

January 1974
U.S. ISSN 0084-0793

LTC No. 97
THE LAND TENURE CENTER
310 King Hall
University of Wisconsin
Madison, Wisconsin 53706

CHILE'S EXPERIMENTS IN AGRARIAN REFORM:
*
FOUR COLONIZATION PROJECTS REVISITED

by

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* A shorter version of this paper has been submitted for journal publication.

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Chile's experiments in agrarian reform:
four colonization projects revisited, by
William C. Thiesenhusen, Madison, Land
Tenure Center, University of Wisconsin,
1974.

28 p. tables. 28 cm. (Wisconsin.
University, Madison. Land Tenure Center.
LTC no. 97)

Includes bibliographical references.

I. Land tenure--Chile. 2. Agricultural
colonies--Chile. I. Title. II. Series.
HD 506 T562

CHILE'S EXPERIMENTS IN AGRARIAN REFORM:
FOUR COLONIZATION PROJECTS REVISITED*

William C. Thiesenhusen**

Optimistic social scientists who write on agrarian reform suggest that incomes of beneficiaries will rise above what farm laborers receive; these income increments will be used to acquire equity in capital and increase consumption. The net effect, over time, will be manifest in salutary effects on the employment problem. Furthermore, the distribution of income should be more equitable than before and production should increase. [For example, 2,3,4,6,8,10.] Not much data has been presented to support these claims.

Analyzing four settlements in Chile's Central Valley located from Santiago to Linares and established by a private foundation, the Instituto de Promoción Agrícola (INPROA), it was concluded in 1964 that, "Reform tends to raise the incomes of campesinos immediately...the income of new landholders [families] was, on the average, increased two or three times under the [new] system [C, p. 202]."¹

This statement was qualified in two ways: (1) the sample group was studied soon after the reform took place; and (2) four colonies constituted a rather small sample.

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¹The crop years in Chile run from May 1 to April 30. Since harvesting runs from January to April depending on latitude and crop, 1963-64 will often be referred to as "1964" and 1969-70 will be referred to as "1970."

This article uses a panel design to overcome the first difficulty. Data on all four were gathered again in 1970. Both 1964 and 1970 were considered by agronomists as "normal agricultural years." The purpose of this article is to determine whether the settlements had become "going concerns." The key questions to address some of the economic issues are:

- 1) How are net family and per capita income and their distribution different in 1970 from the situation in 1964?
- 2) How do colonists spend their income?
- 3) How has labor use changed over the study period?
- 4) What factors are associated with "economic success?"

THE SETTING

In 1964, three post-reform tenure patterns were being used on the four settlements.² One settlement, Los Silos, was organized as a production cooperative, but each settler did have the privilege of farming a small plot individually. A second, Las Pataguas, was divided into parcels. These two were initially studied in their second year of operation.

San Dionisio and Alto Las Cruces, which were in their first year under reform in 1964, were worked under a combination sharecropping and rental system because the land reform foundation saw difficulties with both the production cooperative and immediate individual proprietorship. It was planned that parcelization would follow several years of this form of tenancy. In the system on San Dionisio and Alto Las Cruces in 1964, the foundation supplied the land. Operating expenses were split 50-50 with the colonists, but extra labor was completely at the cooperators' expense. Income was

²For more detail on 1964 than is possible to present here, see [3].

divided equally between the colonists and the land reform foundation. Besides the land in sharecropping, all colonists could cash rent a smaller parcel for raising sugarbeets, a contracted crop. On the sharecropped portion, 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 available. Former estate fields were not divided: a colonist may have had plots in four or five large fields, always knowing which part was "his." While central direction was applied to many farm tasks, each colonist was expected to make certain decisions on his portion of the fields: when to weed, how to divide the irrigation chores, etc.

The idea behind this latter system was that the farm would eventually be apportioned to members but that putting several steps between the farmer and land of his own would prepare him for rational decision-making, foster cooperative ideas, help make the coop into a bargaining organization, and insure that the cooperative was economically strong enough to proceed on its own.

Even though no joint farming remained on these settlements in 1970, one cannot conclude ipso facto (as some analysts are wont to do) that the production coop tends to fail in Chile. The strongest limited purpose coops in 1970 were on Los Silos and San Dionisio where the beneficiaries participated in group farming upon settlement. These coops now help members to market crops and buy inputs, and they assess members for "common expenses" like repairing irrigation works. Some bookkeeping and a few technical assistance functions were also performed by the cooperative.

