects relating to the agrarian reform: contact with research-gathering agencies in the Philippines; consultation with the Bureau of Lands to develop a document

etting forth procedures of the land use classification process; review of proposal by the Department of Agrarian Reform (DAR) exploring the feasiility of an agricultural development project in Palawan; consideration of eans for testing the feasibility of small farms on upland sites that ould be based primarily on tree, fruit, and nut crops; and formulation of resurvey for Plaridel, Bulacan, to determine changes in the welfare of armers ten years after conversion of their land from share tenancy to easehold tenancy.

A major portion of his time has been devoted to general review of the ilippine agricultural resettlement program by a team of researchers from AR, USAID/Philippines, the National Economic Development Authority (NEDA), ational Food and Agriculture Council, United Nations Development Proramme, and Mindanao Agricultural Resettlement Agency of the National ouncil of Churches in the Philippines. The study team reviewed DAR reorts and documents, and visited nine representative settlement projects o confer with DAR field personnel, settlers, and local leaders, then preared a report on land resources, infrastructure development, administraion, assistance to settlers and the socio-political process in settlement reas, with recommendations for change, and three specific models of setlement development.

In addition to these responsibilities, Professor Harkin has initiated study concerning the importance of land ownership to small landlords in e Philippines. Objectives of the study are to determine for landlords vning 24 hectares or less: 1) what portion of total income is derived rom rents paid by tenants; 2) how many are absentee; 3) what status and entimental attachments pertain to land ownership; 4) what modes of comensation are favored; and 5) what disposition will probably be made of ompensation payments, whether for consumption or investment and what kind f investment. A questionnaire has been generated for the study, and inerviewing of a nationwide sample of 2,000 small landlords will be comleted in July 1974.

Multi-National

Professors Peter Dorner, Don Kanel, and William Thiesenhusen constiute the planning committee for an international conference on group farmg experiences in various world regions to be co-sponsored by the Reearch and Training Network Program of the Agricultural Development Counil and the Land Tenure Center. Many countries of the developing world khibit a growing interest in some form of group or cooperative farming, stablished either on the basis of ideological-political considerations or o meet specific practical problems. In most cases there is no previous ooperative farming experience within the country itself, and it must rely n models of these forms established elsewhere. Ideas for production coperatives are often imported and adopted without much critical evaluation f the conditions necessary to make them function effectively. The purose of this conference is to mobilize international knowledge and experence with cooperative-collective farming for use by countries considering is type of approach for dealing with agrarian issues.

Researchers with past experience in selected countries will develop papers for the conference dealing with the following categories: external influences and conditions affecting the establishment of group or collective farming enterprises; characteristic internal operating mechanisms and procedures; measures of socio-economic performance; the nature of change, transition, and evolution in these enterprises.

In order to consolidate and systematize literature relevant to the conference, Professor Dorner is supervising the preparation of an annotated bibliography on group farming. Ira Cohen (U.S.: student in Agricultural Economics) is currently working with entries solicited from approximately one hundred researchers. A packet of bibliographical précis are presently available, representing detailed summaries of the references on group farming. From work thus far it is apparent that literature in the field of group farming is heavily concentrated on measures of socio-economic performance. It is also apparent that the number of successfully developed full-production cooperatives is quite limited. Outstanding examples surveyed to date include the Israeli Kibbutzim, the Ujamaa in Tanzania, the Hutterite Brethren communities of North America, and those of the mainland Chinese. Future plans include the development of an overall summary of this literature in terms of generalized theories and suggestions of directions for future research, to furnish both criteria for selection of participants and a possible agenda for the conference on group farming to be held in the 1974-75 academic year.

The Land Tenure Center is furnishing personnel and financial support for research sponsored by the International Bank of Reconstruction and Development (IBRD). Of five country studies which will form the data base for an examination of land reform and new reform enterprises, LTC students are developing material on two countries, Bolivia and Peru. [See Section B, pages 2-3 and 40-41, for discussion of this research.]

Venezuela

In July of 1973, the Land Tenure Center signed an agreement with the Fundación para el Desarrollo de la Region Centro Occidental de Venezuela (FUDECO), establishing their joint participation in a program of research and training.

Professor Felstehausen traveled to Venezuela in April 1974, to discuss possible directions for the program. These discussions concerned the need to document procedures and systems of organization for FUDECO projects, with emphasis on empresas campesinas, and an analysis of the interaction among official and semi-official agencies involved in rural development programs. Mentioned in this connection were plans to initiate a program of nonformal education for rural Venezuela, with the participation of students from the Instituto de Pedagogía, Facultad de Medicina and Facultad de Agronomía. Also discussed were the need of study programs and special seminars in Madison for FUDECO staff, and LTC assistance in research design and the preparation of planning materials.

Reinaldo Reina, Venezuelan graduate from UW-Madison in Agricultural Economics, is presently in Barquisimeto to assist with a regional

development plan and water allocation criteria for Quibor. This work should result in a land and water use guide for the region; a plan for campesino organization, education and participation in land and water programs; and a procedure for assigning specific responsibilities among the various local, regional, and national agencies involved.

Arrangements are underway for publications to be exchanged with FUDECO. The Land Tenure Center will also facilitate contacts between FUDECO and the Departments of Educational Policy Studies and Mass Communications at UW-Madison.

LAND TENURE CENTER RESEARCH PUBLICATIONS

Books in Progress

The staff of the Land Tenure Center Library has compiled an extensive annotated bibliography on agrarian reform in Latin America which will be published by the Center as Land Economics Monograph no. 5 in the fall of 1974. The volume will include nearly 5,000 citations to books, pamphlets, journal articles, unpublished reports, etc., which can be consulted somewhere on the Madison campus. Agrarian Reform in Latin America: An Annotated Bibliography will be more than 600 pages in length, and will include author and subject indexes. Its publication will be announced to the Center's entire mailing list as early as possible in 1974.

Professor Robert E. Frykenberg coordinated a seminar on "Land Tenure and the Peasant in South Asia" in 1971-72 under the joint sponsorship of the Land Tenure Center in cooperation with the South Asian Studies Center. Papers presented at that seminar have now been combined with others solicited by Professor Frykenberg to form a book tentatively entitled Land Tenure and Peasant in South Asia: An Anthology of Recent Research, which the Land Tenure Center expects to publish in early 1975. It will include the following chapters:

Chapter 1: Introduction: Historical and Analytical Perspectives.....Robert Eric Frykenberg

Chapter 2: Zamindars and the Farming System in 18th Century Bengal.....John R. McLane

Chapter 3: The Silent Settlement in South India: 1793-1853: An Analysis of the Role of Inams in the Rise of the Indian Imperial System.....Robert Eric Frykenberg

Chapter 4: "Privileged Landholding": The Concept Stretched to Cover the Case.....Burton Stein

Chapter 5: Privileged Land Tenure in India: A Comparative Study.....Eric Stokes

Chapter 6: Agricultural Decisionmakers and Environmental Uncertainty: A Cultural Ecological Approach to Agriculture in Late Eighteenth Century Tamilnadu.....Brian J. Murton

Chapter 7: Anthropology and Programs of Village Development: A South Indian Case.....Paul G. Heibert

Chapter 8: The Ryotwari in Lower Burma: The Establishment and Decline of a Peasant Proprietor System....Michael Adas

Chapter 9: Land Tenure and Credit-Capital Tenure in India: A Study in Reincarnations.....Ronald J. Herring

Chapter 10: Agricultural Mechanization in the Punjab: Some Comparative Observations from India and Pakistan.....Carl H. Gotsch

Chapter 11: Land Ownership and Becoming "Twice-born": Some Interrelations Between India's Sacred and Secular Hierarchies.....Joseph W. Elder

Chapter 12: The Political Conditions of Land Reform: A Comparison of Maharashtra and Kerala.....Henry C. Hart ....Ronald J. Herring

Chapter 13: An Account of the Failure of Agrarian Reforms in Bihar (1949-1970).....F. Tomasson Jannuzi

Land Tenure Center Research Papers

During 1973-74 the Land Tenure Center produced seven new research papers. Four of these came from doctoral dissertations written by students associated with the Center, one came from a master's thesis, one was based on a special report written by a Ph.D. student at Cornell University, and one was originally an FAO publication reprinted with the approval of that organization. Following is a summary of these new research papers:

Research Paper No. 53

"Haciendas and Cooperatives: A Preliminary Study of Latifundist Agriculture and Agrarian Reform in Northern Peru," by Douglas E. Horton.

Examines in depth the holdings of one Peruvian family prior to, during, and after the land reform process affected them. Presents data on evolution of production, hacienda organization, social structure; and on the changes brought about by the new cooperative forms of organization. Reviews the literature on cooperatives and analyzes alternative forms of rural cooperativization to suggest some that landholding peasants might be willing to accept and which would not cause drops in production.

Research Paper No. 54

"Management in Cooperative Farming," by Claudio Barriga.

Argues that management functions on cooperative farms, while essentially the same as those in any organization, pose special problems because of the unique nature of management-worker relationships on these farms. Develops an organizational theory for cooperative farms and analyzes the management function in relation to the organizational variables and goals of various types of cooperatives. Two forms of cooperative--the Chilean asentamiento and the Tanzanian Ujamaa village--are examined and a model for cooperative farming is constructed. A detailed survey of different forms of cooperative production in agriculture is included.

Research Paper No. 55

"Domestic Group Organization and Processes in a Rural Colombian Town," by William Russell James.

This study describes the means by which the people in a small Colombian town manage to survive under extremely harsh economic circumstances and in a situation where the main cash crop, coffee, provides only sporadic employment. The domestic household--a term which refers to the members who reside in one household, not necessarily belonging to a single family--is the means for coping with these circumstances.

Using the domestic household as the principal unit of analysis, the author examines the internal social composition of 500 households and demonstrates that a diverse range of economic activities, performed by various members of the household, contributes substantially to the survival of this rural population.

Research Paper No. 56

"Studies on Financing Agrarian Reform in Latin America," by Arthur L. Domike and Eric B. Shearer.

Presents an overview of the issues and problems peculiar to financing agrarian reform programs which decision-makers and planners have to face in the Latin American context. The authors see agrarian reform as having two distinct phases with different activities and financial needs. The study centers on the problems of securing the appropriate kinds and amounts of financing at the proper time to execute reform programs. Many tables present extensive data on reform financing in Chile, Colombia, Peru, and Venezuela.

Research Paper No. 57

"The Problem of Employment Creation and the Role of the Agricultural Sector in Latin America," by Monroe Herman Rosner.

Investigates the relationship between income distribution and employment generation, and the vicious circle whereby low levels of income, by constraining market size, simultaneously determine and are determined by low levels of industrial activity and thereby employment. Argues that the best approach to breaking out of this vicious circle would be a massive agrarian reform, complemented by government programs in support of the small farm sector and in defense of its share of the market.

The major policy recommendation offered is that Latin American governments commit themselves to a basic reorientation in development planning, subscribing to a set of aggressive, well-conceived policies designed to achieve maximum employment generation.

Research Paper No. 58

"The Sugar Estates of the Lambayeque Valley, 1670-1800: A Contribution to Peruvian Agrarian History," by Susan Ramírez Horton.

This socio-economic analysis of six sugar estates in Peru's Lambayeque Valley from 1670 to 1800, derived from historical and archival sources, points to the important role these haciendas played in the colonial economy and refutes the stereotype of the hacienda as a self-sufficient, isolated, and unchanging institution.

The analysis traces the prosperous era of the sugar estates from 1670 to 1720 and then relates those circumstances--economic (changes in the market), ecological (devastating floods), and social--which brought about the stagnation and the decline of the estates from 1720 to 1800.

Research Paper No. 59

"Rural Land Invasions in Colombia," by Roger E. Soles.

Addresses the basic question of what conditions lead to peasant unrest using invasions of privately held lands in Colombia during the 1960's as its reference point. Demonstrates that land invasion occurs in those regions which have two basic characteristics: traditional latifundia have a great deal of control over the land and people; new and modernizing influences which disrupt the traditional relationships of rural society have been introduced. Includes 14 case studies of peasant land invaders in the coastal area of the country.

LAND TENURE CENTER FACULTY PUBLICATIONS: 1973-74

Below is a listing of books, articles, papers, and reviews by Land Tenure Center faculty members published during the reporting year, as well as a listing of works currently in progress.

Professor Marion Brown

"Organizaciones campesinas como vehículo de reforma" and "Esfuerzos privados de reforma." In La Reforma Agraria en América Latina, ed., Professor Peter Dorner. Editorial Diana (Mexico), 1974.

"Methodological Notes on Evaluating the Impact of Agrarian Reform in Chile's Central Valley." With Professor David Stanfield. To be submitted for journal publication.

Evolution of Tenure Structures in the Large Haciendas of Chile's Central Zone between 1966 and 1971." With Professor David Stanfield. To be submitted to the Journal of Developing Areas.

"Work and Power: Changes in Employment Patterns of Rural Families During a Period of Agrarian Reform." With Professor David Stanfield. Forthcoming.

"Factor Combinations and Agrarian Reform: Chile 1966-71." With Professor David Stanfield and Steven Smith. Report to the United Nations Research Institute, February 1974.

"Changes in the Social Organization of Farms in Chile: Causes and Effects." With Professor David Stanfield. Forthcoming.

"Changes in the Intensity of Land Use as Related to Land Reform in Chile's Central Valley." With Felipe Paul. Forthcoming.

Professor Peter Dorner

"Institutional Dualism in Central America's Agricultural Development." With Rodolfo Quiros. Journal of Latin American Studies, November 1973.

"Institutions as Aids to Development." Paper presented to the International Conference of Agricultural Economists, São Paulo, Brazil, August 1973. Accepted for publication by the International Journal of Agrarian Affairs.

"International Assistance for Agricultural Development: New Directions?" Accepted for publication by Challenge.

"United States Foreign Assistance Policies: A Comment." Land Tenure Center, University of Wisconsin (Madison), July 1973.

"Las nuevas direcciones necesarias en el análisis económico para las políticas de desarrollo agrícola," "El caso económico de la reforma agraria: Empleo, distribución del ingreso y productividad" (with Professor Don Kanel), and "Implicaciones de política." in La Reforma Agraria en América Latina, ed., Dorner. Editorial Diana (Mexico), 1974.

Professor Herman Felstehausen

"Reforma agraria: Colombia." In La Reforma Agraria en América Latina, ed., Professor Peter Dorner. Editorial Diana (Mexico), 1974.

"Metodología para el estudio de cambios institucionales." Paper presented to the Latin American Association for Rural Development, Chapingo, Mexico, September 1973.

Parkland Planning and Lake Management in the Rock River Basin, ed., Felstehausen. Water Resources Management Workshop, Institute for Environmental Studies Report No. 14, University of Wisconsin (Madison), November 1973.

The University of Wisconsin Arboretum and Lake Wingra, ed., Felstehausen. Water Resources Management Workshop, Institute for Environmental Studies and the River Basin Planning Seminar, University of Wisconsin (Madison), December 1973.

Institutional Factors in the Creation of Local Sanitary Districts in Wisconsin. Water Resources Center Technical Report 74-01, University of Wisconsin (Madison), April 1974.

Professor William Flinn

"Green Revolution Technology and Community Development: The Limits of Action Programs." With Professor A. Eugene Havens. Accepted for publication in Economic Development and Cultural Change.

"The Adoption of Innovations: The Neglected Role of Institutional Constraints." With Michael Aiken and Professor A. Eugene Havens. Submitted to American Journal of Sociology.

"La tecnología de la Revolución Verde y el desarrollo de la comunidad: Los límites de programas de acción." With Professor A. Eugene Havens. Accepted for publication in Desarrollo Rural en las Américas.

"Green Revolution Technology: Structural Aspects of its Adoption and Consequence." With Professor A. Eugene Havens. Report prepared for UNDP/UNRISD-Global Two, December 1973.

"Structural Determinants of the Selectivity of Migration in a Declining Economic Area." With Professor A. Eugene Havens. Submitted to Social Forces.

Methodological Approaches to the Study of Development. With Professor A. Eugene Havens and Rodrigo Parra. Universidad de los Andes (Bogotá, Colombia). Forthcoming.

"Agrarian Reform and the National Front in Colombia." With Professor A. Eugene Havens and Susana Lastarria-Cornhill. In An Evaluation of the National Front, eds., Albert Berry and Maurico Solaun. Princeton Press. Forthcoming.

"A Note on the Determinants of Satisfaction Among Urban Migrants in Botogá, Colombia." With J. C. van Es. Inter-American Economic Affairs, Vol. 27, Autumn 1973, pp. 15-28.

"Renovation of a Squatter Settlement in Bogotá, Colombia." With Maurico Solaun and Sidney Kronus. Paper presented at the Annual Meetings of the Rural Sociological Society, Center of Adult Education, University of Maryland, College Park, August 1973. Published in Land Economics, May 1974.

"The Persistence of Agrarian Values in Urban Society: The Wisconsin Case." With Frederick H. Buttel. Paper presented at the Midwest Sociological Society Meetings, Omaha, April 1974. Submitted to Rural Sociology.

"Politics and the Environment: The Relationship between Political Attitudes, Employment Sector, and Environmental Concern." With Frederick H. Buttel. Submitted to the Journal of Environmental Education.

"Barrio Residents' Perception of Change and Political Response." With Professor A. Eugene Havens. Paper presented to the Annual Meeting of the Southwest Sociological Association, Dallas, March 1974. Accepted for publication in the Journal of Political and Military Sociology.

"Family Life of Latin American Urban Migrants: Three Case Studies in Bogotá." Journal of Inter-American Studies and World Affairs, November 1974. Forthcoming.

Marginalidad--Desarrollo urbano--Vivienda económica. With others. Universidad de los Andes (Bogotá, Colombia), 1973.

U. S. Rural Society: An Introduction. Forthcoming.

"The Change in Structure of the Environment Movement, 1968-1973." With Frederick H. Buttel. In Who Cares About the Environment: The Origins and Sources of Environmental Concern, ed., Arvin Murch. Vanderbilt University Press. Forthcoming.

"Anomie and Authoritarianism in Five Colombian Cities." With Professor A. Eugene Havens. In Latin American Urban Research, eds., Wayne A.

Cornelium and F. M. Trueblood. Sage Publications (California). Forthcoming.

"The Consequences of Agrarian Values for Wisconsin Farmers." With Donald E. Johnson. Submitted to Rural Sociology.

"Personal Characteristics of Wisconsin Residents Who Perceive Pollution as a Problem." With Frederick H. Buttel. Rural Sociology, Spring 1974.

"The Relationship Between Residential Preference and Pollution Concern." With Frederick H. Buttel. Submitted to the Journal of Environmental Education.

"Decomposition of the Peasant Class: Theoretical and Methodological Clarifications." With Professor A. Eugene Havens. Submitted to the Journal of Peasant Studies.

Professor Robert Frykenberg

"Company Circari in the Carnatic, 1799-1859: The Inner Logic of Political Systems in India." In Realm and Region in Preindustrial India, ed., Richard G. Fox. Duke University Press. Forthcoming.

"Introduction: Historical and Analytical Perspectives" and "The Silent Settlement in South India: 1793-1853: An Analysis of the Role of Inams in the Rise of the Indian Imperial System." In Land Tenure and Peasant in South Asia: An Anthology of Recent Research, ed., Frykenberg. Land Tenure Center, University of Wisconsin (Madison). Forthcoming.

"South Asia: The Integration of India, Congress Rule Over India Since 1950, Economic Development of India"; "Southeast Asia: The Diversity of Its Cultures and Frontiers, The Rise of New States"; "East Asia: The Awakening of China and Japan, The Revolution of China, The Transformation of Japan." In A History of the Western World, eds., Stanley Payne, et.al. D. C. Heath and Company. Forthcoming.

"Failures of Political Leadership in India: 1880-1947." In Political Leadership in South Asia, ed., B. N. Pandey. Forthcoming.

"The Impact of the Social Forces in South India during the Period of Wellesley." Paper presented at the conference "India: Society in Transition, 1795-1808," School of Oriental and African Studies, University of London, England, June 1974.

Professor A. Eugene Havens

"Green Revolution Technology and Community Development: The Limits of Action Programs." With Professor William Flinn. Accepted for publication in Economic Development and Cultural Change.

"The Adoption of Innovations: The Neglected Role of Institutional Constraints." With Michael Aiken and Professor William Flinn. Submitted to American Journal of Sociology.

"La tecnología de la Revolución Verde y el desarrollo de la comunidad: Los límites de programas de acción." With Professor William Flinn. Accepted for publication in Desarrollo Rural en las Américas.

"Green Revolution Technology: Structural Aspects of its Adoption and Consequence." With Professor William Flinn. UNDP/UNRISD-Global Two, 1973.

"Structural Determinants of the Selectivity of Migration in a Declining Economic Area." With Professor William Flinn. Submitted to Social Forces.

Comparative Rural Societies: A Study Guide. University of Wisconsin Extension (Madison), 1974.

"A Longitudinal Analysis of Three Small Farm Communities in Colombia: A Compendium of Descriptive Statistics." With Robert Whittenbarger. Land Tenure Center, University of Wisconsin (Madison), June 1973.

"Agrarian Reform and the National Front in Colombia." With Professor William Flinn and Susana Lastarria-Cornhill. In An Evaluation of the National Front, eds., Albert Berry and Maurico Solaun. Princeton Press. Forthcoming.

Methodological Approaches to the Study of Development. With Professor William Flinn and Rodrigo Parra. Universidad de los Andes (Bogotá, Colombia). Forthcoming.

"Barrio Residents' Perception of Change and Political Response." With Professor William Flinn. Paper presented to the Annual Meeting of the Southwest Sociological Association, Dallas, March 1974. Accepted for publication in the Journal of Political and Military Sociology.

"Anomie and Authoritarianism in Five Colombian Cities." With Professor William Flinn. In Latin American Urban Research, eds., Wayne A. Cornelium and F. M. Trueblood. Sage Publications (California). Forthcoming.

"The Diffusion of New Seed Varieties and Its Consequences in the Coffee-Producing Area of Colombia." In Problems in Rural Development: Case Studies and Multidisciplinary Perspectives, eds., Raymond Dumett and Lawrence Brainard. E. J. Brill Press (Leiden, The Netherlands), 1974.

"Decomposition of the Peasant Class: Theoretical and Methodological Clarifications." With Professor William Flinn. Submitted to the Journal of Peasant Studies.

Professor Don Kanel

"Creating Opportunities for Small Farmers: The Role of Land Tenure and Service Institutions." In Perspectives in Rural Development, eds., Lawrence J. Brainard and Ray Dumett. Brill (Leiden), 1974.

"La reforma de la tenencia de la tierra como un problema político en la modernización de las sociedades tradicionales" and "El caso económico de la reforma agraria: Empleo, distribución del ingreso y productividad" (with Professor Peter Dorner). In La Reforma Agraria en América Latina, ed., Peter Dorner. Editorial Diana (Mexico), 1974.

Professor Kemal Karpat

Social Change and Politics in Turkey. Brill (Leiden), 1973.

