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FELIX CALLANAUPA AND THE UNITED NATIONS:
AN EXPERIMENT IN TECHNICAL ASSISTANCE

A Letter from James G. Maddox

Gran Hotel Bolivar
Lima, Peru
August 24, 1954

Felix Callanaupa, farmer, liquor manufacturer, and respected citizen of Chinchero, Peru, has recently learned about the United Nations. Representatives of that agency have been in his home, on his farm, and in the church where he helps light the candles for Sunday Mass. They have asked him all kinds of questions, put down a lot of figures on papers which he doesn't understand, and encouraged him to sign his name to an important formulario -- an application for a loan from the near-by branch of the Agricultural Bank. As a result, of all this unusual activity, Felix has been approved for a loan of 1,000 soles, about \$50.

Although he hasn't seen any of the money, he has received an advance on his loan. It is in the form of disease-free potato seed, with which he will plant about three-quarters of an acre of potatoes before the middle of September. This early crop will be planted on irrigated land. In October and November, after the rains start, he will receive another advance of potato seed, several sacks of guano fertilizer, and sufficient insecticides to protect his crops from bugs and worms.

Just as soon as the rains soften the ground to a depth of three to four feet, he will receive a properly constructed concrete slab, which he can place over a large rectangular hole in the ground and surround it with adobe walls covered with a thatched roof. The result will be a sanitary privy. If Felix's farm work doesn't delay his privy-building too long, the Callanaupas will be the first family in the history of Chinchero to have one of these fine, new, modern buildings, a full five feet square.

The potato seed, the fertilizer, the insecticides, and the concrete slab for the privy, will use up all of his first loan. But if the crops are good, and prices reasonable, Felix can repay his loan and be eligible for a further one next year. Moreover, the improved seed, together with the insecticides and the fertilizer, should increase his production sufficiently so that he can live better than ever before. To increase the output of Felix's

farm and to protect the health of Felix and his family -- these are two of the goals of the United Nations program in Chinchero.

Since Felix was the first farmer in Chinchero to receive a loan under the auspices of the new program of supervised credit, the technicians who have been working with him are very hopeful that he will be the first to construct one of the new privies. But Felix's behavior is none too predictable. He is a Quechua-speaking Indian, and like several million others of his kind he has lived the full 60 years of his life in a manner quite different from that which is now being suggested to him by representatives of the United Nations. Indeed, there is a 400-year tradition of the Indian resisting the ways of the white man, even while succumbing to them, and there is no positive guarantee that Felix is going to come through with the kind of performance that his new friends and helpers are hoping for. He might upset the apple cart by such simple things as eating and giving away many more potatoes than the experts have predicted, which would mean that he wouldn't have enough for sale to repay his loan; or he might take to drinking all of the chicha which he manufactures and normally trades to his neighbors for barley and a few vegetables. Too much chicha -- an alcoholic beverage made from fermented corn -- would mean that he would never produce the increased yields of potatoes on which the technicians are basing both their personal reputations and their plans for improving the Callanaupa's level of living.

Moreover, there are a lot of other claims on Felix's energy and income. He is a mayordomo in the church. This he feels to be one of the greatest honors ever accorded him, but it puts a rather heavy burden on his cash income for candles, takes a day of his time each week to work for the priest, and requires him to supply substantial amounts of food during fiestas. There are a couple of local officeholders, neither of whom have been elected by the people of Chinchero, who can lay claim to a part of his farm output. Finally, the customs and necessities of field work are such that Felix has to give a lot of his time to helping his neighbors. They, of course, help him in return for what he does for them, but Felix is a big-hearted man, and the fact that he is one of several local chicha manufacturers makes him easy prey to more wily neighbors. If they can get Felix to sample his product a little too liberally, they not only can get a very full measure for every glass that they buy, but they can also talk him into a few extra days of work on their farms.

Felix lives in a world of tradition and custom, in which the use for money is almost nil. The United Nations technicians are striving to supplant the traditional with the rational. They are asking Felix and his neighbors to produce more, to consume more, to improve their health, to educate their children, to learn the uses of money so that they can enter into the trade and commerce of the modern world. They are hopeful that the Callanaupas and several hundred other families in Chincheros can be gradually brought to the point where they will be efficient farmers, responsible citizens, and productive members of society.

These goals have vast implications for Felix. In his

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generation he may see his way of life inherited from his ancestors so changed that his son's sons will marvel at how things were in grandfather's day.

To understand the ramifications of what is happening to Felix, we must take a more detailed look at the community in which he lives and the program which the United Nations has brought to it. This is the subject of the report in the following pages.

James G. Mason

THE UNITED NATIONS TECHNICAL ASSISTANCE
EXPERIMENT IN CHINCHERO, PERU

*

THE PHYSICAL SETTING

Chincheró is the name of both a district and a small village, which is the capital of the district, in the highlands of Peru. The district is a subdivision of the province of Urubamba, which in turn is a subdivision of the Department of Cuzco. It is roughly accurate to think of a Department as corresponding to a state in the United States -- the first unit of government below the national level. The province, therefore, is analogous to a county, and a district is more or less similar to a New England town, or a township. The duties and responsibilities of the various officials at these three levels of government are entirely different from those in the United States, and not much is to be gained by thinking of the District as being roughly analogous to a township, except to indicate that it is the smallest unit of government in rural areas of Peru and that it covers a geographic area of some extent.

