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THE POSSIBILITY OF A GRADUALISTIC TURNOVER OF LAND IN AGRARIAN REFORM PROGRAMS IN CHILE

by

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THE POSSIBILITY OF A GRADUALISTIC TURNOVER OF LAND IN AGRARIAN REFORM PROGRAMS IN CHILE*

William C. Thiesenhusen**

Most commentators on agrarian reform in Latin America advocate that expropriation of land be "rapid and drastic."[1/] Speed is crucia since piecemeal expropriations over a long period, each accompanied by a spate of publicity, tend to render owners of agricultural land apprehensive about the future, thus creating further deterioration of an agricultural sector in which inefficiency--as well as injustice--inspired the initial demand for reform. Landlords quite understandably react to this insecurity "by making only minimal current outlays while foregoing basic investment commitments."[2/] The other side of the matter--how quickly to turn expropriated land over to campesinos as individual proprietors--has been less discussed.

Up through 1964, which saw the election of a Christian Democrat government in Chile, the total agrarian reform effort was very small

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and land was turned over to campesinos immediately in family-sized parcels. Title was granted when at least some principal and land interest payments had been met.

Using several private-sector case studies, this article will argue that the land tenure structure in Chile might be better changed by somewhat slower but nonetheless steady steps toward individual proprietorship. In a government program this would suggest that although land should be taken quickly from all owners to be affected, it might be held in the public domain and managed centrally for a time while new proprietors are being trained on-the-farm for their new roles as entrepreneurs. This implies a less brusque alteration of the current system than formerly and voter-control should insure that this period is not prolonged beyond a period of tutelage.

Opponents of this idea will assert that anything short of immediate individual ownership is a continuation of the anachronistic and almost feudal system in which the government is substituted for the landlord. They may also be concerned that government management of land--albeit for a short period--may be something less than enlightened. Besides, they will assert that new owners without titles might be just as prone not to invest as landlords threatened with expropriation, since they feel their new land rights may be confiscated one day.

These are perplexing caveats, but even more important seems the necessity of maintaining productivity in Chile's farming sector--which has already dropped to dangerously low levels[34]--should the means of

agricultural production be redistributed to the extent the present government has promised.[4/] At least drops in productivity that result from changes in the organizational matrix of agriculture must be kept to the very short run so that attention can be firmly focussed on raising output above pre-reform levels.

The declines in production for market so often associated with land reform are usually traceable to two causes. Home consumption increases rapidly, reducing the available surplus if production remains unchanged. In fact, however, lack of entrepreneurial ability on the part of the former landless will usually also affect total production. If land reform moves campesinos more slowly into the trying experience of full ownership and managership, some restraints can be placed on excessive expansion of home consumption and campesinos can acquire managerial skills in a systematic way in preparation for full ownership. Such a process may involve fewer disappointments for the campesino and certainly should reduce the shock to the economy from a possible change in marketed surplus.

Government management for this interim period need not mean that bureaucrats would be making technical decisions, but implies that experienced and trained agriculturists would have to be in authority. This intermediate period would give the government more time for planning a rational program of overhead capital (now designed for large farms and very expensive to divide) in concert with reform beneficiaries. And institutions through which new owners can make their needs known, receive services, and generally countervail against the market system, might be more soundly built.[5/]

The INPROA Program

However nebulous and idealistic this sounds in the abstract, a "gradualistic" program of land reform is the subject of experimentation in Chile. The government set up one large pilot project after the presidential election of 1964.

This seems to be a precursor of a more general policy for Chile since, according to its pre-election platform, "The Christian Democratic agrarian reform plan envisages the expropriation of big estates, which are to be operated as agricultural cooperatives under the supervision of managers appointed by the state. At a later stage...the land is to be partitioned, but the cooperative structure is to be maintained."[6/]

Even before the election, the Instituto de Promoción Agraria (INPROA), a foundation the Roman Catholic Church set up to distribute some of its lands, had begun experimenting with a "gradualistic" program of land turnover.