An Inquiry into the Social Foundations of Nationalism in the Ottoman State. Princeton University Press, 1973.

"The Question of Gagavuzes' Origin." Paper presented at the First International Conference on Turcology, Istanbul, Turkey, October 1973.

"Economic and Social Transition of Istanbul in the Nineteenth Century," Paper presented to the South East European Studies Association, Istanbul, Turkey, October 1973.

"A New Source Regarding the Origin of Young Turks." Paper presented at the International Altaistic Conference, Ankara, Turkey, October 1973.

"The Teaching of Ottoman History in the United States." Paper presented to the Middle East Studies Association of North America Annual Meeting, Milwaukee, Wisconsin, November 1973.

"The Multi-Party Era in the Turkish Republican Regime." Paper presented at the Conference on Turkish Development, Chicago, Illinois, November 1973.

"Migration in the Nineteenth Century Ottoman Empire." Paper presented at the Conference on Economic History: Historical Demography, Princeton, New Jersey, April 1974.

Professor David King

"The Next Step in Agricultural Development Theory: A Proposal for the Study of the Structure of Transitional Opportunities." Submitted to the Journal of Economic Issues.

"Part-Time Farming in Modern Japan." With Ryohei Kada. Land Tenure Center Newsletter, University of Wisconsin (Madison), January-March 1974.

"Land Reform and Participation of the Rural Poor in the Development Process of African Countries." Submitted to the Journal of Modern African Studies.

"Rural Development: A Proposed New Definition." Land Tenure Center Newsletter, University of Wisconsin (Madison), April-June 1974.

Professor Kenneth Parsons

"Land Reform in Relation to Industrial Development: A Note on Policy Issues." Paper presented at the International Seminar in Taipei, Taiwan, December 1973.

"John R. Commons: A Note on His Career and Ideas." In the biography of John R. Commons by Professor Fumio Ito. Aoyama Gakiun University (Tokyo, Japan). Forthcoming.

"A Note on Issues for Consideration in a Second World Conference on the Role of Land Tenure in Agricultural Development." Forthcoming.

"The Institutional Basis of a Market Economy of Agriculture." Accepted for publication by the Journal of Economic Issues.

Professor James Scott

"How Traditional Rural Patrons Lose Legitimacy: A Theory with Special Reference to Lowland Southeast Asia." With Ben Kerkvliet. Cultures et Developpment (Louvain, Belgium), Summer 1973.

"The Politics of Survival: Peasant Response to 'Progress' in Southeast Asia." With Ben Kerkvliet. Journal of Southeast Asian Studies, September 1973.

"Corruption, Machine Politics, and Political Change," APSR, March 1969. "Patron-Client Politics and Political Change in Southeast Asia," APSR, March 1972. Both reprinted in Italian in Il Clientelismo Politico, Franco Angeli Editore (Milan).

"Patron-Client Politics and Political Change in Southeast Asia," APSR, March 1972. Reprinted in Revolutionary Guerilla Warfare, ed., Sam Sarkesian.

"Corruption in Thailand," Chapter 4 in Comparative Political Corruption, Prentice-Hall, 1972. To be reprinted in Modern Thai Politics: From Village to Nation, ed., Clark Heher. Schenkmen, 1974.

Friends, Followers, and Factions: A Reader in Political Clientelism. Edited with Steffen Schmidt, Laura Guasti and Carl Lande. University of California Press, 1974.

The Moral Economy of the Peasant Subsistence Ethic in Southeast Asia. Forthcoming.

"The Erosion of Patron-Client Bonds and Social Change in Rural Southeast Asia." In Land Tenure and Peasant in South Asia: An Anthology of Recent Research, ed., Robert Frykenberg. Land Tenure Center, University of Wisconsin (Madison). Forthcoming.

Professor Robert Seidman

"Contract Law, the Free Market, and State Intervention: A Jurisprudential Perspective." Journal of Economic Issues, Vol. 553.

"Law and Stagnation in Africa." Zambia Law Journal, 1973.

Law and Development: A Theory of Law as an Instrument of Social Change in Africa. Forthcoming.

Professor David Stanfield

"Methodological Notes on Evaluating the Impact of Agrarian Reform in Chile's Central Valley." With Professor Marion Brown. To be submitted for journal publication.

"Agrarian Reform Policies of the Chilean Military Junta." Land Tenure Center Newsletter, University of Wisconsin (Madison), April-June 1974. To be submitted to the Journal of Political and Military Sociology.

"Evolution of Tenure Structures in the Large Haciendas of Chile's Central Zone between 1966 and 1971." With Professor Marion Brown. To be submitted to the Journal of Developing Areas.

"Work and Power: Changes in Employment Patterns of Rural Families During a Period of Agrarian Reform." With Professor Marion Brown. Forthcoming.

"Factor Combinations and Agrarian Reform: Chile 1966-71." With Professor Marion Brown and Steven Smith. Report to the United Nations Research Institute, February 1974.

"Changes in the Social Organization of Farms in Chile: Causes and Effects." With Professor Marion Brown. Forthcoming.

"Farm Worker and Migration and Mobility as Affected by the Agrarian Reform." With Patricia Garrett-Schesch. Forthcoming.

"Farm Worker Political Consciousness and the Agrarian Reform." With Thomas Bossert. Forthcoming.

Professor John Strasma

"Economic Literature in Bolivia, Chile, Paraguay, Peru and Uruguay, 1971-73." With Bruce Herrick. In the Handbook of Latin American Studies,

ed., Donald Stewart. The Library of Congress, 1974.

"Agrarian Reform" and "Industry." To be published in Peru under the Generals: A Corporativist Revolution, ed., David Chaplin. Trans-Action Press, September 1974.

"Chile and Peru: Two Roads to Agrarian Reform." In Alternatives in the Andes: Chile and Peru, ed., Leila Bradfield. Forthcoming.

"Las empresas transnacionales y el desarrollo." Banco Central de Reserva (El Salvador), June 1974.

Professor William Thiesenhusen

"Chile's Experiments in Agrarian Reform: Four Agrarian Reform Projects Revisited." American Journal of Agricultural Economics, May 1974.

"A Venezuelan Agrarian Reform Settlement--Problems and Prospects." In Tradition and Dynamics in World Agriculture: Economic Studies of Farming in Asia, Africa, and Latin America, ed., Robert D. Stevens. Forthcoming.

"What Changing Technology Implies for Agrarian Reform." Land Economics, February 1974, pp. 35-50.

"Population Growth and Agricultural Development." Paper presented at the Southeast Asia Development Advisory Group of the Asia Society (SEADAG) Conference on "The Role of Population Planning in General Economic Planning," San Francisco, California, November 1973.

"Several Roles of Agriculture in Rural Development." Paper presented at the U.S. Department of Labor Fall Executive Seminar on Maximizing Employment, Washington, D.C., November 1973. Accepted for publication in El Trimestre Económico (Mexico).

"New Technology in Agriculture: Blessing or Curse." Lecture delivered in various Indian cities, February 1974, at the request of the U.S. Ambassador to India; also given in February and March in Lahore, Dacca, Bangkok, Jakarta, and Bogor. Accepted for publication in Economics and Finance in Indonesia (Ekonomi Dan Keuangan Indonesia).

"The Economics of Uselessness." Lecture delivered in various Indian cities, February 1974, at the request of the U.S. Ambassador to India; also given in March in Jakarta. Submitted for publication.

"Development and Equality: Partners or Rivals." Lecture delivered in various Indian cities, February 1974, at the request of the U.S. Ambassador to India; also given in February and March in Chiang Mai, Bangkok, and lecture-discussion given on this topic in Manila. To be published in Soledad, Manila.

"Empleo y desarrollo latinoamericano," "Reforma agraria: Chile," and "Colonización: Alternativa o suplemento de la reforma agraria." In La Reforma Agraria en América Latina, ed., Professor Peter Dorner. Editorial Diana (Mexico), 1974.

"Issues in Agrarian Development in Latin America in the Last Half of the 1970s." Paper prepared at the request of Desarrollo Rural en las Américas, Instituto Interamericano de Ciencias de la OEA, San José, Costa Rica, May 1974.

Professor Joseph Thome

"Legislación de la reforma agraria: Chile" and "Mejoramiento de la seguridad de la tenencia de la tierra." In La Reforma Agraria en América Latina, ed., Professor Peter Dorner. Editorial Diana (Mexico), 1974.

"The Expropriation Policy under the Allende Agrarian Reform." Forthcoming.

Professor Eugene Wilkening

"Canonical Analysis of Farm Satisfaction Data." With Lakshmi K. Bharadwaj. Rural Sociology, Vol. 38, No. 2, Summer 1973.

"Job Satisfaction of Owner-Managers, Hired Managers, and Hired Workers as Related to Farm, Social and Job Characteristics." Submitted to Sociology of Work and Occupations: An International Journal.

"Economic Conditions and Social Class Awareness Among Wisconsin Corporate Farm Personnel." Submitted to Rural Sociology.

"Validity and Reliability of Indicators of Alienation and Integration Applied to a Selected Rural Sample." Submitted for publication.

SECTION C

LAND TENURE CENTER TEACHING ACTIVITIES

PH.D. IN DEVELOPMENT

In 1970 the University of Wisconsin established an experimental social science doctoral degree in development. This degree provides, for the first time, an academic focus for students who wish to pursue advanced study of development issues within an interdisciplinary framework. The degree program was founded in response to a widespread feeling that the problems of development do not fall neatly into the domain of one discipline and that a flexible course-work program is called for in this area which is designed with each student's career goals and interests in mind.

The program is directed toward students with two general career choices. The first are those seeking work in a government program or international agency specializing in development. The interdisciplinary program gives them theory and research methodology needed to deal with development problems. The second are those seeking research or teaching careers in a university. They usually have strong disciplinary interests but want to apply them to the study of development through an interdisciplinary program.

During the past year, Land Tenure Center faculty members and staff responded to written inquiries about the program from 28 countries, in addition to discussing the program with students from Wisconsin and visitors to the University who came to the Center. Five new students have been admitted to the program:

Spring Semester 1974	Fall Semester 1975
Robert Reed	Susana Lastarria-Cornhill
	Antonio Ledesma
	Larry Meyers
	Shahnaz Rouse

Eighteen others are currently enrolled in the development program. Table I gives a listing of those students with a description of their progress to date. A summary of the research being conducted by those students who are at more advanced stages of the program may be found in the "Research" section of this report.

During the reporting year, eight students completed work on the Ph.D. in Development and received their degrees: Gustavo De Roux, John Hatch, Charles Kleymeyer, Francisco Leal, Muhammad Sadik, Nimal Sanderatne, Burton Swanson and Leon Weintraub. [For thesis abstracts, see Appendix C.]

Of these graduates, three have returned to positions in their own countries. Francisco Leal is on the faculty of the University of Los Andes Department of Political Science in Bogotá, Colombia. Muhammad Sadik is Graduate Instructor in Development Administration for the American University in Beirut, Lebanon. Nimal Sanderatne is Senior Economist for

TABLE 1

Name & Country of Origin	Funding 1973-74 & Date Entered Program	Research Topic	Stage in Program
ABEYSEKERA, Gamini (Sri Lanka)	Ford Foundation Spring 1973	"Trends and Sources of Income Distribution in Sri Lanka (Ceylon)"	Completed preliminary examinations Spring 1974; will begin field research in Sri Lanka Fall 1974
ARIF, Tuncer (Cyprus)	LTC Assistantship, University Travel Fellowship Fall 1972	"Income Distribution and Employment in Turkey"	Completed preliminary examinations Spring 1974; currently conducting field research in Turkey
COLMENARES, Humberto (Colombia)	CIMMYT, LTC Assistantship, Ford Foundation Fall 1971	"Adoption of Corn Technology to Large and Small Farmers in Colombia"	Completed field research in Colombia December 1973; currently writing thesis
COX, Paul (United Kingdom)	Institute for Environmental Studies Assistantship Fall 1972	"Food Shortages" (Tentative)	Completing course work; will take preliminary examinations Spring 1975
CRISPI, Jaime (Chile)	Ford Foundation Spring 1971	"An Analysis of the Low Rate of Growth of Agricultural production in Chile"	Currently completing field research in Chile and writing dissertation
DIAZ, Heliodoro (Mexico)	CIMMYT, Rockefeller Foundation Fall 1970	"Study of Institutional Factors Associated with Agricultural Supply/Delivery Systems in Mexico"	Completed field research Summer 1973; currently writing dissertation

Name & Country of Origin	Funding 1973-74 & Date Entered Program	Research Topic	Stage in Program
FALLON, Edward (United States)	LTC Assistantship Fall 1973	-	Completing course work
FLORES, Otto (Peru)	Ford-Rockefeller, teaching at Universidad Nacional Agraria Fall 1970	"Rural Development and Higher Agricultural Training in Peru"	Teaching at Universidad Nacional Agraria, Lima, Peru and writing dissertation, to be completed Fall 1974
GOW, David (Scotland)	FAFP Spring 1971	"Peasant Society in Transition: Land Reform in Cuzco, Peru"	Currently conducting field research in Peru: will return December 1974 to write dissertation
GREENMAN, Edwin (United States)	LTC Assistantship Fall 1973	-	Completing course work
JACKSON, Donald (United States)	LTC Assistantship, MUCIA, Ibero-American Studies Travel Grant Spring 1972	"The Use of Producer's Cooperatives as a Tool in the Implementation of Agrarian Reform in El Salvador"	Completed preliminary examinations Summer 1973; currently conducting field research in El Salvador
LEMEL, Harold (United States)	Graduate School Fellowship Spring 1973	"The Relationship Between Rural Educational Policy and Rural to Urban Migration"	Completing course work

Name & Country of Origin	Funding 1973-74 & Date Entered Program	Research Topic	Stage in Program
LUISELLI, Cassio (Mexico)	Mexican Government Spring 1972	"The Prospective Role of Rural Industries as a Means for Regional Development and Increased Employment in Mexico"	Currently conducting field research in Mexico and China; will return in December to write dissertation
MOORE, Franklin (United States)	Ford Foundation, Afro-American Studies and African Studies Assistantships Spring 1973	"The Aluminum Industry and Its Effects on the Developing Economies of Ghana and Jamaica"	Completing course work
NEWFARMER, Richard (United States)	U.W. Non-Resident Scholarship Fall 1972	"Socio-Economic Change and Development in Brazil: Industrial Concentration and the Role of Multinational Corporations"	Completing course work; will take preliminary examinations Fall 1974
PINNADUWAGE, Sathyapala (Sri Lanka)	Agricultural Development Council, Inc. Spring 1972	"Income and Social Consequences of Technological Change in Agriculture"	Completed preliminary examinations Fall 1973; currently conducting research
TESFAI, Alemseged (Ethiopia)	LTC Assistantship; African-American Scholar's Council, Inc. Spring 1972	"An Evaluation of Communal Land Tenure Systems in Eritrea and Their Significance for Economic Development"	Completed preliminary examinations Fall 1973; currently conducting field research in Ethiopia

ALUMNI

Name & Country of Origin	Funding 1973-74 (Until Completion of Degree)	Dissertation Title	Dates Entered and Completed Program
DE ROUX, Gustavo (Colombia)	Ford Foundation, LTC Assistantship	"The Social Basis of Peasant Unrest: A Theoretical Framework with Special Reference to the Colombian Case"	Spring 1972 May 1974
HATCH, John (United States)	Development Alternatives, Inc., Washington, D.C., LTC Assistantship	"The Corn Farmers of Motupe: A Study of Traditional Farming Practices in Northern Coastal Peru"	Fall 1970 May 1974
KLEYMEYER, Charles (United States)	-	"Social Interaction Between Quechua Campesinos and Criollos: An Analytic Description of Power and Dependency, Domination and Defense, in the Southern Sierra of Peru"	Fall 1970 August 1973
LEAL, Francisco (Colombia)	Ford Foundation, LTC Assistantship	"Social Classes, International Trade and Foreign Capital in Colombia: An Attempt at Historical Interpretation of the Formation of the State, 1819-1935"	Fall 1972 May 1974
SADIK, Muhammad (Lebanon)	Ford Foundation	"Affluent Bureaucracy in a Changing Society"	Fall 1972 May 1974

Name & Country of Origin	Funding 1973-74 (Until Completion of Degree)	Dissertation Title	Dates Entered and Completed Program
SANDERATNE, Nimal (Sri Lanka)	Agricultural Development Council	"The Political Economy of Asian Agrarian Reform: A Comparative Analysis with Case Studies of the Philippines and Sri Lanka (Ceylon)"	Fall 1971 February 1974
SWANSON, Burton (United States)	LTC Assistantship, CIMMYT, IRRI	"Training Agricultural Research and Extension Workers from Less Developed Countries: An Examination of Training Approaches Used by The International Rice Research Institute and The International Maize and Wheat Improvement Center"	Fall 1970 May 1974
WEINTRAUB, Leon (United States)	-	"Introducing Agricultural Change: The Inland Valley Swamp Rice Scheme in Sierra Leone"	Fall 1970 December 1973

the Rural Economics Division of the Economic Research Department in the Central Bank of Ceylon, Colombo, Sri Lanka.

Of the U.S. graduates, John Hatch is Consultant for Development Alternatives, Inc., Washington, D.C. He is primarily engaged in technical assistance to small farmer programs in Latin America. Charles Kleymeyer is Sociologist for a research program jointly sponsored by Harvard University and the University of Valle in Cali, Colombia. He is researching projects for the World Health Organization and Pan-American Health Organization, Models for Delivery of Health Services in Cali, and the International Center for Medical Research sponsored by Tulane University and the Department of Health, Education and Welfare.

Two graduates have chosen interim employment on campus. Burton Swanson is conducting post-graduate research for the Department of Agricultural and Extension Education, and Leon Weintraub is carrying out an internal research project on foreign alumni for the Midwest Universities Consortium for International Activities, Inc. (MUCIA) in Madison.

Two advanced students, Humberto Colmenares and Heliodoro Diaz, completed their field research this year and returned to campus. Four students initiated field research, in Turkey (Tuncer Arif), El Salvador (Donald Jackson), Mexico and China (Cassio Luiselli), and Ethiopia (Alemseged Tesfai).

In addition to course work and research, Ph.D. in Development students are already engaged in professional activities relating to their interests. This past year Paul Cox attended the Conference of Latin Americanist Geographers in Calgary, Canada, and Heliodoro Diaz discussed the Puebla Project at seminars in Mexico, New York, and Washington, D.C. Richard Newfarmer has been working on campus as consultant to the Senate Subcommittee on Multinational Corporations of the Senate Foreign Relations Committee.

Several students have written books and articles relating to their research. Francisco Leal has written Estudio del Comportamiento en Colombia, Volume I, Análisis Histórico del Desarrollo Político Nacional, 1930-1970, published by Tercer Mundo (Bogotá, Colombia), 1973, and "The Dialectical Method of Social Research," which he has submitted to Science and Society. Nimal Sanderatne wrote four articles this past year, "Landowners and Land Reform in Pakistan" for the South Asian Review, "Agricultural Productivity Considerations of the Land Reform Law of 1972" for the Central Bank of Ceylon's Staff Studies, "Reducing Risk in Peasant Agriculture by Agricultural Insurance" for the Agricultural Development Council's Teaching Forum, and "The Impact of the Agrarian Structure on the Political Leadership of Undivided Pakistan" for the Land Tenure Center. In addition, four Development students have given LTC seminars this year.

Because of the expanding number of development students and the increased variety of problems within the development field that its students wish to pursue, the Administrative Committee continued in its effort to identify faculty members with compatible research interests in other departments on the Madison campus. Last year, Professor Henry Hart

(Political Science and Indian Studies) was asked to serve as advisor to Ph.D. in Development students, and six additional faculty members were asked to join the Administrative Committee: Professor Marion Brown (Agricultural Journalism), Professor William Flinn (Rural Sociology), Professor Kemal Karpat (History), Professor Willard Mueller (Agricultural Economics), Professor David Stanfield (Sociology), and Professor Joseph Thome (Law).

Funding for students in the Development program comes from many sources. Table 1 indicates the specific source of support for each student. Below is a breakdown in dollar amounts of sources of financial support given development students for study and research purposes:

Land Tenure Center (211d Grant Funds)	$25,811.00
University of Wisconsin	19,275.00
International Agencies (CIMMYT and IRRI)	5,525.00
Foreign Governments	6,000.00
Foreign Universities	2,100.00
Private United States Agencies (Ford Foundation, Rockefeller Foundation, Foreign Area Fellowship Program, Agricultural Development Council, African-American Scholars Council, Inc., Midwest Universities Consortium for International Activities, Inc.)	66,633.00

When 211d financial support is given, a Research Assistantship is awarded and the student is required to work 15 to 20 hours a week on Land Tenure Center research projects. Support from the University of Wisconsin includes assistantships from departments other than the Land Tenure Center, waiver of out-of-state tuition, and fellowships.

During the past year the Administrative Committee, which sets policy for the degree, consisted of:

Professor Warren Bilkey, Business
Professor Lloyd Bostian, Agricultural Journalism
Professor Marion Brown, Agricultural Journalism & Land Tenure Center
Professor Peter Dorner, Agricultural Economics & Land Tenure Center
Professor Joseph Elder, Sociology
Professor Herman Felstehausen, Agricultural Journalism, Land Tenure Center & Institute for Environmental Studies
Professor John Fett, Agricultural Journalism
Professor William Flinn, Rural Sociology & Land Tenure Center
Professor A. Eugene Havens, Rural Sociology & Land Tenure Center

Professor Don Kanel, Agricultural Economics & Land Tenure Center
Professor Kemal Karpat, History & Land Tenure Center
Professor David King, Agricultural Economics & Land Tenure Center
Professor Robert Koehl, History & Educational Policy Studies
Professor Willard Mueller, Agricultural Economics
Professor Kenneth Parsons, Agricultural Economics & Land Tenure Center
Professor Raymond Penn (Emeritus), Agricultural Economics, Land Tenure Center, Institute for Environmental Studies & Urban and Regional Planning
Professor Richard Powers, Agricultural Journalism
Professor James Scott, Political Science & Land Tenure Center
Professor David Stanfield, Sociology and Land Tenure Center
Professor John Strasma, Agricultural Economics, Economics & Land Tenure Center
Professor William Thiesenhusen (Chairman), Agricultural Economics, Agricultural Journalism & Land Tenure Center
Professor Joseph Thome, Law & Land Tenure Center

There are two subcommittees:

Admissions and Student Evaluation

Professor Lloyd Bostian
Professor Marion Brown
Professor Herman Felstehausen
Professor Don Kanel
Professor William Thiesenhusen (Chairman)

Curriculum Committee

Professor Warren Bilkey
Professor Lloyd Bostian
Professor Herman Felstehausen
Professor Don Kanel
Professor David King
Professor Peter Dorner (Chairman)

UNIVERSITY OF WISCONSIN COURSES

Below is a listing of courses taught by Land Tenure Center faculty during the 1973-74 academic year, with a brief description of each. As the Land Tenure Center does not maintain its own body of courses, each course is listed and administered through one or more departments, as shown.

