Group Credit: A Mechanism to Promote Economic Development Among New Mexico's Community Acequia Associations

Audon Jr. Trujillo

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The University of New Mexico
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GROUP CREDIT: A Mechanism to Promote Economic Development Among New Mexico's Community Acequia Associations

by

Audon Trujillo, Jr.
University of New Mexico, 1983

Professional Project

Submitted in Partial Fulfillment of Requirements for the Degree of

Master of Community and Regional Planning (M.C.R.P.) Rural Development Concentration

The University of New Mexico
Albuquerque, New Mexico
September, 1983
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ABSTRACT

GROUP CREDIT: A Mechanism to Promote Economic Development Among New Mexico's Community Acequia Associations

Audon Trujillo, Jr.
B.A., Education, University of New Mexico, 1975
M.C.R.P., University of New Mexico, 1983

Community irrigation systems have existed in New Mexico for over four hundred years. Today over 800 legally recognized Community Acequia Associations exist in New Mexico. Their members, predominantly Hispanic, have small-scale landholdings averaging from three to ten acres and own over 160,800 acres of New Mexico's surface irrigated farmland. Though this agricultural resource base is extensive, these small-scale farmers have not received an equitable portion of assistance offered to enhance agricultural production.

Group Credit has been used by National Development Foundations in the Caribbean and in Latin America to provide financial assistance to the rural poor in order to enable them to undertake income producing projects. The group credit mechanism is proposed as an appropriate means to 'promote' agricultural production on New Mexico's traditional small-scale acequia irrigated landholdings. Additionally, a process is suggested to establish a New Mexican Rural Credit Foundation which would provide group credit to New Mexican Community Acequia Association members.
INTRODUCTION

This paper seeks to advance a group credit model for providing financial assistance to Acequía (Ditch) Association members in New Mexico. The group credit model has successfully provided financial assistance for successful income-producing projects undertaken by groups in various Caribbean and Latin American countries. In addition the group credit model provides technical and organizational support to the groups assisted. This increases financed groups' ability to successfully complete projects and repay their financial obligations.

The group credit model offers a unique opportunity to provide New Mexico's Acequia Association members, predominantly small-scale minority farmers, with financial assistance needed to undertake agricultural and other related income-producing projects. In so doing it provides resources to promote agricultural production on New Mexico's scarce surface irrigated farmland and offers a unique opportunity to increase rural income and curtail the loss of farmland. As the group credit model is backed by technical and organizational assistance, the Acequia Associations would receive the necessary support activities needed to carry out successful income-producing projects. Additionally, they would be obtaining the support needed for Acequia members to view themselves as a cohesive interest group capable of making and implementing decisions which
affect their community's development.

It is important to recognize that the proposed group credit model follows a "basic needs" development approach. The "basic needs" development approach, advanced most convincingly by Diana Conyers, requires the aims of development policies and programs to meet the "basic needs" of the entire population.

"The emphasis on meeting the basic needs of the entire population means that development policies and programs must be directed towards the poorest sectors of the population, if necessary at the expense of more affluent sectors."

This development approach assumes three basic needs: 1) basic consumptive goods that everyone is entitled to (e.g., food, clothing, and shelter); 2) basic services that everyone should have access to (e.g., education, health services, a clean water supply, etc.); and 3) the right to participate in making and implementing decisions which affect one's own development. In addition the basic needs development approach assumes productive employment is essential to human development. Employment is essential due to its role of being the means by which to secure basic goods and services and the sense of personal satisfaction which productive activity provides.

The group credit model has by design incorporated the integral aspects of the "basic needs" development approach. The group credit model's main thrust is to provide the rural poor, considered a high credit risk, access to a
basic service, namely: credit. Thus the group credit model, by financing grass roots income-producing projects, provides employment opportunities for sectors of the population which private lenders and government entities alike ignore.

In New Mexico the group credit model seems to be particularly well suited for promoting small-scale agricultural production projects undertaken by Acequia Association members. In providing credit to these small farmers--via their Acequia Associations--the model allows the recipients to play a predominant participant role in deciding how to develop their resource base: New Mexico's scarce farmland irrigated with surface water.

This paper is divided into three sections: I New Mexico's Community Acequia Associations; II The Group Credit Model; III Subsequent Action Needed to Realize a Successful Group Credit Foundation in New Mexico.

In the first section the reader is acquainted with New Mexico's Acequia Associations and their ownership of New Mexico's scarce resource of surface irrigated farmland (farmland irrigated with surface water). The second section describes the history of the group credit model, the financial, organizational and technical support group credit provides as a mechanism to promote development in rural areas. The third section identifies three preliminary target areas for establishing a pilot group credit program in New Mexico and develops subsequent action needed to realize a
successful group credit program in New Mexico.

It is hoped that the group credit model will, in the near future, provide a mechanism for New Mexico to preserve its scarce farmland. The provision of group credit to New Mexico's small-scale acequia farmers could provide additional part- and full-time employment for rural residents, and, importantly, develop group solidarity necessary for other projects to be undertaken by Acequia Associations and other rural community groups.
I. NEW MEXICO'S ACEQUIA ASSOCIATIONS

Eight hundred and nineteen (819) Community Acequia* (Ditch) Associations are legally recognized by the state of New Mexico (see Chart I on page 2).** Community Acequia Associations are composed of small-scale landholders, predominantly minority members of Hispanic heritage. New Mexican Community Acequia Association's irrigation systems--acequias--irrigate an average of one hundred and ninety-six acres. A Community Acequia Association has between two and two hundred members with each member having approximately three to ten acres irrigated by their community acequia system. These community associations' irrigation systems irrigated over 160,800 acres in 1978. In 1980 this figure comprised fifty-two percent (52%) of New Mexico's 308,050 acres irrigated by surface water. The 308,050 surface only irrigated acreage in 1980 amounts to but a mere 0.4% of the state's total land area of 77,866,240 acres.

Irrigated acreage in New Mexico is crucial to agri-

* Acequia--Spanish word, literal translation meaning against drought, pronounced ah-say-kya.

** This figure, compiled from A Roster, by County of Organizations Concerned with Surface Water Irrigation in New Mexico (Revised 1978), omits legally recognized Community Acequa Associations in the Upper Pecos River Valley which irrigate over 3,700 acres. The source also notes that no Community Acequia Associations were reported in seven of the states's thirty-two counties: Bernalillo, Curry, Doña, Harding, Lea, Los Alamos, and Roosevelt.
## Chart I

### Community Acequia Associations in New Mexico by County (1978)*

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>NUMBER OF COMMUNITY ACEQUIAS</th>
<th>COMMUNITY ACEQUIAS IRRIGATED ACREAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NORTHWEST DISTRICT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bernalillo</td>
<td>NR**</td>
<td>NR</td>
</tr>
<tr>
<td>Los Alamos</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>McKinley</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rio Arriba</td>
<td>164</td>
<td>28,727</td>
</tr>
<tr>
<td>Sandoval</td>
<td>27</td>
<td>3,911</td>
</tr>
<tr>
<td>San Juan</td>
<td>45</td>
<td>30,962</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>82</td>
<td>4,865</td>
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<tr>
<td>Taos</td>
<td>153</td>
<td>28,470</td>
</tr>
<tr>
<td>Valencia</td>
<td>6</td>
<td>1,325</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>99,762</strong></td>
</tr>
<tr>
<td><strong>NORTHEAST DISTRICT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colfax</td>
<td>15</td>
<td>2,537</td>
</tr>
<tr>
<td>Curry</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>De Baca</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>9</td>
<td>3,805</td>
</tr>
<tr>
<td>Harding</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Mora</td>
<td>95</td>
<td>23,380</td>
</tr>
<tr>
<td>Quay</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>San Miguel</td>
<td>73</td>
<td>8,874</td>
</tr>
<tr>
<td>Torrance</td>
<td>3</td>
<td>1,085</td>
</tr>
<tr>
<td>Union</td>
<td>7</td>
<td>2,417</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>42,098</strong></td>
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<tr>
<td><strong>SOUTHWEST DISTRICT</strong></td>
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<td></td>
</tr>
<tr>
<td>Catron</td>
<td>19</td>
<td>796</td>
</tr>
<tr>
<td>Grant</td>
<td>26</td>
<td>2,678</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Luna</td>
<td>5</td>
<td>408</td>
</tr>
<tr>
<td>Sierra</td>
<td>5</td>
<td>1,502</td>
</tr>
<tr>
<td>Socorro</td>
<td>1</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>5,418</strong></td>
</tr>
<tr>
<td><strong>SOUTHEAST DISTRICT</strong></td>
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<td></td>
</tr>
<tr>
<td>Chavez</td>
<td>8</td>
<td>3,158</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Eddy</td>
<td>3</td>
<td>6,544</td>
</tr>
<tr>
<td>Lea</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Lincoln</td>
<td>38</td>
<td>2,710</td>
</tr>
<tr>
<td>Otero</td>
<td>35</td>
<td>2,629</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>15,041</strong></td>
</tr>
<tr>
<td><strong>STATE TOTALS</strong></td>
<td>819</td>
<td><strong>160,817</strong>*</td>
</tr>
</tbody>
</table>

*Compiled from A Roster, by County of Organizations Concerned with Surface Water Irrigation in New Mexico, 1969, New Mexico State Engineer, Revised 1978.

**NR = None Reported

***160,817 = 0.49% of New Mexico's 77,866,240 acres
culture. Community acequia irrigation systems played a vital role in establishing the state's early self-sufficient communities based on agriculture and ranching (see Sena Case Study for discussion, page 10). In the 1930s the growth of industrialization changed the economic importance of community acequia systems. Following World War II small-scale farmers turned to urban areas, where jobs were concentrated, to earn their livelihood. Today, while most rural residents of New Mexico earn their primary income from non-farm employment, many community members continue to practice farming, albeit on a part-time basis. The community acequia systems concentrated in Northern New Mexico offer an important opportunity to increase family income in economically depressed areas of the state.

A. Land Use Development Pattern of Early New Mexican Communities

The importance of the community acequia systems is illustrated by the development of land use patterns utilized by early New Mexico communities. Communities throughout the state were established predominantly in valleys along rivers and streams to make full use of available surface water for irrigation. Prior to the industrial era homes, transportation systems, and commercial businesses were constructed uphill from the community acequia. Common grazing land was also located uphill away from the acequia irrigated farmland. Agricultural land irrigated by the acequia was divided among the families and located downhill from the acequia to
facilitate gravity flow irrigation. Each family had a narrow strip of land, typically three to fifteen acres, running perpendicular to the acequia. This development pattern recognized the importance of community acequia systems and allowed no construction on irrigated agricultural land (see illustration below).

