On January 9, 1977 the Institute Of Cultural Affairs started a social demonstration project in Cano Negro, a caserio located in the state of Miranda, Venezuela. The objectives of the social demonstration project in Cano Negro are multifactorial. Together they form a comprehensive development plan. This plan was developed during the initial consult period from January 9-15, 1977 at Cano Negro (see methods flow chart). The consultants consisted of one hundred and twenty friends and members of the Institute Of Cultural Affairs, in addition to Cano Negro residents and representatives of some local government agencies. After the consult ended, a document was produced (enclosed), "Cano Negro Human Development Project." It was written by compiling the data consultants gathered the previous week. This task was primarily accomplished in Cano Negro and the Institute Of Cultural Affairs center.

Implementation of the development plan was started immediately following the ending of the consult. ICA auxiliary staff have been assigned to the Cano Negro project for a two year period, after which it is hoped the community will be self sufficient. I was part of the auxiliary staff.

Every morning the staff met to discuss the day's events.

In addition, weekly meeting were held to discuss overall planning and coordination.

Cano Negro has a population of about three hundred people. It is almost isolated except for a three kilometer dirt road from the town of Tapipa. Cano Negro is a beautiful area surrounded by lush tropical forest and overgrowth agricultural lands. Most people are Cacao farmers. Cacao is used to make chocolate. Recently the market value of Cacao has doubled; however, income is seasonally available six months out of the year. The average income is estimated to be Bs 2,500 or $580.00 United States moneies per year. This is below the national median income of Venezuela. The community appears economically stagnant, primarily because of its dependency on a one crop economy, Cacao.

SOURCES OF INCOME - RURAL AREAS, VENEZUELA

50% depend on income (frequently seasonal, irregular) from work on farms or agricultural enterprises + small income from rudimentary productive activities.

35% live from own land farming

15% live from salaries earned at official entities and private companies

Average income = Bs. 281.15/month ($85.39/mth.)

Source: Report fr. IVAC, 1974

There are forty three families in the caserio. About half live in twenty four government build cement houses, while the others reside in traditional mud houses common to the Barlevento area. Most houses have electricity, but the cost is to high for everyone.

Many women head households and start bearing children as early as fourteen years of age. The family structure is not strong in terms of traditional marriage relationship. Women and men live together as "comparinos", this is common through out the caserios and barios of South America. Women bear and lose many children. They age quickly and work hard through out life. Many have marginal nutritional status complicated by too many pregnancies, anemia and parasites.

Primary health care is almost non existent. Vaccinations against polio and malaria spraying being the exception. Medical teams almost never visit caserios. The nearest clinic is in Tapipa and presently lacks a physician. The closest hospital is in Cacaugua. When anyone is seriously ill or needs medical attention they must walk three kilometer to Tapipa and take the bus to Cacaugua. The hospital is poorly managed. Medical case histories are not available after 4pm even to house physician. Toilets are not operative and overall services are poor and inefficient. Women from Cano Negro have their babies delivered at the Cacaugua hospital.

It is necessary to bring sheets, diapers and dressing gown since none of those items are supplied by the hospital.

HEALTH STATISTICS, VENEZUELA

Of the 27 first causes of death, 20 are related to malnutrition.

15.5% of deaths are due to enteritis, avitaminosis or tuberculos.

In rural areas:
60 % of pre-school children, & 50% of school age present malnutrition.

Ratio MS/inhabitants = 1 Doctor per 1,109 inhabitants, nationally

45% of Doctors = in Caracas

44% of Doctors = in other large centers

11% of Doctors = in rural areas

(Ref.: Report of IVACA, 1974)

Govt. plans to institute system of 2 yrs. obligatory service in rural areas.

Cano Negro had no sanitation system. A few households have latrines, while garbage is dumped in the bushes. The lack of a portable water supply was found to be one of the most serious problems. This water problem effected both public health and agricultural diversification.