Fall Semester 1973

Agricultural Economics 476: Professor Dorner taught "The Economic Development of Agriculture (International)," designed for upper division undergraduates and Master's Degree candidates. The course dealt with problems and issues in the economic development of agriculture in various countries, including an examination of current theories, policies and programs. Topics discussed in this course included:

- Approaches to the study of agricultural development
- The role of agriculture in economic development
- Institutional factors in development
- Population growth and employment
- Land tenure, agrarian reform, and development
- "green revolution," technology, and agricultural development
- Some case studies of agricultural development
- Specific issues in agricultural development

Agricultural Economics, Agricultural Journalism & Interdisciplinary 479: Professor Thiesenhusen again offered his course "Land Tenure and the Campesino in Latin America" this semester. Designed for seniors and graduate students, this course addressed the problem of defining campesinos as a group and bringing together what is known about them from various disciplines. Of primary concern was the problem of how campesinos can be brought into the mainstream of economic and political life. The course was organized around the following topics:

- Land reform and the Latin American campesino
- Peasants as economic men
- Peasants, unemployment, and urbanization
- Peasants as a political force
- Communication, education, and the peasant
- The campesinos: what can outsiders do?
- Credit and markets

Agricultural Economics 699: Professor King conducted this course in "Special Problems" for those students requiring analytical background in mathematical economics. In conjunction with Business 714, this course served as a substitute for Economics 603, which was not offered during the academic year.

Agricultural Economics & Economics 707: This course, taught by Professor Kanel, dealt with the ideas of John R. Commons, Karl Polanyi, and other institutional economists. Issues considered included the concept of property, changing the meaning of property, and roles in the economy for corporations, trade unions and other organized economic groups, as well as the government. Topics are considered with regard to contrasts between traditional and market economics, and in comparison with socialist ideas.

Agricultural Economics & Economics 767: This seminar on public finance in less developed areas was conducted by Professor Strasma and centered on the problem of mobilizing domestic resources to finance development. Topics covered included development theory and empirical evidence on the potential and limitations of fiscal policy as a development instrument in low-income countries, case studies in tax reform, and fiscal budgeting and planning.

Agricultural Economics 908: Professors Kanel and King conducted this course, a "Workshop in Economics of International Agriculture," for advanced graduate students who are in the process of writing their dissertations or developing a research proposal. The course focused on the problems and methodology of conducting field research.

Agricultural Economics, Economics & Urban and Regional Planning 923: Professors Felstehausen and Penn jointly taught this course entitled "Seminar on Land Problems: Institutional Development." The seminar focused on basic concepts related to the origins of institutional structures and the role of institutional norms or rules in governing economic, social, and political activities. The course was largely oriented toward land resources in consideration of both international and domestic issues and was organized around the following topics:

- The nature of an institutional system
- The ownership and use of resources
- Methods of institutional inquiry
- Planning the use and allocation of resources
- Government and group management of institutional decisions
- Alternative institutional structures

Agricultural Economics & Economics 960: Professors King and Parsons conducted this course on the "Economics of Agricultural Development" in a seminar format. Professor Parsons presented two papers to the class, "Processes of Transformation in Agricultural Development" and "A Note on the Strategy of Agricultural Development." Class discussion centered on these papers and on papers presented by the students, each an in-depth study of some specific problem in the economics of agricultural development. Two student papers from this seminar are to be published.

Agricultural Economics, Institute for Environmental Studies, Political Science, & Urban and Regional Planning 965: In addition to their association with the Land Tenure Center, Professors Felstehausen and Penn are members of the academic staff of the Institute for Environmental Studies (IES). This semester they conducted a water resources management

workshop on "Management Problems of the Lake Wingra Watershed and UW Arboretum." Issues considered in the workshop included:

- Use pressures on an urban nature facility
- Modification of the watershed due to urbanization
- Biological changes in the lake system
- Restoration or improvement possibilities
- Internal and fringe developments
- Community support, participation and cooperation
- Nutrient problems
- Maintaining plant communities

All funding for this course was through the Institute.

Agricultural Economics & Economics 982: Professor Strasma conducted this interdepartmental seminar on Latin America. The seminar focused on an analysis of Chilean economy and society from 1952 to the present, with emphasis on the Frei and Allende periods of government. Most of the participants had spent a month or more in Chile in research, as Peace Corps volunteers, or in similar programs.

Agricultural Journalism 940: Professors Marion Brown and John Fett, of the Department of Agricultural Journalism, offered this seminar for Master's Degree candidates entitled "Communications Theory and Research Methodology." Professor Brown conducted discussions on experimental and quasi-experimental designs for field research on social issues, as well as a critique of general communications theory as it relates to social change and economic development in Latin America.

Indian Studies 857: Professor Frykenberg offered this seminar in "Modern Indian History" to students doing research in Pakistan and India. Topics for the seminar include problems of religion and society, land and society, and political development in South Asia.

Interdisciplinary 472: Professor King offered this course entitled "Land Tenure in Africa" which dealt with the nature and evolution of the various land tenure systems in Africa. The purpose of the course was to examine what effect man-land relationships are likely to have (and might have with appropriate policy measures) on the role of agriculture in economic development. Specific topics of discussion were as follows:

- Customary arrangements whereby people gain access to land
- Study and comparison of the evolution of land tenure systems
- Examination of different patterns of land tenure and histories of change
- Appropriate role of agriculture in the economic development of countries where different systems of land tenure prevail

Rural Sociology & Sociology 322: Professor Wilkening offered this course on the "Ecosystem Approach to Social Change" for advanced undergraduate and graduate students interested in the principles of social change and their relation to man and his environment, planning and policy making. Topics covered included:

- New approaches to social change
- Historical and cultural roots of the ecological crisis
- The ecosystem perspective
- Social systems, social dynamics, and social change
- Adaptation and the quality of life
- The processes of change: energy distribution and technological innovation
- Planned social change
- Demographic factors: trends in population, public opinion and life styles
- Voluntary associations, policy formation, and case studies

Rural Sociology & Sociology 758: Professor Havens offered this course on the issues and procedures of research in rural sociology. One of the basic issues that was covered dealt with quantitative and qualitative approaches to the study of development. The emphasis was placed on synthesizing both techniques since both are necessary to explain social relations.

Spring Semester 1974

Agricultural Economics & Economics 474: Professors Kanel and Thiesenhusen taught this course entitled "Economic Problems of Underdeveloped Areas." It dealt with growth and structural change in less developed countries and focused on the following issues:

- Population
- Patterns of development: relations between sectors and responses to international trade
- Import-substituting industrialization
- Agriculture-institutional requirements of development, land reforms and "green revolution"
- Role of capital in development
- Theories of development
- Development problems and policies

Agricultural Economics 541: Professor Strasma taught this course on the "International Marketing of Primary Commodities," focusing on an analysis of the factors determining commodity prices and the size and direction of trade, terms of trade debate, and unilateral, bilateral and multilateral efforts to raise and/or stabilize commodity prices. Topics included common markets, preferences for former colonies, and problems of protection in industrialized nations; the nature and functioning of future markets; alternative forms of taxation or "participation" in extractive industries; and efforts to increase value added, as by exporting processed as well as primary commodities.

Agricultural Economics 909: Professors Kanel and King conducted a second semester of the "Workshop in Economics of International Agriculture" for advanced graduate students who are in the process of writing their

dissertations or developing a research proposal. The course again centered on the problems and methodology of conducting field research.

Agricultural Economics, Economics, & Urban and Regional Planning 924: Conducted by Professors Felstehausen and Penn, this seminar on land problems focused on local government programs and planning. It addressed the problems confronting community groups and local authorities engaged in public projects and attempted to deal with land issues. Included as topics for discussion were:

- Local administration and planning procedures
- Community involvement in resource planning and use
- The local decision-making process
- Methods for analyzing local services and functions
- The economics of local development
- Interagency and agency-client communication and coordination
- Community action and alternative forms of control and administration

Agricultural Economics & Economics 960: Professors King and Parsons conducted this seminar entitled "The Interdependence of Rural and Urban Opportunities: The Role of Part-Time Farming in Rural Development." The seminar dealt with the role of part-time farming in the transformational process where transitional opportunities are an important element in rural development. Discussion centered on the following topics:

- Limitations of employment creation criteria
- Government policies to create an institutional structure that maximizes development
- Transformation of the economy from agricultural subsistence to the modern urban and industrial state
- Role of part-time farming in economic transformation
- Evaluation of rural development policy during the transformation process
- Specific examples of the role of part-time farming: Japan, Taiwan, U.S.
- Role of transitional opportunities in less developed countries

Agricultural Economics & Economics 982: Professor Strasma conducted a second semester of the interdepartmental seminar on Latin America. The seminar again focused on an analysis of Chilean economy and society from 1952 to the present, with emphasis on the Frei and Allende periods of government.

Anthropology, Economics, Geography, History, Political Science & Spanish 260: Several members of the Land Tenure Center faculty participated in this new undergraduate survey course titled "Latin America: An Introduction," by lecturing or conducting panel discussions on specific issues pertaining to Latin America. Professor Havens lectured on the changing class structure in the agricultural sector in Colombia and Chile, and Professor Flinn spoke on the influences of rural community structure on migration. Professor Havens both lectured and participated in a panel discussion on U.S. imperialism in Latin America. Professors Brown and Havens spoke on the dynamics of land reform in Latin America, and

Professors Flinn, Havens and Stanfield conducted a panel discussion on land reform and agrarian structure. Professor Strasma spoke on Chile, in the periods during and after the Allende government, and Professors Stanfield and Brown participated in a panel discussion of the Allende period. Approximately twenty-six UW faculty members participated in the course, giving students the opportunity to hear many professors with specialized knowledge of Latin America.

Law 983: Professor Thome conducted this seminar on "Selected Legal Problems of Economic and Social Development in Latin America." The seminar provided an opportunity for graduate students to discuss and analyze legal issues relating to agrarian reform, the integration of marginal communities, and economic planning.

Rural Sociology & Sociology 926: Professor Havens taught this "Seminar in Socioeconomic Change in Underdeveloped Areas" in collaboration with Orlando Plaza, graduate student in sociology. The seminar focused primarily on two areas, dualistic schools concerned with development and the historical approach to the development of capitalism.

Rural Sociology & Sociology 945: Professor Wilkening conducted this seminar on "Quality of Life Measurement." Discussion centered on historical precedents and conceptualization of social indicators and the social indicator movement, as well as conceptualization and dimensions of the quality of life, including case studies, methodological aspects, and applications.

Summer Session 1974

Agricultural Economics, Institute for Environmental Studies, Political Science, & Urban and Regional Planning 965-966: In addition to his association with the Land Tenure Center, Professor Wilkening is a member of the academic staff of the Institute for Environmental Studies (IES). This summer he conducted a water resources management workshop concerned with social, economic, environmental and aesthetic aspects of power plant siting. Speakers were drawn from the Department of Natural Resources, Public Service Commission, power plant companies and interested UW-Madison faculty. Designed to give students experience in management aspects of water resource problems, the seminar required student presentation of guidelines for power plant siting for use by power companies and the Public Service Commission, and defense of these guidelines through the public hearing process.

One-third to one-half of the enrollment in the courses listed above consisted of students from countries other than the United States. In addition, these courses only partially reflect the teaching activities of faculty associated with the Land Tenure Center. Eight courses were taught by LTC-associated faculty as part of their appointment with regular departments at the University of Wisconsin, courses which were not

specifically development oriented. Many members of the LTC faculty participated in seminars not officially under their direction or gave special guest lectures at seminars. Also, the faculty supervised many students registered for 699 and 990 courses which entail independent research and study.

In conjunction with their formal classroom teaching responsibilities, Land Tenure Center faculty assisted, on an individual basis, many students who were enrolled in their classes with research planning. The LTC faculty considers this an important part of their teaching activities, although these students are not formally assigned to them as advisees.

NON-UNIVERSITY OF WISCONSIN TEACHING ACTIVITIES

Land Tenure Center faculty members on leave from the University of Wisconsin often teach courses in the countries where they are based. As visiting professor of law in the University of Zambia, Professor Seidman taught courses this past year in criminal law, jurisprudence, and law and development. In addition, he gave seminars in law and development to several provincial governments and to the Lawyers' Association of Zambia.

Many faculty members participated in seminars or gave guest lectures to faculty and students at universities other than Wisconsin. Professor Flinn lectured on Colombia to students and faculty of Ohio State University. Professor Havens gave a seminar at the Center for Inter-American Relations titled "Agrarian Reform During the National Front in Colombia," and a seminar on "Methodological Postures in the Social Sciences" to the Sociology Department of Texas A & M University. Professor Parsons presented a Student-Faculty Seminar at Michigan State University titled "Frontier Issues in Agrarian Development." Professor Penn, who is also a staff member of the Institute for Environmental Studies on campus, gave seminars on natural resources at South Dakota State University and the University of Colorado.

Certain faculty members are reaching a broader teaching base through media presentations. The African Studies Program has taped a lecture by Professor King, titled "The Place of Agriculture in Economic Development," for distribution on request to college, university and school classrooms. In addition Professor King participated with Professors Flinn, Parsons and Thiesenhusen in a panel discussion on world land tenure problems broadcast over the state educational radio network (WHA). Professor Brown conducted a series of lectures or discussions on Chile, dealing with effects of the change in government on social scientists, universities, the press, labor unions, political parties, the parliamentary system and constitution, and people at different political levels, to members of the Old Madison Club, National Committee for Non-Intervention in Chile, Community Action on Latin America, as well as many UW-Madison student groups, and to the WIBA Seminar Series, WHA Roundtable and WHA Outreach radio programs in Madison. Professor Stanfield gave a series or four talks on agrarian reform in Chile to social studies students at West High School in Madison. Professor Strasma spoke on recent developments in Chile to church organizations throughout Wisconsin and Illinois,

and lectured on "Chile: Allende and After" to students and faculty of Vanderbilt University and the University of Minnesota.

Two faculty members reached an international audience on special lecture tours. Professor Strasma was invited to participate in a Central American Cooperative Lectureship Program sponsored by the U.S. Information Agency. He spoke on "Multinational Corporations and Developing Countries" to groups of students, faculty, business managers and government staff in El Salvador, Guatemala, Nicaragua, Costa Rica, and Panama. He also lectured on multinational corporations to students and faculty in Chile. At the invitation of the U.S. Ambassador to India, Professor Thiesenhusen spent six weeks in Asia lecturing on the effects of income distribution and increasing unemployment on development and the social consequences of technological change in agriculture. He spoke to mixed groups of students, faculty, businessmen and government officials in Lahore, Pakistan; Delhi, Hyderabad, Madras, Calcutta and Patna in India; Dacca, Bangladesh; Chiang Mai and Bangkok in Thailand; Jakarta and Bogor, Indonesia; and Manila in the Philippines.

STUDENT ADVISEES

In addition to its Ph.D. in Development students, Land Tenure Center faculty and associates advise many students who are enrolled in regular degree programs through individual departments on campus. Members of the LTC Executive Committee had 135 advanced students as advisees this past year. Below is a listing of these by region of origin.

United States	57
Latin America	40
Asia	18
Africa	16
Europe	4

The number of students trained in the area of land tenure and reform is an important indicator of the Center's progress. The listing above takes into account only those students who have an LTC faculty member as a major advisor. Additionally, LTC faculty members serve as members on degree committees for many more students and help students from many disciplines by consulting on seminar papers, suggesting reference materials, and often assisting them in their research planning. Thus, those students who are advised on an informal basis are not included in these figures, nor those students who are enrolled at universities other than the University of Wisconsin. For example, in Chile Professor Brown advised six Chilean undergraduate students in design and analysis of their undergraduate theses and four U.S. graduate students who were in Chile during the past year. In Colombia Professor Flinn advised three students who were preparing their B.A. theses as well as two graduate students from Colombian universities.

During the reporting year, 14 LTC students received the Master's Degree: 7 of these students were from Latin America, 4 from Asia, 2 from Africa, and 1 from the U.S. Thirteen students received the Ph.D. Degree.

Of these 8 were Ph.D. in Development students. For abstracts of their dissertations, see Appendix C. The remaining 5 LTC students submitted the following dissertations:

Amos Adedoyin Adesimi, "The Prospects and Potentials of Groundnut Cultivation as a Means of Enhancing Economic Opportunities in the Rural Economy of Northern Nigeria."
Department of Agricultural Economics.
Advisor: Kenneth Parsons.

Norma Jean Stoltz Chinchilla, "Strata and Class Consciousness in the Chilean Peasantry."
Department of Sociology.
Advisor: Maurice Zeitlin.

Johnson Avbiniovurue Ekpere, "A Comparative Study of Job Performance under Two Approaches to Agricultural Extension Organization in the Midwestern State of Nigeria."
Department of Agricultural and Extension Education.
Advisor: Sara Steele.

Yakub Layiwola Fabiyi, "Land Tenure Innovations in Rural Development: The Problems in Western Nigeria with Some Tanzanian Comparisons."
Department of Agricultural Economics.
Advisor: Peter Dorner.

Richard Donald Rodefeld, "The Changing Organizational and Occupational Structure of Farming and the Implications for Farm Work Force Individuals, Families and Communities."
Department of Rural Sociology.
Advisor: Eugene Wilkening.

Research papers will be developed from the theses of Norma Chinchilla, Johnson Ekpere and Nimal Sanderatne.

One special category of student deserves mention. Some students come to Wisconsin as the result of collaboration between the Land Tenure Center and outside agencies and institutions concerned with development issues. For example, LTC faculty served as advisors for a variety of special and short-term students sent by AID missions and FAO specifically to study at the Center. These included AID participants Severino Madronio from the Philippines and Banlu Puthigorn from Thailand, both of whom were admitted to graduate status in Agricultural Economics during the academic year. In addition, AID participant Tesfaye Assefa from Ethiopia and Fernando Salazar, from FUDECO in Venezuela, began their studies in the fall of 1974. Two students completed work at the University this year. Kali Rijal, an FAO fellow from Nepal, completed work and returned to Nepal as irector of the Planning, Evaluation and Publicity Division of the Department of Land Reform. Reinaldo Reina, who had come to the University as the direct result of consultations between Professor Penn and staff of the Universidad Centro Occidental

at Barquisimeto, Venezuela, received a Master's Degree in Agricultural Economics and returned to Venezuela to teach at the University.

Two senior staff members from the Ethiopian Ministry of Land Reform and Administration came to the Land Tenure Center in August for a semester's study, as part of an on-going training program funded by the AID mission in Ethiopia, for which each staff member is to research a problem related to his specific area of responsibility at the Ministry. Ato Hailu Wolde-Emmanuel, head of the Land Tenure Department, prepared a paper evaluating land tenure, land-use and development in the Awash Valley of Ethiopia. Ato Lulseged Asfaw, head of the State Domain Land and Settlement Department, discussed the role of state domain lands in Ethiopia's agricultural development. Both papers were presented to university faculty and staff at special Land Tenure Center seminars in December. [For discussion of this research, see Section B, pages 36-38.] In the fall of 1974, Ato Aschenaki Tafere, Director of the Land Grant Division, will be attending the University in this training program. Ato Aschenaki will prepare an evaluation of the impact of the land tenure system on tenant farmers in Wello Governerate.

Two Japanese students are presently attending the University as the result of a cooperative exchange program between Kyoto University and UW-Madison, negotiated by Professor Parsons. Ryohei Kada and Yukiko Kada are enrolled as graduate students in the Department of Agricultural Economics. Both are working closely with Professor King in his study of rural development in Shiga Prefecture, Japan. [For discussion of this research, see Section B, page 39.] Ryohei Kada received a research assistantship from the Land Tenure Center during the 1973-74 reporting year.

Another important indicator of the Center's progress is the placement of students who have received their academic training in association with the Land Tenure Center. This year the LTC continued in its attempt to locate all students who were associated with the Center at some time between the years 1964 and 1973. Of the 193 students who had close association with the Center while they attended the University of Wisconsin, 150 responded to a questionnaire sent out in the Spring of 1973. An additional 23 have been located this past year, and students completing their degrees during the 1973-74 academic year have also been included. Below is a breakdown of the occupations in which former LTC students are placed based upon information obtained from the poll and, in cases where no response was received, the last available information on record at the Land Tenure Center.

	U.S. Citizens	Foreign Nationals
Faculty Positions at Foreign Universities	3	47
Faculty Positions at U.S. Universities and Colleges	56	4
Employment with the U.S. Federal Government or U.S. Government Agencies	12	1

	U.S. Citizens	Foreign Nationals
Employment with Foreign Governments or Foreign Government Agencies	1	43
Employment with International Agencies	5	21
Employment in U.S. Private Business	2	-
Employment with Private U.S. Foundations or Non-Profit Organizations	4	-
Employment in U.S. State and Local Government	6	1
Employment in Foreign Private Business	-	6
Other (e.g., religious organizations, secondary schools, etc.)	-	2
Unknown	2	11

Appendix B constitutes a listing of all persons responding to the questionnaire as well as students who have completed degrees during 1973-74, indicating their present place of employment.

INFORMAL SEMINARS

In 1973-74 the Land Tenure Center's informal seminar program presented thirty programs. From twenty to sixty persons attended each seminar. The program serves as a forum for visitors to the Center to share their first-hand knowledge of development problems with a wide audience of LTC-associated students and faculty, and as a vehicle for these students and faculty to keep each other apprised of current research efforts and results.

A committee of three graduate students and the Student Program Co-ordinator work closely with LTC faculty members to plan the lecture series around the availability of off-campus visitors. An effort is also made to keep informed of Wisconsin associates who have returned from conducting field research.

During most of 1973-74 each seminar was announced via mail to a list of about 350 individuals. Beginning in late April, however, largely in response to an increase in U.S. postal rates, a new system of asking University departments to post notices of the seminars, and announcing them in classes and in various campus publications has been developed. There has been no drop in attendance at the seminars, so this money- and time-saving system will be continued in 1974.

The following is a listing of all seminars in this program given during the 1973-74 academic year:

September 10, 1973. "LAND REFORM IN ETHIOPIA." Ato Lulseged Asfaw and Ato Hailu Wolde-Emmanuel, respectively head of the State Domain Land and Settlement Department of Ethiopia and head of that country's Land Tenure and Geography Research Department. (Their program of study at the Land Tenure Center is described in Section B of this Report.) This seminar focused on a general overview of the problems of tenancy legislation, population pressures on the land in parts of Ethiopia, the progress of various settlement schemes, and the problem of state domain lands.

September 13, 1973. "THE ADA MINIMUM PACKAGE PROJECT OF ETHIOPIA." Ato Halleluel Getahun, Assistant Minister of the Ministry of Agriculture, Ethiopia, and Director of the Ada Project. Mr. Getahun described the Ada Project, which is an attempt by the Ethiopian government to increase agricultural productivity of cultivated land by providing a minimum of assistance, largely in the form of fertilizers, advice from extension agents, and the establishment of cooperatives to aid in storing and marketing of produce.