CHART II
SENA, NEW MEXICO: LAND USE PATTERN
B. Projected Agricultural Land Loss

The development pattern practiced by early New Mexico settlers enabled early settlers to maintain their subsis­tence farming-ranching livelihood by making maximum use of natural resources. This land use pattern continues to be respected today by rural communities and has served to preserve New Mexico's scarce irrigated lands. Unfortunately, development pressures exist today which threaten to convert prime agricultural land irrigated by community acequia systems.

The self imposed community "defacto" zoning which is embedded in the cultural traditions of rural communities in New Mexico may give way to development due to development pressures. The 1960-1980 development boom experienced in Albuquerque, Santa Fe, Las Cruces, and Farmington exemplify the rapid conversion of agricultural land to non-agricul­tural use. A 1980 study concluded that New Mexico had converted twenty-nine thousand acres of agricultural land each year from 1967 to 1977 to non-agricultural use (i.e., urban build-up, rural transportation, and water). Each year during this period ten thousand of the annually converted twenty-nine thousand acres were considered prime farmland.

The conversion rate of agricultural land is expected to continue at an increasing rate in New Mexico as well as elsewhere in the United States. At the present rate by the
year 2000, the state is expected to convert forty-four percent (44%) of its prime farmland to non-agricultural use. This amounts to converting over 230,000 acres of the state's 524,000 acres considered prime farmland in 1980. This projected rate of New Mexico farmland loss would in all likelihood be accelerated if water rights were ever taken away from acequias in the state. That is, reduced potential for supplemental income caused by the loss of water used for agricultural endeavors would increase the pressure on rural families to sell their land and seek residence elsewhere.

C. Historical Perspectives

The community acequia system has been termed the lifeblood of community life for early Hispanic settlements in New Mexico.

"Just as the veins and arteries crisscrossed their bodies so did the little ditches provide life-giving water to their thirsty fields. From this relation has grown a communal existence that is both physical and social. It doesn't matter if the ditch served three families, 30 families, three acres or 300, the result is the same—physical and social survival is and always has been dependent upon the ditches."

Many communities in New Mexico would never have come into existence without the irrigation engineering feats of the Indian and early Hispanic settlers. Similarly, it is unlikely that many communities would continue to exist today if the acequia systems were not maintained. The Community Acequia Association in each community was at the heart of the
political, social and economic structure of early New Mexican communities along the Rio Grande and elsewhere in the state. Regarding the Acequia Association, Charles P. Loomis, a Professor of Sociology and Anthropology at Michigan State University, wrote:

"From an economic point of view there is no community-wide social system of as much importance as the ditch association. It is certainly the oldest community organization. Its function is that of controlling, maintaining, cleaning, and repairing the irrigation system, the most important of which are the dam and the main ditch."

The state's arid climate forced early inhabitants to develop irrigation systems in order to establish agriculture. While historical records do not pinpoint the exact construction date of the first irrigation ditch in New Mexico, they do establish that Pueblo Indians had irrigation ditches constructed by 1583. During that year Antonia de Espejo, an early Spanish explorer, upon entering New Mexico reported: "many irrigated corn fields with canals and dams, built as if by the Spaniards." The early Spanish colonizers were guided by the Spanish Ordinances of 1573 in founding settlements in New Mexico and the rest of the New World. These ordinances included codified instructions which required colonizers to establish settlements near sites with abundant water for drinking and irrigation. Spanish colonialists in New Mexico organized the first formal documented laws relating to irrigation development and public regulation of irrigation systems.
"These laws were based upon traditional Spanish codes and practices . . . provided that all waters in the New World would be common to all inhabitants; that . . . officials should supervise irrigable lands, . . . ; that distribution of water to colonialist be made on the advice of municipal councils; and that whatever local provisions might be established regarding water distribution, these should be conceived so as to promote the general public welfare."\textsuperscript{12}

These first document laws directed the colonizing efforts of new settlers in New Mexico and generally continue to be respected by New Mexico law and adhered to by Community Acequia Associations.

1. Acequia Membership/Leadership

Today the function of the Acequia Association remains much the same as that of the original Spanish colonial system. Formally the Community Acequia Association is thought to have been governed by the district alcalde (mayor). The current governing system of Community Acequia Associations relies on the mayordomo or ditch boss and the acequia commission which is composed of a president, a vice-president, a secretary, a treasurer, and, at times, of two to three vocales (substitutes). These officers are elected annually by members of the Community Acequia Association. Membership of the Community Acequia Association is determined by an individual having land adjacent to and irrigated by the community acequia. Each member has one vote in electing officers. That is, acequia members with larger irrigated
tracts have equal voting power as do members with relatively smaller landholdings. Thus it can be said that acequia organizations follow general democratic principles.

The **mayordomo** is the most influential member of the Community Acequia Association. He is responsible for distributing water to acequia members, ensuring that non-members do not illegally use acequia waters (water rights are legally recognized and allotted by the state of New Mexico), inspecting and supervising repair of the acequia and determining the labor each Community Acequia Association member must provide annually to clean and repair the ditch. At times the **mayordomo** appoints **partidores de agua** (water partitioners) to help distribute water along acequias which may reach three miles or more in length.

Acequia Associations are legally recognized as political subdivisions of the state by New Mexico Statute 75-11-25.1. This establishes their legal right to assess members an annual irrigation related tax. Most Community Acequia Associations assess a tax based on a per acre amount. Failure to pay the tax levied and/or provide the labor assessed by the **mayordomo** may be met by having one's irrigation privilege revoked. It is the **mayordomo** who makes this decision though he may be--but rarely is--overruled by the acequia commission.
D. Case Study: Sena Community Acequia

1. Background

In order to illustrate the historical importance and current socio-economic significance of community acequia systems in New Mexico a case study of an acequia system and the community it serves is presented. The community acequia is located in Sena, New Mexico.*

The Sena Community Acequia was chosen to study for a number of factors. Some of the most important factors were the relatively long length of the ditch (4.5 miles) and the number of individuals who are members of the Sena Community Acequia (43) and the extensive acreage irrigated by the ditch (343 acres). The number of members provided a greater opportunity to find farmers in their fields to interview. While the method was in no sense scientific, it had the advantage that persons interviewed were not preselected by any faction that might have existed.

*This community was chosen due to the author's research on acequias in this area. This research experience includes a Rural Development Planner position during 1979-80 with Siete del Norte, a Community Development Corporation (CDC), and a summer internship in 1982 with Designwrights Collaborative Inc., a private non-profit consulting firm. Research with Siete del Norte yielded a survey on thirty-four (34) acequias in the Upper Pecos River Valley between Pecos and Anton Chico, New Mexico. The Upper Pecos River Valley Acequia Survey, was used to develop The Ribera Ranch Resource Development Plan, a comprehensive area development plan. The internship with Designwrights Collaborative Inc., resulted in an earlier version of the present case study.
Moreover, the Sena Community Ditch is considered by area acequia mayordomos to be the best acequia in the Upper Pecos River Valley between the community of San Jose and Anton Chico. Finally, the Sena community is composed of approximately 160 persons and has a Spanish population of at least 98%. The county's 1980 population (approximately 22,700) has a Spanish population of 81%.

2. Geographical Setting

The Pecos River basin forms the second most important river basin in New Mexico. It flows over 500 river miles within the state and another 350 miles in Texas before it joins the Rio Grande at Comstock, Texas. The terrain along the Pecos River varies considerably. The northern most portion between Cowles and San Jose is mountainous and forested. Between Ribera and Anton Chico this gives way to rather narrow valleys surrounded by flat mesa country. Further down the river at Anton Chico the topography of the land surrounding the Pecos River valley changes. No longer is the Pecos enclosed by rather steep walls as rolling hills replace them.

Due to the semi-arid condition in New Mexico, the Pecos River offered important life sustaining qualities to early New Mexican settlers in developing the agricultural subsistence communities along the river during the early 1800s. Today along the first 40 miles on the northern portion of the Pecos River over 12 communities exist. Most of these
co~unities lie within the original boundaries (315,000 acres) of the San Miguel del Vado Land Grant. On March 12 of 1803 the first two of these communities to be settled were San Miguel del Vado--known today as San Miguel and San Jose del Vado--known today as San Jose. These communities were settled by 58 and 46 families respectively.\textsuperscript{13}

On November 25, 1794, Lorenzo Marquez was granted on behalf of 52 men, 16 of them Indian, land along the Pecos River. Lieutenant-Colonel Fernando Chaco, then the civil and military governor of New Mexico, a province of New Spain, awarded the San Miguel del Vado Land Grant with certain conditions which the petitioners had to fulfill. One of these conditions involved the common construction and maintenance of community acequias or irrigation ditches:

"Fifth: That construction of their plazas, as well as the opening of acequias and all other work, that may be deemed proper for the common welfare, shall be performed by the community with that union which in their government they must preserve."\textsuperscript{14}

The \textit{1980 Upper Pecos River Valley Survey} studied communities along the Pecos River between Pecos and Anton Chico, New Mexico. Each of the communities had maintained their community acequias. In fact, 34 acequias had been constructed and 22 community acequias continue to benefit communities between Pecos and Anton Chico, New Mexico.*

* Note: Not all acequias in New Mexico are community acequias. Some are owned by private individuals and yet others have become part of an irrigation district/or a conservation district. These acequias are not legally recognized as community acequias.
3. Historical Setting

Located within the original San Miguel del Vado Grant of 315,000 acres lies Sena, New Mexico. The community was originally known as Puerticito. Though the actual date the community was founded is unknown, historical material involving the San Miguel del Vado Land Grant establishes the existence of various communities prior to 1846 including Puerticito (Sena), La Cuesta (Villa Nueva), San Jose, San Miguel, Las Mulas, El Pueblo, El Gusano and Bernal. Since San Jose, the first community within the San Miguel del Vado Land Grant, was established in 1803, it seems certain that Sena was settled between 1803 and 1846. Historical materials also reveal that by 1846 a community acequia for Sena residents had been constructed.

The acequia systems provided early settlers with a source of water to grow their food supply and feed for their livestock. Without such a water source, the semi-arid climate would not have supported these communities. Therefore, the acequia irrigation system played a crucial role in the maintenance of many rural communities and in the preservation of a cultural heritage. The records indicate that on March 12, 1803, the land in the valley irrigated by the acequia system in the neighboring community of San Miguel (approximately five miles north) was apportioned equally among the heads-of-family. Sena residents in all likelihood had similarly obtained their portion of irrigated lands prior to 1846.
The individual plots of land irrigated by the acequias in Sena may never have been large enough to fully support the families residing there. That is, Sena residents developed their community by utilizing their land resource base for small-scale agriculture and livestock production. While neither agriculture nor livestock may have been able to fully support area families, the land use mix provided a self-sufficient livelihood for area residents. The first settlers had substantial grazing land surrounding Sena on which families maintained their cattle. This land was held in common by the residents for the welfare of the entire community. The limited land irrigated by acequias and the rather extensive land resources above the valley formed the economic basis for early settlers' community life in Sena as well as many other communities along the Pecos River and along the Rio Grande Valley.