The district of Chincheró is located on a high rolling plain, at an elevation of about 12,000 feet above sea-level. The center of the district is approximately 12 miles from Cuzco, which is the capital city of the Department of Cuzco and, before the days of the Spanish conquest, the capital city of the Inca Empire. Cuzco is the third largest city in Peru, and a mecca for tourists, who come from all over the world to visit its famed Inca ruins. Nevertheless, the people who live in Chincheró are quite isolated and extremely backward. They are not a part of the worldly procession which streams through Cuzco, only a few miles from their homes.

Within the district of Chincheró there are approximately 47,000 acres of land. Of this, about 34,000 acres, or almost three-fourths, are in crops or pasture. There are no forested areas, although some of the mountain slopes have bushes on them. At least 2,500 acres are covered by lakes and swamps. Not more than ten per cent of the land that could be used for crops or pasture is idle, and a good part of this is taken up by Indian villages, trails and roads.

The rainy season, which is the main crop-producing season, extends from the middle of October to the end of March. There is some irrigated land which is used in June, July, August and September, but this is the winter season and the temperature is often below freezing during the nights. Although Chinchero is only about 13 degrees south of the equator, the high altitude gives it a rugged climate. When the sun shines the weather is bright and warm. The minute the sun sets or goes behind a cloud, it is bleak and chilly. The shortage of oxygen in the atmosphere makes it a difficult place for anyone who is not thoroughly acclimatized to high altitudes.

In most of its physical characteristics Chinchero is typical of thousands of Indian communities in Peru. Over four-fifths of the people of Peru, which number 8.5 to 9 million, are of Indian stock. The pure Indian groups represent about 40 per cent of the population, and the cholos and mestizos with mixed blood about 47 per cent. Chinchero is predominantly Indian. However, as will be discussed later, it has a few cholos and mestizos. The importance of Chinchero, and of Felix Callanaupa, is that they provide the raw material for a microscopic study of what is commonly called the "Indian Problem" of Peru.

LAND TENURE AND AGRICULTURE

Of the 34,000 acres of crop and pasture land in the district of Chinchero, an estimated one-third is in large farms, commonly called haciendas. The remaining two-thirds is held by 13 different Indian communities, called ayllus, the church, the municipality of Chinchero, and a few small owners. Of the 22,000 to 23,000 acres outside of the large haciendas, about 55 acres are church land, approximately 30 acres are municipal land, and about 150 acres are owned by small independent operators. It is obvious, therefore, that the great proportion of the agricultural land of the district is held by haciendas and Indian communities.

All of the hacienda land in Chinchero is in seven haciendas, several of which have land in other adjoining districts. One of the largest of these has more than 13,000 acres, about one-third of which is in the district of Chinchero. The land of this hacienda is owned by a religious organization, the Convent of Merced, and is rented by one of the richest men in Cuzco, a business man who has extensive interests in textile factories, retailing, farming and the importation of American automobiles. The operation of the hacienda is under the direction of a manager, or mayordomo. With the help of several assistants, he directs the activities of 75 to 100 Indian families who are workers and tenants. The mayordomo is a mestizo, and the business man who rents the hacienda from the Convent is an Italian.

This hacienda is primarily engaged in the production of livestock, but each of the Indian families has from 12 to 18 acres of land assigned to it for crop and pasture purposes. The rent payment is a combination of money, labor and produce. For instance, each family pays from 50¢ to \$1.50 per acre in cash, depending

largely on the quality of the soil and whether or not it is irrigated. In addition, each family must supply the labor of two persons for three days each week -- a total of six man-days of labor -- to work the lands that are operated by the hacienda management. For this work, the hacienda manager pays each worker 20 centavos, or about one U.S. cent, per day. The worker uses this cash to buy coca for chewing and a little chicha for drinking. Finally, each of the tenant families must pay five of its best sheep, one pig and two chickens each year to the hacienda.

This combination of cash, labor and livestock rental arrangement is complicated by the fact that there are several types of work included in the requirement of six man-days per week. For instance, each tenant family sends one of its members for a month each year to take care of the horses and mules of the hacienda. For this work the hacienda pays three soles, or about 15 cents for the month. Several hacienda tasks command no pay at all. Six men are assigned each week to work in the hacienda house; each tenant takes his turn at this housework, as directed by the mayordomo. Four men are assigned in turn each week to deliver the milk produced on the hacienda to Cuzco. Likewise, 8 to 12 women from the tenant families are selected each week to milk and care for the cows. Similarly, each family must provide a shepherd (usually a child or a woman) for six months each year to watch the flocks of sheep owned by the hacienda.

All of these various types of paid and unpaid labor apparently come within the total requirement of six man-days per week per family. Actually, women and children perform much of this work, and the labor of even the smallest child watching a flock of sheep is calculated in the man-day total.

In an area where there are virtually no full-time, hired farm workers, and where money is a rarity, it is somewhat fictitious to try to reduce the rental payments to a cash value. Nevertheless, it is useful to summarize them and relate the total to the acres rented and to the amount produced. The following calculations are an attempt to do this:

1. Assume a 12-acre farm for which the family pays a cash rent of 300 soles per year,
2. Assume that the family provides the equivalent of 300 man-days of labor per year for the hacienda management for which it receives no offsetting remuneration, and that this labor is worth about two soles per day, which is two-thirds of what able-bodied men receive for working on the roads in the area,
3. Assume that the five sheep, one pig and two chickens which the family pays as a part of its rent are worth 400 soles. (This is about what they are selling for in the Chinchero area.)