September 17, 1973. "POPULATION, AGRICULTURE, AND THE ECONOMIC GEOGRAPHY OF CHINA." Mr. Loren Fessler, Associate of the American Universities Field Staff. Mr. Fessler had recently returned from a stay in Hong Kong and he described what the China-watchers there believe to be current trends in Chinese agricultural production.

October 5, 1973. "LAND REFORM IN THE PHILIPPINES." Mr. Francisco Sionil Jose, consultant to the Department of Agrarian Reform in Manila, editor and publisher of the Philippine current affairs monthly, Solidarity, and Manila correspondent for the London Economist. Mr. Jose has advised the Philippine government on its on-going land reform program, which he described in very favorable terms.

October 31, 1973. "RURAL RECONSTRUCTION IN THE THIRD WORLD." Dr. Y. C. James Yen, founder of the Rural Reconstruction Movement and president of the International Institute of Rural Reconstruction based in the Philippines. Dr. Yen described the work of the International Institute in several underdeveloped countries of Latin America, Asia, and Africa. The Institute must be invited to set up a project by the government of the country in question, and it relies for its personnel on natives of that country, providing necessary training at its Philippine headquarters.

November 13, 1973. "INDUSTRIAL DEVELOPMENT STRATEGY IN TROPICAL AFRICA." Mr. Laszlo Lukacs, Senior Industrial Advisor for the United Nations Industrial Development Organization (UNIDO) in Monrovia, Liberia. Mr. Lukacs discussed industrial development strategy in relation to plantation agriculture, agricultural processing, and other agro-allied industries in tropical Africa.

November 14, 1973. "INTRODUCING AGRICULTURAL CHANGE: THE INLAND VALLEY SWAMP RICE SCHEME IN SIERRA LEONE." Mr. Leon Weintraub, Ph.D. in Development candidate at the Land Tenure Center. Mr. Weintraub described the Inland Valley Swamp Rice Scheme, which is attempting to increase agricultural productivity by means of introducing new cultivation practices and inputs. His concern was less with the success of the scheme than with

its practicality. This was the first of three noon-hour seminars presented by Ph.D. in Development students nearing completion of their theses.

November 19, 1973. "CONSTRAINTS ON AND PRESSURES FOR AGRARIAN REFORM--AN ASIAN PERSPECTIVE." Mr. Nimal Sanderatne, Ph.D. in Development candidate at the Land Tenure Center. Mr. Sanderatne focused on how reforms may be affected by: the nature of the political system, the existing tenure system, the impact of economic and social diversification, foreign economic and political pressures, distracting economic and political issues, and the influence of religious and cultural values. His examples were all drawn from Asian countries. This was the second in the student seminar series.

November 28, 1973. "TRAINING AGRICULTURAL RESEARCH AND EXTENSION WORKERS FROM FROM LESS DEVELOPED COUNTRIES." Mr. Burton E. Swanson, Ph.D. in Development candidate at the Land Tenure Center. Mr. Swanson compared the approaches to training taken by IRRI and CIMMYT to determine the usefulness of the training to the participant after his/her return home, and the influence of different training objectives and methodologies on the work behavior of participants after their return home.

December 3, 1973. "SAHELIAN DROUGHT RELIEF." Dr. Edward Fei, Regional Coordinator for Africa in the Office for Program and Policy Coordination, AID. Dr. Fei has served as coordinator of the AID task force working to alleviate the hardships caused by the severe and continued drought in the Sahel region, which consists of Senegal, Chad, Mauretania, Upper Volta, Mali and Niger. He described the short- , medium- , and long-range relief efforts undertaken by AID and other international agencies.

December 11, 1973. "LAND TENURE, LAND-USE, AND DEVELOPMENT IN THE AWASH VALLEY, ETHIOPIA." Ato Hailu Wolde-Emmanuel, head of the Land Tenure Research and Geographic Department of the Ministry of Land Reform and Administration, Ethiopia. Ato Hailu explored the problems of development in this region of Ethiopia as the prelude to a set of policy guidelines designed to enhance more equitable patterns of land use by the nomadic peoples native to the area and the in-coming settled farmers. His presentation was based on a long paper which represented the culmination of his semester-long training at the Land Tenure Center. [For a description of the LTC training program for Ministry of Land Reform and Administration officials, see Section B, page 89.]

December 18, 1973. "THE ROLE OF STATE DOMAIN LANDS IN THE DEVELOPMENT OF ETHIOPIA." Ato Lulseged Asfaw, head of the State Domain Land and Settlement Department, Ministry of Land Reform and Administration, Ethiopia. Ato Lulseged discussed the evolution of state domain lands, and the current pattern of their disposition and use, and offered proposals for their future use as a spur to agricultural development. This also represented the culmination of his training at the Land Tenure Center.

January 18, 1974. "SMALL-HOLDING DEVELOPMENT IN AFRICA WITH SPECIAL REFERENCE TO UGANDA, KENYA, AND ANGOLA." Mr. Ronald Watts, a British writer and broadcaster with extensive experience in Africa. Mr. Watts discussed small-scale farming developments in Africa, with particular reference to the headway made with land tenure problems in Kenya and the

experimental smallholding and outgrower schemes in Uganda. He noted, among other difficulties, the lack of simple means of passing on viable innovations to other small farmers. He also reported briefly on some land tenure problems in southern Angola, where he most recently served as an agricultural consultant.

January 22, 1974. "PEASANT WORKERS (PART-TIME FARMERS) IN POLAND AND EASTERN EUROPE." Dr. Boguslaw Galeski, Professor in the Institute of Philosophy and Sociology of the Polish Academy of Sciences in Warsaw and formerly a Visiting Professor at the Land Tenure Center. Professor Galeski described the phenomenon of part-time farmers who also work in industry and their significance to agricultural production in the countries of Eastern Europe. His talk served as the basis for an article in LTC Newsletter No. 42.

February 1, 1974. "AGRICULTURAL EDUCATION AND THE HACIENDA SYSTEM IN PERU, 1902-70." Mr. Otto Flores, a Ph.D. in Development candidate at the Land Tenure Center. Mr. Flores argued that agricultural education in Peru has tended to change according to the needs of the export sector, thus principally benefitting the hacienda system. He presented data on the economic structure of the export sector of agriculture, and on the research-training orientation within agricultural institutions.

February 12, 1974. "FOOD SUPPLY AND CONSUMPTION BY SOCIAL STRATA IN CHILE, 1968-70, AND UNDER ALLENDE." Dr. Flavio Machicado Saravia, Agricultural Credits Expert in Chile for the United Nations Food and Agricultural Organisation. He described the results of a study which projected demand for various foodstuffs and estimated improvement in nutrition by income group. There was a massive increase in demand, attributable in large measure to the income redistribution during the first year of the Allende administration, which caused a higher total calorie intake for lower income strata and shifts in consumption patterns for middle and upper strata. A longer paper on which this seminar was based will soon be issued in both English and Spanish by the Land Tenure Center.

February 20, 1974. "PUBLIC HEALTH PROGRAMS AND RURAL DEVELOPMENT IN COLOMBIA." Dr. Antonio Ordóñez, M.D., formerly Minister of Public Health of Colombia, presently consultant for the Department of National Planning, for the School of Public Health of the University of Antioquia, and for the Harvard-Universidad del Valle Rural Health Program in Colombia. Dr. Ordóñez identified the worst public health problem in Colombia as malnutrition and described government efforts to alleviate its effects. He also discussed various population control measures.

March 12, 1974. "REVOLUTION IN A PLANTATION SYSTEM." Michael van Langenberg, a member of the faculty of the Department of Indonesian and Malaysian Studies at the University of Sydney, Australia. Professor van Langenberg described the collapse of the plantation agriculture of East Sumatra over the period 1945-50 as a consequence first of the Japanese occupation, and later of a chaotic combination of cross-cutting economic, ethnic, and political struggles.

March 21, 1974. "LATIN AMERICANIZING FOREIGN ASSISTANCE: A NEW APPROACH." William M. Dyal, Jr., President of the Inter-American Foundation. Mr. Dyal discussed the challenges and problems of supporting social change in Latin America and the Caribbean, especially as experienced by his Foundation, which is a newly created non-profit government corporation providing grants to private local organizations involved in social and civic development.

March 26, 1974. "COLOMBIAN AMAZON INDIANS." Pedro Cortes, a student in Rural Sociology at the University of Wisconsin-Madison. Mr. Cortes has recently returned from six months among the Indians of the Colombian Amazon. In his presentation he described the negative effects on their civilization caused by the extension of a capitalist economy into the regions they occupy. He urged regulation and control of this process as absolutely essential to the preservation of the Indian communities.

April 3, 1974. "CONTRAPUNTO DE LA REFORMA AGRARIA ("Counterpoint of the Agrarian Reform, Chile, 1973")," a showing of the Spanish version of the Land Tenure Center's new film on Chile which is described in Section E of this Report. The film was interrupted a number of times to enable Professors Marion Brown and David Stanfield to provide the audience with some background material to the scenes in the film.

April 10, 1974. "EARLY ECONOMIC POLICY OF THE ALLENDE GOVERNMENT." Professor John Strasma, Professor of Agricultural Economics and the Land Tenure Center, formerly director of the LTC office in Chile. Professor Strasma presented data on the income redistribution carried out by the Allende government and on the concomitant increase in demand. He also described changes in the pattern of government spending from Frei to Allende. Professor Strasma's talk was the basis for an article in LTC Newsletter No. 43.

April 11, 1974. "FURTHER THOUGHTS ON SOCIAL ANTHROPOLOGY AND DEVELOPMENT PLANNING: LAND TENURE IN ETHIOPIA." Dr. Allen Hoben, a member of both the Department of Anthropology and the African Studies Center at Boston University. Professor Hoben presented a brief review of traditional Amhara concepts and practices of land tenure within a social anthropological framework, then analyzed the implications of these concepts and practices for development in Ethiopia. He stressed the valuable role social anthropologists could play in development theory and practice.

April 15, 1974. "RURAL DEVELOPMENT IN ZAMBIA." Dr. Ann Seidman, Chairman of the Economics Department, University of Zambia, Lusaka. Dr. Seidman analyzed underdevelopment in Zambia as the result of inefficient internal economic organization. She stressed the fact that extension services and transportation routes fail to assist the majority of subsistence farmers, many of whom are isolated in the hinterlands. This neglect results in depopulation of rural areas, abandonment of land formerly used for agricultural purposes, increased use of resource-depleting agricultural practices because of labor shortages, and even a net flow of food from urban and suburban to the more remote rural areas.

April 23, 1974. "THE HUK MOVEMENT IN THE PHILIPPINES." Luis Taruc, the Philippines' most famous guerilla leader and social reformer, now serving

as an advisor to the government's land reform program. Mr. Taruc described the long struggle of the people of the Philippines to enjoy the privileges of participatory democracy, a struggle in which he has been of crucial importance. He dwelt on the generally repressive role the U.S. government has played in Philippine affairs since the days of McKinley, but expressed the hope that this might change in the future.

April 26, 1974. "SOME ASPECTS OF EL SALVADOR'S SOCIO-ECONOMIC DEVELOPMENT." Ing. Edgardo Suárez, President of the Salvadoran Central Reserve Bank, Governor for El Salvador of the International Monetary Fund, the Inter-American Development Bank, the World Bank, the Central American Monetary Council, and the Economic Affairs Committee of El Salvador. Mr. Suárez spoke in Spanish.

April 30, 1974. "DUALISTIC ECONOMIC GROWTH--JAPANESE AGRICULTURAL DEVELOPMENT." Professor Kazushi Ohkawa, of Hitotsubashi University in Tokyo, a scholar of international renown, and a major advisor to the Economic Planning Agency of the Japanese Government. Professor Ohkawa analyzed the changing ratios of output per worker and growth ratio of production per worker in the agricultural, manufacturing and service sectors of Japan between 1885 and 1965 to illustrate the fact that development in Japan has followed a unique path, bearing little resemblance to development in the Western world. He stressed the care which must be taken in interpreting the Japanese experience in relation to other countries of Southeast Asia since the Japanese growth path is largely a consequence of social structure.

May 2, 1974. "LAND TENURE AND AGRICULTURE IN JAPAN--DEVELOPMENT OF RICE FARMING." Dr. Motosuke Kaihara, chairman of Kyoto University's Department of Agricultural Economics and Forestry Economics. Professor Kaihara presented an outline of the charactersitics of rice farming in Japan, and of the enormous increase in the use of machinery in rice farming which has taken place since 1960 as the country has shifted more and more to part-time farming. He accompanied his lecture with a set of slides which showed aspects of the change in cultivation practices. This was the second seminar on Japan.

May 3, 1974. "THE STATE OF CHILEAN AGRICULTURE AND LAND REFORM IN 1972 AND 1973." Dr. Solon Barraclough, currently Professor of Agricultural Economics at Cornell University, has been associated with FAO since 1958 and has spent the last 15 of those years in Chile; from 1964 to 1973 he served as project manager of the Agrarian Reform Training Institute (ICIRA), jointly sponsored by the Chilean government and the UN. Dr. Barraclough described the progress made in land reform under Allende, stressing the very difficult political constraints under which the government was forced to work. He contended that production did not drop significantly during this period, but that more and more of it was marketed through unofficial channels. Dr. Barraclough's talk was the basis for an article in LTC Newsletter No. 43.

May 6, 1974. "RURAL DEVELOPMENT IN AREAS OF SHIGA PREFECTURE, JAPAN, WHERE DIFFERENT OPPORTUNITY STRUCTURES PREVAIL." Dr. David J. King, Visiting Assistant Professor of Agricultural Economics and the Land Tenure

Center. Dr. King described a research project he proposes to undertake in this area of Japan to explore the effects differing opportunity structures have on rural development. His proposal is based on the ideas that rural and agricultural development are discrete phenomena, and that the farm household rather than simply its head is the preferred unit of analysis. Materials related to this talk were the basis for articles in LTC Newsletter Nos. 43 and 44. This was the third in a series of seminars on Japanese agricultural development.

May 16, 1974. "AN ANALYSIS OF SOCIO-ECONOMIC STRUCTURE: THE COCOA REGION OF BAHIA, BRAZIL." Gervasio Castro, a candidate for the Ph.D. in Economics at the University of Wisconsin-Madison, and Economist, Ministry of Planning in the Brazilian government. Mr. Castro is attempting to relate current structures in a particular area of Brazil to the broader historical context of the country's development. He described the data with which he will work, which was gathered in a survey conducted by the Planning Ministry, and reviewed several standard theoretical approaches to development on which he hopes to improve.

SECTION D

LAND TENURE CENTER CONSULTING SERVICES

OFF-CAMPUS CONSULTING AND TECHNICAL ASSISTANCE

During the past year, the Land Tenure Center faculty continued to provide consulting assistance in a variety of ways. Members of the faculty responded to requests from U.S., international, and foreign agencies for technical assistance and training; prepared or reviewed project plans for such agencies; provided analysis and commentary on research or policy manuscripts submitted by international or other agencies; assisted various agencies in recruiting trained personnel; recommended specialists trained at the Land Tenure Center, or senior social scientists with whom the staff had close association, for jobs in universities and various national and international development agencies, or for short-term assignments with private consulting agencies; participated in student-staff seminars at other universities; and served as consulting members of national and international organizations and councils.

Listed below are specific consulting services provided by LTC faculty during the reporting year:

Professor Peter Dorner

Participated in scholarship selection for the Inter-American Foundation as a member of their Scholarship Selection Committee, in three meetings during the reporting year, in Washington, D.C., and Los Angeles, December 1973-February 1974.

Traveled to Manila on a consulting mission for the Agency for International Development, to evaluate the Philippine land reform and the supportive program of USAID/Philippines, and to make recommendations for future program directions, March-April 1974.

At the request of Instituto Nacional Agrario (INA) of Honduras and USAID/Honduras, traveled to Tegucigalpa with Professors Parsons, Thiesenhusen and Thome to continue technical assistance to the government of Honduras in the formation of its agrarian reform policies and to formulate the basis for a collaborative agreement between INA and the Land Tenure Center, May 1974. [For further discussion of this agreement, see Section B.]

Traveled to Guatemala City with Professors Thiesenhusen and Thome at the request of the National Planning Council of Guatemala to participate in their deliberations on agrarian matters. Met with Planning Commission concerned with the new Five Year Plan to discuss aspects relating to small farmers, May 1974.

Undertook a mission to Peru for the United Nations Development Programme Food and Agriculture Organization in order to evaluate the program of the Agrarian Reform Research and Training Institute (CENCIRA) and to

advise UNDP on future support of its program, June 1974.

Chaired the planning committee to organize a conference on cooperative and collective farming, to be cosponsored by the Agricultural Development Council and the Land Tenure Center. The purpose of the seminar is to bring together persons involved in and knowledgeable of cooperative-collective farming experiences in various regions and to provide an opportunity for discussing these experiences within a common analytical framework. In order to consolidate and systematize literature relevant to the conference, Professor Dorner also supervised the preparation of an annotated bibliography on group farming, throughout the 1973-74 reporting year. [For further discussion of this project, see Section B, pages 91-92.]

Advised in personnel selection twice for the United Nations Development Programme, twice for the World Bank, twice for the Agency for International Development, and three times for the Food and Agriculture Organization in Rome, throughout the 1973-74 reporting year.

Professor Herman Felstehausen

Traveled to Venezuela to aid the Fundacion para el Desarrollo de la Region Centro Occidental de Venezuela (FUDECO) in developing a land settlement and irrigation project in Barquisimeto, and in exploring ways to develop a cooperative program between FUDECO and the Ministry of Agriculture, April 1974.

In Colombia, finalized the agreement between the University of Los Andes and the Land Tenure Center for a joint research and training program, to include exchange of faculty, students and research publications, as well as joint research projects involving both institutions. [For a verbatim copy of this memorandum of agreement, see Section B.] In addition, Professor Felstehausen conferred with staff members of Centro Interamericano de Desarrollo Rural y Reforma Agraria (IICA-CIRA) in order to plan a more effective collaboration between their institution and the Land Tenure Center. New projects considered focused on environmental studies and cooperative small farm arrangements. He discussed problems of food production and rural health with a former minister of health in the National Planning Office, and spoke with staff members of the Ford Foundation about the development of the small farm sector, April 1974.

Consulted with members of the Upper Mississippi River Basin Commission in Minneapolis to delineate ways in which the U.S. government might develop more effective means to involve the public in large regional public works projects, May 1974.

Professor William Flinn

Returned to Bogotá, Colombia to check on the conclusion of work for a series of migration studies under AID contract, titled "Urban Development and Migration: A Study of Personal Characteristics and Earning Capacity of Migrants in Latin America." In addition, Professor Flinn met

with officials of Centro Interamericano de Desarrollo Rural y Reforma Agraria (IICA-CIRA) about continuing collaboration with the Land Tenure Center, and to confer with USAID/Colombia on the sectoral plan, September 1973. [For further discussion of this research, see Section B, page 68.]

Met with the chief of Urban Sector Analysis of the USAID/Colombia mission to discuss rural industrialization and medium sized cities, January 1974.

Traveled to Bogotá to do short term consulting with the Colombian Mission on migration data collected by the Ministry of Agriculture, June 1974.

Professor Robert Frykenberg

Evaluated the quality of programs and personnel, including research proposals and individual work, for the Office of Education, NDEA Title VI to Centers and Fellowship Programs, throughout the 1973-74 reporting year.

Served as a member of the Committee of consultants, for the Exchange of Scholars to India section of the Committee on International Exchange of Persons, responsible for bestowing senior Fulbright-Hayes Awards, both research and teaching. In this capacity, Professor Frykenberg considered one to two proposals per month, throughout the reporting year.

Made informal and formal evaluations on programs and personnel for the American Institute for Indian Studies, the Canada Council, the Universiti Malaya, and other institutions, throughout the 1973-74 reporting year.

Professor Duncan Harkin (See Section B, pages 90-91.)

Professor A. Eugene Havens

Consulted with the United Nations Research Institute for Social Development in Geneva concerning data on the "green revolution" and its consequence on employment and migration. These seminars used project data from the community of Támesis, Colombia, part of the rural migration project, and resulted in a report prepared by UNDP/UNRISD-Global Two, which Professor Havens later reviewed, December 1973.

Traveled to Colombia to evaluate the development program of Centro de Investigaciones Multidisciplinarias en Desarrollo (CIMDER), Universidad del Valle, Cali, May 1974. CIMDER is a research and action unit within the Division of Public Health, Department of Social Medicine, which develops public health delivery systems.

Professor Don Kanel

Represented the Land Tenure Center at a conference sponsored by USAID/TAB's Agricultural Economics and Sector Planning Division on "Agricultural Sector Analysis Work" in Chicago, November 1973.

Traveled to Mexico City to consult with the International Corn and Wheat Research Center (CIMMYT) and to participate in a conference on the

adoption of improved corn technology by small farmers. In addition, Professor Kanel conferred with Ph.D. in Development student Cassio Luiselli about his research on the possibilities for increased rural employment in Mexico, December 1973. Luiselli has since traveled to China on this project. [For further discussion of this research, see Section B, page 83.]

Traveled to Guatemala to confer with two graduate students in Agricultural Economics on their field research. With Leonel Gonzales he discussed potentials of non-traditional agricultural exports, and with Hector Morales, the cost-benefit analysis and location of additional sugar-refining mills in Guatemala. In addition, Professor Kanel went to El Salvador to confer with Ph.D. in Development student Donald Jackson about his work on production cooperatives, December 1973. [For further discussion of this research, see Section B, page 45.]

Attended a meeting in Madison sponsored by the Agricultural Development Council, on U.S. training in economics and agricultural economics for students from less developed countries, March 1974.

Served on the planning committee to organize a conference on cooperative and collective farming, to be cosponsored by the Agricultural Development Council and the Land Tenure Center, throughout the 1973-74 reporting year. [For further discussion of this project, see Section B, pages 91-92.]

Professor David King

Participated with Professor Kenneth Parsons in a consultation between Dr. Motsuke Kaihara, Visiting Professor at UW-Madison from Kyoto University in Japan, and faculty and staff of UW-Platteville. The presentation included a slide lecture and panel discussion on "Land Reform, Japanese Farming, and Japanese Agricultural Development," April 1974. [For further discussion of the LTC-Kyoto agreement, see Section B.]

Offered an alternative definition of rural development for consideration at meetings of the Special Steering Committee for Rural Development and Agricultural Development of the Society for International Development, Washington, D.C., May 1974.

Professor Kenneth Parsons

Traveled to Kyoto, Japan to discuss the joint research program between the Land Tenure Center and Kyoto University, with particular attention to Dr. Motsuke Kaihara's program as Visiting Professor at the University of Wisconsin-Madison, March-June 1974. Professor Parsons also conferred with staff of the National Commission for Agricultural Policy in Tokyo about the role of part-time farming in the current and prospective development of rural Japan, and with staff of the American Embassy in Tokyo regarding recent and prospective agricultural export to Japan, January 1974 [For further discussion of the LTC-Kyoto agreement, see Section B.]