The common grazelands provided the community with goats and as a marketable product: cattle. These lands were also used extensively up to the late 1930s for dryland farming according to residents of Sena interviewed during July 1982. The irrigated land provided settlers with vegetables and fruit crops which were preserved for year-round use. The residents no longer rely exclusively on the irrigated lands to grow the family food supply, it seems canning and drying food lessened in importance during the 1950s through the 1960s. However, agricultural products from irrigated lands continues to be a secondary income source.
The pattern of crops has changed from grains, vegetables and fruits, which sustained families' food supply, to hay and alfalfa crops which sustain a small number of cattle during the winter months. Often this serves to provide the families with a secondary income source. The earnings from the alfalfa and hay crops are both a direct and indirect form of income. Directly they receive money by selling the alfalfa for $3.00 to 3.50 per bale and they receive indirect benefits by using the feed for their cattle which are later sold or butchered for household use. In times of economic hardship or need the family's cattle are available to provide needed cash. Thus cattle for these families, usually less than 20 head, seem to provide a unique but rather appropriate means of "savings."

Today the lands in Sena are used primarily for growing alfalfa and fodder for animals. It is estimated that roughly 85% or 310 acres of the 343 acres of land irrigated by the Sena Community Acequia is in pasture, primarily alfalfa. The remaining 15%, roughly 40 acres is in vegetable crops: including corn, chili, squash, cucumbers and melons, as well as fruit such as apples and pears. The yields for alfalfa and all grass hay in San Miguel county have been estimated at 1.5 and .94 tons per acre, respectively. In 1977 this amounted to the lowest county yield in New Mexico. This low yield was possibly due to the non-use of fertilizer by area farmers. By 1981 the county yields for alfalfa hay and all hay rose to 3.1 tons and 1.84 tons per acre respectively. The county
rank for these crops rose to 7th for alfalfa hay and 6th for all grass hay. Grain crops, once the major crop grown, have all but disappeared in this area.

Sena Community Acequia members pointed out that prior to 1946 dryland crops consisting of beans and corn were extensively farmed by them on the mesa above Sena. During that time period the crops helped to supplement their income. Since the 1940s the climate became dryer the mesa lands no longer proved sufficient to maintain dryland crops. Similarly their grazing lands have become more sparse and support fewer cattle. By 1982 because less supplemental income is provided by grazing land irrigated farmland has become increasingly important to their income.

While Sena's economy developed through a logical utilization of the natural resources that surrounded the community, residents today have their primary means of employment in the larger neighboring towns and cities of Las Vegas, (40 miles northeast), Santa Fe (20 miles northwest), and Albuquerque (110 miles southwest). The original 315,300 acres involved in the San Miguel del Vado Land Grant was cut to approximately 5,200 acres by the U.S. Taylor Grazing Act of 1934. Thus, present day residents have had to depend on less land resources than their ancestors to earn their living. Likewise the climate, according to local residents, has become dryer and has increased the importance of the acequia systems. The loss of the extensive common grazing land and
the reduction in productivity due to lack of moisture has necessitated the rural to urban migration for many descendants of the original Hispanic settlers of Sena. This rural to urban migration mirrors trends of other communities along the Pecos River and the Rio Grande.

4. Demographic Data

San Miguel County, where Sena is located, had a 1980 population of 22,751. This represents a decrease in population from 1950 of over 700 persons. However, since 1970 (population 21,951) the county has experienced a slight increase in population (2.7%). The increase is due to a population influx into Las Vegas; the county seat. San Miguel County's 1977 mean per capita income was $3,839. According to the New Mexico State Housing Authority 38.5% of its population in 1979 had their families mean income below the poverty level. In 1977 25% of the county's population received food stamps. Only 7.1% of families in the county had an income of $15,000 or over in 1969. The county's 1980 population had a median school completion of 9.1 years. As no significant industry increase is expected, it will be difficult for the county's income level to increase significantly.

5. Organization of the Sena Community Acequia

In 1979 there were 43 members of the Sena Community
Acequia who irrigate 343 acres and had an average of approximately 8 acres. While a 1922 hydrological survey indicates that there were 128 parcels, it is difficult to estimate the average landholding per acequia member. However, parcels had an average of 2.8 acres. This indicates that Sena ditch members' average land holdings, seemingly, have increased though the actual acreage irrigated has remained stable.

The New Mexico State Engineer considers these small land holdings to be inefficient and feels water utilized by these farmers less beneficial than other "development" related uses. Unfortunately many other state and federal organizations have taken a similar view of small farming operations and have all but excluded them from programs providing agricultural and economic assistance.

While it is difficult to place a monetary figure on the importance of the community acequia and the communities irrigated land the value placed on the irrigated lands by Sena residents from its earliest settlers to the present is shown by the fact that the residents always built their homes uphill from the acequia to insure the utilization of all irrigated land. Today this pattern continues to be respected in Sena and surrounding communities and can be thought of as culturally determined zoning which serves to protect farmland. Community members rarely built on irrigated land because they considered and continue to consider irrigated land important to their livelihood. This pattern of land use
is shown on Chart II on page 4.

The Sena community acequia system originally consisted of three community acequias. The original ditches from north to south, were La Fragua, Puertocito and Saiz community acequias. It is apparent that these three ditches were consolidated after 1866 as the Hope Decree* established priority rights of La Fragua community acequia in 1860 and Puertocito community acequia in 1866. Many acequia members still relate to their lands as if the three ditches were separate. In fact three partidores de agua (partitioners of water) exist today along the Sena community ditch. The partitioners give permission for acequia members to irrigate their land; each partitioner customarily allows up to three members to irrigate at the same time. This practice of having three water partitioners is slightly unusual in New Mexico. It is most common for the elected mayordomo to give members permission to use water. The practice is necessitated, it seems, by the rather extensive length of the ditch (4.5 miles). Thus the original three ditch system seems to be respected by this arrangement.

* The Hope Decree during May, 1933, established priority right use of water for all community acequias and their corresponding members between Pecos and Carlsbad, New Mexico. Priority right refers to the right of individuals who established their water use first in time to have first priority for water in times of scarce water supply.
Each year during December an election is held to elect the acequia commission. The commission consists of the mayordomo, assistant mayordomo, secretary and treasurer. Only those having land irrigated by the acequia can vote. While voting has been legally established in proportion to the number or amount of a member's water rights, elections are in fact by consensus. Consensus aptly applies to the manner in which decisions are made among many community acequia associations which affect the acequia members unless a strong community leader holds the mayordomo position. If such a strong leader holds the mayordomo position, autocratic decisions are usually the rule. However, should the mayordomo make decisions which are seen as benefiting him or a select few, acequia members are likely to unseat the mayordomo. The acequia governing system thus ensures that a committed person, one who seeks to uphold the general welfare of acequia members, holds the mayordomo position.

Most of the acequia members in Sena are related and/or are very familiar with each acequia member. It would be wrong to portray present day relations among acequia members and the acequia association as a close knit, cooperative type arrangement. Rather it seems that the close kinship ties and lifelong experiences have made the consensus process a difficult one.

Among older community acequia association members the term la comunidad is used to designate community and acequia association. Jealousies exist, however, and deeds which
occurred years ago, appearing meaningless today to the outsider, are recalled by acequia members as very meaning­ful and tend to preclude cooperation among the affected members. On the other hand, members interviewed all voiced common values concerning the importance of the acequia and its maintenance such as the acequia being central to the community. Most members voiced a strong desire to improve the Sena ditch, for example, placing culverts in the ditch to protect against landslides where needed, and lining the ditch with concrete.

It seems that the acequia associations have not been working for the optimal use of their irrigated land resource but, rather, exist primarily to maintain their irrigation system. For instance the Sena Community Acequia Association members do not purchase products or sell produce together. With the exception of a backhoe, owned by the Sena Association and used to work on the acequia, no farm implements are cooperatively owned. Many members have their own tractor although usually an older model.

Though convites (community work groups) were common during the early 1900s, very little mutual help is practiced today. The principal exception is the cleaning of the ditch. The annual cleaning of the acequia is considered a major community ritual among New Mexican Community Acequia members and in Sena it occurs during March. Should an acequia member fail to show up or provide a peon (worker) in his place, the mayordomo assesses an appropriate fee. Peones in Sena are
paid $20 per day for ditch cleaning and the annual ritual usually lasts three days.

Acequia members no longer are available when neighbors need them as was previously the case. Today acequia members have jobs in neighboring communities and have limited time for small-scale farming efforts. Thus the internal community clock, which previously allowed mutual help, has been replaced by a completely different 9 to 5 time schedule. Acequia members have responded by changing their cropping pattern from labor intensive vegetable-fruit-grain crops to field crops which require mechanization and use less labor, namely alfalfa and hay. This has decreased the amount of time needed to tend their land but the supplemental income derived from these crops is less than optimal.

This change from mutual help, cooperative effort, and optimal use of farmland, appears to be caused by the necessity of residents to seek employment outside the community. In relying on a primary source of income from the outside, their small-scale farming, mutual help orientation has all but ceased. Unless some intervening action takes place that supports and rewards cooperation among acequia members occurs, it is unlikely that community acequia association resources, human-and-agricultural, will be tapped to improve farm income among acequia members.

6. Water Adjudication

In May of 1933 the Hope Decree established a priority
right for water use for all community acequias between Pecos and Carlsbad, New Mexico. However, more recently state district court in Roswell, New Mexico, has heard a motion brought forward by the Carlsbad Irrigation District. The district claimed that it was not receiving the water proportion allotted to them and sought to force upstream users to use less water in order to obtain their due portion. The district court in July, 1982, ruled in favor of the Carlsbad Irrigation District. The case has been appealed to the state supreme court. This decision, if upheld according to Ray Wyche of the Roswell Artesian District, will affect all but 800 acres of irrigated land in the Pecos River Valley. These 800 unaffected acres have a priority use right prior to 1887 which is the priority date claimed by the 2000 irrigated acres in Carlsbad Irrigation District.

Fortunately because Sena Community Acequia has a priority right date of 1860 and will be unaffected by the ruling. However, only one member of the Sena Community Acequia interviewed was aware of the adjudication suit. Since 50% of water rights granted to the lower Pecos and 20% of the Upper Pecos (where Sena is located) would be affected it would seem that more should have known.

7. Institutional Support

Little institutional support or technical assistance was reported by acequia associations interviewed. The only area of support readily identifiable for the members of these
small-scale farming enterprises has been in the form of financing for ditch improvements. In 1980 the Sena Community Acequia Association received government support for acequia improvement. The project, funded by the New Mexico State Engineer and the United States Agricultural Stabilization Conservation Service (ASCS), involved installing eight-hundred (800) feet of culvert. The culvert serves to stop acequia flooding and infill resulting from runoff erosion from the mountain slope that borders the ditch. The vast portion of funding was a grant with an approximate $2,000 loan. Repayment was shared by the Sena Acequia members. The Sena Community Acequia Association is legally responsible for the loan.

