

CAN-PRODECOOP-ASDENIC: FOOD SECURITY IN LAS SEGOVIAS:

2009-2010 Year 1 Report to GMCR

Organization: Community Agroecology Network (CAN) in collaboration with our partners PRODECOOP and CII-ASDENIC

1. Overview:

A. Project Vision & Goal

United with our partners, this project will enhance food security and build resilient food and agricultural systems that enable 740 households (approximately 4,440 people) in the Segovias region of northern Nicaragua to reduce and eventually eliminate *los meses de las vacas flacas* and more successfully resist the negative impacts to food security from climate change in the future.

The Project Goal will be measured by the following outcomes:

- Improved Food Availability
- Improved Food Utilization
- Improved Food Access
- Improved Nutritional Outcomes. This will be measured over the long term with standard anthropometric measures (for height, weight, body mass, etc.) as characterized by regional experts and according to the standards use by the World Health Organization (see GMCR reporting Collaborative Guidelines).
- Enhanced food sovereignty as participating families, cooperatives and communities are able to more effectively create and sustain their preferred types of food and agriculture, and use these activities to improve their day to day food security as well as enliven their cultures.



Vision Trip -- Raul Diaz—Director of ASDENIC & Salatiel Valdivia—Vice Director of Cooperative Development, PRODECOOP.. share ideas with CAN staff at local farmers market, California.

To achieve these goals, we have developed a partnership based model of social change—this model combines the participatory democracy of cooperatives and the organizational capacity of a cooperative union, such as PRODECOOP, with the agility and innovation of ASDENIC, a local development, education, and technology focused NGO with more than two decades of experience working in the same region, and the international expertise in agroecological, livelihoods and value chains that CAN will continue to leverage throughout the project.

B. First Year Objectives and Results

During the first year of the project, the major goals center around building the foundation of the project by harmonizing the project management team and developing a shared vision; building local capacity with our partner organizations; conducting a participatory diagnostic study and identifying best practices; and initiating a pilot project. The activities completed to achieve each of these four goals are outlined below:

1. Harmonize project team and develop a shared vision

Our objectives were to create trust among all participants (especially between PRODECOOP & ASDENIC) and begin building the human resource capabilities needed for this work, and ultimately to create a shared vision about what we could do and how we will do it.

The following activities were conducted to reach these objectives:

- Vision trip to California-- Salatiel came to Santa Cruz for 6 days and Raúl for 12 days. We toured sustainable agriculture farms, a food pantry, Alba Organics, a farm worker training and empowerment center, farmers' markets, CAN offices, and gave a public lecture at UC Berkeley. Raúl attended the SCAA and heard Rick Peyser, Chris Bacon, Michael Sheridan and others present the overall plan to reduce “los meses de las vacas flacas” and to see the industry-wide response. Salatiel and Raúl worked for several days with Chris and Maria Eugenia to plan the second half of the first year and outline the longer-term goals of the project. Decision-making and communication protocols were also developed and reviewed for the project.
- Best Practices Exchanges in Nicaragua and Honduras: ASDENIC collaborated with PRODECOOP to lead Farmer-to-Farmer and Cooperative-to-Cooperative exchanges in Honduras and within Nicaragua. These included:
 - Visit to community working with *Campesino-a-Campesino* program that had successfully created seed saver programs and a local community-based seedbank. (Thanks to Holt-Gimenez for the recommendations).
 - Visit to Honduras to learn from diversified farms and soil fertility enhancement practices.
 - One practice that was learned was “*microrizes de la montana*”, a practice of using microorganisms in the soil from nearby native forests to inoculate organic compost and thus accelerate and improve the decomposition processes. This practice was applied in the pilot project.
 - Best Practices Guide team was created, activities conducted, 32 Best Practices identified (see diagnostic result) and the manual planned.
- MOUs were signed between CAN-PRODECOOP & CAN-CII-ASDENIC. General Managers and Boards of Directors approved three-year budgets in all organizations involved.





2. Building local capacity

Our objectives were to gain the individual and organizational knowledge and competencies to successfully guide this initiative.