4. The family has then paid the following rent:

Cash	300	soles
Labor	600	"
Produce	400	"
	<hr/>	
	1,300	"

At the rate of exchange prevailing in August 1954, this is equivalent to about \$65, or \$5.50 per acre.

The family might well grow $2\frac{1}{2}$ acres of potatoes, on which it could produce about 5,000 kilograms that would be worth approximately 3,000 soles, plus $2\frac{1}{2}$ acres of wheat which would produce about 800 kilograms, worth approximately 800 soles. Most of the rest of the land might reasonably be expected to be in pasture. From it, our hypothetical family could produce livestock products of a value of 1,000 soles. Thus, this family would have a gross farm income of 4,800 soles, or about \$240. The rent of \$65, therefore, would be approximately 27 per cent of its gross income.

This figure is lower than I would have guessed. However, I have checked the calculations with several technicians familiar with the area, and they find nothing seriously wrong with the assumptions. It should be kept in mind, however, that the result is not an actual accounting of rent paid by a family, or the average of carefully calculated rents for a group of families. It is a synthetic calculation made on the basis of assumed wages and yields, and average prices received for farm products as reported by agricultural technicians working in the Cuzco area. It needs further checking by careful research.

If, for instance, the labor contribution had been calculated at the rate of three soles per day, the value of the total rental payment would have been 1,600 soles, which would have been one-third of the value of the gross output of the farm. There are, no doubt, families on this and similar haciendas who are paying essentially this same amount of rent, but who produce considerably less than 4,800 soles worth of products. Thus, the proportion of their gross output which goes for rent would be higher than the 27 per cent suggested by the calculations above. On the other hand, most of the smaller haciendas in the area require their Indian families to work only three or four days per week for the hacienda owner, instead of six days per week as is customary on this largest and best managed of the haciendas in Chinchero. Such families, therefore, would be paying a considerably lower rent in terms of their total production. If the labor contribution to the total rental payment in the example above had been worth 300 soles, instead of 600, the total value of the rental payment would have been 1,000 soles, which is just a little more than 20 per cent of the gross output of the farm.

Until I learn of further research on this problem, I will hold the opinion that the Indian families are paying as rent to the hacienda operators one-fourth to one-third of what they produce. If, in this complicated system of peonage, we focus

attention solely on the rental payments, we have to conclude that they are not exorbitant. For decades, the most common rental arrangement in the southern United States has been for a share tenant, who furnishes his own mules and machinery, to pay the landlord one-fourth of the cotton and one-third of the other crops which he produces. This has been an onerous system, and not one to be held up to the world as a model. However, even in the Middle West where rental arrangements are usually complicated by the heavy capital requirements necessary for successful farming, a land rental payment of 25 to 30 per cent of the gross output of the farm is not uncommon.

The real weaknesses of the hacienda system in Chinchero appear to be not so much in the rental arrangements as in social factors. The haciendas are under the management of mestizos, who look upon the Indian peons as beasts of burden and treat them with little more respect and courtesy than is accorded the family dog. Moreover, almost no capital is being added to the haciendas by their owners and operators, and new technologies are not being introduced. The farming practices are not unusually destructive of the soil (though some of our conservation enthusiasts could find much to criticize), but the large landowners are not improving their livestock; they are not using fertilizers, improved varieties of seeds or insecticides to increase crop yields; nor are they attempting to reduce labor requirements per unit of output.

Most of the haciendas in Chinchero are owned by absentee landlords, who have other sources of income. Some of them have farms in other areas, particularly in the edge of the selva, where they show a greater interest in good farming and good estate management. The operations in Chinchero continue in their traditional patterns. The output per worker is so low that neither the owner nor the Indian makes very much. However, the costs to the owners are almost nothing, and anything that they get out of the hard, inefficient work of their Indian peons is almost like a gift. As long as the Indians are willing to work three to six days per week on hacienda land and pay an additional small cash rent, the landowner can sit idly by and collect an income almost without effort. He got his land originally at practically no cost, and his annual taxes are extremely low. The whole system is tradition-bound, in which commercial or "business" ideas have little influence.

The tenure arrangements of the Indian families on the 22,000 to 23,000 acres of land owned by the 13 Indian communities in the Chinchero district are much different from those on the haciendas. Here the Indians pay no rent, except a few days work now and then on trails and roads. These community lands, according to law can neither be sold nor mortgaged. This is an attempt, on the part of the Nation, to protect the Indian from exploitation.

I have heard much talk in Peru, and other Latin American countries to the effect that community lands are communally operated; that where this is not the case, the communities have an active council of elected officials which leases the land each year, or for stated periods, to individual families for an annual

rental. Neither of these systems operates in Chinchero.

For all practical purposes, except legal sale and mortgaging, each family in the Indian communities owns scattered tracts of the so-called community land. The family uses the same land year after year, and looks on it as private property. The family pays nothing to the community for the use of its land, and there are no taxes levied on it by the Indian community or by the government. Felix Callanaupa, our friend of earlier pages for example, thinks that he owns 1.03 hectares of land or about $2\frac{1}{2}$ acres. It is scattered in seven different tracts, some of which are in communities completely outside of the one in which he lives. The largest of these tracts is .30 of a hectare (about three-fourths of an acre) and the smallest is about 300 square yards. It is on the latter that he has his house and stables. In addition, he rents .30 hectares (one topo) of Saints land from the church.

