



# Trip Report: The Structure and Performance of Rural Financial Markets and the Welfare of the Rural Poor

---

**Country: Mexico Dates: November 9-20, 2003**

**By Steve Boucher**

- Itinerary
  - November 9: Mexico City
  - November 10 – 12: Amecameca Municipality, State of Mexico
  - November 13 – 15: Mexico City
  - November 16 – 19: Cortazar Municipality, State of Guanajuato
- Primary Participants:
  - UC Davis: Steve Boucher, Ed Taylor, Susan Materer
  - Colegio de México: Antonio Yunez, Angeles Chavez, George Dyer

## Trip Objectives

In addition to several minor goals, the two main objectives for this trip were:

- Field test household instrument: During September and October, Yunez and Chavez modified the Peru household instrument to fit the Mexican context. A primary objective of this trip was to test the credit and agricultural production/cost modules. These modules required (and continue to require) significant modification because the agricultural practices, agrarian contracts (land, credit, insurance...), and institutional histories are highly location specific. After applying these modules to approximately 20 farmers, we have made significant modifications to the instrument. A second field test will be carried out in December in Oaxaca, which is the second primary field site of the Mexican study. A final field test is planned for February – one month prior to the beginning of data collection.
- Finalize sample frame in Guanajuato: Household surveys will be carried out in two states in Mexico: Guanajuato and Oaxaca. Within each of these states, farm households will be selected from both irrigated and rainfed areas. In January 2003, Yunez and Taylor carried out a national household survey in 80 communities in rural Mexico. In that survey, 5 communities were selected in Guanajuato and 7 in Oaxaca. These communities are all in rainfed agricultural areas and will serve as the sampling frame from which we will draw the rainfed portion of our sample. As the Taylor – Yunez study was focused on rainfed areas, we needed to construct a sample frame of households with access to irrigated land. The natural starting point for constructing this sample frame is the Irrigation Districts (*Distritos de Riego*) – the user organizations which manage, distribute, and collect fees for water use. Each District, in turn, is subdivided into modules (*modulos*) at which level the individual farmer records are kept. During this trip we established a good working relationship with one of the main modules in Guanajuato – module 4 of district 11 in Cortzar. We acquired a hardcopy of the water users list (*pardon de usuarios*) which will serve as an ideal sample frame. We are currently working to establish agreements with neighboring modules to increase the area covered by our sample frame. The same process will be followed to establish the sample frame for households with access to irrigated land in Oaxaca during the second field test in December.

## Trip Details

### Part I. Arrival (11/9).

On Sunday, November 9, Ed, Susan and I traveled from Davis to Mexico City. Sunday night we met with Antonio Yunez and Angeles Chavez of the Colegio de Mexico to review the agricultural and credit modules of the survey that we would be applying in the upcoming week.

### Part II. Field testing of survey in Amecameca and Ayapango, Mexico (11/10 – 11/12).

On Monday Ed, Susan, Angeles and I traveled to the municipality of Amecameca – which is approximately 100 km east of Mexico City in the state of Mexico. We were met by Marlene Martinez, who worked as a supervisor in this region of Mexico during the national survey in January, 2003 and who had arranged several interviews for us with farmers and agricultural extension workers. Agriculture in this area is predominantly rainfed with a single growing season – called the spring/summer season – between May and November. Corn and grains – such as wheat and barley – are the dominant crops. There is also a mix of private and ejidal lands.

We spent most of the Monday in Ayapango – a community in the municipality of Amecameca - speaking with Mr. Artemio Gonzales Gonzales. Mr. Gonzales was the president (*comisariado*) of the Miguel Negrete ejido in the mid-1990's. This is the period during which the ejidal reforms – implemented by the government program *PROCEDE* took place. As Mr. Gonzales was involved in ejidal leadership during the provided us with keen insights as to what this latest round of Mexican land reforms has meant. We also took a walking tour of the surrounding farm land and spoke with several farmers who were engaged in the final stages of the corn harvest.

