

Western Kentucky University
TopSCHOLAR®

WKU Archives Records


WKU Archives

1-1982

UA68/2/1 Intercambio Internacional, Vol. VII, No. 1

WKU Latin American Studies

Follow this and additional works at: http://digitalcommons.wku.edu/dlsc_ua_records

 Part of the [Higher Education Commons](#), [International and Comparative Education Commons](#), [International and Intercultural Communication Commons](#), [International Economics Commons](#), [International Relations Commons](#), [Journalism Studies Commons](#), [Latin American History Commons](#), [Mass Communication Commons](#), [Other Race, Ethnicity and post-Colonial Studies Commons](#), [Public Relations and Advertising Commons](#), and the [Regional Economics Commons](#)

Recommended Citation

WKU Latin American Studies, "UA68/2/1 Intercambio Internacional, Vol. VII, No. 1" (1982). *WKU Archives Records*. Paper 3658. http://digitalcommons.wku.edu/dlsc_ua_records/3658

This Newsletter is brought to you for free and open access by TopSCHOLAR®. It has been accepted for inclusion in WKU Archives Records by an authorized administrator of TopSCHOLAR®. For more information, please contact connie.foster@wku.edu.



Intercambio Internacional

Vol. VII, No. 1, January 1982

Western Kentucky University, Bowling Green, Kentucky 42101

EDITORIAL

Richard V. Salisbury
Director-Center for Latin American Studies
Western Kentucky University

Academia in general and area studies in particular are currently experiencing difficult times. As everyone is well aware, tightened budgets at the federal and state levels have resulted in fewer dollars being available for higher education. Indeed, at the present writing it is not clear whether or not federal funding will be available for the designated second tier of regional area studies centers. The potential absence of such federal funding is significant, for as university budgets contract area studies appear to be highly vulnerable. Thus for those individuals and institutions committed to the survival of area studies, some sort of collective action (institutional, state, and regional) seems appropriate.

Prohibitive travel and lodging rates, for example, in combination with diminishing institutional travel funds have served to discourage attendance at national conferences. A logical alternative for Latin Americanists would be to emphasize state and regional conferences and to explore expanded bi-lateral and/or multi-lateral linkages with neighboring institutions. Such contacts could lead to the sharing of resources, both material and human, which in turn would enhance the quality of the Latin American Studies programs of the cooperating institutions. None of this, of course, is new; indeed, Latin Americanists, as well as other area studies specialists, have long extolled the benefits of intra as well as inter-institutional cooperation. The problem is that such rhetoric has rarely been followed by any specific action. The times dictate, however, that such cooperation is necessary, perhaps even mandatory, for the maintenance of viable area studies programs throughout the country.

Intercambio Internacional is a publication of the Latin American Studies Program of Western Kentucky University with editorial offices in the Center for Latin American Studies.

EDITORIAL BOARD

Kenneth Cann
Edmund Hegen
John Petersen
Richard Salisbury, Chairman
Mary Ann McCelvey, Editorial Assistant

Contributions are welcomed from anyone interested in Latin American and hemispheric cooperation.

Si usted quiere contribuir un artículo o comentar sobre cualquier tema en esta revista, escriba por favor al Center for Latin American Studies, Western Kentucky University, Bowling Green, Kentucky 42101.

TABLE OF CONTENTS

Editorial	1
Editorial Board	1
Latin American Students at WKU	1
Student Exchange	1
Latin American Cookbook	1
Fall Conference on Latin America	2
The Cattle are Eating the Forest: The Conversion of Forest to Pasture in Southern Honduras	2
Comparing Management Behavior: Venezuela, Mexico and the United States	7
Colombia and Ecuador, A Horticulturist's View	8
For College and University Professors	8
Faculty Activities	8

LATIN AMERICAN STUDENTS AT WKU

There are 318 international students enrolled at Western for the 1981-82 school year. Of that number 95 (86 undergraduate, 9 graduate) or 30 percent are from Latin America. They represent the following countries: Argentina (1), Brazil (1), Belize (2), Chile (5), Colombia (14), Costa Rica (1), Ecuador (4), El Salvador (2), Guatemala (3), Honduras (1), Mexico (1), Nicaragua (2), Panama (3), Peru (3), and Venezuela (51). There is also one student from Puerto Rico.

STUDENT EXCHANGE

Two students from Western Kentucky University, Karen Parrish and Lori Ogden, recently spent six months in Panama under an A.I.D. exchange program involving the Future Farmers of America. An exchange team of six Panamanians left Bowling Green in December after an eight-month stay in the U.S.

LATIN AMERICAN COOKBOOK

The Center for Latin American Studies announces the publication of a cookbook, *From Guacamole to Rocambol: Latin American Recipes from Western Kentucky University*. The collection of over 90 tasty recipes features many of Latin America's better-known dishes, as well as other equally delicious but less well-known recipes that are family favorites among the contributors. All recipes were tested, and a glossary provides an explanation of less familiar ingredients along with possible substitutions where needed. The book is beautifully illustrated by Anabella Gonzalez, a Guatemalan art student at Western. The cookbook is available for \$4.50 per copy, and all proceeds go to the WKU Latin American Student Scholarship Fund. To obtain a copy, please send a check or money order payable to the College Heights Foundation Scholarship Fund to: Center for Latin American Studies, Western Kentucky University, Bowling Green KY 42101. Please add \$.65 for mailing within the U.S. (for a total of \$5.15). Persons living outside the U.S. should send an international money order for the cost of the book plus \$.90 postage for surface mail (total \$5.40) or \$3.75 for air mail postage (total \$8.25).