Participated with Professor David King in a consultation between Dr. Motsuke Kaihara, Visiting Professor at UW-Madison from Kyoto University

in Japan, and faculty and staff of UW-Platteville. The presentation included a slide lecture and panel discussion on "Land Reform, Japanese Farming, and Japanese Agricultural Development," April 1974.

At the request of Instituto Nacional Agrario (INA) of Honduras and USAID/Honduras, traveled to Tegucigalpa with Professors Dorner, Thiesenhusen and Thome to continue technical assistance to the government of Honduras in the formation of its agrarian reform policies and to formulate the basis for a collaborative agreement between INA and the Land Tenure Center and USAID/Honduras. Professor Parsons stayed several additional days to make preparations for his 14-month assignment there under the contract, May 1974. [For further discussion of the agreement, see Section B.]

At the request of Michigan State University, traveled to Ethiopia in order to work with the director of the Institute of Development Research at Haile Sellassie I University and his staff on the design of a five-year research program in the Ada District of Ethiopia, particularly with regard to land tenure problems, June 1974.

Professor Raymond Penn

Traveled to Jamaica at the request of OAS as part of a five-man consulting mission, to evaluate nine on-going development projects and to recommend for financing to the International Bank for Reconstruction and Development (IBRD) and other agencies projects which would lead to fuller employment, June-July 1973.

Traveled to Barquisimeto, Venezuela to confer with staff of Fundación para el Desarrollo de la Región Centro Occidental de Venezuela (FUDECO) concerning their agreement with the Land Tenure Center, July 1973. [For further discussion of this agreement, see Section B.]

Participated in seminars on world food distribution as it relates to agricultural development, with the Canadian Wheat Board both in Winnipeg, Canada and in Madison, October 1973 and April 1974.

Traveled to Kuwait to consult with his former graduate student, Ali Ahmed Attiga, head of the Organization of Arab Petroleum Exporting Countries (OAPEC), in the Secretary General's Office, concerning the management of natural resources as it relates to energy and the fertilizer problem, April-May 1974.

Consulted with the former Minister of Planning in Egypt, on the possibility of establishing an Agrarian Institute, May 1974.

Professor David Stanfield

Initiated a project proposal for the Agency for International Development, an evaluation of agrarian reform and other cooperatives in Chile, using farm data generated over the past ten years, February 1974.

Initiated a project proposal for USAID/Chile for the purpose of maintaining research services of the Land Tenure Center in Santiago from

April through June, February 1974.

Traveled to Santiago, Chile to consult with the AID Mission Director concerning cooperatives and how they might be helped to function better, as well as programs which could be developed by AID to finance cooperative investments. In addition Professor Stanfield conferred with Ph.D. in Development student Jaime Crispi about his dissertation research on the rate of outflow of capital from agriculture in Chile, 1965-1970, February-March 1974.

Aided the Center for Rural Development and Cooperatives in Santiago, Chile in developing a project proposal to be submitted to the Inter-American Foundation. The proposal was designed to evaluate policy alternatives for the construction of cooperatives to achieve a variety of social goals, May 1974.

Initiated a project proposal for the International Bank for Reconstruction and Development (IBRD), an exploration of factors influencing increases in production and employment of the reform sector of Chilean agriculture, May 1974.

Professor John Strasma

Gave a series of seminars throughout Central America, for staff of the Central Bank and Planning Agency of El Salvador. Professor Strasma spoke to business managers, university professors and students in El Salvador, Guatemala, Nicaragua, Costa Rica and Panama as part of the Central American Cooperative Lectureship Program sponsored by the U.S. Information Agency. He conducted this series of seminars in close consultation with the AID Mission and/or Economics Officer of the Embassy for each country, April 1974.

Traveled to Honduras twice to consult with government officials in the Institute of Agrarian Reform about financial planning aspects of agrarian reform legislation, April-May 1974 and May-June 1974.

Traveled to Venezuela, Uruguay and Chile to give a series of lectures for university professors and students of Chile dealing with "Recent Trends in Agricultural Trade in Relation to National Development and Rural Income Distribution" for staff of the Agricultural Ministry and Central Bank of Venezuela and Uruguay, June 1974.

Gave assistance in personnel selection to the World Bank, the United Nations Development Programme, the Inter-American Development Bank, and the Inter-American Foundation, throughout the 1973-74 reporting year.

Reviewed project plans of field work in South America for scholars at several major universities, throughout the 1973-74 reporting year.

Professor William Thiesenhusen

At the request of U.S. Ambassador to India Daniel Moynihan, spent six weeks in Asia lecturing on the effects of income distribution and increasing unemployment on development and the social consequences of technological change in agriculture. In the course of his tour, Professor Thiesenhusen lectured at universities, government agencies and cultural centers in Lahore, Pakistan; Delhi, Hyderabad, Madras, Calcutta and Patna in India; Dacca, Bangladesh; Chiang Mai and Bangkok in Thailand; Jakarta and Bogor, Indonesia; and Manila in the Philippines. En route, he discussed possible future cooperation with staff members of USAID/Bangladesh, USAID/Thailand, and other national agencies and institutes. In the Philippines, Professor Thiesenhusen met with Duncan Harkin, UW Professor of Agricultural Economics presently working under an LTC contract with USAID/Philippines, to do research on agrarian reform programs being carried out by the Philippine government. He also met with Dr. Thomas Flores, Director of the new Agrarian Reform Institue at Los Baños, and staff members concerning future research of the Center, and observed the agrarian reform process in Canatuban City in Nueva Ejicia Province, February-March 1974.

At the request of Instituto Nacional Agrario (INA) of Honduras and USAID/Honduras, traveled to Tegucigalpa with Professors Dorner, Parsons and Thome to continue technical assistance to the government of Honduras in the formation of its agrarian reform policies and to formulate the basis for a collaborative agreement between INA and the Land Tenure Center, May 1974. [For further discussion of this agreement, see Section B.]

Traveled to Guatemala City with Professors Dorner and Thome at the request of the National Planning Council of Guatemala to participate in their deliberations on agrarian matters. Met with Planning Commission concerned with the new Five Year Plan to discuss aspects relating to small farmers, May 1974.

Served on the planning committee to organize a conference on cooperative and collective farming, to be cosponsored by the Agricultural Development Council and the Land Tenure Center, throughout the 1973-74 reporting year. [For further discussion of this project, see Section B, pages 91-92.]

Professor Joseph Thome

At the request of Instituto Nacional Agrario (INA) of Honduras and USAID/Honduras, traveled to Tegucigalpa with Professors Dorner, Parsons and Thiesenhusen to continue technical assistance to the government of Honduras in the formation of its agrarian reform policies and to formulate the basis for a collaborative agreement between INA and the Land Tenure Center, May 1974. [For further discussion of this agreement, see Section B.]

Traveled to Guatemala City with Professors Dorner and Thiesenhusen at the request of the National Planning Council of Guatemala to participate in their deliberations on agrarian matters. Met with Planning Commission concerned with the new Five Year Plan to discuss aspects relating to small

farmers, May 1974. Returned to consult with government officials in the Institute of Agrarian Reform about legal aspects of agrarian reform legislation, June 1974.

Professor Eugene Wilkening

Reviewed international and domestic programs of the Rural Sociology Research and Teaching Extension, Cornell University, as part of a team sponsored by the Cooperative States Research Service (CSRS) of the U.S. Department of Agriculture, May 1974.

Reviewed a manuscript on regional differences for the State Planning Department, Madison, Wisconsin, titled Where People Want to Live in Wisconsin, June 1974.

MAJOR SPEECHES AND STAFF PARTICIPATION IN NATIONAL AND INTERNATIONAL MEETINGS AND CONFERENCES

Land Tenure Center faculty has participated in a number of national and international meetings and conferences and has spoken to many groups interested in the area of land tenure and reform. Some examples of the past year follow:

Professor Marion Brown, participated in meetings on group farming at the International Congress of Anthropological and Ethnological Sciences, Chicago, Illinois (September 1974).

Professor Marion Brown, attended a conference with staff members of the Kennedy Committee on Refugees, Washington, D.C. (December 1973).

Professor Marion Brown, attended a conference sponsored by the Social Science Research Council, entitled "The Social Sciences under Military Government: The Chile Case," New York (January 1974).

Professor Marion Brown, observed at a bipartisan Congressional Conference entitled "Chile, Implications for United States Foreign Policy," Washington, D.C. (February 1974).

Professor Marion Brown, gave a series of lectures or talks on Chile variously titled "Chile under Allende" or "The Rise and Decline of the Popular Unity Government in Chile, 1965-73" to members of the Latin American Students' Association, Presbyterian Student Center, Old Madison Club, Sociology of Economic Change Students' Association, National Committee for Non-Intervention in Chile, Community Action on Latin America, and to the WIBA Seminar Series, WHA Roundtable and WHA Outreach, Madison (September 1973-March 1974).

Professor Peter Dorner, attended the Seminar on Rural Public Works Programs, Research and Training Network, Agricultural Development Council, New York (July 1973).

Professor Peter Dorner, "Institutions as Aids to Development," paper presented to the International Conference of Agricultural Economists, Sao Paulo, Brazil (August 1973).

Professor Peter Dorner, participated in the Conference on Credit Programs for Small Farmers sponsored by the Agency for International Development, Washington, D.C. (August 1973).

Professor Peter Dorner, attended the Seminar on Land Reform Research, Research and Training Network, Agricultural Development Council, Chicago (December 1973).

Professor Peter Dorner, participated in the Seminar on Small Farmer Programs sponsored by the World Bank, Washington, D.C. (January 1974).

Professor Herman Felstehausen, "Metodologia para el estudio de cambios institutionales," paper presented to the Latin American Association for Rural Development, Chapingo, Mexico (September 1973).

Professor Herman Felstehausen, attended the First Midwest Land Conference, Cedar Rapids, Iowa (November 1973).

Professor Herman Felstehausen, participated in a seminar to review organization of land and water use districts with staff of Fundacion para el Desarrollo de la Region Centro Occidental de Venezuela (FUDECO), Barquisimeto, Venezuela (May 1974).

Professor Herman Felstehausen, "Small Farm Agricultural Development in Mexico and Colombia," lecture given to several classes in the Madison public schools, Madison (November 1973, January and May, 1974).

Professor William Flinn, participated in a panel discussion on world land tenure problems and the work of the Land Tenure Center for UW Roundtable on WHA radio, Madison (July 1973).

Professor William Flinn, "Renovation of a Squatter Settlement in Bogotá, Colombia," paper presented at the Annual Meetings of the Rural Sociological Society, Center of Adult Education, University of Maryland, College Park, Maryland (August 1973).

Professor William Flinn, "Barrio Residents' Perception of Change and Political Response," paper presented to the Annual Meeting of the Southwest Sociological Association, Dallas, Texas (March 1974).

Professor William Flinn, "The Persistence of Agrarian Values in Urban Society: The Wisconsin Case," paper presented at the Midwest Sociological Meetings, Omaha, Nebraska (April 1974).

Professor William Flinn, "The Influences of Community Structure on Migration Rates and Flow," paper to be presented at the Rural Sociological Society Meetings, Montreal, Canada (August 1974).

Professor Robert Frykenberg, "The Silent Settlement in South India: 1793-1853: An Analysis of the Role of Inams in the Rise of the Indian Imperial System," paper presented to the International Congress of Orientalists, Paris, France (July 1973).

Professor Robert Frykenberg, "Failures of Political Leadership in India: 1880-1947," paper presented to the International Conference on Leadership in South Asia, School of Oriental and

African Studies, University of London, England (March 1974).

Professor Robert Frykenberg, "Criteria for Judging Failures within the Context of India's Social and Political Integration," speech given at the School of African and Asian Studies, Sussex University, England (March 1974).

Professor Robert Frykenberg, "The Impact of the Social Forces in South India during the Period of Wellesley," paper presented at the conference "India: Society in Transition, 1795-1808," School of Oriental and African Studies, University of London, England (June 1974).

Professor A. Eugene Havens, "Methodological Postures in the Social Sciences," seminar given at Texas A & M University, College Station (October 1973).

Professor A. Eugene Havens, "Barrio Residents' Perception of Change and Political Response," paper presented to the Annual Meeting of the Southwest Sociological Association, Dallas, Texas (March 1974).

Professor A. Eugene Havens, "Agrarian Reform during the National Front in Colombia," seminar given at the Center for Inter-American Relations, New York (April 1974).

Professor A. Eugene Havens, "The Decomposition of the Peasant Class in Colombia," paper to be presented to the Rural Sociological Society Meetings in Montreal, Canada (August 1974).

Professor Don Kanel, attended a conference on "Agricultural Sector Analysis Work" sponsored by the Agricultural Economics and Sector Planning Division of USAID/TAB, Chicago (November 1973).

Professor Don Kanel, participated in a conference sponsored by the International Corn and Wheat Research Center on the adoption of improved corn technology by small farmers, Mexico City (December 1973).

Professor Don Kanel, participated in the Agricultural Development Council's Review of U.S. Training and Related Research Activities in the Field of the Economics of Agriculture in Developing Areas, Madison (March 1974).

Professor Don Kanel, attended a symposium on "The Interrelations of Culture, Technology and Development in Latin America" sponsored by the Organization of American States and the University of Nebraska, Lincoln (April 1974).

Professor Kemal Karpat, "The Question of Gagavuzes' Origin," paper presented at the First International Conference on Turcology, Istanbul, Turkey (October 1973).

Professor Kemal Karpat, "Economic and Social Transition of Istanbul in the Nineteenth Century," paper presented to the South East European Studies Association, Istanbul, Turkey (October 1973).

Professor Kemal Karpat, "A New Source Regarding the Origin of Young Turks," paper presented at the International Altaistic Conference, Ankara, Turkey (October 1973).

Professor Kemal Karpat, "The Teaching of Ottoman History in the United States," paper presented to the Middle East Studies Association of North America Annual Meeting, Milwaukee, Wisconsin (November 1973).

Professor Kemal Karpat, "The Multi-Party Era in the Turkish Republican Regime," paper presented at the Conference on Turkish Development, Chicago, Illinois (November 1973).

Professor Kemal Karpat, "U.S. Policy in the Middle East," speech given to the Business Women of Madison, Wisconsin (March 1974).

Professor Kemal Karpat, "Migration in the Nineteenth Century Ottoman Empire," paper presented at the Conference on Economic History: Historical Demography, Princeton, New Jersey (April 1974).

Professor Kemal Karpat, "Political Developments in Turkey," lecture given at the University of North Carolina, Chapel Hill (April 1974).

Professor David King, participated in a panel discussion on world land tenure problems and the work of the Land Tenure Center for UW Roundtable on WHA radio, Madison (July 1973).

Professor David King, "Rural Development: A Proposed New Definition," paper presented at MUCIA Conferences on "The Role of Extension Services in Assisting Small Farmers Increase Production Throughout the World," Madison (November 1973 and May 1974).

Professor David King, series of talks concerning a proposed research project, "The Study of Rural Development in Areas of Shiga Prefecture, Japan, Where Different Opportunity Structures Prevail," with faculty at the University of Tokyo, University of Kyoto and Shiga Agricultural College at Kusatsu, the Prefecture Department of Agriculture at Otsu, Municipal Government offices in eight municipalities of Shiga Prefecture, the Japanese Chamber of Agriculture in Tokyo, the Japanese Planning Commission in Tokyo, and the Agricultural Attache's Office staff in the U.S. Embassy, Tokyo, Japan (March 1974).

Professor David King, participated in a panel discussion on land reform, Japanese farming and Japanese agricultural development at the University of Wisconsin-Platteville (April 1974)

Professor David King, "Rural Development: A Proposed New Definition," paper presented at the Society for International Development Conference, Special Steering Committee for the New Section on Rural Development and Agricultural Development, Washington, D.C. (May 1974).

Professor David King, "Japan Looks at Land Tenure and Agricultural Problems in Southeast Asia," panel discussion on "Our Campus, The World," WHA radio, Madison (June 1974).

Professor David King, "The Place of Agriculture in Economic Development," lecture taped by the African Studies Program for loan to teachers in school and college classrooms, Madison (June 1974).

Professor Kenneth Parsons, participated in a panel discussion on world land tenure problems and the work of the Land Tenure Center for UW Roundtable on WHA radio, Madison (July 1973).

Professor Kenneth Parsons, "Land Reform in Relation to Industrial Development," Institute of Land Economics Seminar, Taipei, Taiwan (December 1973).

Professor Kenneth Parsons, participated in a panel discussion on land reform, Japanese farming and Japanese agricultural development at the University of Wisconsin-Platteville (April 1974).

Professor Kenneth Parsons, "Frontier Issues in Agrarian Development," Michigan State Student-Faculty Seminar, East Lansing (April 1974).

Professor Kenneth Parsons, "Japan Looks at Land Tenure and Agricultural Problems in Southeast Asia," panel discussion on "Our Campus, The World," WHA radio, Madison (June 1974).

Professor Raymond Penn, participated in seminars on world food distribution as it relates to agricultural development, with the Canadian Wheat Board, Winnipeg, Canada (October 1973) and Madison (April 1974).

Professor Raymond Penn, participated in a series of biweekly seminars in the development of a Land and Water Resource Workshop, Madison (February-April 1974).

Professor Raymond Penn, conducted a seminar on "Natural Resource Management as it Relates to Energy" for staff and students of South Dakota State University, Brookings (May 1974).

Professor Raymond Penn, conducted a seminar on "Natural Resources" for staff of Colorado University, Fort Collins (June 1974).

Professor Raymond Penn, participated in a series of weekly seminars for the World Climate Food Project, Madison (throughout the 1973-74 reporting year).

Professor Robert Seidman, "Legal Education in Zambia," presentation given to the Law Students' Association, University of Zambia (May 1974).

Professor Robert Seidman, "Law and Development," series of seminars given at the Lawyers' Association of Zambia, and the Provincial Governments of the Northern, Western and Copperbelt Provinces of Zambia (March-June 1974).

Professor David Stanfield, gave a series of four lectures on "The Coup in Chile" and "Agrarian Reform in Chile" to social studies students at West High School, Madison (January 1974).

Professor David Stanfield, "The Coup Experience," lecture given to UW-Madison Journalism class on reporting, Madison (January 1974).

Professor John Strasma, "Recent Developments in Chile," speech given to church organizations throughout Wisconsin and Illinois (September 1973-March 1974).

Professor John Strasma, "Chile: Allende and After," lecture given at Vanderbilt University, Nashville, Tennessee, and the University of Minnesota, Minneapolis (November 1973 and January 1974).

Professor John Strasma, participated in a bipartisan Congressional Conference entitled "Chile, Implications for United States Foreign Policy," Washington, D.C. (February 1974).

Professor John Strasma, presented data on Chilean Agriculture in relation to recent economic and political developments, to meetings of the Midwest Economic Association, Chicago (March 1974)

Professor John Strasma, "Multi-National Corporations and Developing Countries," talk given to staff of the Central Bank and Planning Agency of El Salvador, to business managers, university professors and students in El Salvador, Guatemala, Nicaragua, Costa Rica and Panama as part of the Central American Cooperative Lectureship Program sponsored by the U.S. Information Agency (April 1974).

Professor John Strasma, "Recent Trends in Agricultural Trade in Relation to National Development and Rural Income Distribution," talk given to staff of the Agricultural Ministry and Central Bank of Venezuela and Uruguay (June 1974).

Professor John Strasma, "Multi-National Corporations and Developing Countries," talk given to university professors and students of Chile (June 1974).

Professor William Thiesenhusen, participated in a panel discussion on world land tenure problems and the work of the Land Tenure Center for UW Roundtable on WHA radio, Madison (July 1973).

Professor William Thiesenhusen, spoke on agrarian reform to Keys for Agricultural Development, a two-week seminar held at the University of Wisconsin, Madison (August 1973).

Professor William Thiesenhusen, participated in a roundtable discussion on agricultural policies and rural development at the Princeton-Brookings Workshop on Income Distribution in Developing Countries, Princeton University, New Jersey (October 1973).

Professor William Thiesenhusen, "Population Growth and Agricultural Development," paper presented at the Southeast Asia Development Advisory Group of the Asia Society (SEADAG) Conference on "The Role of Population Planning in General Economic Planning," San Francisco, California (November 1973).

Professor William Thiesenhusen, "Several Roles of Agriculture in Rural Development," paper presented at the U.S. Department of Labor Fall Executive Seminar on Maximizing Employment, Washington, D.C. (November 1973).

Professor William Thiesenhusen, attended the Seminar on Land Reform Research, Research and Training Network, Agricultural Development Council, Chicago (December 1973).

Professor William Thiesenhusen, "New Technology in Agriculture: Blessing or Curse," lecture delivered in various Indian cities at the request of the U.S. Ambassador to India (February 1974); also given in Lahore, Dacca, Bangkok, Jakarta and Bogor (February-March 1974).

Professor William Thiesenhusen, "The Economics of Uselessness," lecture delivered in various Indian cities at the request of the U.S. Ambassador to India (February 1974); also given in Jakarta (March 1974).

Professor William Thiesenhusen, "Development and Equality: Partners or Rivals," lecture delivered in various Indian cities at the request of the U.S. Ambassador to India (February 1974); also given in Chiang Mai, Bangkok, and Manila (February-March 1974).

Professor Joseph Thome, "Chile: The Coup and Its Aftermath," lecture given to the Law School, University of Wisconsin, Madison (April 1974).

Professor Joseph Thome, attended the Interamerican Symposium on Agrarian Law, sponsored by IICA in Lima, Peru (June 1974).

Professor Eugene Wilkening, attended the Conference on Social Well-Being and Quality of Life Related to Water Resource Projects, Logan, Utah (July 1973).

Professor Eugene Wilkening, chaired the Task Force on Natural Resources and the Rural Environment for the Rural Sociological Society Meetings, University Park, Maryland (August 1973).

OFF-CAMPUS VISITORS TO THE LAND TENURE CENTER

During the reporting year, visitors from approximately forty countries came to the Center to obtain publications, to use the Land Tenure Center Library, and to consult with its faculty. Guests of the Land Tenure Center included administrators and scholars from foreign and U.S. universities, government officials, technicians, and students. The Land Tenure Center often served as a base for these visitors and sought to arrange other contacts for them with University of Wisconsin personnel working in their areas of interest. In addition, an effort was made to bring them into contact with Land Tenure Center students, and many visitors were invited to participate in the Center's seminar program.

Several visitors to the Center last year were high government or university officials from foreign countries who came to consult on land reform programs currently being developed in their own countries and to discuss cooperative agreements between the Center and their respective institutions. Also, high officials of the U.S. government and private foundations visited the Land Tenure Center in order to seek advice and to exchange ideas with Center faculty on foreign aid programs and problem areas.

In August John Hummon, Deputy Director, USAID/Philippines, and Keith Sherper of the AID Office of Development Administration visited the Center for discussions on the Philippines. Issues discussed during round table and individual meetings included the legal aspects of reform, land registry, different forms of tenure, resettlement and land consolidation problems.