On Tuesday we applied the survey to two farmers. Farmer FGG is a member of the Ayapango ejido. He owns two plots – his ejidal plot of 4 hectares on which he grows corn for pasture for his 10 dairy cows and a second private plot of 3 hectares which he rented out to another ejidatario. The second farmer, MRF, was a medium sized private farmer. The contrast between these two farmers was striking. MRF also owned just under 10 hectares, however he grows raspberries for export and for the upscale hotel market in Mexico City. MRF farms jointly with his son – who has an agronomic engineering degree and who is primarily responsible for marketing the raspberries in Mexico City. They have a commercial loan with Bancomer, although the funds are state funds channeled through FIRA (government loan agency).

On Wednesday we applied the survey to two more farmers – LGR who is a private farmer that grows sorghum and corn in association with three brothers and AY who is an ejidatario that grows pasture for dairy cattle on both his own land and in land rented in from a small private farmer. In the afternoon we met with Luis García Gallegos – an extension worker from the Ministry of Agriculture (SEDAGRO) in the Ayapango office. Mr. García was very informative regarding the local names for the primary agricultural tasks in the region. He also provided an excellent overview of the distribution of land between ejidos and private farmers in the region.



(Susan Materer (UC-Davis) learning about post-harvest corn storage from Artemio Gonzales, the ex-president of the Miguel Negrete ejido in Ayapango, Mexico)

### Part III. Revision of survey and institutional meetings (11/13 – 11/15).

We returned to Mexico City on Thursday morning. We spent the rest of the day discussing modifications to the survey instrument based on the previous three days of interviewing.

On Friday Ed Taylor returned to Davis. In the morning and early afternoon, Susan and I met with the following institutions:

- USAID, Mexico City. We met with Jeremy Smith – AID’s new micro-finance officer. Jeremy was very interested in the BASIS research project and its potential to help inform AID’s rural finance policies in Mexico. Jeremy also provided valuable information on the thinking of the Fox government regarding rural finance. Of special interest was the new banking law that seeks to formalize the wide range of cooperative banking institutions (such as village banks). In addition, Jeremy expressed concern regarding the new government run financial institution “Financiera Rural”. This institution is a revived form of the defunct Banrural. The precise form which Financiera Rural takes is not yet defined and warrants close attention. If Financiera Rural ends up being a first-floor bank and directly lending to farmers, then this turn out to be an example of the “crowding out” of private financial initiatives by the state.
- Ford Foundation, Mexico and Central America Office. We met with David Myhre – the director of Ford’s “Finance for Development and Economic Security” program. David is an expert on rural financial markets in Mexico and was extremely helpful in laying out the current financial institutional landscape and its recent evolution. The Ford Foundation is currently working with

several micro-bank organizations in areas of extreme poverty. One of these institutions (AMUCS) operates in the Oaxacan highlands. We discussed the possibility of choosing the BASIS survey communities in relation to the areas where Ford is working (a quasi-controlled experiment with some communities in AMUCS areas and others not). David also put us in contact with the Mexico City office of AMUCS which we visited next.

- Mexican Association of Social Sector Credit Unions (AMUCS). We made a quick visit to the central office of AMUCS to introduce ourselves – primarily Susan since she will be returning to Oaxaca where AMUCS operates in December. We met with Rafael Ramirez Bustamante – the general administrator. AMUCS also has an extensive bookstore from which we acquired a good deal of background literature on rural financial markets in Mexico. AMUCS appears to be a very dynamic and interesting institution. We will follow up on this initial contact in subsequent visits to establish a more formal relationship.
- Freedom from Hunger. We met with Kathleen Stack and April Watson, who were in Mexico to identify partner micro-finance institutions interested in incorporating a business training and services component into their financial product. Freedom from Hunger (which is based in Davis, CA) will be working closely with various rural MFI's in the next several years and will be an important source of information for the evolution of the Mexican government's rural finance policies.

Late Friday afternoon we returned to the Colegio de Mexico to meet with five of the field supervisors from the national household survey. The objective of this meeting was to discuss the viability of working in different regions and to strategize with the supervisors regarding the recruitment of enumerators and timing of the survey.