No acequia member interviewed had received an agricultural production loan from either a private bank or a government program. When asked about government agricultural loans, many recalled such programs between the '30s and '50s but not since. The nearest private commercial bank and government Farmers Home Administration office is located forty miles away in Las Vegas.

Several Sena residents remarked that until 1981 county extension agents had not visited them during the last five-to-ten years. During the summer of 1981 the County Extensionist sponsored an insecticide program to control a grasshopper plague. The cost to the farmer was $1 per acre sprayed. During the last eight years, the area's county extension office has had four County Extension Agents.
According to two San Miguel County Extensionist the priority of county extension is the support of 4-H activities. Very few visits occurred by extensionists to area acequia associations during the last six years. Rather, the extensionist would call a meeting in Las Vegas to provide courses and technical assistance. Acequia members are likely to be working during the County Extension Agent's 8:00 a.m. to 5:00 p.m. work day. Therefore, to be more useful agricultural technical assistance should be provided during the evening hours (5 p.m.-9 p.m.) and on weekends.

8. Concerns Voiced

Though Sena Community Acequia members enjoy the best irrigation system in the Upper Pecos River Valley, they maintain that additional ditch improvements are necessary. In the 1982 interviews major concerns of Sena residents regarding water were: a) improving the ditch by adding culverts along the mountain and b) reducing the damage caused to crops by flooding. Other acequia related problems voiced included; lack of control in providing water (i.e., complaint about farmers being allowed to flood their fields for days); lack of water along the lower end of the ditch; lack of knowledge among fellow acequia members about water requirements of different crops; infrequent but periodic lack of water during droughts and the lack of water conservation (only three Sena farmers use irrigation tubes). While overall the agricultural lands in Sena are relatively level,
unlevel irrigation land in at least a portion of many fields seems to be the rule rather than the exception. In many of the fields which run perpendicular to the course of the valley there are low areas two thirds of the way down the fields where excess water accumulates and retards plant growth. Similar excess water damage occurs due to seepage from one field to the next. This is due to one field being lower than the other and water being allowed to run excessively in the higher field.

Other needs mentioned by acequia members interviewed included marketing assistance; technical and educational assistance to control insects, weeds, to improve seed varieties, and to demonstrate improved water delivery techniques (irrigation tubes, drip irrigation, crop water requirements). Also mentioned were additional financing for ditch improvements (primarily augmenting culverts for the ditch where it borders steep hillsides); landleveling; and financing for agricultural inputs (e.g., machinery, seed, fertilizer, labor, marketing).


The above concerns of Sena acequia members was found to be shared by acequia mayordomos interviewed in the 1980 Upper Pecos River Valley Acequia Survey. The 1980 survey interviewed eighteen (18) mayordomos of twenty-two (22) active community acequias associations in the Upper Pecos. In
response to the question of how best to support their acequia association there were many areas for improvement supported by the mayordomos. Ranked in order these were:

1) Improving acequias (i.e., more water, fixed schedules, etc.).
2) Demonstrating new ways of getting higher yields.
3) Providing agricultural credit to acequia organizations.
4) Having a commercial greenhouse owned by acequia associations to grow start-up plants and thus shorten their growing season.
5) Having an agricultural coop store make agricultural goods available to acequia members at a reduced price.
6) Availing machinery to acequia associations.
7) Providing technical assistance.

A similar question regarding what action would be the quickest to stimulate acequia members to farm resulted in the following ranking:

1) Greater water supply
2) Assuring market for products
3) Lower cost of production
4) Strengthening the acequia organization
5) Having agricultural credit made available to acequia members
6) Setting a fixed schedule for irrigation among acequia members
7) Developing varieties of crops for the area

E. Organizations in New Mexico Representing Community Acequia Associations Interests*

In New Mexico three community acequia federations have come into existence since 1972: the Tres Rios Association (1972); the Pecos River Valley Ditch Association (1975);

*Information within this section was compiled by this author while employed as an intern for Designwrights Collaborative, Inc., during the summer of 1982.
(1975); and the Acequias del Norte (1980). The former two organizations formed in opposition to efforts by the Office of New Mexico State Engineer and U.S. Corps of Engineers to form conservancy districts in their region. The latter organization formed to lobby for government funding of acequia repair and improvements. To date no organization has formed to represent the Community Acequia Association's general agricultural interests. Rather, organizations tend to form in opposition to irrigation development that is viewed negatively by acequia members or they form federations to obtain funds for acequia irrigation system improvement. Other agricultural components relating to economic development needed by small-scale acequia farmers, such as production credit, technical assistance, marketing, research, etc., have not been addressed by these organizations.

These three New Mexican acequia federations could become the medium in which to stimulate income generating projects undertaken by acequia associations. While none of the organizations has a strong state-wide following, future attempts to stimulate agricultural production among small-scale farmers should seek to work with these acequia organizations. As there are over eight hundred (800) legally recognized community acequia associations in New Mexico, a strong state acequia federation acting as an advocate group could eventually gain considerable political support for their agricultural development and related endeavors. However, the single purpose nature of the acequia organizations, that of
acequia improvement, poses a considerable obstacle. It is felt that these federations must adopt an advocate role seeking support for the many components needed for agricultural development among small-scale acequia landholders. More specifically, the goal of their federations should be expanded to include the attainment of resources needed by their members to optimize their income from their surface irrigated landholdings. Thus, in addition to attaining funds for acequia improvement the federations need to advocate for the other components needed for agricultural production such as 1) agricultural research, 2) credit, 3) technical assistance, 4) machinery, and 5) marketing assistance.

1. Tres Rios Association

Board of Directors

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c/o Tres Rios Association
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Edward Zavalie, Vice President
Embudo, NM

David Fernandez, Secretary-Treasurer
Box 27
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(505) 758-1129

Andres A. Martinez
Box 784
Taos, NM 87571
(505) 758-3039

In 1972 the Tres Rios Association was formed to oppose the formation of a conservation district and the construction of Indian Camp Dam. Composed of fourteen (14) community acequias
in the Taos area the Tres Rios Association felt that the benefits of forming a conservation district would not outweigh the negative aspects. These negative aspects included: acequias would be subordinate to the conservation district; dues contemplated were viewed as excessive; and a lack of assurance in being compensated for any disaster which might result should the dam break.

According to Andres Martinez, the first president of Tres Rios Association, the Taos Council Coordination Council was promoted by the State Engineer, the Soil Conservation Service, the Bureau of Reclamation, and the Corps of Engineers. These government entities believed that the formation of a district would help organize their efforts. Community acequia opposition resulted because acequia members felt that the entities were trying to create jobs within the government agencies (e.g., Corps of Engineers) and diminish local self-control offered by the acequia associations.

Tres Rios Association was the defendant in a suit brought forward by the Rancho de Rio Grande Conservancy District in 1977. This conservancy district and suit was promoted and supported by the State Engineer. The conservancy district wanted to compel acequias to become part of the conservation district. The suit, Rio Ranch Conservation District vs. Tres Rios Association in district court, was ruled in favor of the conservation district in 1975, but on appeal was overruled by the State Supreme Court. Upon losing the suit, the Rancho de Rio Grande Conservancy District dissolved.
The suit cost the Tres Rios Association approximately $10,000 in legal fees. These fees were collected from members of the Tres Rios Association, which is composed of fourteen Community Acequia Associations in the Taos area.

Membership in the Tres Rios Association has been as high as 1,000 members. Dues payment for each member was $1 per annum. Dues collected and donations from Taos residents and donors from out of state were utilized to pay the legal fees incurred. Legal assistance was provided by Legal Services of Taos in District Court and attorney William Shaab of Albuquerque in the appeal to the State Supreme Court.

While the association no longer has an immediate need to oppose the formation of a conservation district, it has remained functioning and is the longest standing organization in the state which advocates for the right of Community Acequia Associations. The Tres Rios Association established bylaws in 1972 and serves to protect community acequia water rights and the natural resources surrounding acequias (i.e., water, land, air). These resources are seen as essential to sustain community life. Though intact, the organization has become largely inactive as the last meeting occurred over one year ago.

2. Pecos Valley Ditch Association

Board of Directors

Pedro V. Gallegos, Chairman
General Delivery
Villanueva, NM
(505) 421-6078
The Pecos Valley Ditch Association like the Tres Rios Association also formed in opposition to the proposed creation of a conservation district being promoted by the State Engineer's office. They were successful in their opposition, but they have been largely unsuccessful in getting government agencies to finance the lining of their ditches.

Each of the seventeen (17) ditch associations which compose the Pecos Valley Ditch Association appointed one representative. When the association was established these representatives elected the board of directors in 1975. There has been no subsequent election.

This organization has become largely inactive. The last meeting attended by Pecos Valley Ditch Association members was in May 1980. The organization has not been incorporated and has not established bylaws. Apparently the lack of a threatening issue and specific goals has lead to the association's inactive state.
3. Acequias Del Norte

Board of Directors

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Los Alamos, NM
(505)

Andres Martinez, Vice President
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Acequias del Norte was established to serve all community acequias in Northern New Mexico. In 1980 a meeting to elect officers was held in Mora, New Mexico. Considering the quantity of community acequia organizations that exist in the state and the small number of acequia representatives (less than fifty) that attended this first and subsequent meetings, Acequias del Norte will need to increase its active acequia membership to claim that it represents a majority of acequia associations in the state.

The initial purpose of the organization was the acquisition of federal funding for ditch repair and improvements. Today, Acequias del Norte maintains this goal and has included raising the level of public consciousness to recognize water rights and legal rights, as well as economic and historical importance of community acequias associations.

Acequias del Norte's directors, like all organizations outlined in this section, operate without any payment for their services. No dues payment is currently required of member
community acequias, although a membership application is being drawn up which sets $10 as the fee for a Community Acequia Association to become a member. Bylaws and Articles of Incorporation are being drawn up.

The development of Acequias del Norte was promoted by Senator Pete Domenici January, 1980, during a Schedule Hearing on Acequias which the Senator chaired. During the course of the hearing he called for an organization to be formed which would represent community acequia association interests. Thereafter, Wilfredo Gutierrez helped serve as a catalyst for establishing Acequias del Norte.

In 1981-82 Acequias del Norte was being assisted by ten (10) VISTA volunteers. These volunteers were to compile a list of community acequia associations and their respective members. Approximately 700 community acequia associations in northern New Mexico had been identified by the VISTA volunteers by 1982.

F. Public Institutional Support for Community Acequia Associations

"If state agencies, who have the expertise and resources to help the acequias of the north, do not begin to have more sympathy for our priorities and our needs and hopes for the future, then no matter what their rhetoric, they are going to help bring down the acequia system as we currently know it."