By 1970 the land reform foundation had greatly reduced its technical assistance on all of the farms, but it remained guarantor of most crop loans that the coop received from public agencies and re-loaned to members. Hence, a technician visited the settlements several times a year although he had little contact with most of the settlers.

By 1970 Los Silos, San Dionisio, and Alto Las Cruces had joined Las Pataguas in being divided into family sized farms. Dairy was the major enterprise on Los Silos and field crops were the principal income sources on the other three.

METHODOLOGY

The questionnaire used in 1970 allowed direct comparisons with the 1964 data. All data were adjusted to escudo (the unit of Chilean currency)³ values in 1970. The inflator is based on the agricultural wholesale price index (which is very similar, over the period examined, to the general wholesale price index). Had the consumer price index been used, income differentials over time would have been more marked [calculated from 1, p. 139, and 5, Cuadro 25, p. 39].

Table 1 shows the number of head of families interviewed each year. Some of the original interviewees could not be found. In that case, the total sample was completed in 1970 by selecting colonists randomly from the remaining universe. The study groups included 56 families in 1964 and 58 in 1970.⁴ The analysis below will at times utilize the entire sample as a

³In early 1970, \$ 1 U.S. equaled about 15 Chilean escudos (E°), but this was the official rate; in the black market many more escudos were traded for the dollar.

⁴Disaggregated cost and output data were gathered, bit by bit, and combined into income figures.

measure of the entire colony's progress; at other points it will utilize only the 45 settlers who were interviewed both in 1964 and 1970, to most clearly trace changes in the situation of individuals over time.

THE INCOME ANALYSIS

Overall gross income per hectare rose from E1,873 to E3,240 over the study period--a rate of about 10 percent a year. Overall agricultural production in Chile rose along an irregular path at a rate less than half of that [10, p.3]. Mean net family income (total gross income minus operating expenses) rose on all four settlements when 1970 was compared to 1964.⁵ Off-farm earnings were included in gross income (which averaged E36,148 per family) but they made up about 4 percent of that figure.

Table 1

Families Interviewed, Four Colonization Projects in Chile

	Number of heads of families interviewed in 1964	Number of those interviewed in 1964 and re-interviewed in 1970	Additional heads of families chosen randomly to make up 1970 interview
Los Silos	15	15	1*
San Dionisio	14	8	7*
Las Pataquas	19	16	3
Alto Las Cruces	8	6	2
Total	56	45	13

*One colonist more was interviewed in 1970 than in 1964 because the universe had grown.

⁵For purposes of these comparisons we assume that in 1964 all income and operating costs on the sharecropped land (San Dionisio and Alto Las Cruces accrued to the beneficiaries).

Table 2

Net Family Income (Escudos or E° of 1970)			
	Means		Percent Increase
	1964 (N=56)	1970 (N=58)	
Los Silos*	12,742	17,828	40
San Dionisio	19,872	30,146	52
Las Pataguas	22,557	26,345	17
Alto Las Cruces	13,843	26,947	95
Overall	17,662	25,062	42

*Results for years after 1970 are likely to be quite different from the reporting year on Los Silos since just prior to interviewing the coop had received a fairly large loan for dairy cattle. (The results of this study do not include milk from these new animals.)

In 1970 San Dionisio had the highest net family income of the four colonies, but Alto Las Cruces showed the highest gain in net. The family income gain on Las Pataguas was rather small. Overall mean family income rose 42 percent.

If these settlers had received the government-set minimum wage (E 12 from January 1 through December 31, 1970), had worked 320 days during the year, and if only the head of the household was engaged in wage labor, each family would have received the equivalent of E3,840, about 15 percent of their actual mean earnings. If earnings to capital and land are subtracted from 1970 beneficiary earnings, the average family would show returns to labor of about double that made by a wage laborer.

Family size grew during the study period. So, on a per capita basis mean net income rose by only 5 percent.

Distribution of Income.

When net family income on the 45 families for which data was secured in 1964 and 1970 is rank ordered and aggregated by terciles (Table 4) one gets a picture of the income distribution in that year. If these categories are maintained in 1970, the percentage received by the top third drops and that of the bottom third rises. Indeed, the bottom tercile earned in excess of the average of the middle tercile in both 1964 and 1970. However, when income is rearranged in 1970 terciles, income for the top group rises and for the bottom group falls. This indicates a growing tendency toward income inequality, but also considerable mobility. This observation was also corroborated by an analysis of per capita income.

