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Rural Development and Urban Food Programming

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Rapid urban growth, the persistence of the agrarian question, the obstinacy of marketing problems and the relative lack of State intervention in the market are some of the causes of the present complex situation of the urban food supply, which the author outlines in the initial pages of this article.

In the second part, which is the core of the article, he presents those factors that should be considered in designing an urban food supply strategy, which include marketing, the placement of human settlements, energy, collective consumption patterns, food education, hygiene, soil use, nutrition, and economic policy measures, for times of crisis and for the medium and long term.

In the third part the author discusses the problems of the articulation of the institutional and administrative apparatus associated with such a strategy. He has designed two models for this purpose. One is based on the strengthening of intersectoral planning mechanisms, while the other, towards which the author inclines, relies on co-operatives or State enterprises as the foundation for the integrated management of the basic components of the strategy.

In his final considerations the author restates his conviction that the urban food supply can only be effectively organized if the producers and consumers affected by its shortcomings band together and pressure for far-reaching changes in these structures.

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I Introduction

1. The growth of the cities

In 1975, 85% of the world's rural population lived in the underdeveloped countries; by the year 2000, 90% of the world's rural population will be concentrated in the underdeveloped countries. In that year, there will be 25 cities with over 10 million inhabitants, seven (28%) of which will be in Latin America. The largest city in the world will be Mexico City, with 31 million inhabitants, followed by São Paulo with 26 million.

Whereas in 1975 eight of the 15 largest cities in the world were in developed countries, by the year 2000 there will be only three (Tokyo, New York and Los Angeles).

In 1975 the urban population of Latin America represented 61.2% of the total; in the year 2000, it will amount to 75%, with 466 million inhabitants. A total of 165 million inhabitants (i.e., 35% of the entire urban population of the region) will be concentrated in only 17 cities with over four million inhabitants each.

2. The agrarian issue and supply

Against this background, certain basic characteristics of the predominant agricultural policy of Latin America during this century account for the present problems relating to urban food supply. During this period, various historical circumstances substantiated the conviction that the introduction of major changes in the land tenure system was a basic requisite for its integral development.¹

Owing to institutional and political circumstances, however, little progress could be made. Agrarian reforms were not put into practice, but this did not stop agriculture from operating; without any restructuring of the farming system, it was nonetheless able to meet the demand of the international market and to supply the urban domestic markets.

¹Since the time of the conquest, Latin American culture has been marked by a struggle for land, which in more recent times has been manifested in the agrarian reform movements of Mexico, Bolivia, Cuba, Peru and Chile, the activities of international enterprises in Central America, and the agrarian issue in Colombia.

Thus, for example, between 1961-1965 and 1980 grain production rose from 55.3 million tons to 87.4 million. Within this total, wheat output increased from 11.8 million tons to 14.6 million; the output of unmilled rice climbed from 9 million tons to 16.5 million, while that of secondary grains rose from 32.3 million tons to 56.3 million.

Sugar cane production increased from 205 to 362.2 million tons; banana output expanded from 14.7 to 19 million tons; and the soya harvest rose from 1.5 million hectares and 2.0 million tons in 1969-1971 to 11.4 million hectares and 20 million tons in 1980. The production of beef and mutton, pork and poultry increased from 8 million tons in 1961-1965 to 11.3 million in 1979; egg production went up from 0.9 to 2.0 million tons and that of milk from 20 to 32.7 million tons.

Nonetheless, the worldwide picture with respect to food production in recent years is not very bright. Information issued by FAO (1981) indicates that the index of variation was 2.5% annually for the world as a whole in the period 1971-1980, and Latin America had the highest growth rate of the various world regions (3.9%), followed by the Asian countries with centrally planned economies (3.4%), the Near East (3.3%), the Far East (3.2%) and Oceania (2.8%). With respect to per capita food production, Latin America came second among developing countries and first among developing regions having market economies, with 1.2% annually, followed by the Far East with 0.7%. The annual growth rate for developed countries was 1.9%, inasmuch as their population increased by only 0.8%.

In Latin America, the bulk of production came basically from the entrepreneurial sector, although peasant agriculture also provided a substantial part of the domestic food supply. Nevertheless, the social crisis in the agricultural sector (which was the primary target of the farm-restructuring policies) could not be resolved within a rural setting. Instead, the nature of the problem changed and shifted to the marginal zones of large urban centres; with very few exceptions, this has been the modern manifestation, thus far in this century, of the long-standing and unresolved rural social problem.