INPROA already has responsibility for about 7,371 acres of irrigated and 6,120 acres of dry land--approximately 11 per cent of the Church-held land in the country. The Chilean Church owns relatively little real estate (when compared to some other Latin American nations) and much of it is not fit for agriculture. Recent support has been given to the INPROA program through a new $1.5 million Inter-American Development Bank loan announced in November 1965. This loan should help INPROA more than double this reformed land area through the infrastructure, credit, and technical assistance it will provide. While

the INPROA land redistribution program presently benefits about 200 families (it has formerly received other international as well as Chilean Church financing), the new loan will enable an extension to 400 more, the majority of whom already live on the farms to be reformed and work as resident farm laborers for the Church or for those who rent its property.

INPROA plans to distribute this new land in three stages:

In the first stage, once it has received an estate for subdivision, INPROA will foster the creation of a cooperative among beneficiaries who will farm as sharecroppers for one year. Meanwhile, a cooperative will be organized made up of these tenants.

In the second stage, each estate will be leased to the tenants by way of their new cooperative for a two-year period. During this time, members will pay a cash rent for land. Basic infrastructural improvements will be carried out by members working through their cooperative with the promise that in the third stage, INPROA will sell the subdivided plots to members of the cooperative.

Beneficiaries will be selected by the cooperatives with guidance and advice of INPROA. Throughout the process INPROA will provide farm credit and technical assistance services to the cooperatives and their members.

INPROA arrived at this policy through experimentation with the establishment of campesinos' individual parcels on two fundos (as large Chilean farms are usually called), Las Pataguas and Alto Melipilla, resettled in 1962; one collectively operated farm, Los

Silos,[7] also "reformed" in 1962; and a trial run of this gradualistic method on San Dionisio and Alto Las Cruces which began in 1963. A more detailed account of INPROA experiences on Las Pataguas and San Dionisio during the 1963-64 crop year follows.

The Las Pataguas Experience with Rapid Land Turnover

Previous to restructuration, Las Pataguas was operated as a single unit in traditional fashion: workers took their orders from intermediate-level foremen who, in turn, were supervised by the farm's administrator. Reform saw Las Pataguas' 1,162 irrigated hectares subdivided into 76 small farms. Over 60 per cent of those selected as colonists had worked on the fundo previous to its reform--as fundo workers or supervisors.

Three sizes of unit were established: twelve colonists were settled on 2.5 acre plots called huertos; fifty-nine were moved onto family-sized units or parcels averaging 42 acres; and five others colonized hijuelas, averaging from 86 to 212 acres. Size of plot within the last two categories was equalized depending on soil type and irrigation possibilities and was set after extensive soil surveys of the farm. It was planned that labor of those who had gotten huertos would be used on the larger units. Huertos and parcels went largely to those who were farm laborers previously; hijueleros were largely former fundo supervisory personnel whose "capacity and experience" were superior.

An effort was made to turn over a developed unit to colonists on Las Pataguas. The irrigation system had to be revamped to serve small

parcels, roadways had to be cut through the fundo, and some houses built. These improvements added about 20 per cent to the cost of reform and are to be paid off with land over a 20 year period with five per cent interest. Amortization payments are subject to readjustment annually for inflation. The average parcel (land plus overhead capital) sells for about $4,660.

All colonists, it was decided, would be members of a multipurpose cooperative which would function as an intermediary for input purchase and selling of produce, would supply bookkeeping and technical help, and would act as a caretaker of the colony's overhead investments--buildings and machinery.

The cooperative was ridden with problems from its inception. Independent for the first time in their lives and fraught with anomie toward institutions they had heretofore known, settlers were naturally skeptical of a cooperative in which they were told membership was compulsory. A number of colonists believed that there was no advantage to selling their produce through the cooperative, a belief that proved well founded in the initial years, since the two per cent marketing fee it charged was not clearly overbalanced by a marked price advantage stemming from bulk sales. Contributing to this weakness as a bargaining organization, some cooperative members successfully evaded the cooperative, marketing some of their produce through ambulatory purchasers who came to the farms.

It proved difficult to hire a competent bookkeeper so the position changed hands many times during the first year. Members feared

they were being cheated by lax accounting procedures, and no interim statements of colonists' debts were provided to give them the assurances they needed. When year-end accounting was made, members were surprised and disillusioned with the amounts that had been deducted for inputs and interest. Though evidence shows INPROA to have been scrupulously honest, it had not helped colonists to see the value of each expenditure as it was made.

