

FMF-12

Chile's Agriculture:
The Food Supply (No. 1)

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Santiago, Chile

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366 Madison Avenue
New York, New York 10017

Dear Mr. Nolte:

The carts roll by night. Horse-drawn, gayly-painted, they converge upon the central market at the very core of Santiago: the horses' shoes and steel rims of two large wooden wheels clip stridently over the city's cobblestone streets in the pit of the darkness.

Laden with produce—lettuce, tomatoes, potatoes, sweet corn, grapes onions, squash, avocado, pomegranates, melons—the carretelas swing through the high, wide gates of La Vega at a trot, rushing to get in line in order to wait—wait behind dozens of other carts and trucks, earlier arrivals, to take their place at the unloading area—wait to discharge the harvest until the unionized stevedores are ready—wait till their contracted consignee is on hand to usher the foodstuffs through the auction and into the hands of the buyer in return for a roll of escudos.

The gates open to the public at 5:00 a.m. in the summer, the influx at this hour largely the potential buyers—both retailers and wholesalers—who scrutinize the contents of bags and boxes to determine their bids. There are some 3000 of them, competing in this one market for tons of food which will supply 70% of Santiago's residents and some 50% of all Chileans. In a plexus emanating from this center a "negative flow" returns potatoes to Melipilla from whose soil they were dug, tomatoes to the truck garden area of Quillota, and apples to the orchard country north of Chillán.

PRINCIPAL CITIES
AND AREAS OF CHILE

Arica

Atacama Desert

Antofagasta

La Serena

Viña del Mar

Valparaíso

Santiago

Central Zone

Concepción

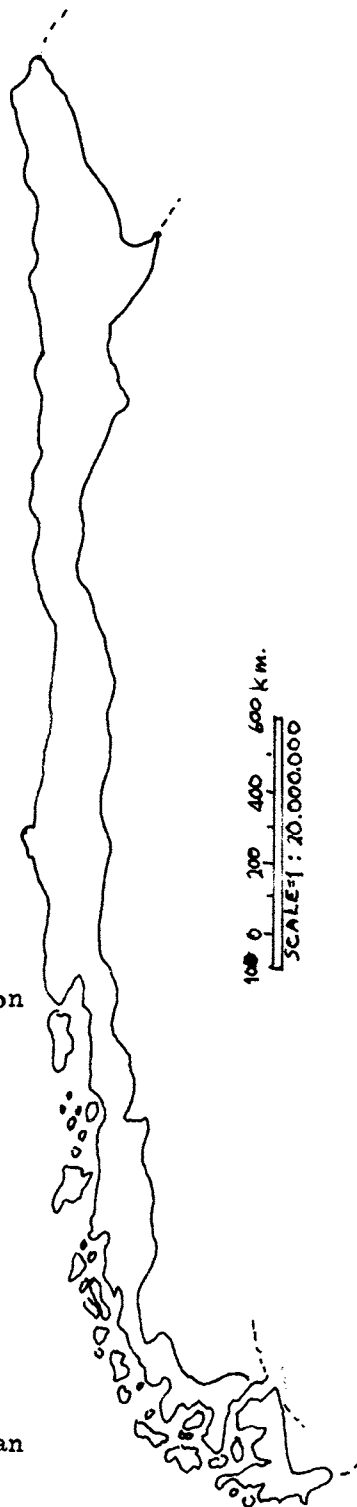
Valdivia-Lake Region

Chiloé Island

Canal Region

Strait of Magellan

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SCALE: 1:20,000,000



Auctions start at 6:00 and proceed at a contrapuntal pace, auctioneer's prattle hawking the gunny sacks of beans, soon set against a colleague's voice babbling the bids for celery. As the dawn first lights the scene, the 10 acres of La Vega are already aswarm with frenetic, cacophonous action. Most wholesale transactions take place under the open sky, the fin de siècle pavillions long ago inadequate to hold but a fraction of the retailers. The narrow streets radiating from the enclosure are jammed with trucks and carts drawn both by horse and man, most waiting to remove the purchased goods which are hand carried by human pack animals whose bowed backs support three or four sacks of vegetables, crisscrossed to better the precarious balance. Sidewalks are blocked with makeshift kiosks of petty merchants, and the cracked concrete and cobblestones are strewn with mud, husks and manure.