In the early decades of this century, migration was the variable of adjustment; the equation formed by the ecological base, the land tenure

systems and employment could be solved through rural exodus. When this means of adjustment became impossible, the recourse to violence between landowners and peasants through the seizure of land gave rise to social conflicts which are prevalent even today in several countries of the region. In vast areas of Central America, Colombia and Brazil there are still severe social tensions over the question of land ownership.

As time went on, the rural social crisis subsided to some extent, not through the application of agrarian reform programmes, but rather through exodus and rural-urban migration. These variables of adjustment, however, can no longer function in the urban environment. The only means of social adjustment to which the surplus population and manpower in urban areas can resort are various processes of income expropriation whereby the surpluses of the middle and upper classes are taken by force and the governments are obliged to adopt emergency solutions which mitigate, but do not solve, the social problems. The various forms which repressive processes assume in the region within this context of social causality constitute endogenous variables in the present forms of societal organization.

This is the social setting for the problems of the urban food supply. In the cities of Latin America, the adjustment process is increasingly taking place in terms of forced expropriation and income redistribution in order to allow the basic levels of consumption to be maintained.

3. Marketing and supply

The studies which have been conducted on food marketing and supply in a number of countries of Latin America point up a large number of problems which affect both consumers and producers. On the basis of studies carried out in Mexico, the Dominican Republic and Ecuador—whose situations are similar to those of other countries of the region—the following problems, among others, can be identified:

a) Under various marketing systems for agricultural products, intermediaries operate with a large profit margin owing to the inefficiency of the marketing process through the long chain linking producers with consumers.

b) The prices of goods allow scant profit for small-scale agricultural producers who lack bargaining power. Consumers also suffer, since the agricultural products which reach them are high-priced and not always of good quality.

c) In the long process of marketing there is a high percentage of loss during the post-harvest stage owing to the use of inadequate producers in the handling, sorting, processing and packaging of products and by-products, as well as makeshift and unsatisfactory conditions of storage and transport for most of the crop-farming and stock-raising products. Increasing food production is futile if it is not coupled with the improved utilization of such products and a reduction of the present heavy losses in foodstuffs when produced. Conservative estimates indicate that in Latin America the average losses of grains and legumes exceed 20% of the harvest, while the figure is over 30% for fruits and vegetables.

d) The lack of accurate and timely information and the great uncertainty as to how much income will be earned at the end of the harvest make decision-taking on production a difficult and hazardous task.

Data concerning the difference between consumer and producer prices for some agricultural goods in the Dominican Republic (SEA, 1977) show a wide variation from one year to another and between the two prices. In 1975 and 1976, these variations were as follows: rice, 128% and 60%, respectively; beans, 101% and 71%; bananas, 175% and 50%; ganduls,² 316% and 105%; yuca, 35% and 102%, and sweet potatoes, 67% and 32%, respectively. In Peru in 1975 the difference for some products was: potatoes, 195%; onions, 213%; tomatoes, 218%; bananas 219%; and apples, 206% (DESCO, 1977). In Brazil, the mark-up for rice in the state of São Paulo in 1975 and 1976 fluctuated between 40% and 36%, while the figures for beans were 60% and 68%, respectively (Coelho and Cavalini, 1981).

In most of the countries, government concern to resolve inflationary problems gradually led to the establishment of price-setting policies. At the same time, however, all the credit and financing policies for agriculture and marketing were based on the idea that people should pro-

duce the *gandul* is a commonly-eaten legume in tropical and «cinitropical zones.

vide real collateral in order to obtain credit from public institutions. Small-scale merchants and producers were not eligible for credit; owing to the structural circumstances and conditions of their businesses and farms, neither of these groups was able to gain access to the financing designed to rationalize and expand their businesses. Large-scale intermediaries, merchants and landowners, however, could obtain credit because they were able to provide proof of their creditworthiness. This was the situation which shaped the food supply system in Latin America under the rule of the free market. Economic agents increased their wealth with public credit, thereby consolidating oligopolistic intermediation practices which benefited national and foreign enterprises and businessmen whose structural conditions already lent themselves to the concentration of economic and financial power.

With policies which set maximum prices for agricultural products and credit policies such as those described above, marketing channels atrophied even further, thus bringing about a large-scale redistribution of income among consumers, intermediaries and producers.