These small tracts of land are actually sold by the Indians, although legal title cannot pass. Likewise, they are transferred from one generation to another by gift and inheritance. Moreover, these transactions are recognized by a special ceremony, which takes place once a year. On "godmother's day," which is in February or March, the chief of each ayllus -- a man who has the title of Kuraka -- makes an annual reconnaissance of the holdings of each family. He is accompanied by two Waylakas -- men dressed like women -- and the three of them visit each tract of land in the village. When they arrive at a man's tract, he must walk around its boundaries with the Waylakas and then wallow on the ground to show that he works it. Having gone through this ceremony, he continues to hold it as his property. If the tract has a new "owner" since the last ceremony, through purchase, gift or inheritance, he will be recognized, provided he goes through the ceremony.

In Chinchero, there are families that have accumulated a fair acreage of land, although it is usually in scattered plots; there are others who have only a tiny tract or two. Some in the latter category are moving away to become day laborers in other districts. This problem of small scattered tracts of land is a serious handicap to any program of community development and the improvement of farming practices. It virtually forces a continuation of hand cultivation of crops, since it is a serious impediment to the use of either oxen or tractors.

In order to get an idea of the size of farms in the Indian communities I tabulated the acreage in each of the farms of the first eleven families who applied for loans in connection with the United Nations program of supervised credit. They are as follows:

<u>APPLICANT</u>	<u>SIZE OF FARM</u> <u>in acres</u>
1	4.50
2	3.88
3	12.00
4	33.85
5	9.45
6	5.05
7	2.25
8	2.15
9	4.00
10	3.45
11	3.05

These farms are not only small, but there is not a single one in which the land is not scattered through at least five different tracts. Some had holdings in as many as 15 tracts. (Applicant #4, with over 33 acres, is a mestizo, of whom more will be heard later.) This problem of small, scattered tracts of land, commonly called minifundia, is without doubt the most serious land problem faced by the families in the Indian communities. It may, indeed, be a greater impediment to progress than the rental arrangements found of the large haciendas.

SOCIAL STATUS, POLITICS AND RELIGION

There are three social classes in Chinchero, two of which are quite distinct. At the top are a few mestizos -- people of mixed Indian and white blood, who in dress and outward appearance are completely "westernized". At the bottom are the Indians, who make up the great bulk of the population. They usually dress in "homespun," go barefooted, and often have long hair. Between these two distinct classes are the cholos, who are of mixed blood, but are closer to the Indians in appearance than to the mestizos. They are usually the servant class in the cities, and in the rural area of Chinchero they often hold slightly bigger and better farms than the Indians. They usually wear clothes made from factory-woven cloth.

There are three important offices in the district, all held by mestizos. They are: the priest of the local church; the governor of the district; and the alcalde. All are appointed: the priest by the archbishop of Cuzco; and the governor and alcalde by the sub-prefecto of the province of Urubamba. The latter, in turn, is appointed by the Prefecto of the Department of Cuzco, who is a direct appointee of the President of the country. The priest functions as a religious leader of the district, and manages the church lands. The governor has control of the local police

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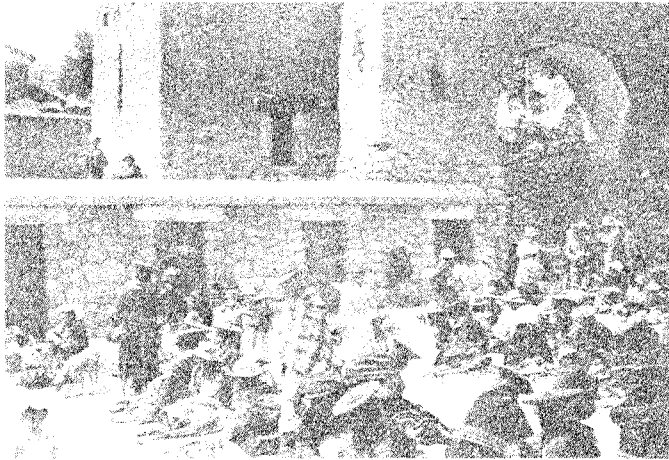
-- there is one part-time policeman in each of the 12 outlying communities -- and has responsibility for keeping the peace. The alcalde is the executive officer of the district. He presides at the meetings of the district council, and is responsible for the maintenance of roads, the keeping of town records, and for maintaining the plaza in which the weekly market is held.

Neither the governor nor the alcalde receives a salary. The men who had held these posts for the past several years were recently ousted, and new appointees were in the process of receiving their official papers at the time of my last visit to Chinchero during the second week of August, 1954. These two jobs, however, are rather juicy plums. The new acting-governor, a local farmer, is reported to be a "tough guy." This really means that he is ready and anxious to receive "gifts" of sheep, pigs, chickens, potatoes, barley, and, of course, labor from his constituents. If his twelve local assistant -- the part-time policemen -- are really behind him, he will find plenty of excuses for "gifts." There are always Indians who drink too much chicha; there are numerous petty thefts; and there are some encroachments across property lines. As any "good governor" knows, these kinds of misdeeds can best be handled out of court. Moreover, if there aren't any crimes in the community, the extreme ignorance of the Indians makes them "easy pickings" for any intelligent mestizo who controls the police force.

The out-going alcalde, an acquaintance from last year when I first visited Chinchero, is a short, fat, energetic, tough, merchant and farmer, who is perhaps the richest resident of the district. (The hacienda operators don't live in Chinchero). He is the man with over 33 acres of land listed in the preceding tabulation of applicants for loans. He owns one of the two stores in the district and runs the post office. He has a two-story, whitewashed adobe house on the main street of the principal village. There are stories that before he became alcalde, about ten years ago, he was a poor man. It is well-known that he has received many "gifts", and some people suspect that he will be able to continue his pressure on the people even though he has officially lost his portfolio..