In January Vice Rector Fernando Cepeda of the University of los Andes, Bogotá, Colombia, spent several days in Madison to discuss the basis for an agreement between his institution and the Center, which would include joint research, teaching, and training programs and an exchange of students, faculty, and research publications. This agreement has since been signed by all parties, and plans are underway to start the exchange program in the near future. [A copy of this memorandum of agreement can be found in Section B, pages 87-88.]

Licenciado J. Mario Ponce C., Director of the National Agrarian Institute in Honduras, came to Madison in March for intensive discussions on the technical assistance agreement to be signed between the Land Tenure Center and USAID/Honduras. Consultations involving Center faculty and graduate students were designed to determine possible alternative methods of implementing the Honduran agrarian reform decree and to work out all details of the contract of agreement. [For further discussion of this contract, see Section B, page 89.]

March 19-22, William Dyal, Jr., President of the Inter-American Foundation, was in Madison under the auspices of Ibero-American Studies, the Center for Development, and the Land Tenure Center to participate in a series of seminars and individual conferences. Discussion centered on the challenges and problems of supporting social change in Latin America

and the Caribbean, and the new approach needed in foreign assistance programs to respond to these dynamic changes in a more meaningful manner.

The Land Tenure Center benefits greatly from the exchange of ideas and experiences generated by contact with scholars and officials who come to the Center. Visiting experts share their knowledge with faculty and students here, thus increasing LTC competence in many fields.

Included among those who came to the Center this past year were:

H. Darin-Darabkin, visiting at the Academy for Contemporary Problems in Columbus, Ohio, and Director, International Research Center on Rural Cooperative Communities (CIRCOM), Israel. Came to discuss CIRCOM programs and possibilities for further cooperation with the Land Tenure Center.

Gerhard Tschannerl, Deputy Director, Tanzanian Bureau of Resource and Land Use Planning, Dar-Es-Salaam, Tanzania. Met with LTC faculty to discuss land problems in Tanzania and gave a seminar on land use planning in Tanzania.

Orlando J. Sacay, Undersecretary, Department of Local Government and Community Development, Quezon City, Philippines. Came to the Center to discuss community problems in the Philippines. Mr. Sacay is in charge of the cooperatives to which all beneficiaries of land reform are required to belong.

Betty Dávila and Consuelo Morillo of Fundación CIARA, Caracas, Venezuela. Met with Professors Felstehausen, Flinn and Havens and with student participants in the Colombia Rural Modernization Project to discuss aspects of rural sociology. They will be in charge of a nation-wide socio-psychological study in Venezuela to determine values and attitudes of the campesino.

Rodrigo Mujica A., Professor of Agricultural Economics, Catholic University, Santiago, Chile. Met with Professors Dorner, Strasma and Thiesenhusen and students to discuss income redistribution, the Latin American research network, minifundio projects, and agrarian reform.

John Hummon, Deputy Director, USAID/Philippines. Came to the Center for a briefing on land tenure problems in the Philippines, before taking up his post there. Was accompanied by Keith W. Sherper, AID Office of Development Administration, Bureau for Technical Assistance, Washington, D.C. (now at USAID/Philippines). Met with LTC faculty, including Professors Dorner, Harkin and Thiesenhusen, and with students.

Leonardo Montemayor, National Secretary, Federation of Free Farmers, Quezon City, Philippines. Visited Madison to discuss problems of farmers in the Philippines with faculty of the Land Tenure Center and the Center for Cooperatives.

David Bathrick, Chief, Community Development Division, USAID/Bolivia. Met with Professor Thiesenhusen to discuss problems of the Bolivian small communities and also visited the Department of Agricultural and Extension

Education for information on community extension services.

Jesús Santa Iglesia, Assistant Professor, University of the Philippines at College, Laguna, Philippines, and former UW-Madison student in Agricultural Economics. Came to the Center to consult with LTC staff and find out about new research developments and possible exchange programs.

D. N. Srivastava, Assistant Director General, Indian Council of Agricultural Research, New Delhi, India. Visited the Land Tenure Center to speak with Professor Felstehausen and to discuss latest agricultural research projects.

Haileluel Getahun, General Manager, Ada Project, Addis Ababa, Ethiopia, and Clyde Adams, USAID Project Officer, Ethiopia. Came to Madison to discuss socio-economic development issues, land reform, and integrated rural development activities with LTC faculty. Ato Haileluel gave an LTC seminar on increasing small farmer productivity, especially with regard to "The Ada Minimum Package Project."

Wyn Owen, Director, Economics Institute, University of Colorado, Boulder, Colorado. Met with Professors Dorner, [illegible], Parsons, and Thiesenhusen to discuss details of the Center's program.

Hugo Tulio Melendez, Professor, Seminar on Agrarian Legislation at the National Autonomous University, and Editor, Mexico Agrario, Mexico City, Mexico. Visited Madison to propose a continuing seminar and exchange of faculty between his institution and the Land Tenure Center.

Mason Guffney, Director, British Columbia Institute for Economic Policy Analysis, University of Victoria, British Columbia, Canada. Visited the Center to consult with LTC faculty about organizing a conference on the size of farms and to obtain literature on farm size.

Jose Marques de Melo, Professor, University of Sao Paulo, Brazil. Consulted LTC faculty, staff, and library concerning activities and research on Brazilian communication and social change.

Francisco Sionil José, Editor, and Consultant, Department of Agrarian Reform, Quezon City, Philippines. Having previously assisted in setting up the Agrarian Reform Institute of the University of the Philippines, Mr. José came to Madison to gather material on agrarian reform research pertaining to his country and to inform himself about the Land Tenure Center. He presented an LTC seminar on "Land Reform in the Philippines."

José R. Chávez M. and Gustavo Hidalgo V., Economists, University of Carabobo, Valencia, Venezuela. Visited the Land Tenure Center to discuss with Professors Strasma and Thiesenhusen possible exchange programs between the two institutions, an exchange of publications, and the possibility of sending their own faculty to the Madison campus for graduate training.

Loren Fessler, American Universities Field Staff Associate,

headquartered in Hong Kong. Sponsored by International Studies and Programs, Mr. Fessler gave an LTC seminar on "Population, Agriculture, and the Economic Geography of China" and participated in several class discussions and special seminars on China.

James Yen, founder of the Rural Reconstruction Movement, and President of the International Institute of Rural Reconstruction (IIRR), with headquarters in the Philippines, and Mrs. Ping-sheng Chin, U.S. Resident Director for the IIRR. Mr. Yen gave an LTC seminar on "Rural Reconstruction in the Third World." In meetings with LTC and other faculty, he discussed the IIRR's progress and possible cooperation between the Land Tenure Center and his institute, including an exchange of publications and other materials.

Ellida Litavrina, Professor of Colonial Latin American History at the University of Moscow and the Academy of Sciences, U.S.S.R., on a U.S. cultural exchange program sponsored by the Conference on Latin American History. She gave a seminar sponsored by Ibero-American Studies "On Being a Latin American Specialist in the Soviet Union," and visited the Land Tenure Center to discuss problems of contemporary land tenure systems in Colombia with Professor Felstehausen and members of the Colombia Rural Modernization Project.

Lászlo E. Lukács, Senior Industrial Advisor for the United Nations Industrial Development Organization (UNIDO) at the Ministry of Planning and Economic Affairs, Monrovia, Liberia. Spent several days on campus to consult with faculty on questions of industrial development strategy in tropical Africa. Gave an LTC seminar at which he discussed topics such as industrial development strategy in relation to plantation agriculture, agricultural processing, and other agro-allied industries in tropical Africa. Met with Professors Havens, King, Felstehausen, Parsons and Dresang, and participated in several class discussions on development problems.

Pradeep Menhendiratha, Executive Officer of the American Institute of Indian Studies, New Delhi, India. Accompanied by UW History Professor Robert Frykenberg, met with Professor Thiesenhusen to discuss the problems of his institute and other organizations. They agreed to have further discussions on the subject during Professor Thiesenhusen's Asia trip in February-March.

Samuel Benchimol, Head, Department of Urban and Regional Housing Planning, Venezuelan Government Planning Office (CORDIPLAN), Caracas, Venezuela. During his visit to the U.S., sponsored by the State Department's International Visitor Program, Mr. Benchimol was intent on exchanging national-level experiences in planning and development, to include not only housing, transportation, and municipal services, but all aspects of urban and rural planning.

John Steele, USAID/Argentina. Visited the Center to consult with Professor Kanel on agricultural problems in Latin America, specifically Argentina.

Eric Shearer, private consultant in agricultural economics, Washington, D.C. Came to Madison to discuss the Center's contract with the International Bank for Reconstruction and Development (IBRD).

Solomon Eckstein, of the International Bank for Reconstruction and Development (IBRD), Washington, D.C. Visited the Land Tenure Center to review its progress on a contract to restudy agrarian reform in five Latin American countries. He had conversations with LTC faculty and consulted on the Bolivian report currently being compiled by graduate student Joseph Dorsey, who did on-site research in Bolivia earlier in the year. [For further discussion of this research, see Section B, page 2.]

Edward Fei, Regional Coordinator for Africa, Agency for International Development, and former UW-Madison Economics Professor. Came to Madison invited by the African Studies Program to lecture on "Africa's Sahelian Drought and the American Response." He met with LTC faculty to discuss problems in the Sahel, especially in relation to the recent catastrophic drought, and he gave an LTC seminar.

Lester Schmid, Program Chairman, Agriculture-Business Program, Southwest Minnesota State College, Marshall, Minnesota. Visited the Land Tenure Center to discuss development problems.

Dennis Zvinakis, Development Officer (Economics), Agency for International Development. Came to the Center to discuss community development issues with Professors Flinn and Thiesenhusen.

Fernando Cepeda, Vice Rector, University of los Andes, Bogotá, Colombia. Dr. Cepeda was invited to Madison by members of the Colombia Rural Modernization Project to speak on a study carried out in that country by the International Bank of Reconstruction and Development (IBRD).

Oscar Reyes, Director, School of Journalism, National University, Tegucigalpa, Honduras. Visited the Center and LTC library to acquaint himself with its operations and programs.

Ronald Watts, Journalist, United Kingdom, with twenty years agriculture-oriented experience in several African countries. Came to the Madison campus to hold an LTC seminar on "Small-Holding Development in Africa, with Special Reference to Uganda, Kenya, and Angola." Met with LTC faculty to exchange ideas on small land-holding patterns in Uganda and on the problems of making extension services available to small farmers.

Boguslaw Galeski, Professor in the Institute of Philosophy and Sociology of the Polish Academy of Sciences in Warsaw, Poland. Gave an LTC seminar on "Peasant-Workers (Part-Time Farmers) in Poland and Eastern Europe," and spent several days in discussion with Professor Thiesenhusen and other LTC faculty.

Michael J. Korin, Land Reform Advisor, USAID/Philippines. Visited Madison to acquaint himself with the Land Tenure Center and its operations, especially in connection with research now underway in Southeast Asia.

Malcolm Daes, Fellow and Tutor in Latin American History, St. Anthony's College, Oxford, England. Visited the Center briefly, in connection with a seminar sponsored by the Ibero-American and History Departments. In conversations with faculty, he mentioned how useful LTC publications have been in his research, and cited several bibliographies compiled by the LTC library.

Ullmon L. James, Director, North Africa and Africa Regional Affairs, Agency for International Development. In conversation with LTC faculty, Mr. James expressed interest in regional projects for Africa, and in exploring possible UW support for the training of African students in Africa, as well as faculty interest in teaching in Africa under such a program.

Donald C. Taylor, Agricultural Development Council at the Malaysian Agricultural University, Selangor, Malaysia. Visited the Land Tenure Center to explore the possibility of a joint ADC-UW teaching-research appointment, on a rotating basis, between Malaysia and the U.S.

Flavio Machicado S., Agricultural Officer, Food and Agriculture Organization of the United Nations, who in 1972-73 directed a detailed field work on food supply and consumption in Chile. Gave an LTC seminar on "Food Supply and Consumption by Social Strata in Chile, 1968-70 and under Allende." Mr. Machicado also exchanged views with LTC faculty and students on the Chilean situation in past years, especially in relation to agricultural credits and production.

José Luis Larraín, Director of Planning, Agricultural Development Agency (INDAP), Santiago, Chile, on a U.S. tour at the invitation of the State Department. Visited the Land Tenure Center to express interest in supporting the Center's research efforts, especially with problems in the minifundia area.

Jennie Lincoln, Research Assistant, Department of Political Science, Ohio State University, Columbus, Ohio. Spent a week in Madison researching a paper on political aspects of the Chilean and Peruvian agrarian reform for presentation at the Latin American seminar held in Princeton in Spring of 1974.

Otto Bammel, Agricultural Secretary, Embassy of the Federal Republic of Germany, Washington, D.C. Came to the Center to discuss issues relevant to European Community-U.S. trade relations and agricultural policies.

Antonio Ordóñez, Consultant, Department of National Planning, and Professor of the School of Public Health, Medellín, Colombia. Met with LTC and Medical School faculty to discuss Colombian public health programs and rural development, and gave an LTC seminar.

James O'Brien, Program Representative, Inter-American Foundation, Washington, D.C. Met with LTC faculty to discuss aspects of projects in Chile being considered for financing by the Foundation.

Michael van Langenberg, faculty member, Department of Indonesian and Malaysian Studies, University of Sydney, Australia. Gave an LTC seminar

on "Revolution in a Plantation System," which described the collapse of the plantation agriculture of East Sumatra over the period 1945-50.

William Dyal, Jr., President, Inter-American Foundation, Rosslyn, Virginia. Met with a large number of faculty and students to discuss the problems of "Latin-Americanizing" foreign assistance and gave an LTC seminar.

Mario Ponce C., Director, National Agrarian Institute, Tegucigalpa, Honduras. Came to Madison for meetings on a technical assistance agreement between the Land Tenure Center and Honduras.

Carlos Podestá, President, Paraguayan University Student Federation, Asunción, Paraguay. As a member of the Paraguayan Land Reform Agency, Mr. Podestá was especially interested in acquainting himself with studies and research carried out on land tenure and other questions of land redistribution and reform in Latin America. He discussed these issues with LTC faculty and students.

Bryant Kearl, of the Agricultural Development Council, Asia Office, Singapore. Visited the Madison campus briefly to discuss the Council's new projects in Asia.

Christopher Obiora Oranyeli, senior official of the Ministry of Agriculture and Natural Resources, Midwest State of Nigeria, Benin City, Nigeria. Visited the Land Tenure Center on a tour of the U.S. as an Eisenhower Fellow. He discussed with LTC faculty the overall agricultural problems of Nigeria, especially those related to institutional credits, needed innovations in the agricultural sector, and farm settlement problems.

Meir Merhan, of Israel, temporarily with the International Trade Center (UNCTAD), Geneva, Switzerland. Traveled through Madison and held discussions with LTC faculty on agrarian reform in Venezuela. He was especially interested in a cooperative land tenure project between the two institutions with LTC support.

Tatu Vanhanen, Assistant Professor, University of Tampere, Finland, in the U.S. on a Fulbright-Hayes Fellowship. Visited about a week in Madison to work at the LTC library, gathering data for a comparative study in which he relates farm size to the strength of political parties. He also met with LTC faculty and students to discuss relevant data on Latin America.

Allan Hoben, Professor, Boston University, Massachusetts. On a visit jointly sponsored by the Land Tenure Center and the African Studies Program, Professor Hoben gave an LTC seminar on social anthropology and development planning in connection with land tenure in Ethiopia. In conversations with faculty he expressed interest in the general organization of the Center, with a view to reorganizing Boston University's African Studies Center along similar lines.

Pablo Mauricio Alvergue, Chairman, Political Science Department, National University of El Salvador, San Salvador, on a tour of U.S.

universities sponsored by the State Department's International Visitor Program. Spent one day in Madison meeting with faculty from the Land Tenure Center, Political Science Department, and Ibero-American Studies to discuss development problems. His trip to Madison was arranged by the Center for Latin America on the UW-Milwaukee campus, which he visited for several days.

Ann Seidman, Chairman, Department of Economics, University of Zambia, Lusaka. On a brief visit to Madison, Professor Seidman gave an LTC seminar on "Rural Development in Zambia."

A. R. Stevenson, Agricultural Development Council, New York. Interviewed ADC fellows and faculty advisors on the Madison campus.

Luis Taruc, consultant to the Department of Agrarian Reform, Philippines. A co-founder of the Socialist Party of the Philippines and leader of the Hukbalahap Movement during World War II, Mr. Taruc gave an LTC seminar on historical aspects of the Huk movement in his country and met with students and faculty to discuss the progress of the Philippine agrarian reform program.

Edgardo Suárez, President, Central Reserve Bank, San Salvador, visiting the U.S. on a tour sponsored by the State Department's International Visitor Program. Participated in roundtable discussions with LTC students and faculty on problems of economic development, such as population, multinational corporations, transfer of technology, international monetary reform, and foreign investment, and gave an LTC seminar on "Some Aspects of El Salvador's Socio-Economic Development."

Kazushi Ohkawa, Professor, Hitotsubashi University, Tokyo, Japan, presently a Visiting Professor at Yale University's Economic Growth Center. Professor Ohkawa came to the Madison campus jointly sponsored by the East Asian Studies Program and the Land Tenure Center. He gave an LTC seminar on dualistic economic growth within Japanese agricultural development and held informal discussions with faculty and students.

Ace Partadiredja, Professor, Faculty of Economics, University of Gadjah Mada, Jakarta, Indonesia, and former UW-Madison student in Agricultural Economics. Spent four weeks in Madison on an Eisenhower Fellowship. During his stay, he met with LTC faculty and carried out research on land tenure.

Solon Barraclough, Professor, Agricultural Economics, Cornell University. Associated with the United Nations Food and Agriculture Organization for the past fifteen years, Professor Barraclough spent most of that time in Chile. During his visit to UW-Madison, sponsored by the Ibero-American Studies Program and the Land Tenure Center, he gave an LTC seminar on "The State of Chilean Agriculture and Land Reform in 1972 and 1973," and discussed current issues related to land and production in Chile with LTC students and faculty.

Robert A. White, of the Institute of Socio-Economic Research, Tegucigalpa, Honduras. Came to Madison to discuss ideas on research

methodology for a joint program evaluating Honduras' agricultural development program.

Gervasio Castro de Rezende, Economist, Ministry of Planning in the Brazilian government, and candidate for the Ph.D. in Economics at UW-Madison. Came to Madison to confer with his faculty advisors and gave an LTC seminar on the socio-economic structure of the cocoa region of Bahia, Brazil.

Don Carter, International Extension Specialist, Extension Service, U.S. Department of Agriculture, Washington, D.C. Conferred with Professor Thiesenhusen to learn about the Center and its program.

R. G. Spitze, Professor of Agricultural Economics of the University of Illinois, Urbana. Met with Professor Kanel to confer on research plans and progress.

Eliot O. Waples, Chairman, Department of Real Estate and Finance, Colorado State University, Fort Collins. Met with Professor Kanel to discuss plans for future research.

A. M. Weisblat, Director, Research and Training Network at the Agricultural Development Council, New York. Held discussions with Professors Dorner, Kanel and Thiesenhusen about the conference on group farming to be held June 1975 and for which an annotated bibliography is being prepared. [For further discussion of this project, see Section B, pages 91-92.]

The following figures represent a breakdown into categories of those individuals whose visit to the Land Tenure Center was recorded for the 1973-74 reporting year:

U.S. Government Agencies	13
U.S. Universities	36
Foreign Government Officials	17
Foreign Universities	30
International & Foreign Non-Government Agencies	12
Foundations & Other Private Agencies	10
Miscellaneous	4

SECTION E

LAND TENURE CENTER SERVICES

LAND TENURE CENTER LIBRARY

In March 1974, the Library staff conducted a thorough inventory of library holdings for insurance purposes. The table shows the total number of titles and volumes, subdivided by format.

Format	Titles	Volumes
Books	8,625	10,300
Files	13,875	17,000
Journals		9,200
Current	410	
Discontinued	150	
Journal articles indexed	6,000	
Maps	150	150
Microforms	200	380
Reference	1,325	3,150
Totals	30,735	40,180

Acquisitions

Acquisition resources have been concentrated on areas that the University of Wisconsin Memorial Library has not covered adequately. Titles are duplicated only when the material is particularly relevant to the research focus of the LTC. Due to this policy, acquisitions during the past year totaled approximately 8,500 items, slightly higher than last year.

The percentages of new acquisitions are weighted heavily toward Latin America due to the large influx of donations and gifts received by the Library during the year. Professor Henry Sterling, upon his retirement from the UW Geography Department, donated over 500 nonduplicate items to the Library. The great majority of these items deal with land tenure and colonization in Latin America.

The Library also received nearly 200 Chilean items from the LTC office in Santiago. Additional Latin American items were received via Professor Dale W. Adams from the Ohio State University Capital Formation

Project, and from Lourdes Felice, a Venezuelan student at UW-Madison.

Thus, nearly 1,000 books, periodicals and file items dealing with Latin America were received unordered and free of charge and have skewed the acquisition percentages in favor of Latin America to a great degree. Elimination of the donations would change the percentages for new acquisitions as shown by the table.

Geographic Area	Minus Donations	Including Donations
Africa	28.9	25.6
Asia	26.8	18.3
Latin America	28.1	44.8
General	16.2	11.3

Recently more than 50 items on Asia were received as a donation from Roger Luedtke, but these have not as yet been integrated into the collection.

Usage

The number of individuals using on-campus facilities remains at the total of 6,000. In addition to UW students and personnel, the Library has been utilized by students and staff from many universities and institutions, including the Agricultural Development Council, Hamline University, the Inter-American Foundation, and the University of Tampere, Finland.

There has been a dramatic increase in the number of off-campus requests and interlibrary loan requests to the Library in the past year. These requests stem primarily from the series of bibliographies compiled by the Library staff and distributed free of charge by the Land Tenure Center. Compared to 200 requests received during 1972-1973, the Library received and filled more than 350 during 1973-1974. Students and personnel at institutions such as the International Rice Research Institute (Philippines); Smithsonian Institute; Rockefeller Foundation; Harvard University; the University of California-Los Angeles; Studiecentrum (Belgium); and University of Leeds (England) made use of the Land Tenure Center collection.

Exchanges

The exchange of publications between the Land Tenure Center Library and other institutions continued to expand during the past year. The Library currently receives publications, including 50 journal subscriptions, from over 150 organizations. More than three-quarters of these exchange agreements have been established with foreign institutions, so that many hard-to-get publications from government agencies, universities, and private organizations are received regularly by the Library.

Among the requests for exchange publications filled by the Library during the past year were those from the newly created Centro de Documentación e Información de Amazonia "Hugo Pesce" in Peru, and from the Servicio de Documentación y Comunicación para el Desarrollo Rural in Nicaragua. Exchange programs were established for the first time with Israeli organizations--the Society for International Development, the International Technical Cooperation Centre, and the Centre for International Agricultural Cooperation.

