Fondo para Productores de Ladera: Public Funding for a Private Extension System for the Hillside Farmers of Honduras[1]

James C. Hanson, Jorge Lainez, James Smyle, and Wilfredo Arrazola Diaz[2]

Situation

Fondo para Productores de Ladera (FPPL) is a publicly funded, private delivery extension system in the Honduran states of Yoro, Olancho, and Francisco Morazán designed to work with small farmers in hillside agriculture. FPPL is part of the Natural Resource division of the Ministry of Agriculture and Livestock in Tegucigalpa. FPPL became operational in June 1999 and terminates in December 2003. It is a pilot effort whose second phase is currently under preparation and expected to continue through 2008.

The objectives of FPPL are 1) reduce the environmental degradation associated with deforestation and soil erosion on the hillsides, 2) work with small farmers who live on these hillsides to increase their income and quality of life, and 3) develop a long-term financing mechanism that the Honduran government can use to continue this program. Historically, the Honduran government has not provided service to these upland farmers instead focusing on "farmers with potential" (those on the best lands). However, since there is a strong cause and effect relationship with poverty, lack of food security, and hillside agriculture accelerating the rate of deforestation and soil erosion in these upland communities, there is a new commitment to providing educational advice to these small farmers (World Bank, 1997). Hurricane Mitch demonstrated the importance of this emphasis when the damage due to landslides and sediment deposition was greatly enhanced due to deforestation.

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[2] Jim Hanson is an Extension Economist at the University of Maryland, College Park, MD, USA; Jorge Lainez is the Coordinator of FPPL at Projecto de Administracion de Areas Rurales – PAAR, Tegucigalpa, Honduras; Jim Smyle is a Natural Resource Economist at the World Bank, Washington, DC; and Wilfredo Diaz is the Manager for the Unidad Administratradora de Projectos (UAP) at Centro Agronomico Tropical de Investigacion y Ensenanza (CATIE), Tegucigalpa, Honduras.

Administration and Operation

The administration of FPPL was competitively bid out and CATIE's proposal was selected. CATIE is an agricultural research and education center located in Costa Rica with country offices located throughout Central America. There are eight technical specialists and a director hired by CATIE. There are two agronomists and one forester in Yoro, one agronomist and one forester in Olancho, two agronomists in Francisco Morazán, and one information and technology expert in Tegucigalpa. The director is also located in Tegucigalpa. It is the job of these technical specialists to promote the program, evaluate proposals developed jointly by the private companies and community groups, monitor and evaluate the program's functioning at the field-level, supervise contractual aspects, and certify results. The private companies hire their own agricultural technicians to work directly with farmers.

The four activities of FPPL are technology transfer, small watershed management, training, and applied research. To date, major activities have focused on technology transfer. Through CATIE, the national government contracts with private companies to provide agriculture and natural resource educational advice (extension) to small farmers on the hillsides in these Departments (Figure 1). A private company may have more than one project, but each project is limited to 8 villages of approximately 20 families each. There are two agricultural technicians for each project with each working with 4 villages or 80 families (visiting a village at least one day per week). Home economists and forestry technicians may also be employed.

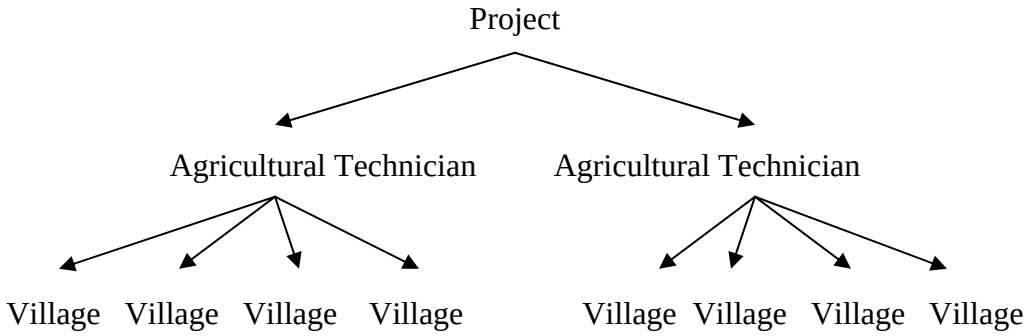
The private companies work in a participatory fashion with each village to develop a proposal in which they identify goals that they want to accomplish in the upcoming year. There are several subject matters from which they can choose (Agricultural Production, Forestry Production, Livestock Production, Soil Conservation, Home Improvements, and Environmental Education). Across all subject matters, there are 64 specific activities from which they can select to work. For example, a given village may want to practice improved maize production on 25 manzanas[3] (Agricultural Production), plant 800 meters of live grass barriers on the hillsides (Soil Conservation),