When the crop producing settlements are considered together (call them "1") and Los Silos, the dairy farm, is considered by itself (as "2"), it becomes plain that a good bit of this income gap is caused by what happened on Los Silos. After the dissolution of the production cooperative a few colonists were able to acquire animals, but most were not (and some bought animals that subsequently died). On "1," income accruing to the top and bottom thirds drop slightly as a percentage of aggregate net income when 1970 is compared with 1964. On Los Silos the share in the aggregate net family income of the lowest tercile dropped from 18 percent to a negative number while the share of the top group rose by about 30 percentage points to over 80 percent of aggregate net income. This all makes intuitive sense; a few mistakes in dairying can lead to the loss of an animal and an inability to make a fairly sizable initial payment can lead to non-acquisition in the first place. Crops, on the other hand, permit a wider range of error--a

person may have a good crop or a poor one, but seldom no crop at all. Also, seeds and fertilizers are easier to acquire because they are divisible; investment in cattle does not have this characteristic.

Table 3

	Net Income per Capita (E of 1970)		Percent Change in Means
	1964	1970	
Los Silos	2367	2211	-7
San Dionisio	3513	4614	+31
Las Pataguas	3493	3428	-2
Alto Las Cruces	2645	3534	+34
Averages	3473	3650	+5

Table 4

Distribution of Net Family Income
by Terciles (45 Families Studied in 1964 and 1970).

Ter- cile	Aggregate Net Family Income			% of Total per Year		
	1964	1970 (all families in their 1964 terciles)	1970 (Income rearranged into terciles)	1964	1970 (same people)	1970* (rearranged)
1	559,750	556,205	697,734	63	53	66.5
2	227,267	225,592	320,590	25	22	30.5
3	107,417	265,040	28,513	12	25	3
Totals	894,434	1,046,837	1,046,837	100	100	100

* Gross income by terciles was distributed 57 percent, 29 percent, and 14 percent.

Table 5

Distribution of Net Family Income Per Capita by Terciles
(45 Families Studied in 1964 and 1970)

Terciles	Mean Per Capita Income			% Change from 1964 to 1970		
	1964	1970 (All individuals in their 1964 terciles)	1970 (Income rearranged into 1970 terciles)	1970 (same people)	1970 (rearranged)	1970 (entire sample)
1	5493	4856	5841	-12	+6	+2
2	3065	1822	3060	-40	+0	+29
3	1746	2560	387	+47	-78	-29
Average	3434	3074	3096	-10	-10	+5

Of the 45 original families in 1964 who were interviewed again in 1970, 23 remained in the same net family income tercile in 1970 as in 1964; since seven of these remained in the bottom tercile, they probably can be regarded as "hard core poverty." Over half of those in the bottom tercile in 1970 were Los Silos settlers. Ten settlers showed upward mobility and 12 dropped to a lower tercile. There is some tendency for families to remain in their same relative position in the income spectrum, but one can also argue that there is an element of fluidity and settlers are not entirely "locked" into their relative position. Some analysts writing on reform assume that all beneficiaries progress more or less in equal measure. That is not true; some make considerable income progress while others stagnate.

Again considering the entire sample, the development paths of the four colonies when net family income and egalitarianism are considered fall into several categories. San Dionisio and Alto Las Cruces showed a fairly high

rate of growth between 1964 and 1970. But it took place in a more egalitarian fashion on San Dionisio (where the bottom half of the income receivers earned 39 percent of that income accruing to the top half in 1964 and 51 percent in 1970) than on Alto Las Cruces (where the comparable figures were 34 and 27). Las Pataguas and Los Silos exhibited slower rates of net family income growth. Las Pataguas seems to be on a more egalitarian trajectory (with the bottom half of the income receivers getting 26 percent of the income in 1964 and 50 percent in 1970) than Los Silos. (The bottom half of the latter earned 47 percent of all income in 1970 and this half averaged a negative income in 1970.) Thus it seems to be possible to have both stagnation and growth with egalitarianism--or without it.

Equity Value in Capital.

Besides measuring income, another way to measure well-being is the extent to which a farmer accumulated wealth over the study period. Indeed, stock of capital owned afford a better welfare measure than income since what a farmer owned in 1970 is a cumulative function of all income generated in the six-year period. While it is possible to argue that even in a panel design some of the received income is transitory, this assertion is more difficult to make if, say, highest income receivers have also acquired the most capital. The best proxy measure of wealth available here is investment in movable farm capital. Land is not used since most had not yet made significant amortization payments. And such capital as fruit trees, an improved building, and irrigation works were very much in evidence, but they proved too difficult for farmers to evaluate. Furthermore, there appeared to be a high positive correlation between both of these omitted categories and movable capital.