Duplicates List no. 9 was mailed out in February 1974, and thus far, over 300 publications have been distributed to 30 institutions. The mailing list for duplicates was revised and expanded to include 200 institutions. During the summer of 1974 these addresses will be put into a computerized list to simplify the mailing process. Duplicates List no. 10 is currently being compiled and will be distributed shortly.

Publications

Due to the work required by the annotated bibliography described in the 1972-73 report, the Library staff has not prepared as many new country bibliographies as it was able to in past years. Besides the four quarterly accessions lists, the staff prepared second supplements for the previously issued Colombian and Chilean bibliographies (Training and Methods 9 and 12). Training and Methods 23, reported last year as dealing with the Caribbean area, actually contained only Cuban materials; while Training and Methods 24 lists holdings on Caribbean islands other than Cuba.

The Latin American annotated agrarian reform bibliography is entering the final stages of preparation. Typing will be completed on the camera-ready copy during the summer. The program for the subject and author indexes will be completed during June. This bibliography will include more than 3,000 entries and will be published as Land Economics Monograph Series Number 50. It will be sold for $15.00 hardcover and $5.75 softcover.

Annotations for the Middle East and South Asian portions of the annotated bibliography are being edited at present. They will be issued as separate volumes.

Future Plans

Plans center primarily around projected publications. Library staff members are presently compiling Training and Methods on the Río de la Plata countries (Argentina, Paraguay, and Uruguay) and on Central America, which will complete the series devoted to specific countries. New non-country publications will include a bibliography of the Library's statistical holdings and an index to maps on land tenure, land classification, and land use in the Library. Supplements are planned for the Mexico, Asia, Peru, Africa, and Brazil bibliographies.

The Latin American bibliography on agrarian reform is expected to be sent to the printer by October. Distribution will be handled by the University of Wisconsin Press. Publication of additional parts of the bibliography may possibly be part of the Library's own Training and Methods series.

The staff will continue to concentrate on filling lacunae in the collection which are brought to light in the preparation of the annotated agrarian reform bibliography. Efforts will be made to publicize the Library's holdings more widely on the UW campus. More specialized bibliographic requests will be filled, and this service will be publicized as much as possible.

LAND TENURE CENTER PUBLICATIONS

Fifty-three new publications were added to the Land Tenure Center's regular publications series in the 1973-74 reporting year. A complete listing can be found in Appendix A. We estimate that more than 137,334 copies of publications have been sent free of charge to interested persons around the world. About 78,355 of these items were distributed through the Center's mass mailing system; the remainder were requested individually. (See Table 1.)

Publications of the Center fall into seven general categories, two of which are described in the Library section of this Report.

The Newsletter is a quarterly publication sent to the entire mailing list of more than 3,000 individuals and institutions. It keeps readers informed on research findings and activities related to land tenure, land reform, and agricultural development. Summaries of major new publications are also included. Many of the articles are in both English and Spanish, and a few are in Portuguese as well.

The Reprint series contains selected journal articles pertaining to agricultural and institutional development problems. Twenty-two new reprints were added this year, including the first two in French ever produced by the Center.

Research Papers are syntheses of theses produced by persons supported by or associated with the Land Tenure Center. Seven new papers have appeared in the series during 1973-74. Next year we look forward to issuing the first such papers based on theses done by our own Ph.D. in Development students.

LTC Papers are usually articles circulated as working papers intended for publication elsewhere. Eleven new papers were added to this series in 1973-74.

A semi-annual listing of available publications keeps the entire mailing list informed of new publications and provides them with an order form.

Beginning with calendar 1974, all Research and LTC Papers carry Cataloguing in Publication (CIP) data prepared by the LTC Library staff. The CIP information is in a form suitable for xeroxing directly onto catalogue cards. It should reduce the time needed to catalogue LTC publications and hence make them available to library users sooner than has been possible in the past.

Our mailing list was computerized during this reporting year to save both time and money. We are now able to order mailing labels by the name, the country, or the expressed interest of individuals on the list. This enables us to send publications as they become available rather than waiting for an order to reach us, saving time for our readers and allowing the Center to take advantage of the lowest bulk postage rates for U.S.

residents. We believe that the data in Table 1 provide evidence for the success of this system: in 1973-74 more publications were sent by the automatic mass mailing system than were ordered individually, the continuation of a pattern begun last year. Also, we continue to receive responses to our requests for information on areas which interest our readers; well over one-third of all those on our mailing list have provided such information.

TABLE 1

Land Tenure Center Publications Distributed
July 1, 1973 - June 30, 1974

Mass-Mailed Publications

Type of Publication	Total Sent
Newsletter	14,512
Available Publications List	12,245
Accessions List	6,314
Reprints	20,271
Research Papers	8,205
LTC Papers	8,732
Training and Methods	8,076
SUB-TOTAL	78,355

Requested Publications

Type of Publication	Total Sent
Newsletter	446
Available Publications List	337
Accessions List	205
Reprints	18,681
Research Papers	6,709
LTC Papers	7,127
Training and Methods	4,421
Special Bibliographies	557
Information Brochures	213
Film Brochures	173
Discussion Pap	110
SUB-TOTAL	38,979

TOTAL PUBLICATIONS DISTRIBUTED 137,334

LAND TENURE CENTER FILMS

The Land Tenure Center continued to make its five films on Chile and two of its films on Bolivia available in Spanish through the local RTAC officer attached to the USAID Mission of the American Embassy in every Latin American country. Additionally, films on Bolivia, Colombia, and Chile are available in English through the Land Tenure Center. Listed below are the English film titles and the number of requests met for each film during the reporting year.

Bolivia

"Changes in Agriculture, Population and Utilization of Resources" (15)
"Aspects of Land Ownership and Land Use in the Rural Community of Montero" (29)
"Frontier Settlement of Japanese from Overseas, Indians from the Highlands" (27)
"Market at La Paz, Patterns of Living and Land Use at Vilaque and Near Lake Titicaca" (51)
"Campesinos and Farming on Isla del Sol, Annual Market Days at Casani (Peru-Bolivia Border)" (32)

Colombia

"Transportation and Community Services in Spontaneous and Planned Colonization, INCORA's Role in New Settlements" (24)
"Changes in Land Use and Transportation Problems for Two New Settlements" (22)
"Improvement and Utilization of Valle Resources" (12)
"Statement by Enrique Peñalosa Camargo, Director of INCORA" (0)
"Statement by Milcíades Chávez, then serving in INCORA as Assistant to the Technical Director" (0)

Chile

"Aspects of Land Tenure in Chile (3 Parts)" (56)
"Chile's Experiments in Agrarian Reform (2 Parts)" (19)
"Counterpoint of the Agrarian Reform: Chile 1973"

During the 1973-74 reporting year, Land Tenure Center staff completed work on "Counterpoint of the Agrarian Reform: Chile 1973," in Spanish and English. Professor Albert was on location in Chile in January and February of last year working with Professors Brown and Stanfield and Mr. Edmundo Palacios of the Chilean Communications Project of the United Nations Food and Agriculture Organization. Shooting was completed in early March; editing and scripting were completed in the fall and winter of 1973-74.

Most of the film was shot at three locations: Culiprán, near Santiago; El Castillo, near Los Andes; and the Hacienda Illapel in Chile's

semi-arid Norte Chico. All three farms are now agrarian reform settlements: Culiprán, a livestock farm, was seized by the workers in 1965 and subsequently expropriated from its absentee landlord; it is now organized into an asentamiento. El Castillo, an intensive diversified farm, was expropriated in 1971 and at the time of the filming operated as a production cooperative called Centro de Reforma Agraria Salvador Allende. Illapel, a farm of over 160,000 hectares, was expropriated in 1968 and is now an asentamiento with a mix of collective and private small enterprises. The film includes interviews with traditional landowners as well as with the leaders of the farm worker organizations and reform beneficiaries. It attempts to document the social and political dynamics of the reform process and point up new policy issues that have emerged in the wake of reform. Film footage of these and other farms portrayed in the film taken in 1965 before they were expropriated has been incorporated into the new film. Thus the film serves to document Chile's evolving agrarian reform program from the points of view of people involved with and affected by the reform process.

In January the film was exhibited at the VII International Agricultural Film Competition in Berlin. Since its completion, it has been shown to numerous groups and organizations, both on and off campus, including the Agency for International Development, USAID/Honduras, USAID/Colombia, USAID/Chile, Center for Inter-American Relations and Ford Foundation in New York, New World Coalition in Boston, Regional Technical Training Aids Center in Mexico, U.N. Food and Agriculture Organization in Rome, the National Conference on Development Politics in Latin America at Princeton University, and the Cornell University Department of Agricultural Economics. On campus it was shown to a special Land Tenure Center seminar, classes in Agricultural Economics, Ibero-American Studies and Agricultural Journalism, and an Agricultural Development Council study group on collective farming, among others.

SECTION F

PLAN OF WORK

PLAN OF WORK

1. Our primary focus must continue to be research, training, and the dissemination of research results. The primary target of our efforts will continue to be the small farmer. Our work in the coming year will have several emphases:

    a. Group farming, with both research on specific country experiences and the June 1975 conference.

    b. Ongoing monitoring of the reform process and of programs designed to aid the small farmer in a number of countries. Results of earlier research in Chile and Colombia will continue to be published. A new study will be begun in Peru.

    c. Continued study of traditional tenure systems in Asia and Africa for the guidance they can provide policy-makers on the effect of measures being undertaken in those areas.

    d. Analysis of the effects produced by the introduction of new technology. This will involve study of the type of technology introduced and the existing institutional and infrastructural patterns.

2. We will continue to respond to requests for consulting both here and abroad. Visitors to the Center will be assisted in every possible way. The Library will continue to respond to requests for materials.

3. The Center will continue to serve as a repository for research materials of all kinds--published and unpublished documents, government reports, etc.--relevant to our research goals. No other Center in the world serves this function.

4. Our regular publications series will continue to be issued and distributed. We will continue to refine our computer systems to enhance the service we can supply.

5. Our training program for USAID/Ethiopia will continue. One student will come for the fall 1974 semester.

6. We will send Professor Kenneth Parsons to Honduras for a 14-month stay as a consultant to the land reform agency there. Other faculty members will respond to any short-term needs there.

7. Professor Duncan Harkin will continue his stay in the Philippines.

8. Our relationship with Kyoto University will be further implemented. Some joint research projects will be started up with non-211d funding.

9. We will actually publish two books--Agrarian Reform in Latin America: An Annotated Bibliography, and Land Tenure and the Peasant in South Asia. Work will continue on an annotated bibliography of Asian and African materials.

10. Continue to expand our course offerings and to arrange frequent informal seminars. More groups of seminars which share a common theme will be arranged.

11. Continue our Ph.D. in Development program and develop close ties both with other interdisciplinary degrees here at Wisconsin (the new program in Land Resources is an excellent possibility) and with other universities.

12. Our agreement with FUDECO will be further implemented.

13. Five or six Ph.D. in Development theses will be completed, as will several by Land Tenure Center students not in this particular program.

We have assembled in the Center an institutionalized capacity to respond to fast-breaking issues in agricultural development wherever they arise. It is difficult to plan specifically for such matters--for example, when we wrote this portion of the 1972-73 Annual Report, the whole complex of food-energy-reform issues was not even being discussed, indeed the potential food shortage was not widely recognized. Yet we have had to cope with these problems during this reporting year. Similarly, we have the capacity to cope with the requests for advice that are sure to emerge from the rapidly changing conditions in a number of countries, though we cannot predict precisely what they will be. It is this established institutional capacity for wide-ranging response to needs that is the Center's unique strength. We will maintain it during the coming year.

APPENDIX A

A COMPLETE LIST OF LAND TENURE CENTER PUBLICATIONS

July 1974

I. Land Tenure Center Reprints

II. Training and Methods

III. Special Bibliographies

IV. Land Tenure Center Research Papers

V. Land Tenure Center Papers

VI. Land Tenure Center Discussion Papers

VII. Latin American Research Briefs

VIII. Monographs

IX. Glossaries

X. Doctoral Dissertations

XI. Master's Theses and Memorias

XII. Annual Program Reports

XIII. Accession Lists
(Land Tenure Center Library)

XIV. Available Publications Lists

XV. Newsletters

Fifteen Series; * Indicates Issued in 1973-74 Fiscal Year

LAND TENURE CENTER PUBLICATIONS

Land Tenure Center Reprints

No. 1 Peter Dorner and William Thiesenhusen, "Relevant Research Programs to be Conducted in Developing Countries." Journal of Farm Economics. 1964. (Out of print. Available on loan through Land Tenure Center Library, University of Wisconsin.)

No. 2 Peter Dorner and Juan Carlos Collarte, "Land Reform in Chile: Proposal for an Institutional Innovation." Inter-American Economic Affairs. 1965.

No. 3 Dale W. Adams, "Land Ownership Patterns in Colombia." Inter-American Economic Affairs. 1965.

No. 3-S Dale W. Adams, "Tenencia de la Tierra." Agricultura Tropical. 1964.

No. 4 Belden Paulson, "Difficulties and Prospects for Community Development in Northeast Brazil. Inter-American Economic Affairs. 1964.

No. 5 Peter Dorner, "Land Tenure, Income Distribution and Productivity Interactions." Land Economics. 1964.

No. 5-S Peter Dorner, "Interacciones entre los sistemas de tenencia de la tierra, la distribución del ingreso y la productividad agrícola." El Trimestre Económico.

No. 6 George W. Hill, "The Agrarian Reform in Costa Rica." Land Economics. 1964.

No. 7 Raymond Penn, "Understanding the Pressures for Land Reform." Congressional Hearings on Inter-American Economic Relationships. 1962.

No. 8 Frank Osterhoudt, "Land Titles in Northeast Brazil: The Use of Aerial Photography." Land Economics. 1965. (Out of print. Available on loan through Land Tenure Center Library, University of Wisconsin.)

No. 9-S John D. Strasma, "Financiamiento de la reforma agraria en el Perú." El Trimestre Económico. 1965.

No. 10 Charles W. Anderson, "Toward a Theory of Latin American Politics." Paper of the Graduate Center for Latin American Studies, Vanderbilt University. 1964.

No. 11 J. H. Beuscher, "Agriculture in a Multi-State World: A Plea for Empirical, Comparative Legal Studies." Instituto di Diritto Agrario Internazionale e Comparato. 1963.

No. 12 Joseph R. Thome, "Title Problems in Rural Areas of Colombia: A Colonization Example." Inter-American Economic Affairs. 1965.

No. 13 John D. Strasma, "Market-Enforced Self-Assessment for Real Estate Taxes." Bulletin for International Fiscal Documentation. 1965.

No. 14 Raymond Penn, "Public Interest in Private Property (Land)." Land Economics. 1961.

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No. 16 Dale W. Adams and L. Eduardo Montero, "Land Parcelization in Agrarian Reform: A Colombian Example." Inter-American Economic Affairs. 1965.

No. 16-S Dale W. Adams and L. Eduardo Montero, "Una alternativa a programas de distribución de tierras." Economía. 1965.

No. 17 Dale W. Adams and A. Eugene Havens, "The Use of Socio-Economic Research in Developing a Strategy of Change for Rural Communities: A Colombian Example." Economic Development and Cultural Change. 1966.

No. 18 Dale W. Adams, "Colombia's Land Tenure System: Antecedents and Problems." Land Economics. 1966.

No. 19 Peter Muller, "Recent Developments in Land Tenure and Land Policies in Germany." Land Economics. 1964.

No. 20 Kenneth L. Karst, "Latin American Land Reform: The Uses of Confiscation." Michigan Law Review. 1964.

No. 21-S William C. Thiesenhusen, "Un experimento de reforma agraria." Desarrollo Económico. 1966. (Out of print. Available on loan through Land Tenure Center Library, University of Wisconsin.)

No. 22 William C. Thiesenhusen, "A Cooperative Farming Project in Chile: A Case Study." Journal of Farm Economics. 1966.

No. 23 William C. Thiesenhusen, "Chilean Agrarian Reform: The Possibility of Gradualistic Turnover of Land." Inter-American Economic Affairs. 1966.

No. 24 William C. Thiesenhusen, "Agrarian Reform and Economic Development in Chile: Some Cases of Colonization." Land Economics. 1966.

No. 25 Solon L. Barraclough and Arthur L. Domike, "Agrarian Structure in Seven Latin American Countries." Land Economics. 1966. (A Spanish version is also available.)

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No. 37 William C. Thiesenhusen, "A Long-run 'Brain Drain' Policy for the United States." Congressional Hearings on Government Operations. 1968. (Out of print. Available on loan through Land Tenure Center Library, University of Wisconsin.)

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No. 40-S Edmundo Flores, "Como funcional el sector agropecuario de México." Comercio Exterior. 1967.

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No. 46-S Lester J. Schmid, "El papel de la mano de obra migratoria en el desarrollo económico de Guatemala." Revista Economía. 1968.

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No. 82 Kang Chao, "Agricultural Production in Communist China: 1949-60." Chaps. 1 and 2. (The University of Wisconsin Press, 1970.)

No. 83 William C. Thiesenhusen, "Green Revolution in Latin America: Income Effects, Policy Decisions." Monthly Labor Review. 1972.

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No. 87-S Terry L. McCoy, "La reforma agraria chilena: Un análisis político del cambio estructural." América Latina. 1970.

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*No. 95 Robert K. Davis, "Some Issues in the Evolution, Organization and Operation of Group Ranches in Kenya." East African Journal of Rural Development. 1971.

*No. 96-S William C. Thiesenhusen, "La encrucijada del sector agrícola en América Latina." Economia Política. 1972.

*No. 97 Harrison C. Dunning, "Land Reform in Ethiopia: A Case Study in Non-Development." UCLA Law Review. 1970.

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*No. 99-F Georges Ed. Bourgoignie, "Ethno-écologie d'une collectivité regionale: Les cités lacustres du Dahomey." La Revue Canadienne des Etudes Africaines. 1972.

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*No. 43 October-December 1973. 49 pp.

*No. 44 January-March 1973. 65 pp.

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*Issued in 1973-74.

Available Publications Lists

No. 1	November 1964
No. 2	March 1965
No. 3	July 1965
No. 4	November 1965
No. 5	February 1966
No. 6	July 1966
No. 7	October 1966
No. 8	March 1967
No. 9	September 1967
No. 10	March 1968
No. 11	June 1968
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No. 13	September 1969
No. 14	July 1970
No. 15	January 1971
No. 16	November 1971
No. 17	July 1972
No. 18	December 1972
No. 19	May 1973
*No. 20	September 1973
*No. 21	April 1974

*Issued in 1973-74.

Newsletters

Newsletters Nos. 1-25 are out of print. They are available on loan through Land Tenure Center Library, University of Wisconsin.

No. 1 October 1, 1962. 10 pp.

No. 2 November 1, 1962. 15 pp.

No. 3 December 1, 1962. 17 pp.

No. 4 January 1963. 26 pp.

No. 5 February 1963. 28 pp.

No. 6 March 1963. 37 pp.

No. 7 April 1963. 31 pp.

No. 8 May-June 1963. 37 pp.

No. 9 June 15, 1963. 34 pp.

No. 10 July-August 1963. 46 pp.

No. 11 September 1963. 50 pp.

No. 12 October-November 1963. 49 pp.

No. 13 December 1963. 35 pp.

No. 14 January-February 1964. 31 pp.

No. 15 March 1964. 35 pp.

No. 16 April 1964. 30 pp.

No. 17 May-June 1964. 32 pp.

No. 18 July-October 1964. 27 pp.

No. 19 November 1964-March 1965. 28 pp.

No. 20 April-July 1965. 37 pp.

No. 21 August-October 1965. 31 pp.

No. 22 November 1965-February 1966. 38 pp.

No. 23 March-July 1966. 49 pp.

No. 24 August-October 1966. 50 pp.

No. 25 November 1966-March 1967. 27 pp.

No. 26 April 1967-February 1968. 22 pp.

No. 27 March-August 1968. 19 pp.

No. 28 September 1968-February 1969. 19 pp.

No. 29 March 1969-August 1969. 21 pp.

No. 30 September 1969-January 1970. 25 pp.

No. 31 February 1970-June 1970. 22 pp.

No. 32 July 1970-January 1971. 36 pp.

No. 33 February 1971-July 1971. 26 pp.

No. 34 August 1971-November 1971. 55 pp.

No. 35 December 1971-March 1972. 44 pp.

No. 36 April 1972-June 1972. 42 pp.

No. 37 July 1972-October 1972. 44 pp.

No. 38 October 1972-December 1972. 56 pp.

No. 39 January 1973-March 1973. 31 pp.

No. 40 April 1973-June 1973. 66 pp.

*No. 41 July 1973-September 1973. 44 pp.

*No. 42 October 1973-December 1973. 32 pp.

*No. 43 January 1974-March 1974. 34 pp.

*No. 44 April 1974-June 1974. 46 pp.

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*Issued in 1973-74.

APPENDIX B

LIST OF FORMER LAND TENURE CENTER STUDENTS

LIST OF FORMER LAND TENURE CENTER STUDENTS

Staff of the Land Tenure Center believe that perhaps its most enduring contribution to "development" comes through the training of scholars and policy makers. Following is the best list of past students we could compile in 1973-74, and it covers the entire period of existence of the Land Tenure Center.