Technical help from INPROA was to have been channeled through cooperative officers who would, in turn, help members. This system had its difficulties, however. The undesirability of the remote fundo as a living site for an experienced and trained agricultural technician and his family meant that technical help was supplied irregularly--often not when it could be most beneficial to colonists. When it was available, campesinos were not certain of its reliability. The new owners seemed to feel the risks of trying new practices too great a gamble and largely managed their parcels with techniques already known to them.

There was a hope that better trained hijuela operators would be able to fill in as technical assistants to parcel holders. But from the beginning, those most favored settlers who received larger plots began to dominate the cooperative, bringing dissension among the majority group of parceleros who resented this effort to control their organization.

Hijueleros, who had largely come from a class of fundo employees accustomed to giving orders to lower level workers, did little to help

parcel holders. Even their demonstration of better techniques didn't seem to "trickle down" because of these social barriers. Rather, the hijueleros' special privilege made them the object of disdain of the majority of the colonists--especially the parcel holders--who now felt their status raised by the reform and resented the paternalistic approach to technical help that resulted. Thus technical help through the loosely organized cooperative was largely unavailable during the period described.

Through painful re-organization in the 1964-65 crop year, hijuela operators have been convinced to withdraw from the cooperative, even though they will continue to farm the plots granted them.

On the other end of the spectrum, the huerteros were often paid even less (and more irregularly) for their work than would have been the case under the fundo system. Huerteros who wanted more land in 1964-65 were therefore given the opportunity to purchase property that was fortuitously reserved for cooperative use.

Economic Situation of Colonists in 1963-64

Interviews of a random 25 per cent sample of the beneficiaries of the parcel holder group reveals that net cash income (mainly from the sale of crops, but including some livestock and livestock products) averaged about E° 2,457 in 1963-64.[8/] Besides this, the average parcel holder paid INPROA about E° 1,000 for the use of land (understood to include infrastructural improvements) and machinery. This represented interest on outstanding land and capital debts. He

also consumed products grown on his parcel valued at about E° 1,364. The joint income of all the factors of production on his parcel was thus about E° 4,821 in 1963-64 (E° 2,457 plus E° 1,000 plus E° 1,364). His return to labor alone (E° 4,821 minus E° 1,000) without subtracting any depreciation (which would be a small and arbitrary amount) was about E° 3,821. These same parcel holders' income in former situations--the year before they came to Las Pataguas or while they worked under the traditional system as inquilinos or other types of fundo workers--averaged E° 1,162. (This included cash wages and valued perquisites 9/ all expressed in 1963-64 prices.) Comparison with the E° 3,821 figure for 1963-64 reveals an increase in labor income under the reform program of somewhat over three times. It indicates a more than satisfactory rate of return to labor compared to its possible employment elsewhere in the economy.

The purpose of the experiment at Las Pataguas, however, is to transfer land ownership and give colonists an equity in some machinery. Beginning in 1964-65 colonists will have to begin making principal payments averaging about E° 785 annually on their land. Principal payments on machinery purchased by the cooperative or parceleros individually at the beginning of the reform effort (which averaged E° 225) began in 1963-64.

An examination of the labor income figure (E° 3,821) would imply that parcel holders would have no trouble meeting these principal payments (E° 1,010 yearly). Nonetheless, turning from an analysis of the firm to one of how households spend their income, an examination of

colonist-estimated family accounts shows that although labor income rose in 1963-64, so did family expenditures. Although the year before reform, expenditures were limited by a net income of E° 1,162, in 1963-64 they totalled almost three times as much or E° 3,317. (Our interviews indicate that an average of E° 1,953 of the net cash farm income was spent for the family's food, shelter, clothing, and other miscellaneous purposes. In-kind products consumed on the farm was valued at E° 1,364.) When these amounts are subtracted from the return to labor established earlier (E° 3,821 minus E° 3,317), a savings of only E° 504 remains. As mentioned previously, in 1963-64 E° 225 was due as a principal payment on machinery. Subtracted from the E° 504 savings, this yields a surplus of E° 279. If land principal payments had also been required in 1963-64, the average colonist would have shown a deficit of E° 506.