Andres A. Martinez
President/Tres Rios Acequia Association
January 1980

The forms of public intervention for community acequia associations to date can be characterized as having a narrow
focus on acequia maintenance and improvement or "water delivery enhancement." Various public assistance programs have provided community acequia associations with funding and/or engineering assistance for acequia repair and improvement. Assisting agencies have included: the Soil Conservation Service--provides assistance in the form of technical design of projects; the New Mexico State Engineer Office--provides cost sharing grant money; the Agricultural Stabilization and Conservancy Service (ASCS)--provides cost sharing grant money; the Interstate Stream Commission (ICS)--provides low interest loans; Resource, Conservation and Development Districts--in the past have provided cost sharing grant money; and the Four Corners Regional Commission (FCRC)--has provided cost sharing grant money.20

Community Acequia Associations have found congressional support from Senator Domenici (R-NM). The Senator sponsored Acequia Hearings in 1980, has walked various ditches with acequia members, and is supporting a bill to capitalize a loan fund for acequia rehabilitation. The authorization proposed is part of the Omnibus Water Bill which would provide forty million U.S. dollars to the U.S. Corps of Engineers for acequia rehabilitation. An additional eight million (20%) would be matched by the state of New Mexico.

Other than the technical assistance and financial assistance for acequia rehabilitation community acequia associations have had no concerted public or private institutional support. That is, community acequia associ-
ations have not been the recipients of the 1960s war on poverty programs and subsequent grass roots oriented economic development efforts of the state and/or federal government. None of these programs attempted to focus their economic development strategies by utilizing the existing grass roots organizations which the state's community acequia associations had and still have to offer. While there is a deep cultural commitment to hold on to the land it is uncertain how much longer these small scale farmers can maintain and produce on these lands.

While "water delivery enhancement" is needed for acequia improvement, it is but one component of agricultural development. Thus, if community acequia associations are to increase the productivity of their lands, if acequia members are to increase their farm related income, then the other integral components of agricultural development must be embraced by a comprehensive development policy. The resource base community acequia association have to offer is not the acequia system per se, but rather the over 160,800 acres of irrigated land and, importantly, the human organizational element offered by the state's eight hundred (plus) community acequia associations. In order to make the optimal use these land based and human resources should be an integral component of agricultural development of future economic development in rural New Mexican communities. Priorities should be established for future public economic development assistance utilizing existing resources offered by New Mexico's acequia
associations. In addition to considering a water supply the central components for agricultural development needed to increase farm income for New Mexico's small-scale community acequia association members are:

1) Planning and policy analysis (i.e., the state needs to develop a policy and analytic tools for guiding decision-making and reviewing legislation [established and proposed] regarding the allocation of public resources related to developing our small-scale agricultural industry).

2) Technology development and diffusion (i.e., research, education, and extension needed to maximize profits from small-scale agriculture should be planned and provided).

3) Credit (i.e., ways to provide availing small-scale farmers with production credit should be established).

4) Marketing and storage (i.e., the infrastructure for farming including machinery, fertilizer, seeds, insecticide, etc., and for marketing agricultural products need to be developed).

5) Existing farmer organizations (i.e., identifying farmer organizations which exist to plan and implement agricultural development among small-scale farmers).

Group credit experiences in the Third World may provide a means by which to solidify an agricultural development strategy for New Mexico which addresses the state's small-scale agricultural landholdings. While the focus is on credit for groups undertaking income-producing agricultural projects, group credit mechanisms also integrate the various other components involved in agricultural development.
II. THE GROUP CREDIT MODEL

The group credit model is essentially a mechanism for providing financial assistance to the rural poor in order to enable them to undertake income producing projects. The financial assistance extended to the rural poor is made available not to individuals but rather to organized rural groups. This group credit mechanism seeks to: 1) reduce lender cost incurred by the lender institution providing financing to the poor; 2) decrease borrower related costs of the recipients and lost work-time involved in soliciting loans; and 3) foster group solidarity and increase the likelihood of future collective action by the people assisted on other problems that face their community. In addition to the financial assistance, the group credit model provides organizational support to the groups assisted and the groups whose projects are funded also receive technical support prior to and during project implementation.

A recent article in the Journal of the Inter-American Development Foundation discloses the search for improving the financial viability of institutions loaning to the poor and the reluctance of banks to loan money to the poor.

"Central to the search for credit mechanisms such as revolving loan funds is the inability of small producers to compete with larger farmers for access to commercial credit rates. Apart from the social gap that separates banker and campesinos (rural poor), bankers regard campesinos as high-risk, high-cost borrowers. They (the rural poor) lack both borrowing experience and collateral. Since it costs almost as much to administer a $1,000 loan as it does a $10,000 loan, bankers who lend to small farmers must worry more about collecting less."
A. HISTORY OF THE GROUP CREDIT MODEL

Fortunately the group credit model experience appears to hold the greatest promise for improving the financial viability of institutions loaning money to small farmers. Extending group credit to the poor has been implemented by many of the eighteen National Development Foundations (NDFs) which have been established in Latin America and the Caribbean. These NDFs are private sector, non-profit organizations which provide financial and technical assistance to persons who do not have collateral and are unable to obtain commercial bank loans. NDFs were promoted by the Pan American Development Foundation (PADF) beginning in the mid-60s following the experience of a retired businessman, Sam Green, who started the 'Fundacion del Centavo' (The Penny Foundation) in Guatemala. The Guatemalan experience demonstrated that small groups of peasants were credit-worthy without collateral with loan securities based on the social implication of their pledged word and group solidarity in repaying loans.

The Pan American Development Foundation (PADF) continues to establish new National Development Foundations (NDFs) and provides emerging NDFs with technical assistance. Once an emerging NDF is soundly established it is able to request membership in Consejo de Fundaciones Americanas de Desarrollo (SOLIDARIOS), a council of Latin American and Caribbean foundations. SOLIDARIOS serves as a central bank for member foundations, provides technical assistance and
training. SOLIDARIOS, located in the Dominican Republic, was formed in 1972 and by the end of 1981 had fourteen member foundations from thirteen countries. Currently seven SOLIDARIOS member NDFs (Guatemala; Nicaragua; Quito, Ecuador; Mexico; Dominican Republic; Argentina; and Trinidad and Tobago) are considered to be effective credit institutions for rural groups (see CHART III page 42).

Though each NDF is autonomous and therefore unique, PADF has recognized three basic characteristics of established NDFs:

1) NDFs should be stimulated, created and supported by private sector representation with a commitment to encourage and participate in development activities that reach the poor, disadvantaged population of their countries.

2) NDFs should have sound management systems with qualified, locally-recruited staff.

3) The NDF should operate at least one program, providing loans and assistance from a revolving loan or guaranteed fund to a specified target group that is ineligible for access to traditional sources of credit and assistance.

The emphasis of various NDFs group credit program is on reaching the poor and small farmers. This is due to a rethinking of previous development strategies. The trickle down development approach of the 1950s and 1960s involved massive capital investment but produced little measurable benefit to the poor in countries that pursued "economic growth" development strategies. This was especially true in the rural sector where the traditional subsistence farmer
### CHART III

#### 1981 Solidarios Member
National Development Foundations (NDFs)*

<table>
<thead>
<tr>
<th>Name of NDF</th>
<th>Country</th>
<th>Date of Incorporation</th>
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<tbody>
<tr>
<td>Instituto de Desarrollo Social y Promocion Humana</td>
<td>Argentina</td>
<td>?</td>
</tr>
<tr>
<td>Centro para el Desarrollo Social y Economico</td>
<td>Bolivia</td>
<td>?</td>
</tr>
<tr>
<td>Fundacion Nacional para el Desarrollo Social**</td>
<td>Colombia</td>
<td>1972</td>
</tr>
<tr>
<td>Fundacion Costarricense de Desarrollo**</td>
<td>Costa Rica</td>
<td>1972</td>
</tr>
<tr>
<td>Fundacion Ecuatoriana de Desarrollo (Zona Norte)<strong>,</strong>*</td>
<td>Ecuador</td>
<td>1968</td>
</tr>
<tr>
<td>Fundacion Ecuatoriana de Desarrollo (Zona Sur)**</td>
<td>Ecuador</td>
<td>1968</td>
</tr>
<tr>
<td>Fundacion del Centavo**,***</td>
<td>Guatemala</td>
<td>1963</td>
</tr>
<tr>
<td>Foundation Haitienne de Developpement**</td>
<td>Haiti</td>
<td>1979</td>
</tr>
<tr>
<td>Fundacion Hondurena de Desarrollo**</td>
<td>Honduras</td>
<td>1969</td>
</tr>
<tr>
<td>Fundacion Mexicana para el Desarrollo Rural***</td>
<td>Mexico</td>
<td>1969</td>
</tr>
<tr>
<td>Fundacion Dominicana de Desarrollo**,<strong>,</strong></td>
<td>Nicaragua</td>
<td>1970</td>
</tr>
<tr>
<td>Fundacion Dominicana de Desarrollo**,<strong>,</strong></td>
<td>Dominican Republic</td>
<td>1965</td>
</tr>
<tr>
<td>-Trinidad and Tobago Development Foundation**,<strong>,</strong></td>
<td>Trinidad</td>
<td>1970</td>
</tr>
<tr>
<td>Instituto de Promocion Economico-Social de Uruguay</td>
<td>Uruguay</td>
<td>?</td>
</tr>
</tbody>
</table>


**Indicates that the NDF was created with Pan American Development Foundation assistance.

received little benefit. The prevailing economic strategy of that time period helped spark a massive rural to urban migration. This caused Third World countries to further invest in the urban infrastructure where gainful employment for the new arrivals was seldom gained.\(^\text{27}\) The huge influx of rural residents to urban areas caused various Latin American and Caribbean countries to rethink their development approach.

Developing countries also became concerned with increased equity and employment generation through agricultural development. Agricultural research from countries as diverse as Columbia and India indicated that small farms employed more labor and other variable inputs per acre and achieve higher yields.\(^\text{28}\) Thus many experts began to feel that the greater productivity of the small farmer offered the best hope to: 1) produce the basic foods needed by lower income countries and 2) bring about increased national development.\(^\text{29}\) The U.S. responded in 1969 by the "Moss Amendment" or "Production Guaranty Credit Program." This program was an attempt to mobilize and redirect private, commercial credit to the bottom forty percent (40%) of developing countries' population.\(^\text{30}\) This enabled the poor to undertake their own self-help programs.

NDFs emerged during this search to increase equity and employment generation. NDFs developed loans for the poor on an individual and group basis. Among the more mature
foundations, such as in the Dominican Republic*, Guatemala, and Mexico, group credit awarded to the rural poor has played a major part in their program. These foundations have established their group credit programs to access credit to the rural poor, primarily through financing agricultural projects. The foundations' group credit approach has enable developing countries to extend credit to poor families and small landholders who have little or no collateral. Moreover, they are able to offer credit for income-producing projects to this low-income sector at reasonable interest rates. Additionally, their efforts have spurred other public institutions to assist rural groups.