On the basis of what I now know about Chinchero, it is impossible to say just how extensive and serious this business of receiving "gifts" really is. Certainly, it is a time-honored custom among the governors and alcaldes in most of the rural districts. Apparently, much depends on the particular personality. The outgoing alcalde in Chinchero appears to have been stronger and more ruthless than the out-going governor. It is generally thought, therefore, that he has had a faster rate of accumulation of possessions. It appears that neither the former priest nor the governor were able to temper his appetite, and it is possible that the recent shift in local officials is related to the fact that the alcalde tried to put on a second campaign for raising money to pay for a statue of a local hero which had been erected in the market plaza many months ago. The people thought that their first round of contributions had been sufficient to cover the cost. Their opinion was buttressed by the fact that the

THE OLD CHINCHERO



THE SUNDAY MORNING MARKET in Chinchero operates almost entirely on a barter basis. Farmers who have seen little cash are now learning the uses of credit for the purchase of better seeds. Improved technology may more than double the yield of Chinchero land.

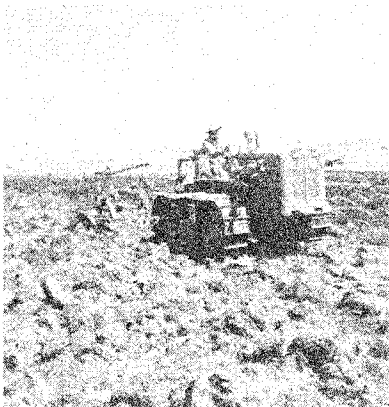


FELIX CALLANAUPA and his family live in a three-room adobe house. He is better housed than many of his neighbors in having a tile instead of a thatched roof. Oxen and wooden plows break some of the ground in Chinchero, but many farmers turn the earth with foot plows, which are simply narrow spades.

THE NEW CHINCHERO



THE HOME ECONOMIST-NURSE talks things over with Indian villagers in Chinchero's main street. She spends full time in the district. A doctor comes once a week to hold a clinic in the village. Professional advice on health and home-making is a new experience for the people of Chinchero.



A MECHANIZED PLOW breaks land too hard even for an ox-drawn implement and opens new acreage to cultivation. A thresher is at hand for the harvest. The new dipping vat for pigs and sheep will for the first time rid Chinchero livestock of skin parasites.



statue was in place, and nobody had threatened to remove it because he had not been paid for it. On the other hand, there may be other reasons for the shift in local officials. The changes may be related to the tension and uneasiness recently evident in Peru, which has resulted in the replacement of numerous Prefectos of Departments with more trusted supporters of President Odria.

The local priest also is new to Chinchero. He came to the parish on August 1. He is not happy about his new assignment, because he feels that his former position was a better one. It is impossible to forecast how he will behave in his new setting, but it is evident that he is a rather weak, secretive man. His predecessor concentrated on his religious functions, and appears to have had little influence in the secular affairs of the community. The Indians, however, are extremely religious, and are devoted to their church. It is a great honor to become a mayordomo of the church, even though it is an expensive office to hold.

There are 39 mayordomos at the present time. They are the tenants of the Saint's land. The church lands are divided into two categories. One of these, which apparently does not involve more than 10 or 12 acres, is retained for the benefit of the priest. It has to be cultivated by the mayordomos, and its products are the exclusive possession of the priest. The other category is called Saint's land. It apparently amounts to between 40 and 45 acres. The Saint's land is rented to the mayordomos. The rent which they pay is of three types: 1) They must work one day each week for the priest, either on his land or around his house; 2) they must buy candles for the weekly Masses; and 3) they must furnish food for the various fiestas that are held in honor of the Saints. The latter two items are apparently variable amounts, which have no relation to the quality or area of land which a mayordomo rents. In general, however, the food which each mayordomo furnishes for the fiesta of the Saint to which his particular land is dedicated is likely to be considerably more than the production of the land. In other words, he has to take produce, or income, from other sources with which to contribute his share of the fiesta costs.

Villager Felix Callanaupa said that he had paid 600 soles during the first seven months of 1954 for candles and fiesta expenses and that he hoped to pay another 400 soles before the year ended. His gross cash income from his farming and liquor business is not likely to exceed 3,500 soles. If he pays 1,000 soles to the church, to cover the expenses of fiestas and candles, he may very well have to sell most of his eight sheep and five pigs to raise the money. The honor of being mayordomo is an expensive one, but apparently it is sought after by most of the Indians as the highest achievement open to them. They usually are appointed for a term of three or four years, and it is not unusual to find them bankrupt at the end of the period.

It should be recalled that it is the mestizos who own and manage the haciendas in Chinchero, just as it is the mestizos who hold the positions of power in the political and religious organizations of the district. However, the two groups do not compete to any great extent. The governor and alcalde do not

expect man "gifts" from the Indians on the haciendas. The priest serves them all, but his principal church is not conveniently located for the Indians on the haciendas. There are small chapels on some of the haciendas, in which the priest holds occasional services. In many respects the haciendas are small private preserves, separate and apart from the affairs of the Indian communities and the political organization of the district. The hacienda owners are far above the economic and social level of the petty officials in Chinchero. They associate with the Prefecto of the department, or, at worst, with the sub-prefecto of the province. Nowhere did I encounter anybody who had a real respect for the Indians, or who felt any responsibility for improving their situation.