[3] One manzanas is equal to .7 hectares.

and plant 560 meters of trees (Forest Production). The proposal is submitted to the government and upon approval a contract is granted for one year.

The private company is paid approximately $27 per family to write a proposal and, if the proposal is accepted, $216 per family to implement the proposal for one year. In subsequent years, the private company is not paid to write a new plan, only for implementation. Villages do not receive direct subsidies such as free seeds or health care for animals. Their only subsidy is the educational advice and assistance provided by the private company.

Figure 1. Guidelines for a private company to develop an extension project.



(Each village has, on average, 20 families or 160 families per project; each village must meet certain characteristics (geographical, income, and social) as specified in the contract)

Every three months, a private company's project is certified (evaluated) by the technical specialists from CATIE. The certification is composed of a quantitative assessment that is allotted 60% of the total score and a qualitative evaluation that is allotted 40% (24% from interviews with agricultural technicians and 16% from interviews with farmers). For certification, two villages are selected at random within a given project (8 villages total). Physical measurements of planned goals for individual activities are made by the technical specialist from CATIE for the quantitative analysis. For the qualitative portion, the technical specialist interviews 15% of the families (typically 3 families per village) and the agricultural technicians who work with these two villages. It takes the technical specialist one day per village to conduct this

certification. Since each technical specialist oversees 8 projects, then 16 days are required per specialist per quarter to perform certifications of private companies. Assuming a successful certification, then the private company is paid for that portion of work. At the beginning of the contract, the private company receives 50% of its project funds, then 20%, 20%, and 10% every three months through the end of the year. The private companies post a performance bond in order to receive the 50% advance.

Results

It is expected that a private company would conduct multiple years of the same project with the same villages. Currently, 51 first year projects have been planned of which thirty-eight projects were completed and their second year of operation begun (Table 1). More second year projects will be initiated as other projects complete their first year of operation. Some tentative conclusions are:

- The technology transfer component of FPPL has been a major success. Over 8,900 families were served by first year projects far exceeding the original goal of 6,500 families for FPPL (World Bank, 1997).
- The basic premise of technology transfer was that private companies would work together with poor villagers to set and achieve agricultural and natural resource goals – that premise appears to be valid. Among the principles upon which the technology transfer projects were based are:
    - Technologies that were advocated would be low-cost.
    - Technologies would offer quick results to the farmers since there were no financial incentives or subsidies.
    - Farmers would be encouraged to validate technologies on their farms.
    - Agricultural technicians would work with a selected number of families within each village so that those selected could in turn teach other farmers.

Table 2 compares performance of private companies in meeting their goals between the first year and second year of operation. Specific activities were grouped together into a common subject matter (i.e., improved maize and soybean production, and crop diversification were grouped under Agricultural Production). Only the Agricultural Production, Soil Conservation, and Home Improvement subject matters were included in this table. Some tentative conclusions are:

- In Year One, private companies and villagers exceeded their planned goals for Agricultural Production, Soil Conservation and Home Improvement. They met or exceeded all their specific goals except for contour retention ditches and animal housing.
- In Year Two, private companies and villagers met their goals for Soil Conservation and Home Improvement, but not for Agricultural Production. In general they met their goals for specific activities except for agricultural diversification and contour retention ditches.
- These goals are set collaboratively by the private companies and the villages. This participatory approach may have accounted for a large measure of the success of this project in Years One and Two. Following the advice of Bunch (1999), if the goal of the extension program is protecting resources (i.e., planting grass barriers), then the program will be more successful when both income generating and resource protecting technologies are promoted than if protecting resources were the only focus.