Underlying this ferment is traditional procedure. Once ensconced at the auction ground, the cart or truck is unloaded by professionals who charge a flat rate per unit—E⁰.07 each box of tomatoes, for instance. Since a man can handle 2000-2500 boxes per night, he may earn up to E⁰175, over \$20, a very good income for a manual worker. Naturally, these ranks are closely guarded, non-members not daring to challenge the monopoly, and the unions sometimes labeled "gangster".

The next charge, also borne by the producer, is for the entrega. In essence, this is the service of a vigilante—he guards the piles to ward off theft during the interim between gate opening and auction. He does not touch the product, and he also charges by the unit.

Three times removed from the producer (four times if he hired the transport) is the consignee whose fee is 10% of the sale value. A fifth or more of this amount is taken by the city as auction tax. For the remainder, the consignee renders a miscellany of services, including: supervising the auctioning of the produce and attempting to get the best possible price for it; paying the various charges which are then deducted from the producer's account; granting credit, if needed, to producer and buyer, usually with no security or signed document.

The consignees are licensed by the city and now limited to 40. However, only 38 operate—two newcomers who attempted to enter the field recently were summarily squeezed out. Again, the adjective "gangster" is sometimes applied.

Once in the hands of the purchaser, the next charge is for loading, and this time there is no fixed amount but, rather, it varies with the number of units and the distance they must be carried—often several blocks due to the parking congestion. This purchaser may be buying for an institution or a cooperative, an ad hoc grouping of retail stores or for his own wholesale operation.

In any case, the food is now on its way to the consumer, and this phase has been more closely studied by agencies and researchers.

They have found that there is an average 20% physical loss between La Vega and the housewife. Prices are carefully controlled and checked by a government agency; for instance, the retailers operating within La Vega would not dare exceed the stipulated mark-up since the watchdog, La Dirección de Industria y Comercio, is headquartered on their doorstep. However, outside the municipal market there are many abuses. In April alone merchants were fined over 80,000 escudos, mostly for infractions of the price ceilings, especially for meat and vegetables, and also for dishonest weights; 39 establishments were penalized by closure during the month.

Regardless of energetic attempts by the control agencies, the marketing procedures are multifarious, defying absolute surveillance. Producer and buyer may rendezvous outside the purview of the market place. Wholesalers are naturally inclined to optimize on shortages or seasonal demands. In a still unsuccessful attempt to form a marketing cooperative for garden products, the director of the Dirección de Industria y Comercio proposed to eliminate the excessive number of intermediaries which, he pointed out as example, can result in the producer's receiving 20 pesos for lettuce for which the public pays 200 pesos:

"Our marketing is too costly...it includes the transport, the packaging, the legitimate profit, the handling costs, and other factors ...we must recognize that there are too many hands which intervene in the process. The succession of intermediaries increase the cost of the product...the quality is not set by the producer but by the merchant. Therefore, it is possible that the produce is bought as second grade, but the public pays the price of first grade."

Similarly, the director of the Cámara de la Carne, an association of meat retailers, observed at its national convention in April that the faults in the marketing structure, chiefly the proliferation of middlemen, resulted in an increase in meat prices ranging from 18 to 22%.

Both of these administrators have reason to cite extreme cases to prove their point. Less committed observers doubt that mark-ups often reach such heights. But it is generally agreed that the marketing process works to the detriment of both producer and consumer.

Not peculiar to Chile are the cases of gouging due to short-term demand. Although everyday observation and academic survey both corroborate Chilean disinterest in seafoods, being a Catholic people, they undergo a marine diet on Easter weekend, consumption reaching 1400 tons. Prices of seafoods are government-controlled, and additional squads of inspectors are assigned to patrol the markets. Even so, this year, abalone reached 20-25 cents each, and sea eel (congrio, a Chilean specialty) soared to 64 cents per pound. Concomitantly, lemons sold for 50 cents per pound.

Inocentadas, a daily satirical cartoon in the Communist newspaper

El Siglo, dialogued:

"Ah, well, we'll get by. I know how to prepare a seafood dish without lemons."

"That's good, but the real problem is---do you know how to prepare a seafood dish without seafood?"

Chileans are accustomed to other chronic shortages, probably the most obvious and painful being beef. Though some establishments do not comply, its sale in market and restaurant is forbidden four days a week---only Friday, Saturday and Sunday offering the possibility of the famous parillada (mixed grill). Even this exiguous provision is denied when there are emergency shortages; last year Santiaguinos passed three weeks without beef. During two weeks this month (June 1968), the sale of beef has been suspended.