Methods of Raising Production or Reallocating Costs

Thus, in order to meet coming land payments, colonists will either have to lower consumption, raise production, or cut costs. The first alternative would be most painful and its achievement most problematical. This indicates a more general situation with which any future agrarian reforms will have to deal: the pressure for increased expenditures for family purposes among those who have long lived in dire poverty is strong.

Comparison of Las Pataguas' output per acre with yields on a neighboring farm under good management and having similar soil and

water resources shows that, given good management, production on Las Pataguas could probably be raised enough to allow colonists to meet all operating expenses and land and capital payments if costs do not rise. This margin of unexploited productivity still exists even though Las Pataguas under reform is producing more gross income than it did under the traditional hacienda system.

Reallocation and stabilization of operating costs at their present level would also seem to be possible, even under a more intensive farming pattern. Left to their own devices, settlers on Las Pataguas seem to have been contracting for more hired labor than would be needed if family labor were fully utilized. At the same time, colonists have been using far less fertilizer per acre than the neighboring farm where productivity was higher. The documentation that follows indicates that a greater percentage of operating expenses should probably have been allocated to yield-increasing inputs (such as fertilizer) and less to hiring labor in 1963-64.

On the 284.7 hectares of our Las Pataguas sample (including now, all land occupied by the sample of parcel holders mentioned earlier plus two hijuelas and two huertos also randomly drawn), 20,170 man-days or about 71 man-days per hectare were used. Of this, about 8,809 man-days was hired labor, contracted at a total cost to the colonists in our sample of about E° 15,922. Thus about 44 per cent of the labor used on our sample of Las Pataguas in 1963-64 was hired.

Three pieces of evidence lead us to the conclusion that this amount of labor is excessive.

(a) Calculations from data given us by the neighboring fundo operator, to whose production we referred above, reveal that labor use on his 630 hectare fundo each year is about 43 man-days per hectare. One may well argue that the neighboring fundo operator uses more labor-saving capital and so does not need as much labor as Las Pataguas. The next two points will attempt to show that this is not necessarily an important objection.

(b) Our information on the crops grown on Las Pataguas and the neighboring fundo was held up against the labor coefficients for the same combination of crops arrived at in an extensive labor input study for O'Higgins, the Province in which the farm is located, to indicate whether labor use on Las Pataguas is really extravagant.[10/] Calculated man-day requirements on our sample of Las Pataguas equalled 10,780, or approximately 38 man-days per hectare. This figure is about half of the number actually used--20,170 (approximately 71 man-days per hectare). On the other hand, the calculated need for the neighboring fundo equalled 20,808, while it actually used 27,000 man-days of labor. Considering that this fundo supports a herd of feeder cattle for which labor coefficients are not available, this seems to indicate that the fundo used a realistic amount of labor--an average for the zone considering the pattern of cultivation.

The calculated figure for Las Pataguas undoubtedly understates the necessity. The Ministry study sample is weighted more toward large farms. Some animals are raised on Las Pataguas. Some parcels need a certain labor flexibility during rush seasons which probably

shows up as redundant labor in a gross calculation such as the one above. Also the input study sample undoubtedly includes farms which have more labor-saving machinery to substitute for hand labor. Yet it seems reasonable to argue that a farming system which uses nearly double the average amount of labor for the zone is one in which the labor force could be reduced.

(c) Data in a study by Morales[11/] also supports the conclusion that use of hired labor at Las Pataguas could be cut back. He uses a stratified sample of 96 selected farms in O'Higgins Province. Average labor use in the first stratum studied (from 10 to 19.9 irrigated hectares) was 45 man-days per hectare. In his second stratum (from 20 to 49.9 irrigated hectares), labor use was 37 man-days of work per hectare. Most of Las Pataguas' farms fall into the smaller of these two size categories.

The three indicators we have used, their imperfections granted, show that from 38 to 45 man-days per hectare is probably average for the cropping pattern on Las Pataguas.

Perhaps by proposing that labor use be cut back, however, we appear to be concluding that the fundo does not have the capacity to support colonist families already living there. This is not true. Potential available labor on Las Pataguas, considering each male colonist-family resident over 16 years living on the fundo, is 172 man-years. Boys under 16 should probably also be figured as part of the work force, but we will assume that there is a counter overcalculation of those too old to work. Considering a man-year as 300

days, the above calculation indicates a labor force of 51,600 days (300 days x 172) on Las Pataguas' 1,162 irrigated hectares--44 man-days per irrigated hectare.