Lessons Learned

1. The privatized technology transfer system, in which private companies work with groups of villages to accomplish common goals, has worked well within FPPL. The participatory extension system, based on farmer input and cooperation, while utilizing agricultural and natural resource technologies that are low-cost and which offer quick results to the farmers, is a good model.
2. In FPPL, farmers participate in the design of the extension programs to be provided by private companies. However, it is important that they increase their ownership of these programs through assistance in evaluating the private companies and the help in designing new outreach strategies to better serve their communities.
3. A publicly-financed private extension system requires significant administrative effort to protect the contractual integrity of the system. In FPPL, the time spent by the 8 technical specialists to certify private companies is excessive and takes them away from important agricultural and natural resource leadership roles within their state. It has been recommended that the number of certifications should be reduced and pay-out schedules adjusted accordingly. Or, alternatively, younger and less

experienced staff could be utilized for carrying out the more mechanical, less demanding activities (such as certifications), freeing up more experienced staff for quality control and technical support In general, while there are efficiencies gained by privatizing the extension delivery system, the overhead costs associated with enforcing contracts and preventing abuses can be significant.

4. Governments need to provide and/or supervise training for the agricultural technicians of the private companies. While it might be assumed that the private companies would provide their own training, that is unlikely since most of these private companies are in their infancy. In Honduras, there has been a high turnover among the agricultural technicians at the private companies. Of the 193 technicians that had been hired through 2001, 73 or 38% had changed their jobs (CATIE, 2001). Some had shifted between companies because of salary and other considerations, but many were lost through attrition. Training programs and professional improvement would be important to increasing job retention.
5. Agricultural training events and applied research have lagged behind technology transfer. An increased emphasis in these areas can be provided by the technical specialists from CATIE, especially when their responsibilities for certification of private companies are reduced. In general, however, training and applied research efforts are necessary if extension programs are going to be sustainable.
6. Two of the FPPL goals were to a) reduce the environmental degradation associated with deforestation and soil erosion on the hillsides, and b) work with small farmers who live on these hillsides to increase their income and quality of life. These activities are complementary. Deforestation and accelerated soil erosion are symptoms of the broader problems which leave poor households with little alternatives to exploiting hill slopes and marginal lands in a desperate attempt to feed their families. When these farmers have developed a sustainable agricultural system, then their soil maintains its productivity and the need to move to new lands is greatly reduced (consequently reducing deforestation and soil erosion). The reduction in deforestation, however, is not the same as forestation. They are both equally important, but the reduction in deforestation must precede forestation, i.e., in general, a basic production system must be stabilized and made sustainable so that successful,

alternative land management activities can then be introduced with a reasonable expectation of adoption.

7. Currently, FPPL counts various output measures such as meters of live grass barriers, number of new cook stoves, and other related activities. Where possible, these output measures should be transcribed into improved outcomes for villagers and their environment. An analysis has shown that the benefit cost ratio for increased agricultural income at the village level using environmentally friendly practices (including the cost of the FPPL extension program) is 1.4 (Hanson, 2000). In addition, the economic benefits associated with improved water quality and protection of other natural resources should be estimated.

Rural Development

The FPPL extension program links natural resource conservation with rural development in a positive fashion. Farmers are taught how to conserve their soils and protect the hillsides through a combination of soil conservation and agricultural diversification efforts. Focusing on both creates a profitable agriculture and a clean environment. Farm communities have increased incomes to spend in their rural communities and the negative effects of environmental degradation is greatly mitigated.

The majority of private companies providing extension advice are located in the rural areas of Yoro, Olancho, and Francisco Morazán. Over two million dollars have been invested in those states through contracts with these companies. The economic multiplier effect, through this small business enhancement program, is significant.