The following activities were conducted to reach these objectives:

- Internal personnel in place and trained:
 - CAN (3 staff, plus external experts) Christopher Bacon and Maria Eugenia, with Heather Putnam coming on board at the end of the year; Ernesto Mendez, Robbie Jaffe, and Jonathan Fox have been active advisers to the project.
 - PRODECOOP (3) Salatiel Valdivia, Vice Manager for Cooperative Development, was designated by Merling Preza, PRODECOOP's General Manager, as overall responsible for this project within the cooperative. He then designated Ruddy Espinoza as the full time Coordinator for Year 1 and brought in Misael Rivas after the first six months with the idea that Misael would be the second full time staff to be supported by the project in Year 2. PRODECOOP also named 27 promoters affiliated with the 18 local cooperatives involved in this project. They anticipate that the promoters will devote 50% of their time to food security related project activities.
 - ASDENIC (4 participating staff, plus other experts), Raúl Diaz is the project lead from CII-ASDENIC and he has done an exceptional job of designating Erika Pérez Talavera and Edulfo Rodríguez Briones to coordinate the Best Practices Manual, David Sarantes Guillen to coordinate databases, and Rosario Herrera with Adrián Kurzen as advisors to coordinate administration and training. ASDENIC also effectively leveraged additional expertise from the organization's President, sociologist Eduardo Castillo, agronomists, as well as food processing and technology experts.
- Contracted regional food security expert as advisor—ASDENIC contracted a PhD and food security expert who coordinated this component of the diagnostic and participated in trainings, and will accompany the project for the next two years.
- Designed two-year youth promoter trainer program (See Appendix for a summary of the curriculum)
- Four project team members participated in the Annual Agroecology Shortcourse put on by partner organization CAN in Chiapas, Mexico.
- Scholarship program for youth promoters in base cooperatives (27 get stipends, 8 get scholarships)
- Multiple meetings and in-house trainings organized by project director Bacon and others.

3. Conducted participatory diagnostic/baseline study, and identified best locally adopted practices

- 27 cooperative level community development promoters were trained to by ASDENIC. Seven promoters become **promotores-formadores**: they learned survey methods, interview techniques, and how to take anthropometric measurements in a respectful and accurate manner. They also participated in quality control and data cross-checking activities—all managed by CII-ASDENIC—and input the data into computers



for further analysis.

- Conducted diagnostic study, including representative study of 266 households that represent 856 families involved in the project, 4 focus groups, and 8 in-depth qualitative case studies. Below is a short summary of results from the diagnostic study. A full report of the diagnostic study is available upon request.
- 32 best practices identified and the process begun to design and publish bilingual manual.

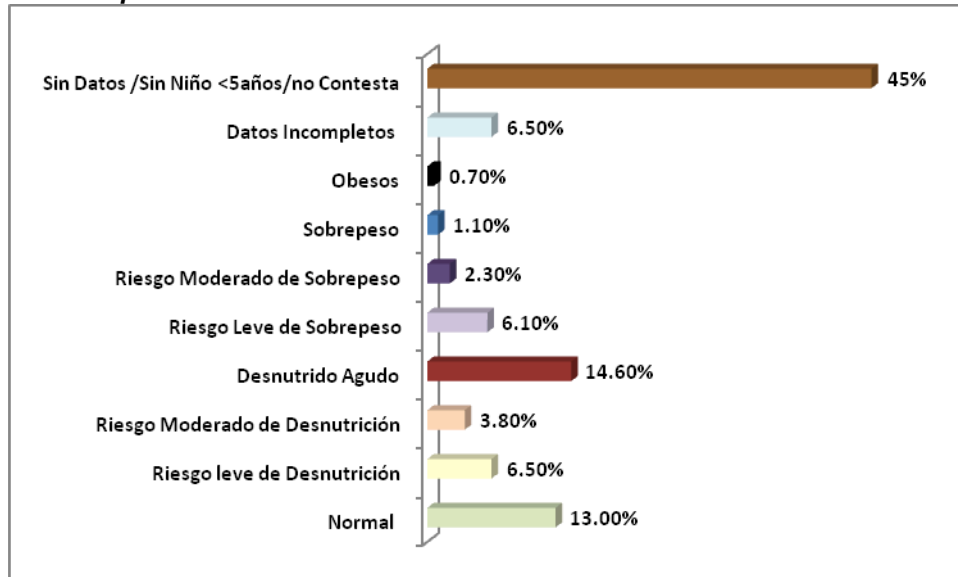
4. Pilot Project focused on Food Access initiated—Cooperativa Miguel Angel Ortiz in the community of El Colorado, Pueblo Nuevo, and Estelí.