Name	From	Major	Present Occupation & Address
Amos A. Adesimi	Nigeria	Ag.Econ.	Faculty Member Dept. of Agricultural Econ. University of Ife Ife-Ife, Nigeria
Weston A. Agor	U.S.	Poli. Sci.	Executive Assistant - Michigan Senate Majority Leader Michigan State Senate Lansing, Michigan 48917
Mohamed Amara	Sudan	Ag.Econ.	Research Officer Industrial Bank Khartoum, Sudan
Carlos Amat y Leon	Peru	Ag.Econ.	Universidad Agraria-La Molina Departamento de Economia Apartado N°456 Lima, Peru
Susana Amaya	Colombia	Mass. Comm.	Communications Media Expert CENCIRA-PNUD-FAO Apartado 4480 Lima, Peru
Luis Arévalo S.	Colombia	Ag.Econ.	Legal Advisor Land Valuation Department Dirección Nacional de Catastro Instituto Geográfico "Agustín Codazzi" Carrera 30 No. 48-51 Bogotá, Colombia
Gilbert Arristizabel	Colombia	Rural Soc.	Sociologist Oficina de Investigaciones Sociales Económicas y Legales Apartado Aéreo 14453 Bogotá, Colombia

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Luciano Barraza Allande	Mexico	Ag.Econ.	Gen. Director, Guanos y Fertilizantes de México S.A. Insurgentes Sur No. 1079 2° piso México 18, D.F., México
Claudio Barriga	Chile	Ag.Econ. & Business	Chairman, Graduate Programs Administración de Empresas Agropecuaria y de Estudios Superiores Instituto Tecnológico de Monterrey Monterrey, N.L., México
Richard Barrows	U.S.	Ag.Econ.	Assistant Professor Dept. of Agricultural Econ. University of Wisconsin Madison, Wisconsin 53706
Harold Beebout	U.S.	Ag.Econ.	Economist The Urban Institute 2100 M Street, N.W. Washington, D.C. 20037
Gonzalo Bello Ricardo	Venezuela	Ag.Econ.	Avenida Principal No. 9 Urbana La Castellana-Chacao Caracas 106, Venezuela
Hernando Bernal	Colombia	Soc.	Director of the Cultural Division of Acción Cultural Popular Apartado Aéreo 7170 Bogotá, Colombia

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Archie M. Bolster	U.S.	Public Policy & Admin.	First Secretary and Executive Assistant to the Ambassador American Embassy, New Delhi c/o Department of State Washington, D.C. 20521
João Bosco Pinto	Brazil	Rural Soc.	Specialist in Agrarian Reform Inter-American Institute of Agricultural Sciences (IICA-Andean Zone) Av. Central 717 11-B San Isidro, Lima, Peru
Russell H. Brannon	U.S.	Ag.Econ.	Professor and Chief of Party University of Kentucky/USAID Project, Thailand N.E. Agricultural Research Ctr. Tha Phra, Khom Kaen, Thailand or USOM/Agriculture APO San Francisco 96346
Marion Brown	U.S.	Ag.Jour.	Associate Professor, Dept. of Agricultural Journalism and the Land Tenure Center University of Wisconsin Madison, Wisconsin 53706
Thomas			International Economist U.S. Dept. of the Treasury Washington, D.C.
Ives Cal			Development Planner Allende 101-302,303 Toluca, Mexico

Appendix B

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Kenneth T. Cann	U.S.	Econ.	Head, Dept. of Economics Western Kentucky University Bowling Green, Ky. 42101
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Elsa M. Chaney	U.S.	Poli. Sci.	Assistant Professor, Dept. of Political Science Fordham University Bronx, N.Y. 10458
Russell J. Cheetham	Austral.	Dev. Econ.	Senior Economist International Bank for Reconstruction and Development (IBRD) 1818 H Street, N.W. Washington, D.C. 20433

*Individual could not be located in 1973-74 and did not respond to the original questionnaire mailed during the 1972-73 fiscal year. In these cases we have included our last available information.

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*Individual could not be located in 1973-74 and did not respond to the original questionnaire mailed during the 1972-73 fiscal year. In these cases we have included our last available information.

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Name	From	Major	Present Occupation & Address
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Wava G. Haney	U.S.	Soc.	Assistant Professor, Urban Analysis and Liberal Education Seminars College of Community Sciences University of Wisconsin Green Bay, Wisconsin 54305
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*Individual could not be located in 1973-74 and did not respond to the original questionnaire mailed during the 1972-73 fiscal year. In these cases we have included our last available information.

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William R. James	U.S.	Anthro.	Assistant Professor, Department of Anthropology SUNY College Potsdam, New York 13676
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Juan Francisco Kaldman	Mexico		Ing. Agronomo - Subgerente del Programa Campesina Rio Nazas No. 23-902 México 5, D.F., México

*Individual could not be located in 1973-74 and did not respond to the original questionnaire mailed during the 1972-73 fiscal year. In these cases we have included our last available information.

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			;202
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Joel Lazinger	U.S.	Rural Soc.	Assistant Professor Department of Sociology University of Wisconsin La Crosse, Wisconsin 54601

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*Individual could not be located in 1973-74 and did not respond to the original questionnaire mailed during the 1972-73 fiscal year. In these cases we have included our last available information.

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*Individual could not be located in 1973-74 and did not respond to the original questionnaire mailed during the 1972-73 fiscal year. In these cases we have included our last available information.

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APPENDIX C

DISSERTATION ABSTRACTS FOR STUDENTS IN THE PH.D. IN DEVELOPMENT PROGRAM

DISSERTATION ABSTRACTS FOR STUDENTS IN THE PH.D. IN DEVELOPMENT PROGRAM

During the 1973-74 reporting year, seven Ph.D. in Development students completed their dissertations and received degrees from the University of Wisconsin. Any of the studies abstracted here may be ordered in their entirety from University Microfilms, Ann Arbor, Michigan.

THE SOCIAL BASIS OF PEASANT UNREST: A THEORETICAL FRAMEWORK WITH SPECIAL REFERENCE TO THE COLOMBIAN CASE*

Gustavo I. de Roux

Under the supervision of Professor A. Eugene Havens

This thesis focuses on the conditions which provoke peasant collective protest. It is intended to provide a basis for understanding the peasantry and its capacity for revolt. For this purpose, a reconceptualization of the meaning of "peasant society" is developed, starting with the historical evidence on confrontation of peasants with members of other classes. From this analysis it is concluded that the relationships between classes and the way a given social equilibrium is maintained condition peasant behavior.

The historical evolution of the Colombian peasantry is described. Before the arrival of the Spaniards, a peasantry--as the term is defined in this work--did not exist. It originated with the inter-cultural clash provoked by conquest, and the new relationships institutionalized between Europeans and natives. Also, it is demonstrated how the formation of the peasantry runs parallel to the formation of the hacienda, and the necessary appropriation of land and labor. Changes introduced by the Spanish Crown in tax policies which put new burdens on the peasantry explain the outbreak of the Comuneros Revolution in 1781.

After independence new social classes emerged and started playing an important role in the country's political arena. Merchants--still dependent on the land--followed a pattern of rapid differentiation. Once they achieved power around the middle of the 19th century, they introduced substantial socio-economic reforms favoring their own interests. The negative effects of such reforms on the peasantry are analyzed here. Also, an explanation of the lack of peasant protest is provided.

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The phenomenon known in Colombia as "La Violencia" is related here to the process of integration of the country to the predominant world economic system. The emergence of new social classes and their differentiation, their interaction, the resulting patterns of conflict, the impoverishing tendencies of urban and rural masses--all of these catalyzed by political manipulations precipitated "La Violencia." In this work how patron-client networks were reinforced is described. Such networks were the instruments for filtering party ideology to an impoverishing peasantry, facilitating radicalization along party lines.

The emergence of a critical consciousness in the peasantry after 1950 is presented here as rooted in the peasants' objective conditions. Using primary as well as secondary data, evidence on deterioration of the peasant situation in the last two decades is provided. A national association created "from the top" related isolated peasant groups, increasing peasants' awareness of belonging to the same class. Agrarian reform failure and development of efficient leadership accounted for peasants' political radicalization.

THE CORN FARMERS OF MOTUPE: A STUDY OF TRADITIONAL FARMING PRACTICES IN NORTHERN COASTAL PERU*

John Keith Hatch

Under the supervision of Professor William C. Thiesenhusen

This study asserts that a major cause of failure in contemporary agricultural development programs attempting to assist small farmers in the Third World may lie in the fact that most of these programs are conducted as "outsiders' monopolies." They are planned, implemented, and evaluated by non-farmers; the expertise of program clients is rarely consulted; and the traditional farming practices of the latter are little respected, or understood. In an effort to build a more comprehensive awareness of the complexity and rationality of the traditional technology which programs all-too-readily seek to modify or replace with more modern practices, the present study attempts to describe traditional agriculture from the "inside"--from the small farmer's perspective.

Based on intensive participant observation and weekly cost of production data collected on 30 small producers in a coastal valley of Northern Peru (farm size: 1-8 hectares), this study describes how a typical small farmer grows a crop of hybrid corn. His efforts are followed day-by-day through a complete crop cycle. Detailed descriptions are presented of every farm task required to raise a corn crop, together with the rationale for each of these practices. From land preparation tasks through those of planting, fumigating, fertilizing, cultivating, irrigating, and harvesting,

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the study explains how much labor is required per task, its cost, and why the small farmer chooses one task strategy over another. Within the major production stages, it was found that at least 28 tasks were involved. In practically every task in the production process the small farmer needs to assess risks, make cost-benefit evaluations, choose appropriate labor combinations, and decide on cropping strategy. The intricate method of irrigation used by small farmers to maximize water-use efficiency is described and analyzed. Also covered are his varied adjustments in farming operations to cope with such uncontrollable contingencies as abnormal weather conditions, credit scarcity, insect plague, corn lodging losses, and market price fluctuations. The bulk of this study constitutes a detailed analysis of labor-intensive farming practices--a textbook of how one group of small farmers in northern coastal Peru grow hybrid corn.

Small farm performance differs substantially from the coefficients of anticipated performance outlined in the cited production plans of a government program, especially in terms of credit used and labor needed. A set of detailed recommendations for improving agricultural assistance programs by mobilizing small farmer participation in program decision-making--in extension, research, administration, and evaluation--is included.

SOCIAL INTERACTION BETWEEN QUECHUA CAMPESINOS AND CRIOLLOS: AN ANALYTIC DESCRIPTION OF POWER AND DEPENDENCY, DOMINATION AND DEFENSE, IN THE SOUTHERN SIERRA OF PERU

Charles D. Kleymeyer

Under the supervision of Associate Professor A. Eugene Havens

This work is based on a systematic field study of social interaction between Quechua campesinos and Criollos (especially government functionaries and other development agents) in the Southern Sierra of Peru. The study is basically problem-oriented, rather than discipline oriented, focusing on an alternative explanation of Quechua impoverishment, by means of an analytic description of Criollo domination of the Quechuas. Such an explanation entails an explicit rejection of the popular notion that so-called underdevelopment or backwardness of Quechua campesinos is a product of individual, cultural, and racial traits.

The major objective of the study was to understand and describe the current social relations between Quechuas and Criollos. This was attempted by combining an especially adapted, qualitative and exploratory method (falling under the general methodological category of participant observation) with an historical analysis. The theories applied in doing so were those of power-dependency and symbolic interactionism. Data collection entailed one year of intensive observation of a large number of Quechua-Criollo encounters and relationships, plus the carrying out of informal interviews and limited case studies of repeating patterns, incidents,

organizational forms and other social phenomena. An attempt was made to not only place Quechua-Criollo relations in their historical context but in their contemporary structural context, as well. Social interaction and social structure were viewed as being related, each one acting upon the other.

One important trend which is described is the persistence, in new forms, of asymmetrical power relations, especially of the patron-client type, between Quechuas and Criollos, even after the alleged introduction of broad reforms in the Peruvian social landscape. In a more analytical section of the work, the numerous sources and mechanics of Criollo power are treated, followed by a discussion of the defensive actions employed by the Quechuas.

It is argued that these social relations of domination and defense act as a brake on efforts to improve the Quechua socio-economic condition (as well as to develop the Peruvian society as a whole) and simultaneously act as a determinant of continued Quechua impoverishment. Since the basis for such relations is broad and complex in nature, minor changes such as the removal of certain position holders (e.g., large landowners) have not resulted in a qualitative change in social relations or an adequate reduction in the problematic nature of those relations. New patrons--e.g., public functionaries and other members of the middle class--have filled the void, bringing with them long established patterns of interacting with subordinate Quechuas.

It is concluded that within social systems characterized by a vertical structure and by great disparities between upper strata and lower ones, a necessary condition for the attainment and maintenance of a process of truly broad-based socio-economic development--and certainly a necessary condition for the sustained development of the groups occupying the lower strata of the social structure--would be structural changes entailing permanent shifts in social power in favor of those subordinate, dominated groups, in this case the Quechua campesinos. This suggests further refinement of the (existing) notion of development as power-accrual and dependency reduction.

SOCIAL CLASSES, INTERNATIONAL TRADE AND FOREIGN CAPITAL IN COLOMBIA: AN ATTEMPT AT HISTORICAL INTERPRETATION OF THE FORMATION OF THE STATE, 1819-1935

Francisco Leal-Buitrago

Under the supervision of Associate Professor A. Eugene Havens

This dissertation analyzes the long process of the formation of the Colombian State; it synthesizes the chronological systematization and the selection of those social phenomena necessary for explaining the problem being studied. The research uses the processes of formation, diversification and organization of social classes as the major focus of the

analysis. On the assumption that Colombian society has been involved, since its independence, in the system of world relations created by capitalism, the processes which are complementary to a class analysis were deduced. These are international trade and foreign capital flows. They have been the essential means of linking the societies which belong to the world system of social relations and, as such, are directly collected in the class structure and the formation of the State of Colombia.

Several processes in this historical overview are outstanding. First, the colonial, latifundista and pre-capitalist character of the social organization which separated from Spanish dominion at the beginning of the 19th century was established as a starting point. This economic backwardness was contradictory to the establishment of a relatively modern liberal State, which was organized to direct the economic and political life of the ruling class.

Second, the emergence of merchant-latifundistas as a social class which tried to impose its interests on those of the rest of the latifundistas was analyzed. The conflict between these fractions of the ruling class resulted in an open struggle through the formation of two political parties: the Liberal Party, which tried to destroy the social organization inherited from the colonial period, and the Conservative Party, which defended the status quo. From the middle of the 19th century, the merchant-latifundistas imposed themselves politically on the rest of the ruling class, causing a profound revolutionary process which almost completely destroyed the State.

Third, we observed how, because of the society's economic backwardness and the merchants' failure to accumulate sufficient capital due to the inability of the society to formally integrate into the world market, the latifundista social organization was reinforced, and the autonomous class tendency of the merchants was frustrated. However, the factors of economic production did acquire a mercantile character. The new social organization resulted in a profound State centralization. The differences in economic interest from which the political parties had arisen no longer conformed to party lines, resulting in both parties encompassing the gamut of interests of the society.

Finally, as a result of the last and most violent of the civil wars, which took place at the turn of the century, the State achieved a certain ability for political organization. This, plus the increase in coffee production, meant that the society could formally become integrated into the world market after World War I. This process led to the formation and consolidation of a commercial bourgeoisie. After a period of economic bonanza and growth in foreign capital flows in the 1920's, the economic crisis of 1929 profoundly affected the society which forced the State to adopt an interventionist policy in the economy and assure State economic stability.

AFFLUENT BUREAUCRACY IN A CHANGING SOCIETY

Muhammad Tawfik Sadik

under the supervision of Professor Henry C. Hart

Studies on various aspects of development have been cast within an essentially Western frame of reference and assumed conditions of relative scarcity.

This study has sought to understand the dynamics of economic and social change in the Kingdom of Saudi Arabia where the development process has proceeded, especially since the 1960's, under conditions of relative affluence due to its rich oil fields.

Affluence is viewed, in this study, as the ultimate independent variable, public policy and government administrative capacity as intervening variables, and economic and social change as the ultimate dependent variables. Correlation and regression analyses supplemented by analyses of qualitative data are used to assess the relationships among political, economic, social and administrative indicators of these variables.

The findings suggest the extensive role of government in whatever economic and social change the country has been able to achieve. But there is little in the country's experience to support the assumptions of conventional wisdom which views a sequential uniform pattern of interaction between and among political, economic, social and administrative variables that may equally apply to all developing countries. Indeed there is little in the country's experience that may suggest a sequential uniform pattern throughout all stages of its development process. The most serious limiting factor that has handicapped the country's development process has been inadequate expansion of government administrative capacity rather than availability of resources for investment.

By enabling the government to expand its role in economic and social welfare as well as in regulatory activities, affluence has created conditions that have made it possible for the political system to escape eruptions inherent in the process and maintain a remarkable record of political stability. Affluence has permitted the growth of opportunities commensurate with the increase in mobilized and aspirant individuals. Thereby it has conserved traditional legitimacy, allowing adaptations in it, and thus contained the potential impact of "rising expectations." Administrative capacity has not grown rapidly enough to meet public policy output needs; therefore the public bureaucracy has caused actual level of development to fall below potential level. Nevertheless, by opening up opportunities for the mobilized groups, it has been a key effective instrument in wedding change and stability.

THE POLITICAL ECONOMY OF ASIAN AGRARIAN REFORM: A COMPARATIVE ANALYSIS WITH CASE STUDIES OF THE PHILIPPINES AND SRI LANKA (CEYLON)*

Nimal Sanderatne

Under the supervision of Professor Peter P. Dorner

The study consists of three parts. The first part develops an interdisciplinary framework for the analysis of agrarian reform. It attempts to identify those conditions most likely to be conducive to changing the agrarian structure within the existing socio-economic and political framework, with considerable constraints and counter-reform actions of the landed interests. Among the numerous factors bearing on agrarian reform that have been identified are: the class composition of the political leadership; the competitiveness of the political system; the levels of political participation; and the nature of the constitutional structure. The economic conditions prevailing in the peasant sector, the extent of economic diversification of the economy, general economic conditions, and the process of societal diversification are among the other factors discussed. The pattern of the agrarian structure, foreign constraints and pressures, and religious influences are also discussed. Economic issues such as the relationships between tenure forms and productivity, the impact of an agrarian reform on labor absorption in agriculture, and the income redistributive capacities of reforms are considered. The importance of providing the supporting services of credit, marketing and crop insurance is stressed.

The second part consists of detailed case studies of agrarian reform in the Philippines and Sri Lanka. The evolution of, and historical influences on, the agrarian structure, the general features of the agrarian problem and the reforms enacted in each country are discussed. A central theme of the case studies is the identification of the problems faced both at macro and micro levels to espouse and implement the reform. The Philippines Land Reform Code of 1963 and the Paddy Lands Act 1958--the main tenancy control legislation of each country--are discussed in detail and the factors responsible for their failure identified. The provisions and likely impact of the 1972 redistributive reforms in the two countries are assessed. Each case study concludes with a discussion of the impact of the nature and functioning of the political system on agrarian reform.

The third part reviews the agrarian reform experience of a number of Asian countries. These include the People's Republic of China, Taiwan, Japan, Pakistan, Nepal and India.

The conclusions of the study are that the class interests of political leaders have an important controlling influence on the direction of reforms. Competitive political systems controlled by substantial landed

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interests tend to resist reform through various devices. Even other characteristics conducive to reform espousal tend to be dampened by these classes. It is for this reason that there has been a general pessimism with the outcome of reforms within an existing framework and most thoroughgoing reforms have been enacted after social convulsions.

Since agrarian reforms are reluctantly enacted and are ad hoc responses to political pressures, they tend to be full of loopholes and administratively difficult to implement. Agrarian reform laws are overburdened with complexity, ambiguity, discretion, and provisions requiring considerable administrative energies. They are not a part of the general process of economic planning, lack a perspective of required reforms for general economic and social development, and lack funding and adequate supporting measures to break the stranglehold of landlord interests. However, the pessimism of undertaking reforms within the existing framework is based on about a twenty-five year experience and new forces which may change the initial pessimism can be seen on the horizon.

TRAINING AGRICULTURAL RESEARCH AND EXTENSION WORKERS FROM LESS DEVELOPED COUNTRIES: AN EXAMINATION OF TRAINING APPROACHES USED BY THE INTERNATIONAL RICE RESEARCH INSTITUTE AND THE INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER*

Burton Eugene Swanson

Under the supervisic f Associate Professor Herman Felstehausen

This study analyzes why research systems in less developed countries have been largely ineffective in producing new technology to solve farmer production problems. The analysis suggests that research workers trained in foreign universities have internalized the normative structure of the educational and research institutions where they studied. When they return home they tend to continue working on theoretical problems using their newly acquired tools rather than focusing on the needs of local agricultural producers.

The main question addressed in this research was: Can the international agricultural research centers offer the type of training that will result in trainees working to solve local production problems? Or will they tend to perpetuate the research norms that place higher value on contributions to the body of knowledge in their respective disciplines? To address this issue a functional model of the research, development and extension process was developed wherein tasks associated with each aspect of the integrated process could be defined. Basically this model differentiates between

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"knowledge generating" and "technology developing" types of research, as well as the "extension of technology" function, with knowledge being viewed as the essential building blocks of improved agricultural technology. This model was used to assess the work behavior and performance of former research and extension trainees from the International Rice Research Institute (IRRI) in the Philippines and the International Maize and Wheat Improvement Center (CIMMYT) in Mexico.

Three different approaches to the training of agricultural research and extension workers were described and evaluated in this study. These training programs are: (1) the CIMMYT Wheat Training Program; (2) the IRRI Rice Research Training Program; and (3) the IRRI Rice Production Training Program. The data used in the analysis of these programs were based on an international survey of former participants. Responses to mail questionnaires were obtained from more than 75 percent of the more than 700 trainees who had participated in one of the three training programs. An analysis of the data indicated that former trainees assess each program in very positive terms, but that different training approaches, particularly in terms of the different educational objectives pursued and the different training methodologies used, resulted in significantly different types of on-the-job behavior after the participants returned to their home countries.

A research project approach to training resulted in participants who continued to focus on experimental research problems (knowledge generating types of research), which resulted in a relatively high output of technical research papers. Participants undergoing on-the-job training in research programs that stressed technology development research were found to be very productive in terms of the number of research activities completed which were directly linked to the development of improved genetic and production technology. Finally most extension personnel trained in modern production technology appeared to be actively engaged in the delivery of technical information to agricultural producers, particularly through the use of high yielding production/demonstration plots; but most have been unable to devote much attention to training other extension personnel in their organizations or to conducting applied research trials, activities for which they are also trained. By looking at the over-all behavior of different training groups from each international center--in the context of the functional model of the research, development and extension process--it was possible to identify where serious institutional bottlenecks may occur in national research and extension programs due to the lack of trained technical personnel.

INTRODUCING AGRICULTURAL CHANGE: THE INLAND VALLEY SWAMP RICE SCHEME IN SIERRA LEONE

Leon Weintraub

Under the supervision of Assistant Professor Dennis L. Dresang

The developing countries of the world are today the hosts to innumerable development projects of all sorts, like industrial, agricultural, educational, and power-generating. While there are probably countless ways of studying or analyzing these projects, most often any serious analysis undertaken usually involves a variant of one basic question: is the project in question an economically profitable one?

Without making light of either the scarcity of resources generally available to most developing countries, or the importance of generating increased income, this study portrays a project analysis in another light. A conceptual framework derived from general systems theory is used to trace the chain of events that is set in motion when the Sierra Leone government implements the Inland Valley Swamp Rice Scheme.

Three rice production systems in Sierra Leone are conceptually constructed and compared. These three systems are: (1) the traditional system currently being followed by the great majority of rice farmers in the country; (2) the planned development project, or the system the government has designed for implementation; and (3) the existing development project, or the new rice production system in terms of how the plan is actually being implemented.

These three rice production systems are compared in a systemic nature: what kinds of inputs do they use, how are their production processes organized, and what kinds of outputs do they produce? One major finding, for example, is that there are often unexpected results produced in instances where the plan as designed is being followed, as well as in instances where there are unexpected deviations in implementation.

Whether or not the Inland Valley Swamp Rice Scheme is a successful scheme depends, of course, on how "success" is defined. This study did not choose a definition and, therefore, cannot answer that question. What this study does provide, however, is a thorough groundwork for the comprehension of the reality of introducing change of the nature described. While any one development project in any one particular developing country may be a potential economic success, it is equally important to know what changes it will be likely to introduce to the people being thereby "developed." Systems theory provides an excellent method to reveal the scope and extent of those changes.