In this free-market atmosphere with its lack of controls on prices and bargaining, intermediaries were the sector in the best financial position to impose producer and consumer prices and to establish the largest mark-ups.

4. *The State's planning role*

In the late 1950s and throughout the 1960s, steady progress was made in development planning in Latin America. Attempts were made to orient the evolution of economic and social variables towards the achievement of broad development objectives. The political and institutional conditions were lacking, however, that would have made it possible for planning really to interpret and implement both the aspirations and the power of decision-making and control of a broad social base. The social legitimacy of planning scarcely extended beyond the narrow limits of the weak and incipient ministerial institutions.

Despite the precariousness of its initial conditions, the first steps towards planning were taken in those years and overall development

plans were prepared in most of the countries. Sectoral plans were also drawn up which in some cases incorporated regional planning components. Planning was predominantly viewed as a normative process for the public sector and indicative for the private sector.

Normative planning has continued to be employed mainly in the public sector and primarily in the programming of investment policies. The public investment programmes contained in development plans have been relatively consistent, and a large number of basic industrial projects, social programmes, and infrastructure for irrigation, transport and marketing in Latin America have been designed and executed under State direction.

Planning as an indicative process for the private sector implied the predominance of mixed economies and the decisive influence of the private sector on economic issues arising within the context of the market.

As regards the urban food supply, this meant that the private sector was dominant in the purchase and sale of foodstuffs. Since the State could only intervene in the market on an indicative basis, intermediary entrepreneurs had complete freedom to conduct their commercial activities as they wished, thus creating imperfections in the markets and in marketing channels.

5. Towards new planning dimensions

An examination of planning experiences in Latin America during the past 20 years reveals that State action made significant economic and social progress possible. A number of countries (generally those at a midway or more advanced stage in their development) carried out social programmes and others concerned with infrastructure, industrialization, education, and science and technology.

Advances in the State's institutional organization were also made and the practice of planning led to a more efficient administration of large areas of public spending. Nevertheless, various political/institutional limitations prevented the execution of policies and programmes designed to bring about structural changes in rural areas, and very few countries were able to make significant changes in the

policies governing land tenure, supply and the provision of support services for the transformation of the rural environment.

During the last few decades global and sectoral planning was generally confined to the sphere of government institutions and served as a formal and rationalizing instrument of State action. Although progress was also made in refining planning instruments at the regional and provincial level, its achievements had no real social significance.

Today, the issue of planning must be seen within a new context. If only 17 cities of over four million inhabitants each in the year 2000 will contain 35% of the urban population (165 million people), then programming in selected cities, if legitimately expressing the potential and needs of large segments of the population, could become a new and powerful tool for rationalizing, orienting and socially controlling the actions of the State. Based on this concept, the programming of rural/urban food supplies could play a vital role in organizing rural and urban communities and in opening up new vistas for their institutionalized participation.

The basis for the social legitimation of planning could be provided by cities and the surrounding rural areas which depend on them; such planning could, in the future, complement the basically centralist planning and development efforts which governments will continue perfecting at the national level.

From the large cities, the planning of the rural/urban food supply could, on a socially legitimate basis, offer programme and policy options and proposals to be decided upon by the national government. The priority task would be to create the conditions needed for national decisions, involving ministerial administration, to be legitimized in the actions taken by the institutions representing the large urban population centres.

In this way, governments would increasingly refine and institutionalize normative planning as a means of rationalizing their actions, but this would involve a new type of planning complemented by specific proposals and controls which would originate in the cities and the families inhabiting them and, from there, would be transmitted first to the municipal government, then to the provincial government and, finally, to

the national institutions, whose specific sphere of activity would be controlled, in social terms, from the large cities.

Amplifying this analysis, one can see that Latin America is currently undergoing an intensive process of political renewal. Democracy is today a social necessity in all the countries, and the more pervasive this process becomes, the greater will be the need for social consultation and participation. This will primarily be manifested in the large urban centres, where the population will have to institutionalize democratic

mechanisms for expressing its aspirations and potential.

At this point, planning will be at the service of the large majorities; the closer they are to the social base, the more legitimate and acceptable will be the results of the planners' work. In this way, processes could take place in the future whereby organized society, in addition to expressing its development proposals through planners, could itself institutionalize community-based mechanisms for the social control of government action.

II

Towards an integrated policy for rural development and urban food supply

In order to move in this direction, new development strategies will have to be designed, their rural and urban components synchronized and co-ordination mechanisms selected for integral rural and urban planning.