Casual observation on any one of the colonies leads one to believe that colonists have made substantial investments. But without gathering detailed data on equity one cannot distinguish between owned capital and that which carries a substantial mortgage. Table 6 displays equity value of movable capital (animals, tools, machinery, etc.) for the entire sample. Las Pataguas still has the largest amount of equity in capital, but San Dionisio acquired it at a faster rate. On the average, overall mean family equity in movable farm capital rose 263 percent when 1970 is compared to 1964.

Table 6

Equity in Movable Farm Capital E (Excluding Buildings and Infrastructure per Family), Entire Sample

	Means		% Increase	
	1964	1970	Means	Medians
Los Silos	6,794	13,353	97	502
San Dionisio	6,029	37,605	443	510
Las Pataguas	21,771	37,933	74	26
Alto Las Cruces	9,429	10,646	93	75
Overall	6,974	25,313	263	240

Table 7 utilizes only the 45 colonists studied both in 1964 and 1970. It demonstrates that when the movable capital terciles of 1964 are used to aggregate 1970 capital, the share of the top group fell while that of the bottom rose. The same observation about net income was made in the preceding section and provides some check on that data. Capital purchased by all terciles increased appreciably in the study period. When 1970 movable capital

is aggregated into 1970 terciles an almost imperceptible change in shares occurs over the study period. To check further on the accuracy of 1970 income data, movable capital was aggregated by the settlers who made up the 1964 income terciles (see Table 4). It was found that 19 settlers fell into the same tercile, while 21 fell into the immediately preceding or subsequent third. Only five were highly divergent cases. Of the seven labeled as "hard core poverty" in the previous section, four appeared in the bottom 1970 capital tercile; three were in the middle group.

Table 7

Equity in Movable Capital by Tercile for the 45 Families Studied both in 1964 and 1970

Terciles	Movable Capital Aggregated by Terciles			% of Total for year 1964 to 1970		
	1964	1970 (All individuals in their 1964 Terciles)	1970 (Capital Rearranged into 1970 Terciles)	1964	1970 (Same people)	1970 (Re-arranged)
1	408,707	837,864	938,134	70	61.5	68.0
2	114,465	319,474	308,599	20	23.5	22.5
3	56,778	205,306	115,911	10	15	9.5
Total	579,950	1,362,644	1,362,644	100	100	100

How is Income Spent?

a. Marketable Surplus and Off-Farm Expenditures.

Does agrarian reform result in increased demand for consumer and investment goods? The best measurement of potential demand available is total disposable income--total net family income less all consumption in kind.

It is impossible to calculate percent rise on Los Silos because total disposable income was a negative number in 1964 and members lived on the subsidy that came from the land reform foundation. Considering only the other colonies, mean overall disposable income in 1970 was 91 percent greater than in 1964. (See Table 8.)

Table 8
Total Disposable Income (E of 1970)

	Means		Total Percent Change - 1964	
	1964	1970	Means	Medians
Los Silos	-1,997	15,610	NA	NA
San Dionisio	15,010	19,948	+33	+26
Las Pataguas	14,506	15,102	+4	+24
Alto Las Cruces	8,116	17,697	+118	+62
Overall	8,898	17,007	+91	+140

b. Investments and Debts.

A major question to be solved by the settlers and the land reform foundation is: will beneficiaries pay off current debt on production credit and land? As Table 9 reveals, families made some purchases of capital on their own account during the 1970 crop year--usually when they harvested or sold some meat or milk.

As was the case in 1964, the average settler seems to overestimate his consumption. But the conclusion that the average settler purchased E 4,052 worth of capital on his own account and consumed the remainder of his

family income seems inescapable. This means that payments were not made toward either institutional production credit or land in 1970 by the average settler and he found himself with E 10,515 in debt (Table 10) to be carried over into 1971.