There are limited economic opportunities and a migration of young people from Cano Negro to the cities has left the caserio without a young working force. This is a common

problem found in many of the rural areas of developing nations. In Cano Negro the existing agricultural system can not support additional workers and other job opportunities are not available.

Large numbers of people have migrated into urban city areas. These areas are overburdened with poor services and a high crime rate. The rural exodus consist of young unskilled workers with few resources available to them. This emmigration also disrupts the socio-family relationships and limits any stability which exist. Parents are not eager to sent their children off to strangers and young adults often return marred by city influences.

RURAL / URBAN, Venezuela

VZLA. - POPULATION CLASSIFIED BY URBAN, INTERMEDIATE, & RURAL				
Yr.	Absolute No.	Urban %	Intermediate %	Rural %
1971	10,721,522	75.45	2.94	21.61
1961	7,523,999	62.52	4.92	32.56
1950	5,034,838	47.90	5.91	46.19
1941	3,850,771	31.34	8.04	60.62
1936	3,364,347	28.89	5.83	65.28

LATIN AMERICA

1970 - 56.2% of population = concentrated in urban areas

Predicted:

1985 - 66.88% of population = concentrated in urban areas

COUNTRIES OF RECENT URBAN EXPLOSION		
BRAZIL, MEXICO, COLUMBIA, VENEZUELA, COSTA RICA, PANAMA		
Year	% of Total Popult'n. over/ Total L.A.Pop.	% Urban Popult'n. over/ L.A.Urban Pop.
1970	65.32%	65.37%
1960	64.38%	59.68%
1950	61.93%	54.99%

i.e. 1970: 65.37% of L.A. urban population is concentrated in countries of recent "urban explosion" = Brazil, Mex., Col., Vzla., C.Rica, Panama.

Source: REFORMA URBANA
C. Acedo Mendoza

Water is in short supply and is presently carried from a water hole or nearby river. Bathing and washing of clothes usually takes place at the river or near the water hole. The lack of uncontaminated portable water and a latrine system is the largest public health problem which exists in the community. All residents appear to be infected with parasites and/or amoebas. This contributes to the marginal nutritional status of the population since

the parasites and amoebas increase the bodies requirements for certain nutrients.

Primary malnutrition is wide spread in Cano Negro. The physical signs of protein-calorie malnutrition such as flakey paint rash and dispigmentation are absent. Most children appear small for their age. Bananas, yuca (cassasava), rice, beans and a few vegetables and fruits make up the diet. There are many reasons malnutrition is prevalent. The high cost of locally unavailable foods, meat, fish and artificial infant formula are important factors. In addition the limited cultivation of vegetables contributes to the malnutrition although the potential for growing a variety of foods exists. Chickens, beans and grains can also be raised and used as a protein supplement; however, few people do. Some fish is caught in the local rivers, this supplies many homes with a free protein source. A fish truck comes once a day but it is expensive and not very fresh, costing about 3-4 Bs per kilogram.

There is an overall lack of information about nutrition. Recently the practice of bottle feeding has become popular. The clinic nurse in Tapipa estimated that up to 50% of women are using the bottle instead of the

breast. Food superstitions also play a minor role; however, these beliefs are fading out.

There is a high illiteracy rate in Cano Negro. The government schools do not operate on a regular schedule. The local teacher is young, inexperienced and not equipped to handle fifty students from grades one to three. As a result few students attend classes which are held regularly. Out of all the children in the village who were attending the Cano Negro school, only three could read and write. Students interested in getting a secondary education must attend school in Tapipa. Several students walk to school every day, although the road becomes almost impassable in the rainy season.

There are many rural education, health, economic development and nutrition programs sponsored by government agencies. However, few succeed reaching the rural areas.

Education

In rural areas:

Average schooling = 1-2 years.