- PRODECOOP selected the community to implement the pilot project, based on the demonstrated need to improve food security, the strong local organization within the cooperative, and the difficult social history (in 1979, 49 people—many women and children-- in the community were massacred as Somoza's defeated Guard fled Estelí after the popular Revolution captured the city on July 16th after days of intense fighting) that the community is working to overcome.
- Identify two cooperative members to lead the pilot project and manage the Community-based food security center or CADA as they are called in Spanish.
- Set up cooperative based administrative system for selling/buying food at a fair price especially during the thin months. All accounting is done through the established practices of the local cooperative with support and follow-up from PRODECOOP.
- Since April the CADA—or *Centro de Acopio y Distribucion de Alimentio-*, has been operating and distributed thousands of pounds of corn beans, and rice and other basic goods such as cooking oil.
- Set up rudimentary facilities to store food (silos, redesign building). It is already in function but we are waiting for plans for redesigned building to hold silos.
- Established one community garden and three individual patio gardens (*huertos caseros agroforestales*). Dr. Mendez developed an excellent protocol for research and design of *huertos caseros agroforestales* and there are several great local examples.

C. Selected Preliminary Results from the Diagnostic Study

The results reveal that hunger and food insecurity continue to be a persistent problem among the children, men and women involved in this project. 213 of the 266 households (80%) said that they were unable to meet their basic food needs at some time during the past year. As seen in Figure 3 of the appendix, the cooperatives identified six months of food insecurity, from April through September, with the most severe occurring June through August. These are consistent with the results found in previous studies (CIAT, Bacon, Mendez) as well as the national level averages well known for the rural areas of Nicaragua by the Ministries of Agriculture (MAGFOR) and Health (MINSAs), as well as SISVIN (*Sistema de Vigilancia Nutricional*). The results also suggest that a workshop can be designed that would focus on food security techniques that would ensure that these families store sufficient quantities of food to avoid hunger during the thin months.

Table 1: Classification of nutrition levels according to weight/height of 143 children participating in the study in 18 cooperatives affiliated with PRODECOOP