B. Administrative Structure of Rural Credit Foundations

In general rural credit foundations in the Caribbean and Latin America have three basic administrative levels. The foundations have developed this structure in order to effectively provide rural groups with financial assistance for viable income-generating projects.

* This writer worked for the Dominican Development Foundation, as a Social Analyst and Program Evaluator, during Peace Corps service (1976-78).
The NDFs typically are headquartered (Level I) in their capital cities. Their headquarters hold the foundation's administrative staff consisting of the foundation's executive director, board of directors, financial manager, loan officer(s), accounting staff, loan committee, as well as support staff (e.g., receptionist, secretaries etc.). All loans initiated by rural groups must go to the foundation's headquarters for approval (see page 55 for loan process). Having their headquarters in their respective capitals facilitates coordinating with public and private agencies and foreign contributors.

The crux of a foundation's success lies in its regional staff. Regional staff is composed of a regional supervisor(s) (Level II), promotors and agricultural exten-
Sionists (Level III). Ideally NDF administering group credit have found that each promotor should assist twelve to eighteen groups. The promotors are under the supervision of the region supervisor. Promotors are the foundation's representatives to the rural residents. They are responsible for explaining the role of the foundation's credit program. The promotor should be familiar to the area's people and be a resident of the area. He/she should identify existing community groups and educate them regarding the foundation's credit program and technical assistance provided by the foundation staff.

C. Support Provided by the Group Credit Model

The group credit model provides three basic types of support to identified beneficiary groups: organizational, technical, and financial. While the financial assistance is the most readily recognizable form of support, the organizational and technical support groups receive are integral components of the group credit concept. Prior to financial support, groups receive organizational and technical support. It is only upon receiving such support that groups receive direct financial support to undertake income-producing projects.

1. Organizational Support

The initial assistance provided groups by the model is
organizational support. Organizational support consists of training for group members in areas of: leadership; parliamentary procedure; record keeping (e.g., minutes, due payments, loan solicitation and loan repayment); and helping the group define its structure, set its goals, and decide on the type(s) of project(s) for which the group members wish to obtain financing.

It is important to note that prior to receiving financing for a project a promotor provides groups with organizational support for a period of at least three months, preferably six months. The groups receiving this organizational support may have been formed prior to the promotor's arrival or the promotor may have called for a meeting in a community and interested individuals to form a group. The financial resources offered by the promotor can serve to motivate community members to form a group. In the case of existing groups, credit is typically the major resource lacking for them to undertake income-producing projects.

During the initial contacts with the groups or potential groups, the promotor explains that the group members do not need collateral to secure a loan. Rather, he explains to the group members, his group credit program relies on "group solidarity" for issuing loans. No individual member can solicit a loan. Instead the group, composed of from ten to over one-hundred individuals, solicits a group loan for a specific project. Individual group members wishing to participate in the project request an amount appropriate to
their needs which is included in the loan solicitation request. If a member is unable to repay the funds he solicited within the project, the other group members participating in the project are responsible for repaying the defaulting member's portion of the loan. Should the group not repay the loan on schedule, the group will be unable to solicit for additional project funding.

There are specific exceptions to curtailing subsequent financing to a group defaulting on a project. For example in an agricultural project an 'act of God' such as excessive rain, a drought, a hurricane, etc., which directly caused project failure would not prohibit the group from seeking financing for future projects. The unpaid portion of their unsuccessful project would be repaid from future project revenue.

Depending on the organizational level of the group the promotor begins by facilitating the group to define its structure, elect officers, develop a consensus on common problems their communities face, decide on the type(s) of project(s) which the group members wish to undertake, and develop internal group requisites for members to participate in the proposed project.

The group is directed to follow parliamentary procedure during the above processes. Officers once elected receive special attention by the promotor as he must instruct them in their duties and teach them various skills in order for them to be effective. Though it may seem repetitive, the promotor
must continually train or assist in training group officers. This is due to groups being encouraged to elect new officers annually and newly elected officers must acquire the management skills necessary to undertake and complete financial projects.

Groups located in the same general vicinity are normally assisted on a regular basis by a single promotor. The map on following page illustrates how group meetings in one region of the Dominican Republic have been organized by two promotors (see Map page 50).

The promotor is careful to facilitate—not direct—the group in deciding what type of project to solicit funding. The group members' individual and combined prior experiences direct the group to know what resources are available to them and what they are capable of and willing to do to undertake a project. A project imposed by a promotor which later fails is likely to cause a group to disband making loan recuperation a difficult task. In such an imposed, failed project the group members simply do not feel responsible for the failure. This is especially true if the project required skills or resources which the group members did not possess prior to project funding.

The promotor is responsible for ensuring that groups soliciting funding have sincere intentions in undertaking the project. He must judge whether the group members possess the necessary abilities and commitment to complete the projects for which they solicit funding. Several indicators
Groups Assisted By The Dominican Development Foundation in Bani, Dominican Republic (July, 1978)

may be used to determine the group members' commitment:

1) the length of time the group has been organized;
2) the frequency of meetings held by the group;
3) the members' attendance of meetings;
4) the length of time group members have resided within the community;
5) previous projects undertaken by the group to solve community problems;
6) managerial capability within the group, etc.

The groups are expected to develop their own internal requisites for members to participate in the projects for which they solicit funding. Most groups are somewhat selective regarding who can become a member. However, upon soliciting funding for a project the group usually becomes very selective regarding which members can participate in the project. Various factors can have the group reject a member from participating in a project. For instance, the member may have previously failed to repay an obligation within the community or to an external credit source; the member may be viewed as lazy, a drinker, undependable; the member is considered to have insufficient prior experience growing the particular crop for which the group is soliciting funding; the member didn't attend group meetings regularly or doesn't participate in community projects; the member has lived in the community for only a short time; the member hasn't made his dues payment to the group; etc.

Some of the factors which exclude a member from participating may seem odd when viewed against traditional credit institutions loan requisites, but the group is responsible for loan repayment and their own established
requisites for project involvement mark an attempt to develop requirements that are appropriate for rural loans. Setting these appropriate rural loan requirements strengthens group solidarity and develops member's administrative, political skills. Moreover, developing this responsibility serves to allow group members a participatory role in making and implementing decisions which affect their own development.

The promotor strives to develop the group members administrative abilities to undertake the financed projects. The contention is that through such involvement the group is more apt to attempt to solve other community problems. One of the model's goals is to develop group administrative capabilities in the area of obtaining support for projects in which they become involved. For instance, groups receiving loans in Latin America have been motivated to effectively petition national agencies for technical assistance to complete a project or to resolve a community problem. Groups have lobbied for and in some instances received assistance to improve their communities water system, to construct regional warehousing for grain storage, to set national minimum price standards to the farmer for certain agricultural products, to combat plagues affecting their crops, or to provide medical services for their rural communities, etc.

In short, the organizational assistance provided by the group credit model is geared primarily to educate group members to undertake and successfully complete income-producing projects for which groups are provided funding.
While there can be no denial that repayment of the loan is a major concern to the group credit foundation, the employment generated in rural areas by the loans, the sense of group/community cohesiveness and the experience gained by groups and their members in effectively deciding which projects to undertake are the essential and intended outcomes of the group credit model.

2. Technical Support

Technical support is provided through 1) financial and technical review of the project—to ensure project viability; and 2) by hands-on training of group members in the field—to improve project chance of success. The technical support typically involves agricultural and animal-husbandry assistance. This is due to the predominance of requests by groups for financing agriculture and/or animal husbandry projects. However, technical support can include any technical assistance needed to ensure successful project completion such as; engineering services, hydrological services; marketing assistance, artisan assistance, etc.

Having received organizational support for a period of approximately six months, a group decides on a project which members formally petition to receive funding. The project for which funds are solicited can be a collective project in which all the work is shared by the group members (e.g., farming 100 acres collectively and equally dividing work and profit) or the project may have each member tend to his/her
specified share of the project individually (e.g., each participant tends to his personal property).

Completing an application for project funding by a group usually marks the beginning of technical support provided by the group credit model. The time period between loan solicitation to project approval may be three to six months (see CHART V). The promotor's review of the project estimated line item amounts is the initial phase of technical assistance. He checks these prices with other similar products/services available in the area and discusses with the group possible revisions. Once the revisions are determined the group decides on final project solicitation amounts and the promotor presents the loan request to his/her Regional Supervisor who in turn presents the project solicitation to the headquarters of the group credit program. The project loan solicitation, upon arriving at the foundation headquarters, is reviewed by the foundation's Financial Analyst and Social Analyst.

Should the Loan Analyst, Social Analyst, Financial/Social Services Manager, and/or the Loan Committee have any suggestions to improve the success of the project they inform the promotor, usually through the Regional Supervisor, of specific recommendations to improve the project. The promotor discusses the recommendations with the group. The committee can reject loan approval for a number of reasons including:
CHART V

Steps In Loan Solicitation Process

3 to 6 months

1. Group Formed by Promotor and Monitored
2. Group Solicits Funding for Project with Promotor Assistance

3. Promotor Presents Project to Regional Supervisor
4. Regional Supervisor Presents Project to Foundation Headquarters
5. Financial Analyst and Social Analyst Review Project
6. Financial/Social Service Manager Reviews Project

3 to 6 months

7. Manager Presents Project to Loan Committee for Approval
8. Foundation Issues Group a Check for Approved Project Which is Given to Regional Supervisor*
9. Regional Supervisor Transfers Group's Check to Promotor
10. Promotor Gives Check to Group's Board of Directors Who Sign Off on Loan (8 to 10% annual interest plus a 2% closing fee is charged)

11. Group's Board of Directors Distributes Loan to Individual Group Members (many groups disburse loan in two or more installments to members to ensure proper use of funds)
12. Group's Board of Directors and Vigilance Committee Plus the Promotor Monitor the Project
13. Individual Repays His/Her Portion of Loan to Group's Board of Directors Treasurer
14. Group's Board of Directors Repays Promotor
15. Promotor Turns in Group's Repayment to Regional Supervisor
16. Regional Supervisor Turns in Groups Repayment to Foundation Headquarters

* If project is rejected committee informs Regional Supervisor of the reason for project being rejected. Supervisor then relays information to promoter who informs group.
- insufficient project information;
- the group members' financial share of the project, usually estimated labor cost which group members provide, is too low;
- the project may be technically unsound or too risky;
- the project may not have addressed marketing the project products;
- etc.

Groups whose projects are funded are provided with periodic, in the field, visits by appropriate technicians. This type of assistance is especially warranted if the group has limited experience growing the particular crop or if previous group member crop yields have been lower than should be expected. If the project includes construction of an irrigation system an engineer and/or a hydrologist may be required to confirm the route of the irrigation canal and to ensure that the quality and quantity of the water is sufficient for the particular crop. Marketing assistance has been provided to individual groups and is especially needed if a large number of funded projects in the same general area are of the same type.