FALL CONFERENCE ON LATIN AMERICA

Dr. Billie R. DeWalt, Associate Professor of Anthropology and Rural Sociology at the University of Kentucky, presented a lecture entitled "The Cattle Are Eating the Forest: The Conversion of Forest to Pasture in Southern Honduras" on Wednesday, November 4, 1981, at 2:00 p.m. in room 125 Cherry Hall. Professor DeWalt is a specialist in Latin American rural development whose publications include numerous articles in scholarly journals and authorship of the book *Modernization in a Mexican Ejido: A Study in Economic Adaptation* published by Cambridge University Press. Dr. DeWalt earned his B.A. and Ph.D. degrees at the University of Connecticut. He has earned numerous federal and private research grants and has had extensive field experience in Mexico and Central America. Prior to joining the faculty of the University of Kentucky Professor DeWalt taught at the University of Connecticut and Central Connecticut State College. In addition to his joint appointment with the Departments of Anthropology and Rural Sociology, Dr. DeWalt is the Director of Applied Studies at the University of Kentucky. Dr. DeWalt's appearance on the Western Kentucky University campus was sponsored by the Latin American Studies Center and the Office of International Programs and Projects. As is customary, lectures presented at the Fall and Spring Conferences on Latin America are published in *Intercambio Internacional*. Dr. DeWalt's study accordingly follows.

THE CATTLE ARE EATING THE FOREST: THE CONVERSION OF FOREST TO PASTURE IN SOUTHERN HONDURAS

Billie R. DeWalt

Associate Professor of Anthropology and Rural Sociology
University of Kentucky
Lexington, Kentucky

Introduction

The research reported here is the first product of the University of Kentucky research effort as part of the International Sorghum/Millet (INTSORMIL) Program. INTSORMIL is one of the Coordinated Research Support Programs created by the Agency for International Development to bring together multi-disciplinary, multi-university teams of investigators to study, in a coordinated way, significant worldwide problems relating to food and agricultural systems. INTSORMIL was one of the first of these programs to be funded because sorghum and millet are the basic food grains used by people in some of the poorest countries of the world (e.g. the whole Sahel region of Africa). Most of the money has been allocated for work by applied agricultural scientists—breeders, agronomists, entomologists, plant pathologists, etc.—but some socioeconomic research has also been funded. In general terms, the goals of the University of Kentucky research team in Honduras have been 1) to study the place of sorghum in the production strategies of small and medium size farmers, 2) to study the real and potential demand for sorghum in Honduran and international markets, and 3) to study the place of sorghum in the nutritional adaptations of families in Honduras. The research reported here is related to the first goal—to understand how sorghum fits into the overall farming systems of southern Honduras. In doing this research, we are attempting to look at how contemporary decision-making fits within the larger historical, political and ecological setting. The aspect on which I will focus here will be to show the processes involved in how, figuratively, the cattle are eating the forest and to discuss some of the implications of these processes.

The Southern Region of Honduras

Southern Honduras (roughly the Departments of Choluteca and Valle) is quite different from the tropical rainforest environs that we typically think of with respect to Central America. The coastal plain on the Pacific is not extensive and has had very little intensive agriculture until relatively recently. Most people live in the high-

land areas that are composed of inactive volcanic mountains that rarely reach altitudes as high as 1400 meters. These mountains, however, are extremely steeply sloped and form many narrow, relatively isolated little valleys. This region is quite hot all year round with maximum temperatures sometimes reaching 105 degrees in March, the hottest month. The most significant climatic feature, however, is the separation between the wet season and the dry season. Almost all rainfall is concentrated in the months of May through November, although in July and August there is frequently another dry period. From December through April little or no rain falls, making the landscape parched, dusty, hot, and unpleasant. Average rainfall is about 1600 millimeters though this is quite variable and drought conditions are not uncommon in southern Honduras.

The south is quite densely populated. Although the region comprises only about 5% of the national territory, it contains approximately 11% of the population of Honduras. There are very few Indians left in the nation as a whole, and all of the people in the south can be classified as *mestizos*.

Since colonial times large cattle ranches have occupied the larger valleys and the coastal plain. Historically the majority of people were subsistence farmers growing corn on the steep hillsides and gathering indigo for sale as a source of cash. About a hundred years ago, synthetic dyes led to the demise of indigo gathering, and at about the same time sorghum was introduced into the region. Sorghum was quickly added to the subsistence repertoire of the south because of its greater tolerance for drought. It did not supplant corn, which was still the preferred food staple, but was grown with it as an insurance crop. In years of poor corn harvests, sorghum grains could be substituted for or added to augment corn in the making of tortillas.

The improvement of transportation links during the 1950's and 1960's has speeded up the changes in the agrarian structure of southern Honduras. The Panamerican Highway that runs through the region was completed in the late 1950's and was eventually joined by a paved road running north to Tegucigalpa. Port facilities on the south coast were also improved. Concomitant with these as Boyer (n.d.) and Stares (1972) have shown, came an increase in coffee, cotton and cattle production in the south. All of these entailed a process by which subsistence peasants were pushed off lands that they had been cultivating so that agrarian capitalism could expand (see White 1972 and Boyer n.d. for a documentation of this process). Although some agrarian reform took place in the south in the 1970's, the general pattern remains one in which there is considerable concentration of lands in the hands of a few while many peasant families have no access to land.