The 44 man-days of labor per irrigated hectare already available on Las Pataguas falls within the 38 to 45 man-day range set up by the evidence we have presented and seems to indicate that employing 71 man-days of labor per hectare represents an unnecessarily lavish expenditure and means underemployment of some labor resources.

Considering that our sample represents about one-fourth of the acreage of the fundo and that the colonists we studied spent E° 15,922 on hired labor, we estimate that all settlers on the fundo probably spent four times that amount or over E° 60,000 in 1963-64 contracting labor.

If not all of the approximately E° 60,000 from hired outside labor can be saved (which, of course, is the case) certainly a major part might be reallocated--perhaps to yield-increasing capital. Or these savings might simply push down expenses thus yielding a greater net income.

Hiring labor, of course, is one way to spread beneficial effects of reform to a wider group of workers. The crux of the matter, however, is that the farming program should be intensified concurrent with hiring additional labor, so that labor will be more productively employed.

If Las Pataguas colonists are to meet their land and interest payments, management talent which would assist colonists to reach an optimum allocation of resources will have to be greatly increased.

The San Dionisio Experience with Gradualistic Land Turnover

In contrast to the Las Pataguas system, a gradualistic method of land turnover is being followed on San Dionisio. In this experiment, INPROA has retained management and family expenditure control. Colonists will receive their individual parcels after this intermediate training period.

INPROA officials felt that the Las Pataguas system of establishing colonists immediately on parcels weakened its young cooperative by giving too much independence too quickly to farmers as yet unprepared for rational decision-making. On the re-settled fundo San Dionisio (56 settlers in 1963-64), INPROA decided that putting several steps between settlement of a fundo and creation of private farms might foster cooperative ideas during the intermediate period, helping to make the cooperative into an effective bargaining organization.

INPROA officials recognized their dilemma: they had to tread a thin line in helping colonists who were inexperienced in agricultural decision-making without destroying their sense of participation in the colony.

Working through settler committees, the San Dionisio cooperative began, upon its formation, to make decisions on such non-technical issues as choosing fellow colonists and employees (the bookkeeper, for example), electing officials, meting out penalties to members who refused to do their share of the work, etc. And its general meetings came to constitute a forum which helped crystallize colonists' desires for presentation to the INPROA staff.

Some problems, however, could not be immediately resolved by a majority vote of cooperative members: amount of fertilizer to use, when to apply insecticides, whether or not to use seed disinfectants, etc. These techniques would have to be presented with the voice of authority at first--through the central management and also by way of supervised credit which could be withdrawn if advice were not followed. At the end of the 1963-64 crop year, on-the-farm courses in cooperatives, agricultural techniques, money management, etc., were added to the program to build up individual skills. Further, although in 1963-64 an INPROA technician largely divided his time between two fundos, a separate resident technician was hired for San Dionisio for 1964-65. This system was designed to teach colonists that new practices pay. Adoption, reasoned INPROA officials, would follow.

Although it is too early to tell whether the gradualistic transition to ownership adapted will be more successful than the rapid transition of campesinos from resident fundo laborers to family farmers on Las Pataguas, an analysis of the system's first year (1963-64) will provide a benchmark for a comparative effort after several more years have passed. And several comments can be tentatively made in comparison of the two systems now. As mentioned previously, the first stage of the program was conversion of landless laborers into sharecroppers.

San Dionisio's Land Tenure System: 1963-64

In the 50-50 sharecropping (*medieria*) system on San Dionisio in 1963-64, INPROA supplied the land for which it, in turn, paid a cash rent to the Archbishop of Santiago. Most operating expenses were split 50-50 with the colonists, but labor was completely at the co-operators' expense. Gross income was split 50-50 between the colonists and INPROA.

Each colonist was asked how much land he felt he could care for under a sharecropping system at the beginning of the 1963-64 crop year. INPROA worked out the cropping pattern for the fundo which called for growing wheat, beans, corn, potatoes, and sunflowers. Each colonist was assigned parts of large fields which represented the best compromise between his acreage desires, crops he wanted to grow, and the amount of cropping land actually available. Former fundo fields were not divided: a colonist may have had plots--of which the total area approximately averaged that of a parcel on Las Pataguas--in four or five large fields, always knowing which part of the field was his.