Besides shortages, there is also the sufferance of inferior quality. Recalling La Vega, one can presume the effects upon produce loaded a day in advance, joggled over cobblestones, tossed upon concrete or tamped mud, exposed to rain and sun, and passed through a series of hands.

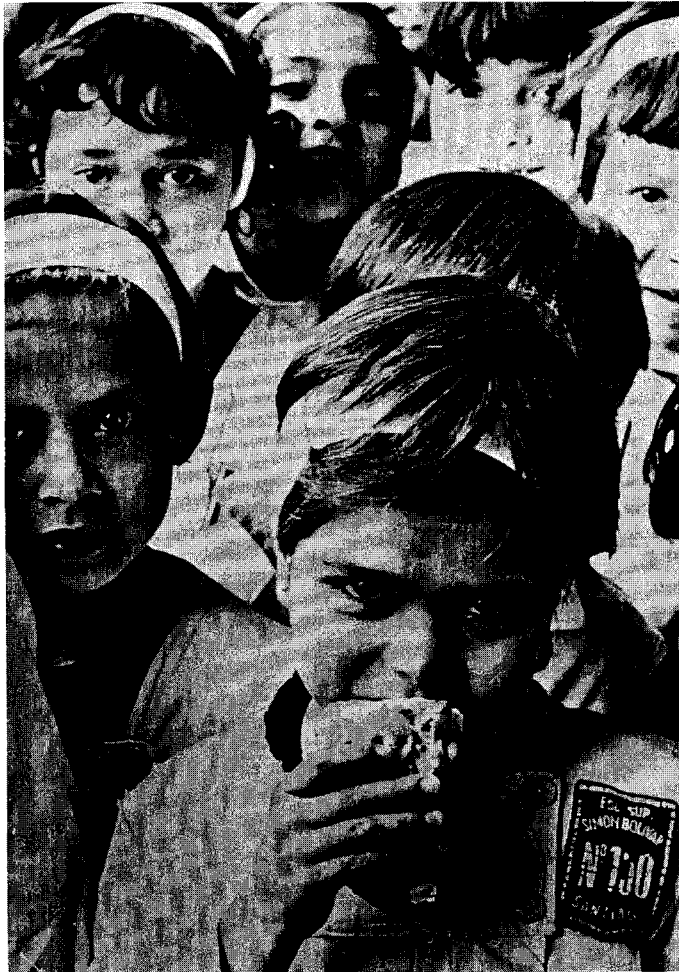
Yet another aspect of the food situation is the rising cost due to Chile's chronic inflation. Last year, by official figures the cost of living increased 21.9%; in the first five months of this year it soared another 15.5%. Chile's consumer price index includes 125 items, based upon the purchases of the working class in 1957. Thus, almost 50% of those items are foodstuffs; in fact, prices for only five items represent 28% of the CPI: wheat, beef, milk, oil and potatoes. Government assiduity in holding down food costs is, therefore, understandable, but, on the other hand, with agricultural production falling behind population increase, farmers must be encouraged. Caught in this vise, the Frei administration has raised the ceilings on several staples, including milk and wheat.

It is not uncommon for lower-class families to spend 70-80% of their income on food---and still not eat well. In the United States, by comparison, food expenditures average 16.2% of disposable income. Lamenting the deteriorating nutrition of his country, President Frei, in his first State of the Nation message (May 1965), commented:

"The slow development of agricultural production is compromising, at an alarming rate, the health and vigor of the people of Chile, since we are now eating less than nutrition experts recommend and less than we ate 10 to 20 years ago; this is taking place regardless of the acceleration in food imports and the reduction in agricultural exports."

He cites the following statistics:

Beef consumption per capita, 1945/47	-	53 kilos
Beef consumption per capita, 1957/59	-	34 kilos



The Children
Of Chile

Recommended daily consumption of animal protein	-	34 grams
Chilean daily consumption of animal protein	-	26 grams
Recommended caloric intake	-	2600
Chilean caloric intake	-	2380

The University of Chile recently initiated a study of the effects of urbanization on food consumption and nutrition in the Nation. To extend through 1970, findings are sparse as yet; however, it is estimated that 40% of the children under two are undernourished, and 70% of those of school age.