The changing agrarian system is reflected in Table 1 which compares land use patterns in southern Honduras for 1952 and 1974. Over the two decades the amount of land in pasture had increased from 41.9% of the land in 1952 to 61.1% of the land area in 1974. Precipitous declines are evident in both fallow land and the amount of land in forest. Both of these are important for subsistence crop production because they are part of the shifting cultivation cycle. Thus, land devoted to raising cattle is displacing forest land and fallow land. Although there has been some increase in the amount of land sown in annual crops, some of this increase (3181 hectares) is due to cotton cultivation and not to expanded food crop production.

The cattle are eating the forest but it remains to be shown how this process is taking place. That is, what are the human dynamics of the situation in terms of how forest is converted into pasture? What are the benefits and consequences of this shift in human terms as well as in ecological terms? And finally, what are the larger outcomes that might be expected as a result of these processes and what, if anything, can be done to have a positive effect on these outcomes? These questions are best answered by beginning with data from the micro-level, especially by considering contemporary farming systems in one part of the south.

Farming Systems in the Southern Highlands

Agriculture on the steep slopes of the south is usually done using some form of shifting cultivation (although see Boyer n.d. for a description of some communities where there is no fallowing cycle).

The brief descriptions below are based on data from Pespire, the *municipio* (roughly equivalent to an American county) in which our research in 1981 was based.

Fallowing periods on the steep slopes around Pespire are generally 5 to 6 years. After this amount of time has passed, farmers believe that enough fertility has returned to the soil so that it can be cultivated again. Although the type of agriculture that is practiced in southern Honduras is usually described as slash and burn agriculture, the way that a field enters the cultivation cycle would usually be more accurately described as a slash and mulch cultivation system. Here, the secondary forest growth is cut down, but rather than being burned it is left lying on the ground to serve as a mulch for the grain crops that are planted.

There are three types of slash and mulch systems. The first is used in planting only corn. The corn is planted at the end of August and is harvested in December when it has dried. The yields are small but this corn can be stored longer than the crop harvested during the middle of the rainy season because it can be dried much more effectively. The second slash and mulch system is used to plant a mono-crop of sorghum. Here, the sorghum is broadcast sown, the brush is cut down and the sorghum is left to germinate and find its way through the dead vegetation. This sorghum can be planted in July, August or September but still matures in December (because it is photoperiodic). Sorghum yields are about two or three times as large as corn yields. The third slash and mulch system also is used with sorghum but in this case the sorghum is grown for animal fodder. The crop is broadcast sown just as in the previous system but it is planted in October. It does not fully mature by the time it is harvested in December, but this is what the farmer wants because the whole plant can be uprooted, stored and fed to the animals during the long dry season.

It is during the second and third year that slash and burn cultivation takes place (see Figure 1). This most frequently utilized farming system can be seen as a compromise between the clear cultural preference for corn that is the staple of the peasant diet and the climatologically better adapted sorghum that is the less risky crop. Fields are slashed and burned in April and corn and sorghum are interplanted (footnote 1). From an agronomic point of view this system seems odd because these plants compete for the same nutrients in the soil. From the farmers' point of view, however, the system makes a great deal of sense. The corn is a rapidly maturing variety that can be harvested in between 60 and 70 days (around the middle of July). This is the period of the year when the previous year's grain harvest has been depleted and, although corn yields are small, they do serve to sustain the farmer for a few months during the remainder of the cropping season. The corn is harvested but the sorghum is left standing in the field and, because the variety grown is photoperiodic, it does not mature and is not ready to harvest until December.

The parish priest in Pespire said that "sorghum is the salvation of the peasant" in the south and this sentiment was echoed by many other people. Sorghum is so important in the region because of its drought tolerance and because it is a multi-purpose crop. The grain is primarily thought of as a food for animals and a substantial portion of the harvest is sold to truckers who sell it on the national market for use as animal feed. Animals also graze the leaves from the dried plants left standing in the fields and some sorghum is grown so that the whole plant can be fed to animals (it is called *guatera*). In addition, sorghum can be and is used as a replacement for corn in making tortillas, the staple food of peasants in the south. Poorer people who are not able to raise enough corn and who do not have enough cash to buy corn in the market use a substantial amount of sorghum for their own consumption.

The poor, landless peasants in the communities we studied in the Pespire region had relatively little trouble renting land to produce their crops in 1981. Table 2, for example, shows that almost half of the 53 people we interviewed in three small communities were either renting land or working borrowed land. Perhaps most surprising was that the rental cost of one manzana (equal to 1.7 acres) of land in 1981 was only about eight dollars and an agreement by the renter to leave the haulm in the field. While haulm to be used for grazing by animals in the dry season could be worth up to fifty

dollars per manzana, rental costs still seemed relatively cheap to us.

We soon discovered that there was another reason why landowners were willing to rent their land so cheaply. Their objective was to have their land cleared so that they could plant pasture. Rather than have to pay laborers to cut the brush and trees, land owners rented their land for the growing of subsistence crops by the landless. Part of the rental agreement was that pasture grasses would be sown in the field between the rows of corn and/or sorghum so that when the subsistence crops were removed the landowner would be left with a new pasture.

Why are landowners more interested in growing pasture to feed livestock rather than growing basic grains or some other crop for export? James Parsons in his article about pasture in Central America summarizes:

"With price ceiling imposed on most basic commodities it has not been attractive to the farmer to intensify his efforts to produce rice, maize, beans or yuca. And the market for the traditional export crops such as coffee, bananas and sugar has been notoriously fickle and unreliable. With beef it is another matter, especially since the opening of the U.S. market some twenty years ago. Profits have been good and risks low. Moreover, grass is the easiest of crops to grow. It take less (sic) resources in capital and management to develop pasture than to intensify cropping efforts, and it is simply easier, requiring less work and effort. In some cases the shift to cattle may reflect a desire to avoid labor problems, or perhaps a recognition that the tired land has been pushed to the limit and needs rest." (1976: 126).