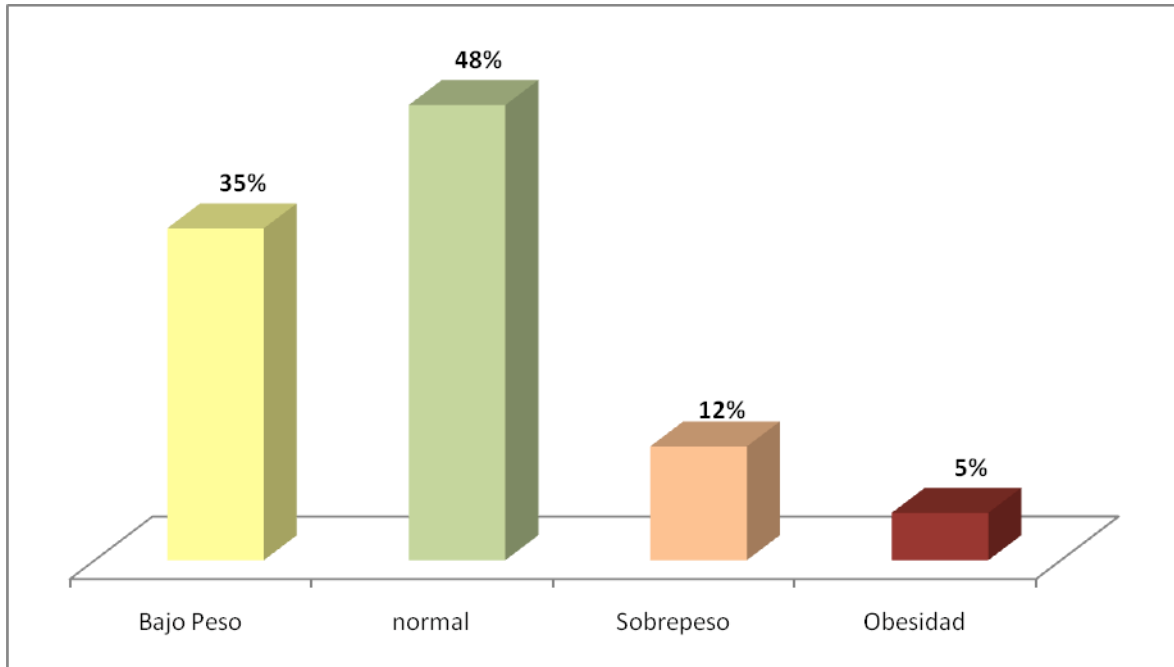


***P/T= Peso / Talla (Weight/Height)

143 children of the surveyed families in the 18 PRODECOOP-affiliated cooperatives were also classified under the category of acute malnutrition using the Weight/Height indicator, which measures current nutrition level. In this table we can see that according to the Weight/Height indicator, 13% of the children classified as Normal, followed by 14.6% as in a state of Acute Malnutrition, followed by 6.5% classifying as being at high risk of suffering malnutrition and 3.8% as being at low risk of suffering malnutrition. 6.1% are at high risk of being overweight, while 2.3% are at moderate risk of being overweight; only 1.1% of the children surveyed are overweight, and the percentage of children classifying as obese diminishes considerably to 0.7%. 6.5% of the families surveyed gave incomplete information and for this reason these children could not be classified according to the Weight/Height indicator, while 45% of the families did not have children below the age of five or they simply did not respond.

Another problem that may have caused high percentages of overweight or malnourished children is the elevated levels of consumption of junk food among this population group, given that junk food is very popular and highly accepted among the families surveyed, besides being very cheap, which leads adults to see it as a viable option for feeding their children.

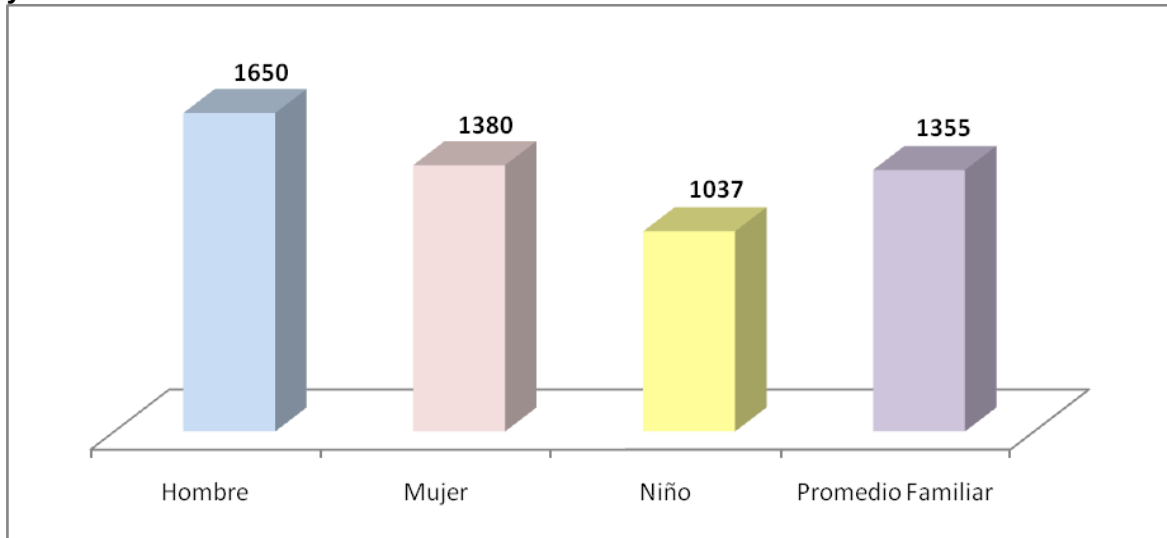
Table 2: Nutrition levels of adults according to body mass index in the 18 cooperatives affiliated with PRODECOOP.