The Director of the University's Department of Social Action (Dr. Alfredo Avendaño) observed that "this means a high percentage of the population has mental and physical deficiencies which retard the country's capacity for socio-economic progress."

Regarding the effects of malnutrition, a Chilean doctor (Dr. Fernando

Monckeberg) noted that "at five years of age, there is already a difference of almost 20 cms. in the height of children in the two social extremes...and what is even more serious is that the diameter of the cranium is also smaller...25% of our poor children have a smaller cranium...the malnutrition of the first months causes irreparable damage...Malnutrition, thus, produces underdevelopment, and underdevelopment produces malnutrition."

Writing on 4 September 1545, the Conquistador Pedro de Valdivia described Chile to the King of Spain:

"Such is this land that to live in it and to perpetuate one's name there is no better in the world...there are four months of winter during which at the quarter moon it may rain a day or two...The summer is so temperate with such delightful breezes that a man may walk in the sun all day with no ill effects. There are abundant pastures and fields which can support all the kinds of livestock and crops you can imagine; there is an abundance of beautiful wood to build houses... whoever wants to come here will find ample water, firewood and grass such that it seems God created it (with all one could wish) at hand."

Four hundred and twenty years later, President Frei described the state of the nation:

"Millions of hectares of devastated forests and eroded soils practically lost to cultivation, valleys without vegetation, rivers which overflow their banks to the detriment of the riparian fields, dunes that advance from the sea---these are the results of an erroneous agrarian policy, which not only has affected the generations which have suffered it, but which will impose its consequences upon the lives of our descendants..."

"The poor performance of agriculture can be attributed not only to the adverse circumstances of the economy (especially the inflation), to the mistaken practices of low investment and high profit-taking in agriculture, to the deficient use of fertilizers, machinery, pesticides, etc., to the insufficient diffusion of modern techniques, to an erroneous tax policy which has damaged the (efficient) producer by benefiting those who make poor use of their lands, to the discriminatory system of marketing and credit---but also in a special way to the lack of education of the peasantry, to the deficient agrarian structure which prevails in the country and to the monopolistic and obsolete systems of marketing which govern the supply and distribution of agricultural products."

As a result of the misuse of the land, pointed out by Frei, Chile has lost, irrevocably, some five million hectares, its vegetation and top soil destroyed. Another 10 million hectares are eroded beyond crop use, now given over to extensive grazing. Another 135,000 hectares are lost to dunes advancing from north and west, "closing in upon Santiago" as dramatically described by the Minister of Agriculture, Hugo Trivelli.

According to the 1965 census Chile reported 55 million acres of agricultural land, used as follows: 13% for crops, 44% in pastures, 26% in forests, 7% in fallow and 10% idle. Since the country has a population of only about nine million, it enjoys one of the highest ratios of arable land per inhabitant of any Latin American nation: 35.5 per 100 hectares (Colombia, 56.6 per 100 has.; Peru, 66.2 per 100 has.; Ecuador, 94.1 per 100 has.; Guatemala, 104.4 per 100 has.). Agricultural specialists have estimated that Chile's food-producing potential could support 25 to 40 million people. With 258,656 farm operating units, 27.5% of the national population is dedicated to agriculture, but their relative contribution to the gross national product falls with each year, 10% in 1967. In fact, agricultural production has been falling behind national needs for decades. While it grew at a rate of 1.8 to 2% (1930-1965), the population increase averaged 2.2%, and the demand for the land's produce exceeded 3.5% due to the expanding power of acquisition.

Not only is the agricultural sector not contributing its share, it represents a drag on the economy as a whole. The causes are manifold.

One of the major ones is revealed in the statistics above regarding land use. First, less than a third of the land suitable for agriculture ---29.2%---is being utilized and, second, that part is, to a large degree, only producing a fraction of what it might. In Chile's most productive agricultural area, between the provinces of Aconcagua and Nuble, a comprehensive irrigation system along with good soil and favorable climate could support year-round, intensive cultivation---60% of the area is in pasture. "Extensive" is the adjective for Chilean agriculture---whether referring to crops or livestock. Over half of the arable land is devoted to wheat, often on lands apt for high-value crops.

As one drives through the verdant Central Zone or through the area of abundant rain to the south, it is not crop land but the bucolic scene which dominates---particularly the herds of Holsteins grazing over great fields of natural pasture. Even the milk production is extensive!