Table 9
Mean Amount Remaining to Pay for Cash Consumption and
Self-Estimates of Cash Consumption, 1970

	1 Total Disposable Income (Table 8)	2 Investment on a Family's own Account Through out the year	3 Amount Remain- ing for Con- sumption (1 minus 2)	4 Self-Estim- ated Con- sumption
Los Silos	E 15,810	E 3,999	E 11,811	E 14,096
San Dionisio	19,948	4,195	15,753	12,867
Las Pataguas	15,102	2,572	12,530	17,019
Alto Las Cruces	17,697	6,848	10,849	13,308
Overall	17,007	4,052	12,955	14,527

Table 10
Amount of Indebtedness in 1970 to be Carried Over Into 1971 by
the Average Settler

	Principal Due on Production Credit	Land Payment Due	Total Debt
Los Silos	E 11,998	E 1,594	E 13,592
San Dionisio	8,427	2,122	10,549
Las Pataguas	7,098	1,575	8,673
Alto Las Cruces	5,504	1,440	6,944
Overall	8,805	1,710	10,515

When settlers were taken as individuals it was found that only about one-quarter were able to make a significant contribution toward land and capital, a result similar to the case reported for 1964 [3].

While a farm subsidy may be absolutely essential for some years after the agrarian structure is reformed, money cannot indefinitely be loaned and not repaid. It seems that settlers are regarding loaned funds as a "gift." Were this a country-wide agrarian reform, such a mass attitude could easily bankrupt the public coffers, contribute substantially to inflation, and/or result in a complete cut-off of government aid to the peasant sector. One should remember that the campesino sector has been discriminated against for long periods of Chilean history and may, at this juncture, deserve a windfall. But if this were repeated country-wide (and there are some indications to this effect in the current Chilean reform), the government would be subsidizing a small group of beneficiaries while leaving the non-beneficiaries further behind than ever.

In 1964 colonists utilized an equivalent of about E 16,000 of their net family incomes for consumption items; they spent about E 21,000 in 1970. About half of their consumption in 1964 was "in kind" products grown on the farm; the figure dropped to about one-third in 1970. It would seem as though if settlers are really expected to make payments on credits, consumption will have to be trimmed and production will have to increase still further.

Labor Use.

In the 1964 study it was found that, "In 1963-64 the four fundos averaged 12 percent more families than before the reform [8, p. 202]." That figure had risen to nearly 20 percent in 1970 and the full resident capacity of the fundos had been realized.

In 1964 several standards of average labor use were used and it was found that by using any of them the beneficiaries of land reform appeared to be utilizing labor to a point where its wage bill exceeded the marginal value of the product. It was concluded:

One way of raising net income [of the settlers] might be to cut back on the amount of hired labor used until it is possible to intensify the operation. This means that individuals would have to become more efficient....The defect of this recommendation is that one way effects of a reform can be spread to a larger group is through employing labor. Calling for a cut in labor supply reduces this beneficial effect of reform. On the other hand, once the farm is worked more intensively...[the beneficiary] should be better able to employ the super-abundant labor which exists more productively than at present [8, p. 203].

Total labor use per hectare was little changed from 1964 to 1970. Indeed, the data show a slight drop in labor application per hectare. While capital, operating expenses, and land rose from 35 percent of total input costs to 58 percent (imputing a labor charge to work by the operator and other unpaid hands), labor dropped from 65 percent of input costs in 1964 to 42 percent in 1970. The most marked change, however, is the drop in hired labor by over half--from 22 man days per hectare to 10 man days per hectare. Since all colonies showed a decline, this trend probably implied that settlers became more entrepreneurial or, at least, "cost conscious" during the study period and realized that contracting labor beyond the point where the marginal value of its product equals the wage bill merely runs up operating costs and eats into net income. On Los Silos in 1964 contracted labor was paid for out of coop funds. But by 1970 hired labor had to be paid by individual campesinos. Here, where labor costs began to impinge on individuals rather than the entire group over the study period, the drop in the

amount of hired labor used and the corresponding rise in the amount of family labor that was applied was most marked.

But in addition to a group who may have stagnated at the bottom of the income ladder on the colonies, another group that may not have benefited from this reform is the local hired labor. Of course it is possible that the group has found other, more remunerative employment since the reform, a point that it was impossible to test.

Table 11
Labor in Man Days/Hectare

	1964			1970		
	Family Labor/Hectare	Contracted Labor/Hectare	Total Labor/Hectare	Family Labor/Hectare	Contracted Labor/Hectare	Total Labor/Hectare
Los Silos	36	19	56	66	6	72
San Dionisio	50	18	68	39	16	55
Las Pataguas	40	31	71	39	6	45
Alto Las Cruces	34	20	54	36	11	47
Mean	40	22	62	45	10	54

WHY WERE SOME COLONISTS SUCCESSFUL?