The seven meat packing plants established in southern Honduras between 1958 and 1971 (Boyer n.d.) were instrumental in creating a demand for livestock and making this enterprise attractive to even relatively small landholders.

Livestock production has become the primary goal of several of the larger landowners in the communities we studied in the Pespire region. One of these farmers told me that he no longer plants any of the basic grains because they are unprofitable. He rents his land to landless farmers who, as part of the rental agreement, sow pasture grass in the midst of the subsistence crops they grow. As indicated in Figure 1, this may occur in the second or third year in which the field is cultivated. The landowner thus obtains another pasture for his animals. As can be seen in Table 3, a dozen landowners now have fields in zacate jaragua (*Hyparrhenia rufa*) grass to feed their animals. In addition, another 23 individuals have planted sorghum solely for its value as a dry season food for animals (i.e., have planted *guatera*). As Parsons has noted, the feeding of livestock in the dry season has been a problem in Central America (1976: 129), but the farmers around Pespire seem to have the solution with sorghum.

The result of this process is that data on the *municipio* of Pespire are similar to southern Honduras as a whole (see Table 1). Pasture land is increasing while forest and fallow land is disappearing. Although the amount of land in annual crops seems to be holding steady, we cannot assume that this land is being used to produce subsistence crops. As we have seen, sorghum for fodder and even a large amount of sorghum grain, which show up in census reports as annual crops, are being grown for animal consumption rather than for human food. What are the implications of this process in both human and ecological terms?

Implications

Richard Adams has written that

"Development . . . becomes meaningful evolutionarily if seen as a sequence of changes a society may undergo that are advantageous to the society: it refers to events that will not only be specifically different for different societies, but which must, at some point, also become conflicting and competitive. If evolution is the universal process whereby life becomes more complex, development is the specific means whereby a given viable entity successfully improves its position with respect to its environment. If evolution involves cooperation

and competition, natural selection and random variation, adaptation and destruction, then development also involves these very same processes" (1970: 42).

Seen in these terms development implies destruction of natural resources and of portions of society as well as beneficial change for certain species and for certain portions of society.

The processes by which pasture is replacing forest in Honduras as well as other parts of the world (see Parsons 1972; Richards 1970; Gomez-Pompa, Vasquez-Yanes and Guevara 1972), is a good illustration of Adams' point. In the alteration of the ecosystem that is taking place, jaragua grass and sorghum, both African introductions (see Parsons 1972), are taking over primarily at the expense of the forest species. There have been warnings that this process of forest destruction will not be without far-reaching consequences for humans and the environment (see Gomez-Pompa, et al. 1972 and Richards 1970). Other individuals, however, are not so alarmist and believe that, with the proper management, the negative ecological consequences may be avoided (see Parsons 1976).

On the human side, the picture is complicated as well. In the short run, the process seems to be quite beneficial for the landless as well as the landowners. Landowners recognize that production of livestock is a much more profitable enterprise than production of grains and they have discovered an efficient and cheap way of converting their land to pasture. The poor have available to them, for the time being, relatively cheap land to cultivate the basic grains they need to support their families. At the same time they recognize that forest land is becoming scarcer and that eventually there will be no land for them to farm. Livestock raising provides few employment opportunities. Permanent and temporary migration for wage labor is already quite a common strategy for many families in the Pespire region. Unfortunately, as we might suspect, the industrial and commercial agricultural sectors in Honduras have not been creating jobs at a rate to absorb the stream of migrants from such rural areas as Pespire.

The production of livestock benefits those who have access to land but what does this increased production of high-quality protein mean for the country as a whole? Unfortunately, it appears that the production of beef is not bound for the 58% of the children under five years of age in Honduras who suffer from identifiable malnutrition (INCAP 1969), but instead the increased beef production is for export purposes. Table 4 shows how much meat is being exported by Central American countries and gives estimates of per capita consumption of meat in those countries. There has been an expansion of beef cattle production throughout the region since 1960 while per capita consumption in most countries has been declining. What seems to be happening in Central America is the same sort of pattern that Fleurent and Fleurent (1980) found in a review of studies in villages in which commercial agricultural enterprises were established. They concluded that commercial agriculture may lead to absolute declines in nutritional status of segments of or a majority of people in the community. The data on beef production in Central America shows that it is profitable and benefits the landowners but appears to be doing little for the nutritional status of the national population because most of the production is exported rather than being consumed within the region.

These are implications then of the conversion of southern Honduras into a vast pasture for the feeding of beef cattle. Fewer individuals will have access to land on which to produce their subsistence crops, unemployment will grow and a large number of people will not have access to obtaining the food they need. These problems can only exacerbate the already explosive social, economic and political situation that exists in Central America. For the nation of Honduras, the foreign capital that is being generated by the export of beef is already beginning to be offset by the importation of basic food grains. Since 1976, Honduras has found it necessary to import corn, rice, sorghum and beans. In the absence of other changes, these imports can only continue to grow as the process of converting more and more land to pasture continues.

The directions that are being taken in Honduras are similar to processes occurring all over the Third World. Poor countries turn precious cropland into facilities to produce goods and commodities

desired by the developed countries. Dependent on developed countries as markets for the goods produced, they also become increasingly dependent on these same countries as providers of their basic foodstuffs (footnote 2). The wealthy countries obtain the commodities they desire, in the present case cutter-and-canner grade beef, while food supplies in poorer countries become scarcer, unemployment increases, and the land and other resources become increasingly degraded.