***IMC = Índice de Masa Corporal (Body Mass Index)

We studied 260 adults in the 18 cooperatives, finding that 48% of these fall within normal levels of nutrition, followed by 35% classifying as underweight. We also observed that 12% of the adults studied classified as overweight while 5% of the population surveyed was obese. In this graphic it is very easy to see the state of epidemiological transition that developing countries are entering, wherein on the one hand malnutrition is causing many losses, both human and material, while on the other hand overweight and obesity incapacitate more human beings and reduce productivity every day, making it more and more difficult to improve the quality of life in these societies.

Table 3: Energy consumption of compared to FAO – OMS recommendations and levels in Nicaragua and in rural areas (based on 24-hour recalls). Daily recommended intake is 2500kcal per day



This table compares the average energy consumption among the 18 surveyed cooperatives with the levels recommended by the FAO-OMS. It can be seen that there is a caloric deficiency of approximately 1200kcal per day, and in relation to the Nicaraguan average consumption the deficiency falls to 600kcal; in comparison with the average caloric consumption of the rural areas in northern Nicaragua the deficiency is only 100kcal. In all cases, these families are suffering caloric deficiencies.

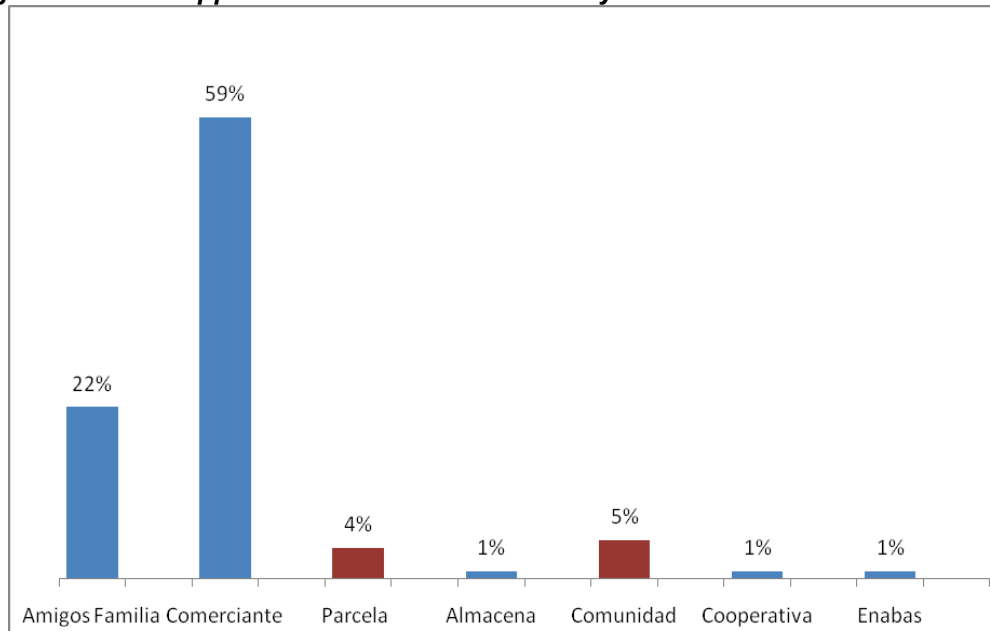
As can be seen in the graphic, the caloric or energy consumption of the surveyed families is below the recommendations of the FAO-OMS, which is at 2500kcal per day, and these families have an average daily caloric intake of 1355.8kcal per day, resulting in a deficit of 1145kcal per day, almost half the recommended daily energy consumption. This picture changes slightly once we segregate the data by gender: children have the least energy-filled diets, consuming an average of only 1037kcal per day, followed by women with a diet of 1380kcal, and finally men with an average intake of 1650kcal per day. The reasons for these low-energy diets are based in eating habits, given that for the majority of these people, the standard menu is dominated principally by three basic grains, and do not include nontraditional foods that could improve caloric intake.

When we mention standard menu, we are referring to those foods that are consumed by more than 60% of the surveyed population with a frequency greater than three times per week. Generally the foods that make up the standard menu are determined by culture, religion, beliefs and myths, so any attempt to modify the standard menu needs to be carefully planned and take these factors into account, in order to achieve positive changes in perceptions of the food environment.

Several components of this study focused on identifying strengths within the communities and on the farm that can be built into the design of a successful intervention to increase food security and sovereignty. For example, households identified the food crops that are available for harvest during the thin months, successful coping mechanisms, and places where they can access food during the thin months. The figure below summarizes these places. What is striking is the lack of access that is currently provided by both the government (ENABAS) and the local cooperative. However, it is possible that food that is made available through the government’s food security plan is actually being accessed

through local intermediaries or other sources.