What were the factors--to a greater or lesser extent manipulated by the settlers--that accounted for the fact that some settlers had more income than others in 1970? Trial multiple regression runs in which four dependent variables were regressed on a number of independent variables that could be theoretically justified left the analyst with the model described in Table 12, Line 1.

The dependent variable is X_1 = 1970 gross income.

The independent variables are listed below along with some theoretical justification for inclusion when necessary:

X_2 = a dummy indicating whether a settler lived on Las Pataguas.

X_3 = a dummy indicating whether a settler lived on Alto Las Cruces.

X_4 = a dummy indicating whether a settler lived on Los Silos.

X_5 = age of husband, 1970. The mean age of male household heads was 45, but the distribution was skewed to the older age brackets. One would imagine that, on balance, age would be negatively related to gross income.

X_6 = number of people in the household. One could hypothesize that the more people living together, the more gross income they would need. Presumably, they would also have the necessary labor force available to produce it.

X_7 = education of husband. Education ranged from 0 to 11 years with a mean of 2.6 years. Years of education were used as a proxy for enlightened management.

X_8 = total male work days, a proxy for amount of effort.

X_9 = equity in animals, a value figure which closely correlated with value of animals in inventory, E .

X_{10} = fertilizer and seed costs per hectare, a proxy for amount of yield-increasing inputs per hectare, E .

X_{11} = number of crop hectares.

The regression equation using all of these variables was capable of explaining 75 percent of the total variation in the dependent variable.

Estimated Coefficients from Regression Equations for (x₁) Gross Income, 1970
(Group of 45 Studied in 1964 and 1970)

Colony	Constant	Dummy Las Pataguas (x ₂)	Dummy - Alto Las Cruces (x ₃)	Dummy Los Silos (x ₄)	Age of Husband (x ₅)	Number of People in Household (x ₆)	Education of Husband (x ₇)	Total Male Work Days (x ₈)	Equity in Animals (x ₉)	Fertilizer and Seed Costs per hectare (x ₁₀)	Crop Hec-tares (x ₁₁)	R ²
All Colonies	-2192.3 (14237.5) -1.54	-8236.3 (8152.7) -1.01	-394.11 (10718.3) -.04	-13748.0 (11049.6) -1.24	175.9 (157.6) 1.12	2357.0 (992.5) 2.4**	2372.0 (1176.5) 2.02***	1.09 (3.4) .13	.78 (.19) 4.2*	6.4 (2.7) 2.3***	3419 (567) 6.03*	.75
All Colonies Except Los Silos	-5944.0 (12129.3) -.49						2566.3 (1479.1) 1.74	10.7 (9.2) 1.2	-.03 (.54) -.06	8.8 (11.1) .80	4001 (713) 5.6*	.70
Los Silos	-14073.3 (25703.1) -.55						-120.8 (2128.4) -.06	-4.05 (28.3) -.14	.92 (.30) 3.08*	7.1 (3.4) 2.1****	7249.9 (9952.1) .73	.74
Los Silos	2738.1 (8022.2) .34								.70 (.20) 3.5*	7.9 (2.8) 2.8**		.70

* Significantly different from zero at the 1 percent level

** 2 percent level

*** 5 percent level

**** 10 percent level

Cell structure: Regression coefficient
(Standard Error)

The following conclusions may be drawn from this analysis: 1) Age of the household head and total effort based on a measure of days worked are not statistically important in determining variation in gross income given the other variables considered. 2) Crop hectares and number of animals owned were highly significant while education of the husband, number of people being supported, and yield-increasing inputs per hectare were less significant. 3) The most manipulatable variables are probably yield-increasing inputs (and short-term credit available per hectare which was fairly highly correlated with inputs) and equity in animals. An investment of E 1 in fertilizer and seed returned E 6.40 in gross income per hectare during 1970 and an investment of E 1 in livestock yielded a gross of E .78 during the year.

These results suggested that there might be a fundamental difference between the three colonies which depended on crops for the bulk of their income and the one which depended on dairy animals. When the non-dairy settlements were considered separately (Line 2), the number of seeded hectares became very important while animal equity faded into insignificance. When Los Silos was considered by itself (Lines 3 and 4) the opposite situation prevailed and yield-increasing inputs per hectare became somewhat significant. This last observation provides some justification for the Inter-American Bank loan for dairy cattle which will be reflected in 1971 income on Los Silos. Recalling an earlier section, however, it must be remembered that a dairy enterprise may be more conducive than one which is more dependent on crops to developing an inegalitarian pattern of income distribution.

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