Groups soliciting funds for artisan projects are often assisted to develop prototypes and to ensure uniform marketable products are produced by group members. Likewise animal-husbandry and poultry assistance may be required if warranted by the project. Typically the promotor initiates the request for technical assistance or the foundation staff
may approve a project on the condition that the group receive technical assistance prior to or during the project. However, as the group gains experience during subsequent project involvement they may initiate a formal request for technical assistance during the project solicitation phase or at other times during the project.

Rural groups receiving credit have established various committees (e.g., education, project vigilance, technical, etc.) to distribute loan related administrative responsibility among group members. These committees serve to develop leadership skills among the group members as well as the group's board of directors and help to ensure project success. The vigilance committee, used by some groups, is established to oversee participating members correct use of project funds and to check members progress in the project.

D. Institutional Rationale for Group Credit

There are various phases involved for a commercial lending institution in extending credit to farmers. Viewed from the concern to assure operating profits the perspective of commercial banking institutions extending credit to farmers is focused on ways to reduce institutional cost and increase revenues. The phases involved in traditional credit extension to farmers is detailed below.
The traditional credit model of commercial lending institutions have favored large loans to individual large-scale farmers. This allows banks to obtain acceptable returns on their investments. That is, as the administrative costs of a U.S. $500.00 loan and a U.S. $10,000 loan are essentially the same, the profit margin from small loans are viewed as an insufficient return on investment. Therefore, the urban focused approach of commercial banks understandably favor large loans to individual borrowers having collateral.

Rural oriented credit mechanisms in the Third World have attempted to develop a rural credit strategy that allows the poor equal access to credit. Credit mechanisms adopted for providing credit to farmer cooperatives have evolved that are more progressive than the traditional urban orientation of commercial lending institutions. The supervised credit model below has been utilized by various developed and Third World countries. Most often the lending institutions are
run by the host government.

The supervised credit model for extending credit curtails improper usage of loan funds by borrowers and provides technical assistance during project implementation. Farmer cooperatives receiving supervised credit have obtained considerable public institutional support (financial and technical) during project implementation. More progressive public supervised credit programs have developed to assist farmer organizations which mirror the private National Development Foundation (NDFs) group credit model.

CHART VII
Supervised Credit Phases Involved in Extending Credit to Farmers*

The group credit model employed by NDFs seek not only ways to improve institutional viability of lending institutions by increasing profitability but also: to reduce borrower costs; increase borrower profit; provide the poor

*Source: Tinnermier, Ronald, Reducing Lender Costs. Panama Agricultural Credit workshop, February 4-6, 1975, p. 2.
equal access to credit; motivate public and private support for farmer related undertaken by the rural poor; and encourage people in depressed rural areas to organize and solve problems facing their communities. Since serving the poor on an individual basis is unprofitable for lending institutions, the NDFs provide loans to organized groups of small-scale farmers through farmer organizations.

The Pan American Development Foundation's stated goals establishing National Development Foundations are:

1) The motivation and mobilization of private sector representatives to create and become directly involved in the process of analyzing, defining, managing, and carrying out development programs for the less fortunate within their own societies.

2) The goal of establishing a sound, well managed organization, bringing to bear the Foundation's private sector members talents in policy, management, finance, etc.

3) To identify needs, design and implement programs or projects in one or more sectors that assist and support the needy segment of the population to improve their incomes, standard of living and participation in society."

The group credit mechanism utilized by NDFs reduce the borrower's loan related costs as NDF staff actually visit farmers in the field rather than having the farmers travel to the bank to negotiate a loan. The borrower's profit is increased because of the reduced borrowing related loan costs and because the group credit model provides technical review and assistance to increase the potential for an acceptable profit margin for the borrower.

A credit institution employing a group credit model does
so because it is socially motivated. That is, it seeks ways in which to provide the poor with equal access to credit for income producing projects. The institution recognizes that the poor also need credit in order to undertake revenue producing projects. The alternative is for a society to provide public welfare to the poor for an undetermined amount of time hoping that the poor will eventually reap the benefits of economic ventures undertaken by larger urban based business, or worse, providing no public welfare to the poor and viewing poverty as unfortunate but acceptable.

The group credit model attempts to improve the viability of making loans to the poor. It does so by organizing the poor, financing projects undertaken by the poor, by providing technical assistance for funded projects, and by motivating other public and private institutions to provide their services to the poor. The rural group organizations promoted by NDFs are created and/or promoted to improve credit access to the poor and motivate rural people to undertake activities to resolve problems faced by their communities. Thus, the group credit model offers direct (additional income) and indirect (public/private institutional support) benefits for rural communities seeking to offer viable employment for their residents.

The chart below details the phases involved in providing group credit. The major additional attributes of the group credit model are the continuous provision of organizational assistance and technical assistance offered groups.
CHART VII

Group Credit Phases Involved in Extending Credit to Farmers by NDFs

Rural oriented NDFs who offer group credit have developed various loan criteria to increase loan viability and to enhance the capability for loan repayment from rural residents. For example the Dominican Development Foundation (DDF) developed the following criteria for their group credit program:

1) loans are made to groups of at least six participating members;

2) neither individual members nor the group qualifies for loans from other commercial lending institutions;

3) the amount loaned per project is limited to $25,000;

4) the length of loan will not be over two years, except in special cases (most loans are for one year);
5) in the case of default, the group carries the obligation to pay; and

6) the interest rate charged is 8% plus a 2% closing cost. In addition the group decides whether and how much additional interest is charged to members. Some collect 1/2 to 1 per cent which is used to capitalize a group contingency fund.

In addition to the foundations' loan requisites, groups are expected to develop their own requirements for member involvement in a project for which the group solicited funding.

E. Capitalizing a National Development Foundation's Group Credit Loan Fund

National Development Foundations established to date have relied largely upon private sector donor contributions.

"The guiding principle of the NDF's is to directly involve the private business sector in helping to find solutions for the basic problems of poor people in urban and rural communities through development programs." 31

The private sector contributions may be from in-country (national) or international businesses. One of the first steps involved in establishing a National Development Foundation is to seek contributions from the private sector. The Pan-American Development Foundation (PADF) recently identified the need for the private sector to be educated about the NDF concept and NDF experience to date in order to promote the creation of such an institution in their countries. 32 In fact this was the first phase identified in the creation of an NDF. Furthermore PADF experience has shown that the private sector will support NDF activities
which:

- perform business related operations, namely credit extension and productivity-related activities;
- strengthen the private enterprise economic system;
- provide sufficient visibility of supporters contributions to recipients in the business related community; and
- seek matching funds from other sources to multiply the effectiveness of local fund raising efforts.

Public sector donor support, largely international, has also played a considerable role in capitalizing an NDF group credit loan fund and is providing funding to support NDF administration costs. Donor contributions have included the World Bank, the Inter-American Development Bank, the Pan-American Development Foundation, the United Nations Development Program, Peace Corps, and the United States Agency for International Development. Various in-country private agencies and private donors from West Germany, Canada, and the United States have also provided funding for loan fund capitalization and administrative costs and technical assistance.

The Dominican Development Foundation (DDF), one of the original NDFs offers an example of the willingness of private and public sector to support group credit activities serving the rural poor. During the 1966-67 fiscal year The DDF loaned approximately $117,700 to 42 groups composed of 2,081 individuals. By fiscal 1977-78 the DDF reached annual loans
amounting to over $2,888,000 to 212 groups composed of 4,668 participants (see CHART IX).

**CHART IX**

Dominican Development Foundation's Loans to Groups During 1966-1980

<table>
<thead>
<tr>
<th>YEAR</th>
<th>GROUPS</th>
<th>INDIVIDUALS</th>
<th>TOTAL AMOUNT (RD$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966-67</td>
<td>42</td>
<td>2,081</td>
<td>117,669.54</td>
</tr>
<tr>
<td>1967-68</td>
<td>161</td>
<td>2,167</td>
<td>216,681.70</td>
</tr>
<tr>
<td>1968-69</td>
<td>160</td>
<td>4,461</td>
<td>234,822.47</td>
</tr>
<tr>
<td>1969-70</td>
<td>156</td>
<td>4,954</td>
<td>387,682.49</td>
</tr>
<tr>
<td>1970-71</td>
<td>257</td>
<td>5,726</td>
<td>480,263.66</td>
</tr>
<tr>
<td>1971-72</td>
<td>198</td>
<td>4,457</td>
<td>455,276.98</td>
</tr>
<tr>
<td>1972-73</td>
<td>278</td>
<td>6,923</td>
<td>776,880.75</td>
</tr>
<tr>
<td>1973-74</td>
<td>393</td>
<td>5,150</td>
<td>1,550,171.90</td>
</tr>
<tr>
<td>1974-75</td>
<td>248</td>
<td>4,440</td>
<td>1,757,284.21</td>
</tr>
<tr>
<td>1975-76</td>
<td>231</td>
<td>4,804</td>
<td>2,396,142.21</td>
</tr>
<tr>
<td>1976-77</td>
<td>189</td>
<td>4,029</td>
<td>2,282,895.33</td>
</tr>
<tr>
<td>1977-78</td>
<td>212</td>
<td>4,668</td>
<td>2,888,243.83</td>
</tr>
<tr>
<td>1978-79</td>
<td>124</td>
<td>2,590</td>
<td>1,602,831.09</td>
</tr>
<tr>
<td>1979-80</td>
<td>138</td>
<td>3,508</td>
<td>2,231,591.86</td>
</tr>
</tbody>
</table>

TOTAL 13,982,261.