Minimizing Negative Effects

The processes that I have identified here will undoubtedly continue in the same direction that they have already taken. These pathways are more profitable for landowners than alternative strategies. What can be done to minimize the destructive effects of these processes and to maximize the developmental effects? I can offer some palliative suggestions especially as these relate to what agricultural research such as the INTSORMIL project can do in the face of what is admittedly a serious social and ecological situation. Long-range solutions lie in the realm of national and international policies including reorganization of the social and economic order.

First, if pasture and beef cattle are going to continue to expand in importance in Central America, as appears likely, then these operations should be made as efficient and as non-degrading to the environment as possible. There is apparently plenty of room for improvement here because Sternberg (1973) has observed that livestock production in developing countries is one of the world's most inefficient industries. Parsons (1976: 130-132) has suggested a number of measures for more intensive management of tropical pastures that appear to be realistic and attainable. These include naturally recycling nutrients to the soil through manuring, carefully timed rotational grazing, using improved higher yielding grasses such as those that fix their own nitrogen, and some rotation of pasture with other crops.

Especially promising in this latter area may be the use of sorghum in rotation with pasture. Farmers have already seized upon sorghum as the answer to their dry-season feeding problems. At present, however, farmers plant sorghum that can be harvested in an immature stage to feed to animals. The plants that produce grain have stalks that are too hard and fibrous for animals to eat. This problem could be solved with an appropriately designed machine to chop up the stalks. This would make it possible for the farmers to plant sorghum that could be harvested for both human and animal consumption — grain for humans, the stalks and leaves for animals.

Cultivation of fields could also be done much more intensively. In the place of the photoperiodic varieties of sorghum from which only one harvest is possible, varieties have already been tried that are capable of producing three harvests per year. Farmers have not adopted these new varieties because they have encountered a number of difficulties with them. Foremost among these are that 1) the first two harvests occur during the wet season and farmers are unable to dry the sorghum sufficiently to store it for very long; 2) because only a few farmers have tried these varieties their crop attracts all of the insect and bird damage that is normally spread over a wide area and 3) the new varieties produce grain that has a very sandy pericarp that is subject to considerable post-harvest storage losses from insects.

The above difficulties are not insurmountable. On the first score grain drying technology exists and could probably be provided on a regional basis in government operated buying stations. Such proposals are already in the process of being considered in Honduras. The second problem could be solved by convincing enough farmers to plant varieties that would produce three crops a year. Research by plant breeders to produce a variety that meets the needs of farmers has to be done to insure that a successful seed is introduced. An INTSORMIL breeder will be in Honduras for the next two or three years to attempt to produce just such a variety. Among the characteristics needed is a variety with a hard pericarp that is resistant to post-harvest storage losses (which would solve the third problem), a seed that produces white and good-tasting tortillas (many existing varieties produce dark tortillas that also don't taste very good), and a variety that is dual purpose in that it will produce large heads of grain along with lots of stem and leaves what will

provide forage for the expanding cattle industry.

The key feature for which we must aim is to obtain more production from existing resources using labor-intensive methods, while creating an ecosystem that is ecologically sound and self-sustaining. This is necessary if the current adaptations in southern Honduras are to survive the rigors of long-term evolutionary processes. To do so, the current system of mining resources (i.e. extracting the pro-

ductive elements from the ecosystem without attempting to conserve or replace them) must be replaced with a kind of agrarian husbandry for which there are all too few models in the Western world. The knowledge base to create such a system exists but the question is whether such a system is profitable enough and socially benign enough to appeal to those individuals who have power and vested interests in the existing structures.

TABLE I
CHANGING LAND USE PATTERNS IN SOUTHERN HONDURAS: 1952-1974

		<u>Southern Region*</u>		<u>Respire**</u>	
		<u>Absolute Number of Hectares</u>	<u>Percentage of Total</u>	<u>Absolute Number of Hectares</u>	<u>Percentage of Total</u>
Annual crops	1952	42,980	14.9		
	1974	51,140	16.8	2,776	14.3
Permanent crops	1952	9,531	3.3		
	1974	8,937	2.9	195	1.0
Fallow	1952	40,802	14.1		
	1974	16,954	5.6	976	5.0
Pasture	1952	121,266	41.9		
	1974	186,018	61.1	11,110	57.3
Forest	1952	74,593	25.8		
	1974	41,395	13.6	4,226	21.8
Totals	1952	289,172	100		
	1974	304,462	100	19,383	100

*Taken from data presented in Jefferson Boyer, Simple Commodity Production, Agrarian Capitalism and Rationality in Southern Honduras (draft copy of Ph.D. dissertation, University of North Carolina).

**Direccion General de Estadística y Censos, Censo Nacional Agropecuario 1974, Tomo III, Uso de la Tierra, Tegucigalpa, Honduras, 1974.