LEVELS OF LIVING

From what has already been said about small farms, tenure arrangements, social status and the power of local officials, it must be abundantly clear that Chinchero is an area of extreme poverty. Not even the mestizo politicians have very much on which to live. Many of the Indian families barely exist. There are a few fairly objective indices, which can be used to indicate how serious the poverty situation is.

For example, there is not a private automobile, radio, truck or tractor in all of Chinchero, unless it is at one of the hacienda houses. The United Nations technicians working in the area say that not a single Indian family receives a magazine or a newspaper. They estimate illiteracy among the men at 95 per cent, and among the women at 98 to 99 per cent. Those adults who read and write are limited almost wholly to men who have been in the army for their two years of required military service.

With very, very few exceptions, houses are of adobe blocks with dirt floors and thatched roofs. It is not uncommon for a family of two adults and six or eight children to live in one or two rooms. The Callanaupa family of two adults, two teenage boys and two younger girls, has a three-room, L-shaped house, which encloses one end and one side of a rectangular yard, or plaza. The house of another family encloses the other end and the other side of this courtyard. The plaza is about 12 feet wide and 18 feet long. The room at the end is used by the Callanaupas as a kitchen, a living room for the entire family, and a bedroom for the parents. One of the rooms along the side of the L is a combined bedroom for the boys and storage room for the hand tools and plows; the other is a combination bedroom for the girls and storage room for potatoes, barley and other farm crops. There is not a window in the house. However, in the kitchen-living-bedroom, there is a hole about 8 by 10 inches in one of the end walls, about six inches below the peak of the room, to allow the smoke to escape. All the cooking is done in a corner of this end of the room over a small open fire that is built on the dirt floor. There are no chairs in any of the three rooms. The only pieces of furniture are the three beds -- one in each room -- which are simple wooden benches, about 18 inches off

the floor, covered with sheep skins. Several guinea pigs inhabit the kitchen-living-bedroom, but the other livestock is kept in pens adjoining that part of the house which does not face the courtyard. The house is cold, damp, dark and smoky; it is the typical dwelling of Chinchero and thousands of other Indian villages in the highlands of Peru.

Statistics on health and nutrition are scarce and of dubious quality, but a few points may be worth mentioning. The local school principal estimates that 40 per cent of the babies born in Chinchero die within a year. The Peruvian home economist and nurse who works with the United Nations program in the area, thinks that this estimate is about right. A nearby doctor, who is being brought to the area for a clinic one afternoon each week, says that the principal ailments are malnutrition, colds and influenza, and internal parasites.

The home economist recorded the daily food consumption of 30 families during a seven-day period. She weighed the food either just before it was cooked or at the time it was served, and felt that her data were accurate. She concluded that the average daily food intake per person was 1,450 grams which contained 1,640 calories. She estimated that in addition an adult drinks about one liter of chicha and chews 50 grams of coca per day, thereby adding approximately 400 calories to the daily intake. A group of anthropologists from the University of Cuzco did some field work in the Chinchero area about six years ago, and concluded on the basis of 14 diets that the average adult male obtained about 3,234 calories per day. It is entirely possible that the two sets of findings are compatible. If the daily food consumption of men, women and children averages about 1,600 calories, it is possible that an adult male gets 3,200 calories, of which 400 might well come from chicha and coca.

Two things are almost certain about the nutritional situation. First, the diet of practically all Indians and most mestizos is far below health requirements. Second, children are suffering more than adults from dietary deficiencies. The hard work which the men and many of the women can perform in the fields indicates that they must be getting at least 3,000 calories per day, and they may average more. The children, however, suffer both as to quality and quantity of food. The sight of men breaking the heavy clay soil in the fields with foot-plows and hoes as compared with the listless play of children on the school grounds shows clearly which group is best fed. Moreover, practically no milk or cheese is consumed by the Indians, and only a few eggs. These are among the high-protein foods needed by growing children. Apparently, the Indians refuse to drink milk even when their scrubby cows are fresh. They think that it is not healthful. The avoidance of milk and cheese is a centuries-old tradition.

The principal foods are potatoes, ocas, ollucos, barley, corn, wheat, and dried lima beans. (Ocas and ollucos are tubers somewhat similar to potatoes). The diet also includes a little meat, some sugar and a few vegetables. There is not an oven in which to bake bread in Chinchero. An enterprising taxi driver

brings a few rolls to the market on Sunday mornings, but most of the cereals are eaten in the form of a gruel or mash. The seed of Quinoa (pigweed) which is high in protein is consumed in small amounts, as is also a type of algae found in the local lakes. There is a very light consumption of green vegetables, primarily onions and cabbage. It is quite possible that if everybody received enough of the commonly consumed foods, the dietary situation would be greatly improved. In other words, quantity may be a more serious problem than quality. However, there would still be a question about the lack of milk in the diets of small children.

THE UNITED NATIONS PROGRAM

It was in this bleak Andean area, populated by illiterate Indians, the slaves of tradition and at the mercy of a few mestizos, that the Technical Assistance Administration of the United Nations started its first Latin American program of rural development. Hardly a more difficult spot could have been chosen in the Western Hemisphere. The program began only seven months ago, and its results are yet to unfold. Nevertheless, the methods that are being used are worthy of note. Moreover, the administrative arrangements by which the United Nations interjected itself into problems at the grassroots level may be of interest to students of public administration.