In Indiana a small herd of beef cattle is considered a luxury, a gentleman's hobby to grace his farm. But they are uneconomic compared to the rapid turnover allowed by hogs or profits of certain crops, such as soybeans. If there are cattle, they are pampered as children, sheltered in barns, grazed on alfalfa, fattened rapidly on corn and high-protein supplements.

In Chile milk cattle feed almost exclusively on natural pastures of inferior nutritive value, particularly short in minerals. An area of 12.5 million acres is thus poorly utilized, supporting an average of only one head per five acres, as compared to the potential of artificial pasture to support almost one head per one acre. In conjunction with the inferior grass, little is done to guard against seasonal



Chile's agriculture
relies heavily
on manual labor.

deficiencies in feed, resulting in a high mortality rate of which 60% is attributable to starvation---approximately 70,000 animals annually.

In the U.S., cattle are ready for market in two or less years; in South America the span is usually three to four years, a period plagued by parasitic disease---tuberculosis, hoof and mouth, brucelosis---and a mortality rate of approximately 15%. Poor forage, disease and primitive husbandry, therefore, lead to a paradox: though Chile is ideally suited to the dairy industry, it must meet one-fourth of its milk requirements with imports.

The slow improvement in agricultural production is due primarily to the stagnant livestock sector, growing at only 0.74% while crop production increased 2.8%. In essence, the cattle industry in Chile is still antediluvian. In addition to the failure to increase yield per head or per acre, there has also been little advance in the absolute numbers of the national herd, as the following figures attest:

<u>Year</u>	<u>Chilean population</u>	<u>No. of cattle</u>
1936	4,530,000	2,570,000
1955	6,770,000	2,840,000
1965	9,000,000	2,850,000

The Mediterranean climate of central Chile and the above average soils allow year-round agriculture, two and even three crops from irrigated land, if properly planned. However, because of the dominant tendency toward extensive agriculture, not only is the potential of

the land not fully realized, but also that of the labor. It is estimated that 30% of the agricultural population is un- or underemployed, leading many of this group to migrate to the slums of the cities. Those peasants more firmly established, as inquilinos (resident laborers on a large landholding) and medieros (sharecroppers), may be occupied as little as 180 days per year.

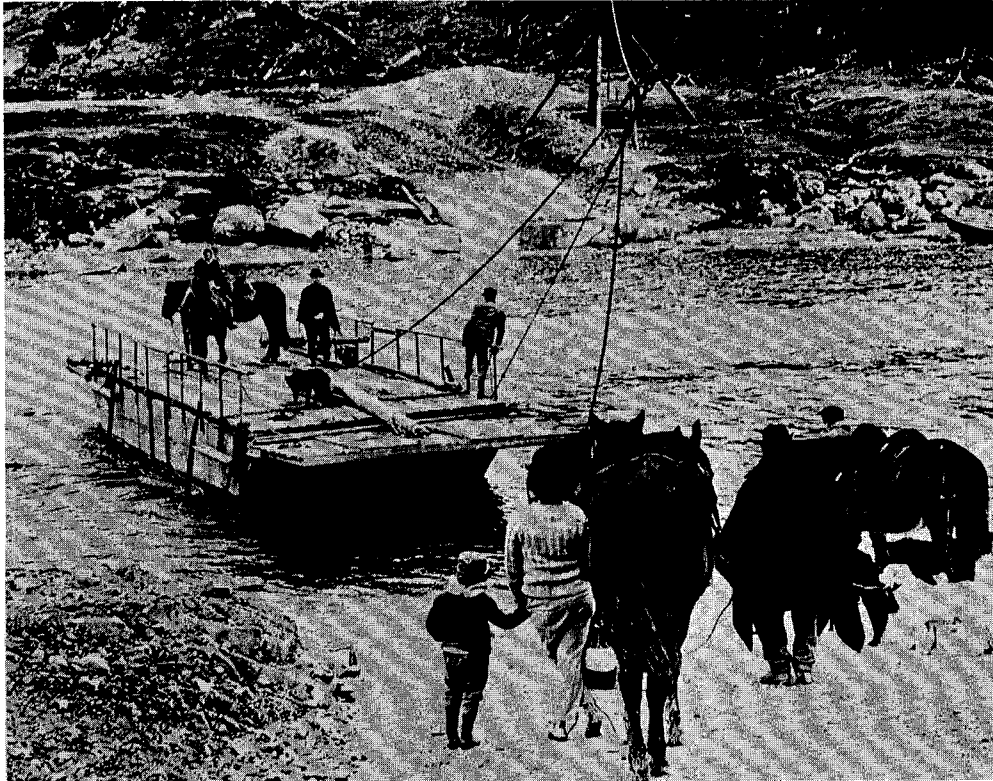
Capital is a third major factor affecting the advance of agriculture. As with the utilization of land and labor, it fails to do its share. Investment is low, even in men who often receive a large part of their pay in kind rather than cash. According to government figures, in 1966, the peasantry composed 92% of the agricultural population, but received only 41% of the income. The patronal class, 8%, garnered the other 59% but, according to both Chilean and U.S. studies, is little inclined to use these funds to improve their landholdings. According to the Government, 84% goes for personal consumption; a PhD. thesis (Marvin Sternberg, University of California) states that in 1960 disposable income (after 5.1% personal income taxes) of 20 large landholders was applied as follows: consumption expenditure 79.5%; personal investments, 13.3%; personal savings, 2.1%.