On Saturday Susan, Angeles and I completed modifications of the survey and printed copied in preparation for the trip to Guanajuato.

#### Part IV. Second field test in Guanajuato (11/16 – 11/19).

On Sunday, Antonio, Susan and I drove to Cortazar municipality in the state of Guanajuato. We were joined in Cortazar by George Dyer – an agricultural economist at the Colegio de Mexico's branch in Morelia. Cortazar is a strong agricultural area within Mexico's vast central plain known as El Bajío. The region contains one of the largest expanses of irrigated agriculture in the country. Irrigation takes one of three forms: 1) Gravity from an extensive reservoir and canal system; 2) Private wells; and 3) Communal wells. The communal wells were sunk by the government and serve between 5 – 20 individual farmers. As part of the economic reforms of the 1990's, most of the irrigation infrastructure (communal wells and canal system) was turned over to the users. The reservoirs and primary canals, however, continue to be managed by the National Water Commission (CNA).

On Sunday afternoon we met with Rubén Balderas. Mr. Balderas was the mayor of Cortazar for two terms in the 1980's and early 1990's. He is also a private farmer who operates over 80 hectares of irrigated land on which he grows vegetables (broccoli and lettuce) and grains (corn and sorghum). Mr. Balderas was truly a gem for us. He oriented us to agricultural issues in the region, served as a tour guide of farms and agro-processing facilities, and set up many interviews with local farmers.

On Monday morning, we toured Mr. Balderas' farm and toured several grain storage and agro-processing facilities. On Monday afternoon we applied the survey to three farmers, including two private farmers who operated between 40 – 60 irrigated hectares and an ejidatario who owned 10 irrigated hectares and rented in an additional 20 hectares. On Tuesday we applied 6 more surveys, again divided between ejidatarios and private farmers.

Several interesting points emerged. First, inter-linked credit cum output contracts with agro-processors such as chicken feed manufacturers and vegetable exporters (Birdseye) are a common means of financing variable inputs. Second, heavy late rains in September caused flooding and significant standing crop loss

throughout the region. The risk module of the survey instrument performed relatively well in capturing the quantitative impact of this shock, although we need to modify the ability to respond questions to reflect different forms of insurance that were available. Third, many of the farms in this region have access to the electrical grid. This implies greatly reduced irrigation cost for those who do not have access to the canal system and must instead pump groundwater from wells. We have modified the survey form to capture whether or not the parcel has access to the electrical grid.



(From right to left: Angeles Chavez (Colmex), George Dyer (Colmex), and Susan Materer (UC-Davis) field testing production survey with farmer in Cortazar, Mexico.)

Finally, we discussed a very interesting contractual form of credit with one of the farmers. Mr. HC, who is an ejidatario and works his own 10 hectares of ejidal land plus rents in 20 hectares of private land, finances his sorghum crop with a contract from an *afianzador*. This is a private individual – in this case a grain merchant – who borrows from a commercial bank and then on-lends to local farmers. Two aspects of the contract stood out. First, the *afianzador* used his own land as collateral for the bank loan and thus bears almost complete risk in this transaction. Second, the collateral offered by Mr. HC to the *afianzador* was the usufruct rights over his land. If Mr. HC defaulted, the contract (which was informal with no written documents) stipulated that Mr. HC and the *afianzador* would jointly work Mr. HC's land until the debt was paid off. This is precisely the type of information intensive contract that we might expect to be offered by local, informal lenders and to be accepted by risk averse farmers. Indeed Mr. HC was confident he could gain access to a formal loan by mortgaging his residential property, but he instead preferred this lower risk contract. The lower risk came at the cost of a higher interest rate, although the cost was not excessive – only 2 annual points above the bank rate. It will be interesting to see the degree to which these types of contracts are available to farmers in the study areas.