Illiteracy = 25.4%

47% of school-aged children are not in school

75% of rural schools offer only up thru 3rd grade

Only 3% of students complete 6th grade

(ref.: Report of IVACA, 1974)

Venezuela is a country rich in possibilities. The discovery of oil in 1914 radically changed the country into the most technically advanced in South America. Its past economy was based on cacao, sugar and indigo. Venezuela has not diversified its interest and now relies on oil. The country appears to have a small middle and small ruling class with a large population of rural poor.

Each program proposal addresses itself towards three areas.

A. Providing community services.

B. Building economic self-sufficiency

C. Ensuring community cohesiveness

This chart divides community needs in project areas where they are easier to tackle.

The Practical Proposals Chart list the major community development projects.

II. Nutrition related proposals were associated under social services proposals.

D. Fundamental care proposals and #17 Cooperative marketing project.

#18 small livestock and #19 home gardening project.

These project would all improve the availability of food and improve the nutritional status of the community.

The following are excerpt from the Cano Negro Human Development Project Consultation Summary Statement. The nutrition projects I worked on.

Tactic #3: Developing Necessary Hygienic Awareness

> In order to prevent disease and improve health, necessary hygienic awareness will be developed. Kitchen cleanliness will be demonstrated in the community kitchen and taught in the classroom. Basic nutrition education will be taught through the actual preparation of meals in the community kitchen and through nutrition classes to provide knowledge on basic food groups. First aid courses will be held for demonstrating treatment of burns, wounds and other minor ailments, and five adults in follow-up sessions will be instructed on the proper treatment of snake bite. Home nursing classes will be given to broaden basic skills in caring for ill family members. Workshops in preventive sanitation measures will be started within the first month of the project. A six week women's course in family care, including prenatal, infant, child and elderly aspects will be offered twice a year. A cooking lab will be held on a rotating basis with village women in the community kitchen where they will participate in preparing nutritious meals.

Tactic #7: Insuring Beneficial Nutritional Practices

In order to provide adequate physical energy levels for Cano Negro residents, beneficial nutritional practices will be ensured. Food supplements will be provided through government food plans, including vitamins, minerals, complementary protein and fluoride tablets. Nutritional assessment will be made of all staple foods in the present daily diet to determine where nutrition deficiencies exist. Children's diets will be supplemented through the introduction of government food resources in the preschool and elementary school. A community kitchen will be started to teach each family proper cooking and to feed the entire community one meal a day using produce from the community garden and meat from the rabbit and broiler chicken farms. A prenatal diet will be established, including mild, iron and vitamin tablets, and will be made available by monthly distribution through the medical outpost. Infant feeding patterns, including the benefits of breast feeding, will be demonstrated, as well as ways for nursing mothers to continue working full-time. Evaluative records kept in the health outpost will record each child's weight, height, skin tone and hair texture and be conducted on a monthly basis for the first year of life, then on a quarterly basis.

Tactic #26: Raising Diversified Neighborhood Gardens

> In order to feed the total community of Cano Negro with nutritionally balanced meals, diversified neighborhood gardens will be established. A community garden, designed to produce fruits and vegetables for serving 300 meals per day in the community kitchen, will be planted, protected by fencing and necessary irrigation. A seedbed nursery to provide seedlings for family and community gardens will be created. Family gardens will be encouraged through demonstrations of plant care and harvesting techniques in the community garden, and by providing seedlings from the seedbed nursery. Experimental plantings in a specially designated section of the community garden will test possible new nutritious foods that might supplement the village diet.

While in the community I participated in many projects. For instance I designed the garbage system, bottles would be returned to stores, cans recycled when markets found and a compost pile started. Finished compost could then be used on the vegetable gardens as a good cheap source of nutrients.

Nutrition Related Activities

Following are several projects I set up and executed while at Cano Negro.

Nutrition Survey:

Through the nutrition survey (see questionnaire) I hoped to determine what infant feeding practices were and what food beliefs, likes and dislikes people had.

The nutrition survey questionnaire was well accepted by members of the community in fact a few women complained because we did not visit their home. It seems that almost every one wanted to contribute.