Patronal preference is to obtain bank loans rather than invest their own money. In that 80 years of inflation have taught the oligarchy to aggrandize upon the monetary spiral, this maneuver is no doubt smart business. Unfortunate, however, is the tendency to misappropriate these loans, turning them to personal use or fast profits in city dealings instead of intended farm improvements. One blatant example was a loan from the International Bank for Reconstruction and Development intended to expand and improve the cattle herds in south Chile; the breeders did use the money to buy better stock but sold off large parts of the original herd, in many cases reloading the capital at high interests.

Given the inflation and the complexities of the credit system, rates tend to be high---running to 36% for 90 days. The normal bank rate is 19% but a 50% tax, plus various fees, raise the cost to the borrower to approximately 30%, about equal with the current inflationary increase.

Once the farmer has harvested his crop, he is faced by a gamut of obstacles, in addition to the marketing process described earlier. Part of these problems arise from the physical characteristics of Chile. The country is 2630 miles long and 54 to 250 miles wide, spanning desert and arctic climates. The bulk of the produce arriving at La Vega originates in an oblong area stretching 300 kilometers south and 150 kilometers north from Santiago. But potatoes and meat may come 1200 kilometers from the south, and mid-winter citrus from 2000 kilometers north.

Long-pull transportation, therefore, plays an important role in the food supply. Government subsidies work to contain freight charges artificially; when the famous Klein-Saks Mission (1955), called in to



A raft propelled by cross-current in south Chile

and Chile's inflation, influenced the Government to remove subsidies in order to cut budget deficits, the result was a vertiginous boost in food costs.

Short-pull, likewise, is a prime consideration. The province of Valdivia, in the heartland of the Lake Region famed for its trout fishing, is the dairy center of Chile. A good paved highway cuts across it, north to south, linking the provincial capital to Santiago. But leave this one artery and the roads soon turn to dirt and gravel, victims of the heavy rains which drench the area nine months of the year. Until a decade ago the independent farmers surrounding Lake Ranco---large, blue and glacier-fed---depended on ferry boats to ship out products and receive supplies. Now a gravel road skirts the shore, shaped as a great sickle, the last river ferried by a raft ingeniously-propelled by the swift cross current. Within the last year the road has been extended over the mountain behind Llifén, the bulldozers struggling up the steep side to cut a narrow mud ledge whose grade strains the power of a truck in low gear. Behind, a rich valley is opened for the first time, and its small farmers, formerly outside the regional economy, have now invested in herds of Holsteins.

Each morning the milk cans cluster the berm, awaiting the daily pick-up. The road engineers promised that a base of gravel would be laid before the rains. However, when the March rains began, only after an occasional day of sun was it possible to churn through the black mud. Already the farmers were pouring spoiled milk into ditches, anticipating a long, wet winter of no income and bankrupting overhead to maintain their cattle. In Santiago, meantime, people stoically accept that, since winter is here again, they will suffer the perennial milk shortages.