References:

1. Bunch Roland, "Reasons for Non-Adoption of Soil Conservation Technologies and How to Overcome Them". Mountain Research and Development, Vol. 19, No. 3, 1999, pp 213-220.
2. Hanson, James C. "Quantitative Assessment of the Cropping System Initiatives of the Technology Transfer Section of Fondo para Productores de Ladera", submitted to James Smyle, World Bank, Washington, DC. November 2000.
3. UAP-CATIE, 2000 Annual Report for Fondo para Productores de Ladera.
4. UAP-CATIE, 2001 Annual Report for Fondo para Productores de Ladera.
5. World Bank, "Staff Appraisal Report, Honduras Rural Land Management" Report No. 15917-HO, February 28, 1997.

Table 1 . Number of private companies, projects, families served, and costs of operation for technology transfer projects in their first and second year of operation, 200-2002.

	1st Year of Operation: 51 Planned Technology Transfer Projects						
	No. of Private Companies	No. of Projects	No. of Families	Plan Costs/ Family ($)	Project Costs/ Family ($)	Total Costs/ Family ($)	Total Costs ($)
Yoro	12	25	4,402	$27	$216	$243	$1,067,573
Olancho	5	10	1,711	$27	$212	$239	$408,193
Francisco Morazán	8	16	2,840	$26	$218	$244	$693,698
Total	25	51	8,953	$27	$215	$242	$2,169,465

	2nd Year of Operation: 38 Planned Technology Transfer Projects						
	No. of Private Companies	No. of Projects	No. of Families	Plan Costs/ Family ($)	Project Costs/ Family ($)	Total Costs/ Family ($)	Total Costs ($)
Yoro	11	22	3,840	0	$217	217	$833,280
Olancho	4	9	1,617	0	$213	213	$344,130
Francisco Morazán	5	7	1,223	0	$221	221	$269,989
Total	20	38	6,680	0	$217	217	$1,447,399

Source: UAP-CATIE

Table 2. Comparisons between 41 projects that have completed their 1st year of operation and 7 projects that have completed their 2nd regarding their ability to meet their planned goals and change in output per village from year one to year two, 2000-2002.

		1st Year: 41 Projects: 324 villages with 7,121 families and 22 families per village				2nd Year: 7 Projects: 56 villages with 1,346 families and 24 families per village				
A. Agricultural production		Planned	Completed	% Change	Average Ouput/Village	Planned	Completed	% Change	Average Ouput/Village	% Change in Avg. Output
Maize	Mz.	9,346	10,416	111%	32	1,559	1,539	99%	27	85%
Beans	Mz.	6,485	6,909	107%	21	1,376	1,355	99%	24	114%
Diversification	Mz.	1,317	1,469	112%	5	211	79	38%	1	31%
			Average	110%				78%		77%
B. Soil Conservation										
Live grass barriers	Mts.	225,450	231,937	103%	716	43,535	44,466	102%	794	111%
Contour retention ditches	Mts.	24,208	15,033	62%	46	2,518	2,218	88%	40	85%
Managing stubble	Mz.	3,592	4,831	135%	15	745	799	107%	14	96%
Cover Crops	Mz.	533	1,299	244%	4	477	510	107%	9	227%
Contour planting	Mz.	1,171	1,353	116%	4	356	341	96%	6	146%
Narrower sowing distance	Mz.	1,007	1,012	100%	3	104	100	96%	2	57%
			Average	127%				99%		120%
C. Home Improvement										
Home gardens	Mz.	302	1,355	448%	4	46	49	107%	1	21%
Improved Cook Stoves	Not.	1,572	1,592	101%	5	256	233	91%	4	85%
Animal Housing	Unit	1,737	1,504	87%	5	331	330	100%	6	127%
Animal health in chickens	Tratam.	14,558	17,584	121%	54	1,149	1,155	101%	21	38%
Source: UAP-CATIE			Average	189%				100%		68%