The Chinchero program grew out of a request made by the Peruvian government to the United Nations for assistance in restoring the city of Cuzco, which was badly damaged by a severe earthquake in 1950. The Peruvians wanted technicians to draw up plans for a power plant, for public housing, and for a cement plant, and also to give advice in rebuilding the parts of the ancient city that had been destroyed or badly damaged by the earthquake. Attention was centered on the problems of the city.

In response, the Technical Assistance Administration of the United Nations sent a small mission to Peru in 1951 to study the situation and recommend what should be done. This mission, which was under the direction of R.W. Hudgens, who then was director of Nelson Rockefeller's American International Association, brought forth three sets of recommendations. First, it recommended the establishment of a new autonomous agency of the Peruvian government to be concerned exclusively with the problems of reconstructing Cuzco and developing the surrounding area. Second, it recommended that the United Nations send several technicians to advise this new agency with respect to rebuilding those parts of the city that had been severely damaged by the earthquake, and to help with plans for expanding the supply of electric power, establishing a cement plant, and encouraging the expansion of other local industries. Third, it suggested that a rural development program should be started in the areas surrounding Cuzco so that the city would have a sounder economic base in the form of a productive hinterland.

The Peruvian government responded almost immediately by

establishing the Junta de Reconstruccion y Fomento Industrial del Cuzco as the new agency to cope with the problems of reconstruction. The UN mission had suggested that the new agency be headquartered in Cuzco, and that it should have considerable autonomy in its relations with the central government in Lima. This was an effort to introduce some decentralization into a highly centralized government. Members of the mission pointed to the TVA in the United States as being the type of agency that might well be established. On this score, however, their recommendations were in vain. To the Peruvians, the mission was asking for a big, dangerous, and unorthodox step in governmental organization. Consequently, the Junta de Reconstruccion y Fomento Industrial del Cuzco was headquartered in Lima, and remains under the close surveillance of the Minister of Fomento, who is chairman of its board.

The Technical Assistance Administration of the UN, sent several experts in industry and housing to assist in studies and surveys, and to give advice to the new organization. The pattern of providing technical assistance by sending advisory experts to assist a member government was well established in the United Nations, and the Technical Assistance Administration had no particular difficulty in following the mission's recommendations in this respect.

It was harder, however, to arrive at an agreement on administration. The mission had recommended that the rural development activity should be a continuing "action program," and that its administration should be under a joint board composed of representatives of the new Junta and of the Technical Assistance Administration of the UN, with the latter supplying the executive officer. The pattern with the mission members had in mind was similar to the Servicio form of organization, which has been used for over a decade in the technical assistance work of the United States government in Latin America. This, however, was too much for the UN to accept. Just as the Peruvians couldn't swallow the idea of decentralizing their government, so the UN couldn't accept the idea of joining in an operating program with one of its member governments, and bearing the responsibility of administration.

Finally, a way was found around the impasse. The UN agreed to make a grant to the Junta de Reconstruccion y Fomento Industrial del Cuzco, on the condition that it would enter into a contract with an approved agency to administer the program. In 1953, the Junta contracted with the International Development Services, Inc., a privately-financed, nonprofit agency under the direction of R.W. Hudgens, the man who had been chief of the UN mission which had made the original recommendation. He had formerly been director of the American International Association, and had had considerable experience with supervised credit programs in Venezuela and Brazil. The program around Cuzco was planned to be a demonstration in the sound use of credit and supervision for improving the levels of living of low-income farm families. It was to be an attempt to adapt to Latin America some of the techniques and methods which the Farm Security Administration has used successfully in the United States.

The UN grant for the first year (1954) was for only \$50,000, of which \$20,000 was to be used for the purchase of farm machinery. The Junta de Reconstruccion y Fomento Industrial del Cusco has made 500,000 soles, approximately \$25,000, available, and will probably put up an additional 250,000 soles within the next few months. The Agricultural Bank of Peru is contributing over 100,000 soles toward the salaries of technicians, and furnishing a line of credit in the form of loans to the small Indian farmers. At the present time, the staff of the project consists of a North American technician supplied by International Development Services, three agronomos, one sanitary engineer, and one woman social worker, who is trained as a nurse and home economist. All except the technician are Peruvians. There are also five non-professional people employed as stenographers, tractor drivers and workmen.

The fact that the program, which was started in January 1954, did not get under way until more than two years after it was recommended, and is operating on a very small scale, has not dampened the spirits of the local staff. They feel that the area presents some very difficult problems, but they are enthusiastic about an opportunity to solve them. The selection of the Chinchero district as the starting place for the program was made by a Costa Rican technician sent by the UN, who lacked experience with supervised credit, and was concurred in by a mining engineer, who is executive officer of the Junta. To interject agricultural credit into self-sufficient Indian communities, where barter at the Sunday morning, local market is the principal means of commerce, will be the supreme test of North American ingenuity.

Fortunately, the technician sent by International Development Services did not arrive until December 1953, which was after the planting season had passed. It was, therefore, too late to interest the local farmers in production credit. Instead, he set about showing them how to side-dress their potatoes with fertilizer and how to control insects and diseases through the proper use of chemical sprays and dusts. He recruited the social worker to start sewing classes and health clinics, and to begin giving demonstrations in some of the rudiments of home sanitation. Moreover, it was soon discovered that the law governing the operations of the Agricultural Bank virtually prohibited the extension of credit to the Indian farmers. It had to be amended in two respects. First, to enable the Indian families to legally mortgage their crops and livestock as security for loans; and, second, to allow the bank to advance loans equal in amount to the estimated value of the security. These amendments to the law were approved in July, 1954. They not only opened the door to a credit program in Chinchero, but also made it possible for the Agricultural Bank to begin to respond to the needs of Indian farmers throughout the country.