This system allowed INPROA to take advantage of any economies of size there might be in large fields while maintaining centralized management over such matters as fertilizer application, insecticide use, etc., as well as planning of the farm's cropping pattern. The foremost advantage of the system seems to be that it economizes on scarce technical resources, but other economies are that the irrigation system does not need to be divided and that crops can be seeded with a large drill and harvested with a self-propelled combine.

Each colonist had certain decisions to make on the portions of the fields which were "his": when to weed, how to divide irrigation chores, etc. In wheat harvest, each sharecropper was given the option of combining separately and paying a higher harvesting fee or harvesting with other medieros who had their plots in the same field and dividing the yield by the number of hectares in medias he possessed. Most chose the latter alternative. Crops like potatoes and corn were harvested individually by hand. Sunflowers were cut by hand, heads were allowed to field-dry, and then were harvested with a combine the cooperative rented.

Besides a plot on shares, all colonists who wanted could cash rent a smaller piece of land--usually a cuadra (equal to four acres or 1.56 hectares)--from INPROA on which they could grow sugar beets according to specifications set forth by the Industria Azucarera Nacional, S.A. (National Sugar Industry, Inc.), usually called IANSA. Sugar beets were irrigated, weeded, and harvested by hand although they were planted by machine. As with the sharecropping system, management decisions were largely made centrally--but by IANSA rather than INPROA.

The Economic Situation of Colonists

In the 27 per cent random sample that was drawn, the average colonist on San Dionisio showed a net cash farm income of E° 2,542. Besides this, he consumed E° 824 of products in-kind (a decidedly lower amount than the E° 1,364 for parcel holders on Las Pataguas showing that more surplus reached the market), indicating a total

return to labor (returns to capital and land came from the 50 per cent of gross on sharecropping land and the cash rent for the sugar beet cuadra already subtracted from net both paid to INPROA) of E° 3,366. Income of the same colonists the year before the reform (cash plus perquisites expressed in escudos of 1963-64) had been E° 1,028 indicating again a more than satisfactory return to labor under the reform situation.

An analysis of family expenditures shows that E° 1,270 of net cash income was spent off the farm. Together with the E° 824 of in-kind products consumed, this indicates a total family consumption of about E° 2,094 or an increase for colonists on San Dionisio of about two times (rather than the increase of about three times on Las Pataguas). This implies a savings of about E° 1,272. Although under the system described no land payments were to be made from this amount, an average of E° 181 was due for machinery purchased by the cooperative or individual members. This indicates a surplus of E° 1,091 (E° 1,272 minus E° 181), showing that most colonists could probably have met a land principal payment this year if eventual payments to be made are roughly similar to those on Las Pataguas. Since we know that the cash rental paid to INPROA and the half of the total income that accrued to INPROA from the sharecropped land was used to pay the rent the Archbishop required (five per cent of the value of the fundo), we can assume that the fundo is also capable of meeting necessary interest payments (which will also be five per cent). In addition to interest, the part of the income accruing to INPROA pays the

irrigation rights, land taxes, a few other expenses of the cooperative, and expenses of management.

The San Dionisio Cooperative: 1963-64

As mentioned earlier, much emphasis on San Dionisio in 1963-64 was placed on building the cooperative into an effective bargaining organization. There are pieces of evidence which indicate that this effort was far more successful on San Dionisio than on Las Pataguas:

Education on San Dionisio. Education poses constant difficulties for the new cooperative. Average literacy on the fundo has been somewhat upgraded by in-migration under the reform. Previously, the illiteracy rate was about 60 per cent, but since most colonists selected from outside San Dionisio knew how to read and write the illiteracy rate is now about 40 per cent. This still places San Dionisio with the lowest level of literacy among the five Church properties.

Previously, area children had to walk to school--an hour and a half in each direction--for a half-day's instruction. During the year, however, the San Dionisio cooperative built a school, hired two teachers, and, since April 1964, has been offering a full day of classes to more than 100 colonists' children and those from neighboring farms. All six primary grades are taught. Besides, courses for reading and writing are offered to adults each night. In 1966 the government will probably begin paying teachers' salaries.