TABLE 2
Land Tenure

Renters (5 people were loaned land by parents or friends)	
<u>Number of manzanas cultivated</u>	<u>Number of Cases (total number = 53)</u>
1+	0
2+	8
3	2
4	1
	20 cases total
Landowners	
<u>Number of Manzanas Owned</u>	<u>Number of Cases</u>
0-10	15
11-20	5
21-30	5
31-40	0
41+	3
	28 cases total

TABLE 3
Primary Cultivars of 53 Farmers in Three Small Communities

<u>Cultivar</u>	<u>Number of Cases</u>
Corn & sorghum, first planting	45
Corn, second planting	39
Maicillera (sorghum)	3
Guatera (sorghum)	23
Squash	21
Beans	13
Yuca	15
Zacate jaranua	12

TABLE 4

Central American Beef Production: Consumption and Export (in million pounds)*

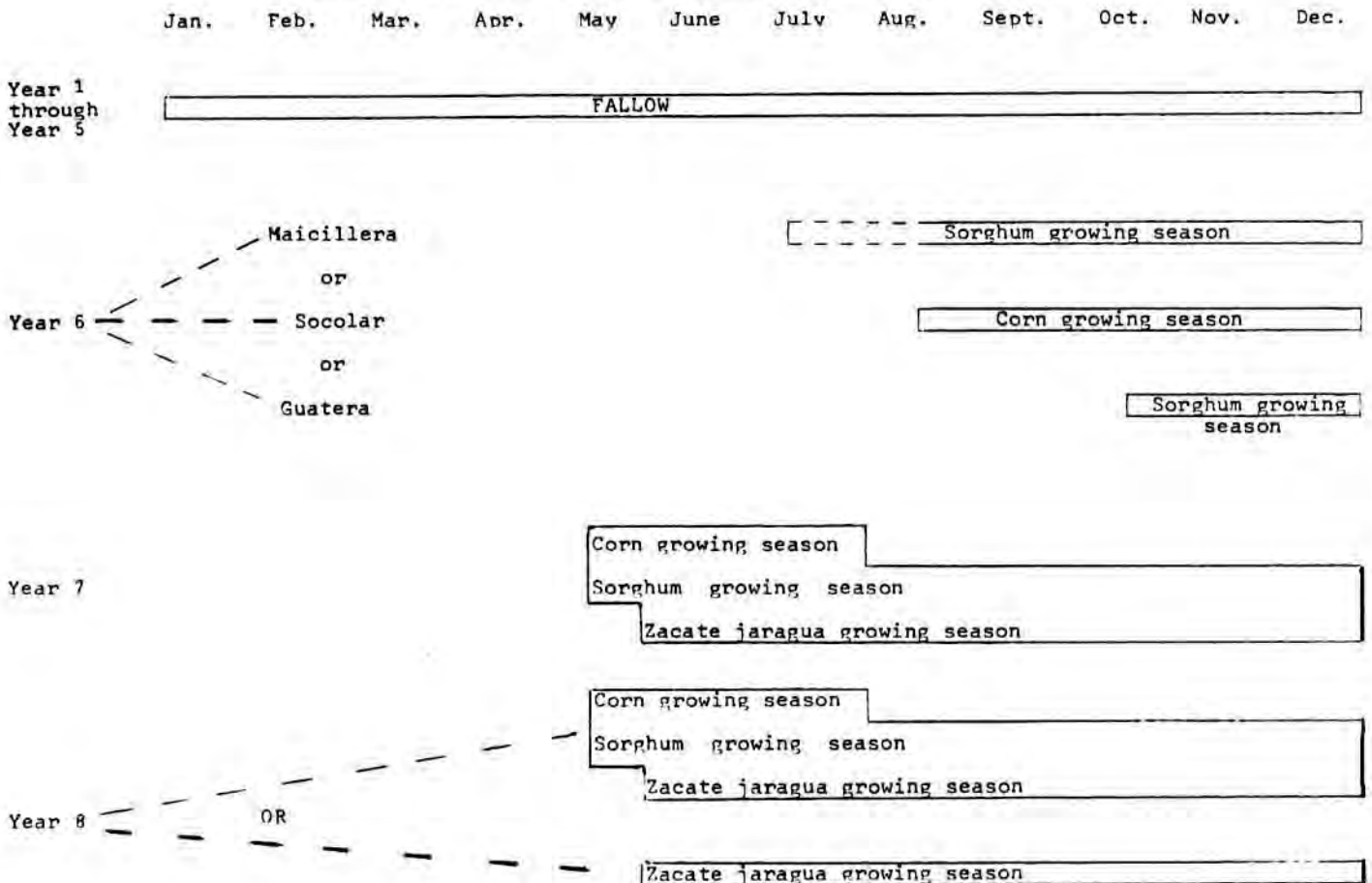
	Total Production	Exports	Domesticallv available	Per Capita Consumption (lb.)	Number of Cattle '73 (millions)
Guatemala					
1959-63 av.	82.3	7.2	75.1	19	
1972	158.9	54.2	104.7	15**	1.9
Honduras					
1959-63 av.	40.7	--	29.7	16	
1972	90.5	51.0	39.5	14	1.6
El Salvador					
1959-63 av.	40.7	--	43.7	17	
1972	52.3	8.5	43.8	12	1.2
Nicaragua					
1959-63 av.	61.2	20.7	40.5	29	
1972	151.1	86.0	65.1	32	2.3
Costa Rica					
1959-63 av.	53.3	17.5	34.8	27	
1972	108.0	73.7	34.2	19	1.7
Panama					
1959-63 av.	47.9	1.5	46.4	42	
1972	89.5	9.9	79.6	52	1.3
Belize					
1959-63 av.	.9	.1	1.0	10	
1972	1.2	.6	1.8	14	0.4

*USDA, Foreign Agricultural Service, "The beef cattle industries of Central America and Panama," revised July 1973.

**Livestock and Meat Report, Agricultural Attache, U.S. Embassy, Guatemala, Sept. 30, 1974. FAS figure of 19 lbs. per capita consumption in Guatemala in 1972 apparently included pork.

FIGURE 1

Fallow and Alternative Cropping Cycles from Pespire in 1981



(1) In many parts of the southern highlands, beans are also intercropped with sorghum and corn. In general, beans are grown above about 400 meters. Fields in Pespire are a little over 100 meters above sea level.