III. RECOMMENDED FRAMEWORK FOR ACTION NEEDED TO DEVELOP A NEW MEXICAN RURAL DEVELOPMENT (CREDIT) FOUNDATION

The group credit mechanism for financing rural development projects in the Third World (detailed in Chart VIII on page 62) may provide an appropriate model for financing agricultural related projects undertaken by rural groups in New Mexico. The existing New Mexican community acequia associations would seem the most natural potential candidates for group loans upon the establishment of a private rural development foundation in New Mexico. The following chart and subsequent narrative propose measures needed to realize a state rural credit foundation. They are intended to guide interested parties to establish a New Mexican Rural Credit Foundation. The process details specific measures that need to be taken but are not bound by time schedules. This is due to the inability to predict how long any particular phase would take to complete. Moreover, this time schedule may be more realistically determined by the interested party who selects to undertake project implementation.
CHART X

A PROCESS TO ESTABLISH A GROUP CREDIT PROGRAM IN NEW MEXICO

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>MEANS</th>
<th>PRODUCT(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Generate Interest</td>
<td>Present this paper and related slide presentation to potential support groups, foundations, and individuals. Further interest generated through personal meetings and via media.</td>
<td>-Identify interested public/private support for the group credit concept and the establishment of a state rural development foundation to benefit New Mexican Community Acequia Associations.</td>
</tr>
<tr>
<td>2. Proposal Development</td>
<td>Proposal developed to fund conference series.</td>
<td>-Funding secured to sponsor rural development Acequia/Group Credit conference series.</td>
</tr>
<tr>
<td>3. Acequia/Group Credit</td>
<td>Invite acequia members, Third World to development officials (e.g. Pan American Development Foundation, SOLIDARIOS, the Inter-American Development Foundation, and a National Development Foundation) to participate.</td>
<td>-Discuss various components used in Third World to develop small-scale agricultural landholdings and increase farm income. -Develop interest regarding establishment of a New Mexican Rural Credit Foundation and the benefits of group credit for Community Acequia Associations. -Generate needs statements regarding what acequia members need to promote agricultural development on their small-scale irrigated landholdings. -Assess acequia members interest for establishing a rural credit foundation.</td>
</tr>
<tr>
<td>ACTIVITY</td>
<td>MEANS</td>
<td>PRODUCT(S)</td>
</tr>
<tr>
<td>----------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>4. Acequia/Group Credit Conference #2</td>
<td>Along with selected acequia representatives from previous conference invite representatives from private business, public institutions, public officials, and private foundations having previously shown an interest in the welfare of acequia members. Include Third World development officials at previous conference.</td>
<td>- Discuss various components used in Third World to develop small-scale agricultural landholdings and increase farm income. - Develop interest regarding establishment of a New Mexican Rural Credit Foundation and the benefits of group credit for Community Acequia Associations. - Review need statements generated at previous conference and develop solution statements. - Assess support of those attending for group credit and establishing a New Mexican Rural Credit Foundation.</td>
</tr>
<tr>
<td>5. Proposal Development</td>
<td>Proposal developed to fund the establishment of a New Mexican Rural Credit Foundation.</td>
<td>- Secure funding for establishing a New Mexican Rural Credit Foundation.</td>
</tr>
<tr>
<td>6. Establish A New Mexican Rural Credit Foundation</td>
<td>Develop Bylaws and Articles of Incorporation, establish a Board of Directors, and select staff.</td>
<td>- Legally establish a New Mexican Rural Credit Foundation.</td>
</tr>
<tr>
<td>7. Select a Pilot Project Area</td>
<td>Conduct a project feasibility study to assess community acequia member support for group credit in Rio Arriba, Taos, and Mora County.</td>
<td>- Determine which county to begin providing acequia associations with assistance and group credit for agricultural production.</td>
</tr>
</tbody>
</table>
A. **Initiate In-State Private and Public Sector Education Regarding the Group Credit Model**

The initial step in creating a development foundation is to educate the private and public sector of the group credit concept and the benefits of National Development Foundations. This is important because these sectors have the political and financial ability to finance the establishment of a rural development foundation and capitalize a revolving loan fund used to provide loans to groups. The information contained in this paper and a related slide show presentation* are aimed at creating the promotional materials necessary to advocate for the establishment of a state rural credit foundation.

It seems apparent that the key to rural economic development is to support projects undertaken by rural residents which utilize their resources and enhance the ability of rural area residents to organize and manage their affairs. In New Mexico the considerable agricultural, irrigated land (160,800 acres +) that small-scale community acequia members control offers an appropriate resource to initiate economic development efforts in rural New Mexico. Agricultural development projects undertaken by these community acequia associations would provide supplemental income to rural families and help to preserve New Mexico's scarce surface irrigated land. This land which will become

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*A slide presentation, entitled "THE GROUP CREDIT MODEL: A Mechanism Used by National Development Foundations in the Caribbean and Latin America to Finance the Poor," has been developed by this writer during August 1983.*
increasingly valuable for food and fibre production as energy and transportation cost increases comprises only 0.4% of the state's total acreage. The group credit model allows development efforts to have a focus by which to initiate small-scale agricultural development undertaken by existing community organizations. Upon being established the rural development foundation would become the advocate and catalyst for other public institutions to join in support of economic development projects undertaken by rural residents.

1. Involvement of Third World Development Institutions

The experience offered by international development institutions and NDFs in the Caribbean and Latin America should be sought and heeded. NDF experience attest to the need for a modest beginning and gradual program expansion. Assistance should be requested from the Pan American Development Foundation in establishing a rural credit foundation in New Mexico. Field personnel (e.g., promotores, agricultural extensionists, and regional supervisors) and administrative personnel (e.g., loan analysts, managers,) and directors of various existing NDFs (i.e., Mexico, Dominican Republic, Guatemala, etc.) could offer invaluable advice regarding program development and implementation.

The Inter-American Foundation may be interested in supporting such a cross-cultural transference of a Third World technology to the U.S. and could become an active supporter in developing a rural credit foundation in New
Mexico. SOLIDARIOS, the Council of Development Foundations, involvement would also prove invaluable. Their expertise and commitment to the group credit model could help develop public and private institutional support for the establishment of a state rural development foundation. SOLIDARIOS also could tap member NDF personnel and NDF clients (group loan recipients) to develop interest among New Mexican community acequia association members; design promotional and administrative materials; and train foundation staff. Due to the proximity of the 'Fundacion Mejicana Para el Desarrollo', a Mexican National Development Foundation employing a group credit mechanism to finance the rural poor, contacts should be developed with this foundation. The expertise offered by the above mentioned institutions would greatly assist in promoting and implementing a successful New Mexican rural development foundation. Their input should be obtained on an ongoing basis.

B. Acequia/Group Credit, Rural Development Conference Series

Presentation of this paper and the related slide presentation on group credit should be disseminated to private businessmen, prominent state public officials, and private foundations. Their reactions would allow one to gauge support for creating a mechanism to finance rural economic development projects undertaken by New Mexico's community acequia associations. Upon determining the inter-
est of key persons and institutions, a proposal should be developed to seek funding to organizing a series of Acequia/Group Credit, Rural Development Conferences.

The general theme of the first conference should be on developing need statements regarding what is required to promote agricultural development on New Mexico's small-scale, irrigated landholdings owned by community acequia members. The primary participants at this initial conference should be acequia members. Group facilitators should assist and topics for discussion should be generated by presentation of an abstract of this paper, the group credit slide presentation and speakers from the Pan American Development Foundation, SOLIDARIOS, the Inter-American Foundation and a National Development Foundation.

The second conference would involve representatives from private business (e.g., Albuquerque Production Credit Association, Federal Land Bank Association, Public Service Company of New Mexico, and other commercial lending institutions), public institutions that provide services in areas of agriculture and economic development (e.g., Farmers Home Administration, New Mexico State University's Research and Extension Departments, and County Extensionists), and public officials that have previously shown an interest in the welfare of community acequia association members (e.g., Senators Pete Domenici and Jeff Bingaman, Governor Tony Anaya, Representatives Manuel Lujan and Bill Richardson, and others with shared concerns). Private Foundation repre-
sentatives should also be invited.

The need statements generated by the previous conference would be addressed by the members of this second conference. The question regarding the utility of establishing a rural development foundation and the merit of providing group credit to acequia associations would be discussed. The same international development speakers would be included from the prior conference along with a summary of the need statements generated by acequia members.

These two conferences should provide sufficient public input to determine the support for creating a rural development foundation in New Mexico. Potential funding sources for establishing a New Mexican Rural Development Foundation and capitalizing its group credit loan fund could also be ascertained. Importantly, the two conferences would educate New Mexicans concerning the group credit concept, promote the establishment of a rural development foundation, and develop linkages between the foundation staff and in-state public and private institutions as well as the foundation and international development institutions.

C. Establishing a New Mexican Rural Development (Credit) Foundation

Having ascertained positive support for the establishment of a rural development foundation and its group credit revolving loan fund, an additional proposal would need to be developed in order to obtain funding for establishing a
rural development foundation in New Mexico. The administra
tive costs of the foundation and the revolving loan fund
would be the central aspects of this proposal request.
Individuals, private organizations, and public organizations
participating in the previous conferences would be able to
assist in targeting the proposal to potential funding
sources. Representatives from international development
institutions may be able to direct the process involved in
establishing a development foundation and help to orient
people working on the proposal.

During this phase of proposal development, an organi
zing committee should be established to spearhead the
establishment of a rural development foundation. Upon being
funded the committee should develop bylaws and articles of
incorporation, establish a board of directors and file legal
registration papers establishing the foundation.

D. Selecting a Pilot Area for an Initial Group Credit
Program.

Upon establishing a rural credit foundation it would be
important to select an area in which to begin to provide group
loans to community acequia associations. It is suggested
that either Taos, Rio Arriba, or Mora County be selected as
the pilot project area in which to begin to offer group
credit. Respectively, these counties have 153, 164, and 95
legally recognized community acequia associations with
almost equal areas of irrigated land totalling over 89,000

75
acres (refer to Chart I on page 2). Additionally these counties have a high ethnic population, a high rate of unemployment and a low per capita income. These factors indicate the need for economic development, the availability of irrigated agricultural land, and the presence of human and community organizations required to undertake agricultural development/group credit oriented projects.

A successful pilot project providing group credit in one of these counties could be the impetus for future project expansion and program implementation throughout the state. Initial foundation efforts, however, should be conservative. That is, group credit provided by the foundation should be confined to a relatively small geographical area and not be offered all at once throughout northern New Mexico. The well meaning tendency to provide funding to community groups throughout the state could be very difficult to administer without a basis of experience to build upon. The foundation needs to begin operation slowly and gradually expand by developing administrative skills, preparing promotional materials, training and recruiting staff, developing appropriate localized loan criteria, and inducing public institutions to provide their services to acequia associations.

E. Conclusion

The emphasis in creating the proposed rural development foundation should not be oriented to 'preserve' agricultural land and the unique cultural lifestyle offered by the state's
acequia systems. Rather the objective should be to actively 'promote' agricultural development undertaken by our unique grass-roots, cultural organizations. Such an active approach would have more success in maintaining existing agricultural land in productive use and in providing the necessary support for unique cultural traditions to continue. Eventually, a successfully implemented rural development program would create a strong state acequia association able to advocate for public institutional support on their own. The initial active promotional approach offered by the group credit model would allow the acequia associations to develop into a viable state organization.
NOTES


2. Compiled from A Roster, by County of Organizations Concerned with Surface Water Irrigation in New Mexico 1969. New Mexico Engineer, Santa Fe, New Mexico (Revised 1978).

3. Ibid.


6. Ibid.


10. Ibid.

11. Ibid., p. 138.

12. Ibid., pp. 139-149.

13. Julian Sandoval et al., vs. USA, USA Court of Private Land Claims, Territory of New Mexico, Santa Fe, microfilm Case No. 25, Reel No. 35. University of New Mexico Law Library, Albuquerque, New Mexico.

14. Ibid.

15. Ibid.

16. Ibid.


22. Ibid.


31. Ibid. p. 91.


33. Ibid. p. 4.