On Wednesday, Antonio and I met with members of the irrigation commission for the Cortazar area. Irrigation in this area is administered by Irrigation District #11 (*Distrito de Riego*). The Irrigation District, in turn, is subdivided into 4 Irrigation Modules (*modulos*). We met with Ruben Marquez Martinez president of District #11 and with Ramiro Merino, the head of agricultural services for Module

#4. Mr. Merino was very helpful. After explaining our research project, we discussed the possibility of using the water user list (*padron de usuarios*) as the sample frame for the irrigated farm sample. The user list is ideal as a sample frame. First it is an updated list of the population of farmers with irrigated land. Second, it provides additional data of use to us for stratification – such as farm size, tenure status (ejidal versus private) and irrigation source (canal, private well, communal well). The result of the meeting was that Mr. Merino provided us with a hardcopy of the user list – which includes approximately 7,000 parcels (representing 3,300 farmers as several have multiple parcels). He agreed to provide us with an electronic version of the list so that we can more easily select a random sample. In addition, Mr. Merino suggested that the workers from Module #4 would be able to assist us in locating the sample households once we draw the sample. This is important since the data base itself does not include home addresses. Antonio is currently approaching the other 3 modules within District 11 to see if we can enlarge the field area to the entire district – which would cover approximately 50,000 irrigated hectares and 25,000 farmers.

#### Part V. Wrap Up (11/19 – 11/20).

On Wednesday afternoon we drove back to Mexico City. Thursday morning was spent in the Colegio de Mexico making additional modifications to the survey instrument. Susan and I flew out of Mexico City early Thursday evening.

#### **Key impressions from the trip**

1. *The relationship between land, the state, and the ejidos continues to be extremely complex and evolving.* Coming into this trip, I had several key questions regarding this relationship. The first was: What factors impact the ejido's decision regarding their choice of property rights regime? Under the PROCEDE reforms, ejidos essentially had the choice between:
  - a. Remaining as they were (communally owned land with individual usufruct rights),
  - b. *Dominio Pleno.* This is the move to full, individual private property rights anticipated by the government;
  - c. *Certificado Parcelario.* This is an intermediate step whereby ejidatarios are granted an individual title to their land with certain restrictions over transfer rights enforced by the ejidal assembly.

The fact that the vast majority of ejidos in Mexico have opted for the third, intermediate option has been a source of some frustration for the Mexican government. One objective of the ejidal reforms was to promote a synergy between land and credit markets in which ejidatarios were expected to opt for dominio pleno and thereby be able to use their land as collateral – or facilitate the transfer of land to the most efficient users. Since almost all ejidos accepted the PROCEDE process – in which first the entire ejidal land and then each individual member's land were demarcated – the vast majority of ejidatarios have acquired their *certificado parcelario*, which established their individual property rights over their ejidal land. This is a necessary first step in order to acquire full private property rights. Why then, have so few ejidatarios taken this next step?

Our conversation with Mr. Gonzales revealed several answers. First and foremost, taking this step would effectively sever an individual's relationship to the ejido. The ejido, after all, is an institution to acquire, manage and protect land rights. After the revolution, when ejidos were formally established on expropriated land, the national government set up a set of parallel institutions to manage ejidal land. Property rights were established and maintained in the Agrarian Registry (Registro Agrario) in the Procuraduria Agraria. The individual, ejidal titles (*certificado parcelario*) acquired in the PROCEDE process are filed in the Agrarian Registry. In order to acquire dominio pleno, an ejidatario must transfer his title from the Agrarian Registry and into the National Land Registry (Registro Nacional de Propiedad) – which is the institution managing property rights over private land. This act, by transferring the recognition of property

rights from the national institutions which manage ejidal issues to the institutions which manage private property thus effectively severs the ejidatario's membership in the ejido. Formally, this act signifies that the farmer is no longer an ejidatario and instead has become a small private farmer (*pequeño propietario*).

Why would an ejidatario be hesitant to "leave" the ejido and become a private property owner? As we found in this trip there are many components to this answer.