Inadequacies in the agricultural infrastructure are manifold. Of 350 slaughterhouses in the country 85% have a capacity of 30 heads or less per week—with facilities at the same low level. Storage and refrigeration accommodations are, likewise, minimal. President Frei had pointed out that, even if Chile had the money to import more foodstuffs, it would be impossible to do so because "the country has reached the capacity of its ports, silos and warehouses." Along the same line, technicians have defined a major factor contributing to the high cost of fertilizers: only one port is equipped for its discharge—thus, demurrage and transport charges reflect the delays and distances prejudicing the supply of this additive.

Conservative sources—that is, those representing the large landholders—lay the blame for underproduction on various causes, largely attributable to government interference. Key among these are official price controls, the tight-money policy, the inflation, import restrictions—and, now, the fear of expropriation due to the agrarian reform.

No matter the views of this faction—though they may not coincide on all the secondary items—on one they are sure to agree: the price control policy, which is interpreted as a deliberate Machiavellian plot of the Government to sacrifice the betterment of the countryside in order to appease the urban sector, politically more strategic; true or not, price-policy critics suspect such favoritism.

Peter Dorner of the Land Tenure Center comments in his "Open Letter to Chilean Landowners" (1964):

"Higher agricultural product prices might (there is no assurance) increase total agricultural production. Higher prices would, of course, increase your income, but without governmental intervention or stronger worker organizations, there is no assurance that any of this additional income would accrue to your workers. It might, indeed, simply result in a transfer of income from people in the cities to the agricultural sector without major or any benefit to the agricultural workers. This would probably increase tensions in both the city and the country."

Putting aside the social and political issues of the price question, there is, no doubt, basis for producers' cries protesting the economic squeeze. As with any controlled economy, all exigencies cannot be foreseen. For instance, government economists projected an inflationary rise of 12% for 1967; therefore, to maintain the equilibrium, the

Ministry of Agriculture granted an overall increase of 12%. In fact, the cost of living rose 21.9% (some unofficial sources suggest it was closer to 30%, a figure easily derived if an index is used with items other than those of the CPI, described above.

ECA (Empresa de Comercio Agrícola) is the principal regulatory agency. It controls prices indirectly by active participation in the market to effect the increase or decrease of food costs, as circumstances may indicate. As is usual with such an agency, its successes are many and unappreciated, its failure are common knowledge. Potatoes, a staple and, therefore, major concern of ECA, offer a choice example of the latter.

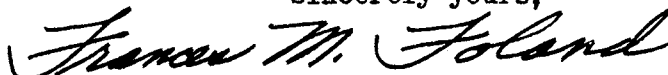
Chiloé is an inhospitable island in south Chile which weather and terrain have condemned to fringe existence. Formerly, it had some success exporting potatoes, a crop which then fell prey to blight and so lost its international market. Production isolated from the central market place at La Vega, the tubers cannot compete with other national sources. ECA bought heavily of the Chiloé harvest, held it for a few months, and then flooded the Santiago market in August-September, with the intentions of providing a foodstuff in short seasonal supply and, also, combatting high prices prevalent at this period of the year. Effects, however, were negative. Private producers in the north who offer a high-quality crop, deliberately scheduled to enter the market in late winter, were ruined by this new and artificial entry of a poor-quality, cheaper product. Prices of an 80-kilo sack of potatoes plunged to two escudos (about 30 cents); since the gunny sack itself was worth more than two escudos, it was smart business to buy the 80-kilo unit, throw away the potatoes and resell the sack.

Two issues, moot and emotional, lie behind the imbroglio of agricultural production. Both are now undergoing trial by fire and will be treated more fully in later newsletters: the capability of the Chilean peasant and the effect of the land tenure structure.

In the first case, the reformers are on the defensive, needing to prove that the peasant can produce if motivated and staked. The conservatives disparage the human potential, as expressed by the rightist weekly PEC: "The Chilean peasant is not like one from Mecklenburg, Frisia or Holstein who from one day to the next can become an independent farmer as soon as he has land, equipment and capital. Neither is he an Italian or a Japanese who will manage to cultivate the last little inch of a garden. The Chilean workman loves the free life—the worries of the soil seem to him just a bother."

In the second case, the pattern of land distribution, the reformers are attacking. In his first State of the Nation message (May 1965), Frei minced no words: "The big landholdings underutilize the land in a dramatic form—possessing 75% of the land and more than 50% of the capital and 40% of the manpower, they only contribute about one-third of the agricultural production...figures prove the anti-economic conditions resulting from men without land and land without men."

Sincerely yours,



Frances M. Foland

Photos courtesy El Mercurio