(2) A recent estimate by the U.S. Department of Agriculture indicates that at the beginning of the decade of the 1970's the U.S. share of world trade in corn and grain sorghum was about 54%. By the end of the decade, the U.S. share had increased to 82% of the world trade (U.S.D.A. Foreign Agriculture Circular, May 9, 1980).

BIBLIOGRAPHY

- Adams, Richard N., 1970, *Crucifixion by Power*, University of Texas, Austin.
- Boyer, Jefferson, n.d., *Simple Commodity Production, Agrarian Capitalism and Rationality in Southern Honduras*, Draft of Ph.D. dissertation, University of North Carolina.
- Dirección General de Estadística y Censos, 1978, *Censo Nacional Agropecuario 1974: Tomo III, Uso de la Tierra*, Tegucigalpa, Honduras.
- Durham, William, 1979, *Scarcity and Survival in Central America: Ecological Origins of the Soccer War*, Stanford University, Stanford, California.
- Fleuret, Patrick and Anne Fleuret, 1980, "Nutrition, Consumption, and Agricultural Change," *Human Organization* 39: 250-260.
- Gomez-Pompa, A.C., C. Vasquez-Yanes and S. Guevara, 1972, "The Tropical Rain Forest: A Nonrenewable Resource," *Science* 177: 762-765.
- Instituto de Nutrición de Centro América y Panamá, 1969, "Evaluación nutricional de la población de Centroamérica y Panamá," Guatemala City.
- Parsons, James J., 1972, "Spread of African pasture grasses to the American tropics," *Journal of Range Management* 25: 12-17.
- Parsons, James, J., 1976, "Forest to pasture: development or destruction?" *Revista de Biología Tropical* 24 (supl. 1): 121-38.
- Richards, Paul W., 1973, "The Tropical Rain Forest," *Scientific American* 229: 58-67.
- Stares, Rodney C., 1972, "La economía campesina en la zona sur de Honduras 1950-1970: su desarrollo y perspectivas para el futuro," Informe presentado a la prefectura de Choluteca, Honduras.
- Sternberg, H.O., 1968, "Man and environmental change in South America," pages 413-445, in *Biogeography and Ecology in South America*, E.J. Fittkau et al., editors, W. Junk N.V., The Hague.
- United States Department of Agriculture, 1980, *Foreign Agriculture Circular—Grains*, Washington D.C.
- White, R.A., 1972, "The adult education program of acción cultural popular Hondureña," Department of Anthropology and Sociology, St. Louis University, St. Louis, Missouri.

COMPARING MANAGEMENT BEHAVIOR: VENEZUELA, MEXICO AND THE UNITED STATES

Joseph P. Cangemi
Professor of Psychology
Western Kentucky University
Bowling Green, Kentucky

I was awarded a full year's sabbatical leave for the 1980-81 academic year. The purpose of the sabbatical leave was to give me the freedom, usually unattainable during the regular school period, to pursue professional projects and interests which would help me to grow personally and professionally. Part of the experiences that were planned during the sabbatical were trips to Venezuela, Mexico, Canada and the Philippine Islands. The objective of these trips was to observe and research organizational behaviors which

were interfering with productivity and profit; also, to observe and study those behaviors that detracted from organizational harmony and effectiveness. A comparison was made with similar facilities in the United States.

The observations of facilities in Venezuela and Mexico proved to be most interesting. During the period of the sabbatical four visits were made to facilities which were subsidiaries of Fortune 500 Corporations. On each visitation opportunities were provided for conferences and discussions with union leaders and company leaders as well as middle and lower level managers. Likewise, discussions were held with blue and white collar employees as well as with spouses of employees. The purpose of the conferences and discussions was to sample the perceptions of these employees within each facility in order to understand how they felt about the work, the company, the management, and a whole host of things. The results were remarkably similar in all locations.

American stateside management, in the main, still seems to have difficulty in selecting the most appropriate North American personnel for overseas assignments. Many managers do not speak the language (Spanish) and seem to have little interest in acquiring a facility for using it. Arrogance toward nationals is still a significant problem and will create substantially greater problems in the future. Treating employees as though they are inferior was a relatively common occurrence while not having the desire to understand the nationals and "blend in" with the local culture was also observed. Antagonistic feelings of the nationals (in the Latin American Countries mentioned above) toward Americans was found in abundance.

The end result of all this behavior is a most strong union posture. The unions in Venezuela and Mexico have a great deal of power. The same distrust unions have toward management here in the United States was observed there, with one added ingredient — the management is American. That in itself added considerably to distrust. One observation worth noting is that the president of each organization was a very good selection (he was a North American). The North American management selections in lower level leadership positions, however, was the area where the bulk of the problems seemed to appear.

In sum, the organizational problems observed outside the United States had many similarities to organizational problems frequently encountered inside facilities in this country. Where the similarities ended was in the conflict between North Americans and nationals of the host countries in which the organizations were situated. Strong difficulties seem to exist in Venezuela and Mexico with regards to Venezuelan and Mexican impressions of numerous North American personnel employed in their respective countries. These difficulties seemed to increase when the North Americans involved were unable to speak Spanish or when they deliberately separated themselves from the host country nationals. The difficulties became acute when pay scales were compared or when a social gathering occurred and host company nationals were not invited.

It appears that Latin American countries are prime targets for United States corporate expansion. Accompanying this expansion, however, will be an increasing animosity toward the United States and its citizens if organizations do not select more people oriented, flexible, creative, and optimistic management personnel. Also, it appears that if organizations in Latin America are not headed by Latin Americans instead of by North Americans, additional problems will accrue. North American corporations could very well find, in my judgment, their companies and properties vulnerable to expropriation if they do not take their time and select the healthiest, emotionally speaking, leaders to head up or work within their facilities in Latin America.