- The ejido has historically been the interface between rural households and the state. Municipal, state, and federal government have historically run programs – such as employment, insurance, and targeted transfers – through the ejidal government. Thus leaving the ejido in order to gain full private property would disqualify an ejidatario – and their family – from access to state programs.
- The ejido provides tenure security. Although the government intended full private property rights to provide greater tenure security than the ejido, this is not necessarily the case. The ejido provides security in two unique forms. First, ejidos have significant political power and thus can provide a counter-weight against land claims or incursions by private individuals (or even the state). Again, it is important to understand the history of the ejidos as a land-based institution and the experience of fighting for land that has accumulated and permeated ejidal identity over time. Second, ejidal land cannot be foreclosed upon. This sets up somewhat of a contradiction. On one hand, this restricts ejidatarios' access to commercial credit which typically requires a land-based mortgage. On the other hand, there are other lenders – informal and semi-formal – who offer non-mortgage based loans. Several farmers indeed suggested that they preferred to pay a higher interest rate for informal loans because they did not require land as collateral.
- Ejidatarios can now offer residential plots as collateral. An interesting component of the PROCEDE reforms was the granting of full private property rights (*dominio pleno*) over the *solar* – or residential plot. Thus ejidatarios who want to gain access to commercial loans may choose to offer the solar instead of agricultural land. If so, they would have little incentive to privately title their agricultural plots.
- Commercial loans continue to be relatively scarce. Acquiring *dominio pleno* over an ejidal plot may be a necessary but not sufficient condition for gaining access to commercial credit – which continues to be exceedingly scarce in rural Mexico.
- The ejidal title (*certificado parcelario*) provides high tenure security. The literature has emphasized three potential benefits of property titles: 1) Increased investment demand via enhanced tenure security; 2) Increased credit access via collateralization; and 3) Increased investment demand via greater marketability and salability of land. With the *certificado parcelario*, ejidatarios have achieved greatly enhanced tenure security. They no longer fear having their land reclaimed and redistributed by the ejido if they do not directly work the land (for example due to migration or renting-out). Thus the *certificado parcelario* has certainly provided the first benefit – without any need for *dominio pleno*. While the *certificado parcelario* does not enhance commercial credit access (since banks cannot foreclose upon it) it is not clear that *dominio pleno* would enhance credit access. Finally, *dominio pleno* apparently increased the marketability of land via sales, although it appears not to greatly enhance it for rentals since farmers appear to have no hesitation in renting out land (either to other ejidatarios or to private farmers) if it has a *certificado parcelario*.
- Acquiring full, private title is costly. The federal government covered the costs of demarcation and granting of the *certificado parcelario*. The cost of gaining and registering private title with the National Land Registry must be covered by the individual farmer. The registration cost alone ranges between \$50 - \$200. When time and other transactions costs are added, this can be a significant and prohibitive cost for poor farmers.
- Ejidal titles are exempt from property taxes. In addition to the fixed costs noted above, an ejidatario who opts for private title would also be faced with an annual property tax. Ejidal land is – at least for now – exempt from this tax. Even if the tax amount is negligible, the perception that the state would become involved in an ejidatario's land is very distasteful.

Ejidatarios seem not to trust the state and believe the state has a hidden agenda in promoting private titling.

Sorting out these – and likely many other – factors in this decision will continue to be a major goal of this research.