Table 4: Origins of Food Supplies in Times of Food Scarcity



During the thin months, 59% of the 260 families surveyed from the 18 cooperatives obtain their food supplies principally from informal traders, followed by 22% who obtain their food supplies from friends and family. The other methods these families use to supply food are through their own production on their land (4%), stored food from previous harvests (1%), through the community (5%), and only 1% obtains food from the cooperative and ENABAS. In this particular instance, an awareness-raising campaign should be executed to promote the importance of storing food in order to avoid suffering hunger during the thin months. A workshop on economic resource management should also be developed to give the families more control over the money available to them.

D. First Year Achievements

We have developed a shared vision and built trust and effective working relationships among the three partner organizations and the individuals that are conducting this project on a day to day basis. ***This combined with a realization of the depth of the problem provoked PRODECOOP to propose a 10-year partnership to substantially reduce and finally eliminate hunger in this region.*** We raised awareness about the problem of *los meses de las vacas flacas* through presentations at the Specialty Coffee Association of America’s annual meetings, Let’s Talk Coffee, and in multiple academic and personal settings.

The core project activities and deliverables were completed and in many cases the efforts of the individuals and some organizations have gone beyond the minimum requirements to achieve this goal. The agility and commitment of the staff of ASDENIC are worth mentioning in this regard, and the major contributions that they have made to developing an innovative training module, identifying best locally available practices, and involving the many different programs and individuals within this organization in the project.

Although the diagnostic occupied a substantial amount of time during this first year, as summarized below and in the final report, the tangible results in showing the depths of problems as evidenced by the malnutrition in children and adults alike, as well as the identification of best practices make this an essential first step and an important tool to guide the decade long partnership that these three organizations are proposing.

E. First Year Challenges & Future Opportunities:

Some of the challenges we mentioned in past progress reports were a lack of salary estimates for PRODECOOP and CII-ASDENIC that include the payment of “social security” benefits or provisions (42% of actual wage). We also found it difficult to start the diagnostic and youth promoter training program in late January/February as initially planned because the heart of the coffee harvest in Nicaragua falls within that timeframe. However, even with these challenges, we have accomplished much of what we set out to do in Year 1.

We have also encountered the following challenges:

- Progress on redesigning and remodeling the building at the pilot project in Colorado, Pueblo Nuevo has been slow, partially due to the lack of good design offers from architects and engineers. The process of buying food having been affected by the high prices and lack of grains, and finally the torrential rains and earthquake that affected the community displacing many community members from their houses. However, we are well positioned to move forward in Year 2 of the project because of the excellent response of our partner organizations to the crisis.



- CAN’s Associate Director, Eric Grabeil, moved on to a new job, leaving a greater administrative burden for the project upon Maria Eugenia and Chris Bacon. However, after a broad search CAN hired a dynamic new Associate Director, Heather Putnam, who has substantial experience working with Nicaraguan coffee cooperatives, project management, and the fair trade movement. She started work in July and has recently been integrated into the administration of this project, having also assisted in the preparation of this report. Heather, Chris, and Maria Eugenia are working together to plan the administration of the project in Year 2.
- Communication between CII-ASDENIC and PRODECOOP is very good but could improve.



- Irrigation water is needed for household & community gardens especially during the dry season, which coincides with the thin months. Many communities also need improved access to clean drinking water.
- Some activities are under budgeted, including the development of food security plans and direct investments on the farms and in the communities for the second and third year. International travel was also low, but this was supplemented from other sources for Year 1.
- Although Dr. Mendez shared an excellent presentation laying out a general strategy to use household agroforestry gardens to improve food security, we are now seeking additional support: there are great opportunities during Year 2 to bring in an advanced undergraduate student (probably from Santa Clara University) and possibly a graduate student to conduct several case studies identifying model examples of these practices within the region, analyzing their impact on food security, assessing additional resources needed (if any), and developing a simple strategy to diagnosis and plan these gardens among other project participants. These studies would greatly add to our understanding of, and response strategy to, the problems we are addressing with this project.