The observations I was permitted to experience by the organizations that had invited me gave me an "insider's view" often unattainable to outsiders. I saw and learned much more than would have been available to me during a regular academic year. Because of these international experiences in organization behavior, adjustments in my classes will be made for the better. Also, these experiences have helped to sensitize me toward organizational problems in ways difficult to attain from merely reading books and studies.

COLOMBIA AND ECUADOR, A HORTICULTURIST'S VIEW

*James M. Martin
Assistant Professor of Horticulture
Western Kentucky University
Bowling Green, Kentucky*

During June of 1981 I traveled through Colombia and Ecuador visiting horticultural crop production areas and facilities. The trip was made possible by a study grant from the Center for Latin American Studies at WKU. In the short span of one month I was able to see first hand a wide range of crops ranging from the very tropical in the lowlands to the cole crops of the sierras.

One of the more spectacular experiences was visiting the cut flower production region around Bogota. One firm that we toured had over 130 hectares of plastic greenhouses devoted to the growing of carnations, pom pon mums and several other types of cut flowers for the U.S. market. It was determined some time ago that this region was the ideal spot in the world to grow carnations due to its 12 hours of bright sunshine each day with the accompanying cool temperatures year 'round. A cooperative and supportive government and excellent transportation arrangements have permitted this industry to literally blossom and flourish. It has captured a substantial part of the cut flower market in the U.S., and is now exporting to Europe as well.

The International Center For Tropical Agriculture (CIAT) near Palmira, Colombia is a marvelous facility devoted to research on four basic tropical crops — yuca, beans, rice and pasture grass. The facilities are sophisticated and esthetically pleasing as well. The work is supported by 11 nations and provides excellent study facilities for anyone interested in tropical agriculture.

What makes Ecuador exciting to a horticulturist or any one who enjoys plants is the great diversity within a modest piece of real estate. The Andes highlands abound with small farms where cool season vegetables are grown. The region around Ambato and Riobamba is particularly fascinating with its deep alluvial soils that are measured in feet rather than in inches. It is the only place I have ever seen a rotation cropping that switched from cabbage to brick making and back. The Kentucky/Ecuador Partners program is sponsoring some excellent work here dealing with vegetable production to eventually help the Indians of the region increase their efficiency and productivity. A simple technique of switching to raised seed beds with straight rows of seedlings has produced impressive results. The great needs are for communication of this information to those to be benefited and to improve the marketing system so that additional production may be sold at a reasonable profit.

The lower land near Bowling Green, Kentucky's Sister City of Santo Domingo de los Colorados, is rich with tropical crops such as bananas, pineapples, citrus, cacao and passion fruit. To walk among

these plantings was a Yankee horticulturist's paradise. These industrious people, who have carved a new city out of the jungle in the last 15 years, have rich resources close at hand. I hope to return for a more extended period of time to learn and to share my talents in this beautiful part of the world.

FOR COLLEGE AND UNIVERSITY PROFESSORS

Professors involved in teacher education are invited to apply to attend the eight week institute "Teaching Global Perspectives," to be held at Central Missouri State University, Warrensburg, Missouri, June 7-July 30, 1982. Each participant will prepare a syllabus for a college course in the teaching of global perspectives K-12; study materials designed to strengthen international studies at the undergraduate level; and consider ways to serve classroom teachers. Each participant will receive \$1,800 to cover the cost of food, lodging, transportation and incidentals. For more information write Dr. Jim Sylwester, Department of History, Central Missouri State University, Warrenburg, Missouri 64093.

FACULTY ACTIVITIES

Dr. Laurence J. Boucher, Department of Chemistry, spent a week in April, 1981 as a Visiting Lecturer at the Universidad Autónoma Metropolitana in Mexico City. Dr. Boucher also spent the period from May 15 to August 15, 1981 as a Fulbright Lecturer in Colombia giving both graduate and undergraduate instruction in Inorganic Chemistry at the Universidad del Valle in Cali; the Universidad de Antioquia in Medellín; the Universidad Nacional and the Universidad Javeriana in Bogota; and the Universidad Industrial de Santander in Bucaramanga.

Dr. Carol P. Brown, Department of Modern Languages and Intercultural Studies, chaired a session on Latin American literature at the Annual Mountain Interstate Foreign Language Conference held on October 17, 1981 at Eastern Kentucky University.

Dr. Kenneth T. Cann, Department of Economics, spoke on "Brazil as a World Power" at the 31st Annual Foreign Affairs Conference held in April, 1981 at the University of Louisville. Dr. Cann taped a radio program on the same topic for WKYU—FM.

Dr. Richard V. Salisbury, Department of History, presented a paper entitled "Diego Rivera and the Mexican Anti-Imperialist Movement" at the VI Conference of U.S. and Mexican Historians held on September 10, 1981 at the University of Chicago. Dr. Salisbury gave a lecture on "Kentuckians at the Battle of Buena Vista" to the members of the Filson Club on November 2, 1981 and served as chairperson and discussant for a session on Latin American history at the meeting of the Southern Historical Association held in Louisville, Kentucky on November 13, 1981.

Center for Latin American Studies
Western Kentucky University
Bowling Green, Kentucky 42101

NON-PROFIT
ORGANIZATION
U. S. POSTAGE
BULK RATE
PERMIT 398
BOWLING GREEN,
KY. 42101