Protest Activity of the Cooperative. In-migration also brought some problems. Most cooperative council members in 1963-64 were elected from the newer and better educated group, and as the year drew toward harvest jealousies arose among a group of old fundo residents who felt the newcomers had gotten too much power. The officers had allied themselves quite closely to INPROA's technicians and, consequently, some of the previous residents felt the council was not fulfilling its designated role as the cooperative's representative body. The rift did not crystallize until the year came to a close however, and the cooperative operated quite smoothly until harvest time.

The San Dionisio cooperative successively hired and fired three bookkeepers in 1963-64. The fourth one came to his position in April after most of the harvest was complete, to find the books in a badly disorganized state.

In late August, during wheat planting, colonists stopped work for a day to protest because they still had not received their final accounting. This movement was not headed by the legitimately selected cooperative officers, but by a rump-group who were occupants of the fundo prior to reform. It seems likely that a non-Christian Democrat politician holding office in the zone also had an influence over this group.

By October the rump-group persuaded the legally chosen council to travel to Santiago to demand their money. The cooperative had arranged to take the matter to a local judge if the money wasn't immediately forthcoming. INPROA argued both that the fundo records

were so bad that its accounts, too, were disorganized and also that it preferred to wait a bit longer before turning the money over to the cooperative to permit a careful investment plan to be drawn up for the entire cooperative.

But the cooperative's position was uncompromising and convincing; lump sum payments were distributed. Late receipt of the money and a complete lack of advance knowledge of the amount members would receive brought about some complaints similar to those described earlier on Las Pataguas. Even so, most colonists were quite satisfied with the amount they received.

How Did Members Spend Their Surplus? With the help of the cooperative, INPROA kept an accounting for each colonist. Living expenses and in-kind advances for inputs were noted as they were loaned to each member during the year. All of the operating expenses, together with a pro-rated share of machinery the cooperative voted to purchase, were deducted from the harvest corresponding to each colonist, as in the above calculation.

On November 2, 1964, each colonist was given a lump sum payment which represented his surplus from the 1963-64 crop year.

Fifteen colonists on San Dionisio were interviewed two weeks after receiving their lump sum settlement to find out how it was spent. The following conclusions can be drawn:

1. Colonists spend quickly upon the receipt of their money, because they are aware of how fast inflation depreciates currency. (Inflation was 38.3 per cent in 1964.) It does not follow that foolish

expenditures are made. Most colonists we interviewed were aware of their capital needs--as they were of their consumption necessities--and made necessary purchases when they received their funds.

Between the date of the receipt of the cash and the time of our interview, about 41.5 per cent of the average cash available was spent for farm operating expenses and capital. About 39 per cent had been spent for family expenses. Only about 19.5 per cent of the average cash available had been saved.

2. Several planned uses of the amount saved were noted by our interviewees:

a) It will be used for consumption purposes later.

b) It will be used to pay labor so no advances need be requested. Only two from our sample indicated their willingness to do this. This frugality is not as rational as it seems, since the subsidized credit rate, available through INPROA, was about 15.6 per cent while inflation was about two and one-half times this fugure. Nonetheless, upon receiving their statements, a number of colonists were shocked at the amount charged for interest on advances.

c) It will be used for entertainment. This response was as infrequent as (b).

It seems as though this scheme was able to channel more funds into investment than on Las Pataguas. Gross per hectare production was, of course, higher, but in the absence of several years perspective it is difficult to say definitely whether this was due to higher initial fertility of the fundo or better management.

Considering that colonists showed about enough surplus this year to make a land payment had one been required, we must conclude that if everything else remains equal, consumption level should not be allowed to drift higher unless net income can be raised.

Internal Growth. Although it had not completed an "investment plan," INPROA had, through the year, arranged for speakers to address the cooperative from time to time on matters of money management, perhaps contributing to the frugal economic behavior detailed above.

INPROA also suggested that if each cooperative member would contribute E^{o} 70, two necessary projects could be undertaken. A team of workers could be contracted to go into the mountainous parts of the fundo to cut fence posts, and work on the fundo road could be begun, thus hastening parcelization and alleviating the necessity of waiting until the Inter-American Development Bank loan could be culminated. Apparently anxious for parcelization, the cooperative accepted this suggestion by a wide majority and work began. All cooperative members began contributing their labor each Saturday to work on the fundo road at the beginning of 1965. This was vastly different from the Las Pataguas scheme, where infrastructure building was accomplished with little community involvement.