Methods:

The survey team consisted of myself and a Spanish interpreter. At each site we asked to see the food storage and cooking area. This way we could answer many of the questions by our observations, cutting down on the total time and number of questions asked. Out of five women surveyed, two bottle fed and three used both bottle and breast. Two out of three women diluted the formula with refined wheat flour, rice cream or sugar. Mothers and grandmothers showed me how they cut the formula because it was expensive or mixed easier. It would cost 2/5 of the weekly income to buy enough infant formula to provide

the nutrients needed for a two month child. (figures based on formula cost and nutrient analysis January, 1977.)

Since fuel is expensive and water scarce, bottles are not always sterilized nor drinking water boiled. Four out of five children had diarrhea; two always and two sometimes, although it is difficult to determine at first glance if this problem is due to bacteria in unsterilized bottles or parasites. Both probably contribute. Almost every child was found to have between one and five different types of amoebas and parasites during the medical assessment. This is a major cause of diarrhea and infant mortality in rural areas.

My observations in Cano Negro confirm the fact that the availability of infant feeding formulas sold as an over the counter items has created a serious public health problem. Children bottle fed under conditions like those in Cano Negro develop malnutrition. The Institute of National Nutrition issued a strong statement against the use of formula during February, 1977. The directors of the institute cited the fact that formula was three time more expensive than dried milk. Therefore, diverting limited food income from other ensential areas.

I spent two weeks at the Institute of National

Nutrition in Caracas. While at its "Centro Clinico", one of the few treatment centers for children with protein-calorie malnutrition, doctors told me that almost all children who were hospitalized were bottle fed. They expressed grave concern over trends away from breast feeding.

I made several visits to local grocery stores, drug-stores and pharmacies and found that infant feeding formulas could be purchased without a prescription. Dr. Jose Fransisco of the Hospital de Ninos told me that most doctors don't realize the extent of the problem. This hospital sees seven hundred children a day. Most children with problems of malnutrition have been bottled fed.

Feeding infants formula is not the only cause of malnutrition. Our survey showed that some people felt that eggs should be avoided during pregnancy. When asked why? we were told that eggs slowed the blood and snakes would be more likely to bite women in the fields. Young children were often given soups and grules low in protein and calories during the first year.

I used the FAO film "Hungry Angels" in Spanish. It was borrowed from INN. The film was shown to the village and everyone liked it since it was the first movie ever to be shown. I followed it with a short lecture on the

proper way to mix formula and what happens when children don't get enough protein or calories. I also gave out INN place mats which show facts on infant feeding and foods which are high in vitamin A.

Overall I felt my fieldwork experience was a good one. Working with development projects such as Cano Negro helped me gain a greater understanding of the problems rural areas face.

Not being fluent in Spanish was a bit of a problem but not insurmountable. I taught elementary school for two weeks in the mornings and attendance grew from six students to over twenty. Both my students and I found there are many ways to communicate.

I found the time spent at the Institute Of National Nutrition very worthwhile. After finishing two weeks there, the institute staff agreed to implement its National Nutrition Programs in Cano Negro. Including a physical nutritional assessment conducted by Dra. Margot Medina and staff on site. This was conducted in Cano Negro my last day there. It included a physical stool test and recording of height and weight. Nutrition records were started and coordinated with our medical dispensary.

APPENDIX

A. Materials for nutrition education:

Food sheets to teach the three food groups

B. Vegetable, Dairy Protein & Vitamin A foods

C. Infant feeding write up

Food Poster

Draft of testimony for ICCR vs Bristol Meyers

D. Nutrition Survey

E. Recommended list of food for community garden

Amino Acid content of food's chart

F. ICA Consult Daily Time Design

Team assignments

Sample orders of the day

G. Promotion Humana

Two week schedule

Institute Nacional De Nutricion - Division De Education

H. Health & Population Statistics