2. *Land rental markets are very active and complex.* Almost all of the farmers we interviewed were involved in temporary land markets – either on the supply or demand side. Migration seems to play a very important role in the rental market. On one hand, migrant remittances serve as capital that permits family members to rent-in land in Mexico. Other households, in contrast, who no longer fear expropriation of ejidal land if they do not work the land have decided to migrate. Although we only traveled to two small areas, the heterogeneity of contracts and contract terms was incredibly rich. This heterogeneity presents challenges to data collection. The diversity of sharecropping arrangements are the most challenging. Consider the following example. One farmer supplies land in a contract called *a tercios* (thirds) – which suggests that the output would be split one-third to one party and two-thirds to the other party. When we asked more details about the transaction it was clear that this was not the case. Instead, the arrangement stipulates that for every three rows of corn that the tenant harvests, the owner was to harvest one row. Both the output and cost sharing rules varied substantially across contracts. The challenge for the survey form is to design the instrument with sufficient flexibility to capture the range of sharing rules and contract terms while not making the instrument too complex for the enumerators. We have made several modifications in the instrument and will test them in the second field test in early December.
3. *Linked contracts with agro-processors are key sources of credit.* The presence of agro-processors and the crops they finance was most notable in the irrigated farming areas in Cortazar. Some examples include: Mexico's largest chicken feed producer (sorghum and corn), Birdseye (broccoli and lettuce), Cargill and Monsanto (seed for corn and barley). The contracts ranged from fairly formal (private, exclusive contract with Monsanto to produce seed corn) to highly informal (sorghum traders that financed variable costs with no written contract). In almost all cases, the farmer is obliged to sell the entire crop to the lender/firm. In some contracts (seed corn and broccoli) a forward price was established at planting time and thus the farmer's price risk was eliminated, while in others the output was transferred at the prevailing harvest spot market price. Of particular interest was the fact that none of the contracts required any type of collateral beyond reputation. We are currently working to modify the credit module in order to better capture the heterogeneity and complexity of these contracts. We were very pleased to see that our strategy of incorporating "key questions" regarding informal credit access throughout the survey (as opposed of depending completely on the credit module to capture all credit transactions) was quite successful. For example, after we ask the farmer about the sale of each crop, we ask if the buyer "helped" the farmer finance the costs of production. Several of the farmers reported these types of transactions – although when we ask them a more direct question "Did you receive any loans for agriculture?" they responded that they did not. The reason is that they consider the linked transaction as primarily an output market transaction – although it of course also has a credit component. Similar questions were successful regarding input supply credit in the cost section as well as housing and consumption loans in their respective survey modules.
4. *Property rights over and markets for water are complex.* Several interesting points emerged regarding water. First, while the state has relinquished much control over water management – especially for surface water – it maintains strict control over property rights to groundwater. In order to sink a private well, a landowner must acquire a concession from the National Water Commission. Due to a declining water table, there is currently a freeze on concessions (at least in the central municipalities visited on this trip). The impact of this freeze is much greater in rainfed areas. Several farmers we spoke with expressed frustration with this policy. They claimed that banks would not lend to farmers who depend on rain for irrigation. They have high

quality land and felt that sinking a well would be a profitable investment, however they were prevented by the freeze on well concessions. Second, in irrigated areas, there is an active market for well water. We spoke with several farmers who purchased land that does not have access to the canal system and also did not have a well concession. These farmers were able to purchase water from their neighbors who have wells. Pricing of the water was apparently based only on covering pumping costs. We are considering adding several questions to explore markets for groundwater as well as the impact of irrigation constraints on credit access.

## Appendix. List of Contacts from Meetings

Jeremy Smith  
Micro-finance officer  
USAID  
United States Embassy  
Email: [jeremy@usaid.gov](mailto:jeremy@usaid.gov)

David Myhre  
Development finance and economic security program director  
Ford Foundation  
Emilio Castelar 131  
Colonia Polanco  
11560 Mexico, DF  
tel: 52-55-9138-0270  
Email: [d.myhre@fordfound.org](mailto:d.myhre@fordfound.org)

Kathleen Stack  
Senior Technical Advisor  
April Watson  
Technical Associate  
Freedom from Hunger  
1644 DaVinci Court  
Davis, CA 95616  
Tel. 530-758-6200  
Email: [kstack@freefromhunger.org](mailto:kstack@freefromhunger.org)  
Email: [awatson@freefromhunger.org](mailto:awatson@freefromhunger.org)

Rafael Ramirez Bustamante  
Administrador General  
Asociación Mexicana de Uniones de Crédito del Sector Social, A.C. (AMUCS)  
Yosemite No. 45  
Colonia Nápoles  
C.P. 03810, Mexico, D.F.  
Tel: 52-55-.36-2073  
Email: [amucs@laneta.apc.org](mailto:amucs@laneta.apc.org)  
Email: [bybus@terra.com.mx](mailto:bybus@terra.com.mx)

---

[Return to Trip Reports Page](#)

---

*Posted 30 01 04*

This file: <http://www.basis.wisc.edu/live/finance/trip1103.pdf>