In the meantime, the local field staff has been an important catalytic agent in enlisting the interest and active assistance of other government agencies. For example, the Public Health Department has earmarked 300,000 soles for a rural sanitary

program in the Cusco area. The sanitary engineer from the Chinchero project of UN will direct the use of these funds, putting most of the money into the construction of sanitary privies and the establishment of pure water supplies for the Indian communities. The Cusco branch of the Ministry of Agriculture has sent technicians to Chinchero to advise on methods of plant and animal disease control, and has designed a dipping vat which the UN technicians are constructing to try to rid Indian-owned hogs and sheep of lice and ticks. A doctor from a neighboring district now holds a weekly clinic in Chinchero for the Indian families. His charges, paid by the UN project are only 50 soles, about \$2.50, per clinic, plus transportation in one of the jeeps used by the agricultural technicians in their educational work with the local families. For the first time in history, many of the Indians have received the attention of a trained medical man.

Two programs of technical assistance sponsored by the U.S. government have been of great value to the UN technicians in launching their efforts in Chinchero. One of these is the joint Peruvian-United States program in elementary education, which is carried out by the Servicio Cooperativo Peruano Norteamericano de Educacion (SECPANE). The other is the work in agricultural extension, conducted by the Servicio Cooperativo Inter-Americano de Produccion de Alimentos (SCIPA). The latter has not operated in the Chinchero district, but one of its rural agents stationed at Cusco has been of great assistance in advising the UN technicians with respect to the agricultural practices that are sound and desirable in the highlands, and has "opened the doors" for them to many sources of information and guidance. SECPANE has had a program in the district for several years. It operates a fifth-grade, "nuclear" school in the Village of Chinchero, and ten other second- and third-grade schools in surrounding villages. It has made two rooms in its Chinchero school building available to the UN project; its teachers have cooperated in local surveys of families, farms and living conditions; and it has granted the use of school land on which to erect a building to house machinery and equipment, as well as land for demonstration plots and gardens.

Great progress has been made in gaining the confidence of the Indian families. Each week, several dozen women and girls come to the classes in sewing, home sanitation and child care that are held by the social worker. She is able to go into the homes and give simple demonstrations in ways and means of improving diets and of making life in the miserable, little houses more healthful and less laborous. Several families have hired the tractor purchased by UN funds to plow their land that has been in pasture. Some of it is of such heavy soil that it can hardly be turned by oxen. For the use of the tractor they pay an amount equal to the estimated cost of operating the machinery, which is about \$3.60 per acre for plowing and discing and making it ready for planting. A part of the UN funds has been used to buy a small threshing machine, which can be hauled from one tract to another by a jeep. It has been kept busy threshing barley and wheat, for which the families are charged enough to cover the cost of operating the machine.

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On many days, the small thresher can be seen operating in a field only a few hundred yards from another where a neighboring family is threshing its grain by the traditional method -- using oxen to tramp the straw into a fine mulch, which is then thrown up into the air to let the wind separate the straw and chaff from the kernels of grain. Likewise, the tractor, with its large three-bottom turning plows, or its heavy disc, is often working in a small tract of no more than one or two acres, while nearby a gang of six or seven men with foot plows -- small, narrow spades -- breaks a neighbor's field by the methods that were in use at the time of the Incas.

The modern and the traditional are working side by side in Chinchero, and the potentialities of the changes that are in the offing are tremendous. The use of machinery will have at least two immediate consequences: the amount of land in crops will be significantly increased; and considerable labor will be available for work outside of the district. Now there is almost as much land in pasture as in crops. The traditional system is to farm the land for four years, and let it lie idle for three years, during which time it is heavily pastured with sheep and a few cattle. Moreover, most of the soil is heavy, and some of it is poorly drained. Thus, there is available for crop production some land that cannot be worked with spades or ox-drawn, wooden plows. With machines to break and drain land, and with the introduction of modern crop rotations and improved pastures, it would be rather easy to increase the total cultivated acreage by 40 to 50 per cent, without violating sound principles of soil conservation. Through the use of fertilizers, disease-free seeds, and chemical insecticides, it may be possible to increase the yield of the land now under cultivation by 40 to 50 per cent. Thus, an 80 to 100 per cent increase in agricultural output appears to be possible in the Chinchero district.

Such an achievement will depend not only on sound agricultural and technical guidance, but on the willingness of the Indian families to accept the new methods of farming and ways of living that will be involved. The reaction of the Indians to a commercial, scientifically-based agriculture, in which modern farm machinery plays a considerable part, will determine Chinchero's future. If a significant proportion of the 1,300 to 1,400 Indian families, comprising 5,000 to 7,000 people, respond with reasonable speed to the new ideas and practices that are being suggested to them, and if the program can be continued for five to ten years, the results will be revolutionary in Chinchero. A pattern will have been set which could be a really significant and wholesome contribution to the solution of Peru's "Indian problem". To flatly predict that the UN program in Chinchero will be blessed with such results is both hazardous and unnecessary. Felix Callanaupa and his neighbors will probably make the final determination, and future reporters can write the story of the outcome.. But North Americans might well remember that there are thousands of areas like Chinchero in Peru and the neighboring Andean countries, and that the progress which is made toward relieving the human misery and indignities now suffered by millions of Indian families, not

only affords an opportunity for Christian benevolence but may also determine the kind of world in which our children will live.