Whether gradualistic turnover of land to campesinos might be one manner of combating lack of campesinos' entrepreneurial skill, whether it is better able to hold down the consumption expenditures of new landholders to permit them to channel more of their increased earnings to investment purposes, whether more agricultural surplus will be available for the market, and whether local institutions are strengthened thereby, merits further study by reform administrators and students of land reform in Latin America. For the present, indications are that the San Dionisio system of gradualistic turnover is progressing far more successfully than the Las Pataguas plan. And after individual farms are assigned on San Dionisio, cooperative members should be better prepared than those on Las Pataguas to participate in the supervised short-term credit program that will provide funds and in-kind inputs depending on colonists' conformity with a farm plan for their parcels.

FOOTNOTES

1/ This phrase, that of Jacques Chonchol in El Desarrollo de América Latina y La Reforma Agraria, Editorial del Pacífico, S.A., Santiago, Chile, 1964, has been echoed by many other agrarian reform experts.

2/ William P. Glade, "The Alliance for Progress as an Instrument of Socialization." in William V. D'Antonio and Fredrick B. Pike, Religion, Revolution, and Reform: New Forces for Change in Latin America, Frederick A. Praeger, New York and Washington, 1964, p. 214.

3/ The number of people in the agricultural work force has remained constant of late but the value of agricultural production reached a peak of E° 510 million in 1960 and, from 1960 to 1963, dropped off at an average of 2.3 per cent a year totalling only E° 475 million in 1963. (Corporación de Fomento de la Producción, Cuentas Nacionales de Chile, 1958-1963, Mimeographed, June 1964, p. 17. Figures expressed in 1961 escudos.) The net annual deficit of agriculture in foreign trade from 1959 to 1963 averaged US$ 82.9 million. Value of agricultural imports now stands at a level four times that of exports. (Ministerio de Agricultura, Sinopsis de la Agricultura Chilena, 1961-1963, Mimeographed, August 1964, p. 23. $ means US$ throughout.)

4/ The present government of Eduardo Frei has promised to give property rights to 100,000 campesinos before the President's term expires in 1970. Legislation designed to facilitate the reform (the Christian Democrat's agrarian reform bill) was introduced to Congress on November 22, 1965. This law would replace the agrarian reform law of the Center-right coalition (which governed Chile from 1958-1964) passed in 1962.

5/ This author recognizes that a gradualistic process of land turnover may be impossible when reform takes place by revolution. But the Alliance for Progress and most Latin American countries which have passed reform laws lately (including Chile) have attempted to provide procedures for reform by less drastic measures.

6/ Ernest Halperin, Nationalism and Communism in Chile, Massachusetts Institute of Technology Press, Cambridge, 1965, p. 198.

7/ I have described the Los Silos operation in "Un Experimento de Reforma Agraria," in Desarrollo Económico, Primer Trimestre, 1965, Vol. 2, No. 1, pp. 19-23.

8/ When calculations and conversions for this article were made US$ 1 = 3.25 Chilean escudos (E°). This data is drawn from the author's thesis, so no attempt will be made to round off figures. Tabular support for all calculations may be found in William C. Thiesenhusen, Experimental Programs of Land Reform in Chile, unpublished Ph.D. thesis, University of Wisconsin, Madison, pp. 172-298.

9/ Perquisites, called regalías in Chile, are customarily paid to resident fundo workers and some are also paid to supervisory and technical personnel. Those valued in this calculation include such items as bread, imputed rental of a small piece of land on which the worker can grow crops of his choice, grazing rights, etc.

10/ Corporación de Fomento de la Producción, Ministerio de Agricultura, Universidad de Chile, Insumos en la Agricultura, Año 1961-62, Santiago, 1964.

11/ Héctor Morales Jara, Productividad Presente y Potencial en 96 Predios de la Provincia de O'Higgins y Su Relación con el Tamaño de las Propiedades, unpublished thesis, Facultad de Agronomía, Universidad de Chile, Santiago, 1964, pp. 24 and 48.