1. *Components of a rural development strategy*

Global and specific development strategies will have to be designed for each of the following rural subsectors: settlement and agrarian reform programmes; integral rural development projects; those areas of peasant agriculture not covered by the above categories; capitalist entrepreneurial agriculture; and forestry and fishing, appropriately broken down according to the type of establishment and administrative unit. An analysis of the main agricultural policies in the region reveals that, generally speaking, the governments do not assign a high priority to programmes which affect the peasant sector. The bulk of the available financial resources are channelled to capitalist entrepreneurial agriculture and the other sectors. Furthermore, very few countries follow an integral agricultural policy capable of broadening directives, programmes and projects to include all the subsectors mentioned above.

Despite these facts, it is generally acknow-

ledged that, in the course of their complex processes of execution, the government programmes for agrarian reform and integral rural development brought to light the total inadequacy of the existing institutional and administrative framework for the agricultural sector. In particular, there is clearly a need for effective mechanisms for co-ordinating solutions on an integral basis for the problems of land-ownership, marketing and support services for small-scale farmers (Figueroa, 1977).

Although settlement and integrated rural development programmes have not achieved a significant degree of social and geographical coverage, they are currently the only manifestations of government action politically and socially directed towards the peasantry. It may be assumed that, as a result of the steady improvement of this type of programme and the desirable and necessary expansion of its coverage, the public agricultural sector in most of the countries will eventually interiorize specific methods for meeting the demands and needs of a significant portion of rural peasant society.

In contrast with the continuing refinement of institutional and administrative techniques for promoting and protecting the interests of agricultural export activities (of medium- and large-scale output) the execution of integrated rural

development projects is increasingly revealing the public sector's marked inability to manage, simultaneously and efficiently, the various components needed to improve the infrastructure, production, marketing, agroindustry and social services of a large part of the peasant population.

Latin America has never developed an institutional structure for the agricultural activities of small-scale producers. This structure was designed to serve other interests, primarily in connection with commercial agriculture. In almost all the countries, this type of agriculture has much more highly refined technical/administrative systems at its command: producers form the base of such organizations and control and direct the entire process of production, processing and marketing. Sugar cane, coffee, cocoa and a wide variety of export products are examples of this.

Latin American agricultural policy has left very little room for transforming and modernizing peasant agriculture. As a result, the institutional structure needed to guide this important sector could not develop, and now the execution of integral rural development projects is forcing the governments to create new management systems for the peasantry. This is probably one of the main contributions to Latin American agricultural policy made by these projects.

2. Components of an urban food supply strategy

There is a pressing need to broaden the traditional approaches, which have so far predominated, with respect to the programming of urban food supplies and to recognize the fact that marketing, although a basic element, is only one of the components of the problem. A range of other elements, whose nature and importance is discussed below, must be brought into the picture.

a) Marketing

Orthodox analyses of marketing on a product-by-product basis trace a systematic relationship among all the links—agents and functions—in the chain from production to final consumption. The basic links are: production, the supply

of inputs, distribution of the output,³ transport, bulking, purchasing authorities, co-operatives, classification, quality standards, packaging, storage, supply centres, agroindustrial processing, wholesale distribution, supermarket chains, open-air producer markets, open-air markets for end-consumers, retail distribution, mark-ups and farm insurance. Marketing as a whole has been modernized in recent years through the consolidation of integrated and differentiated structures for commercial agriculture, export agriculture and domestic markets for high-income brackets.

At the present stage in the internationalization of production and agricultural markets, transnational agroindustrial chains have made sweeping changes in the traditional linkages between production and national agroindustries. This has modified the flow of credit in the agricultural sector, concentrating it in those lines of production and producer strata that are intrinsically linked with modern agroindustries having access to international markets and to middle and high-income domestic sectors. In addition, the financial capital which sustains the modern agroindustrial sector also articulates the financing, production and distribution of the inputs needed by producers.

In contrast, the marketing of foodstuffs for mass consumption or for low-income groups continues to be subject to traditional systems. In most countries, the State has encountered tremendous difficulties in breaking down the informal political, economic and financial links which have consolidated the operational machinery for the distribution of these products.

Over the past 20 years, new installations for modern supply centres in large cities have been constructed in a number of Latin American countries.⁴ The centres were conceived as the

³This includes losses after the harvest, reserves for the farmer and for seeds, and the supply available for the market.

⁴In the 1960s and 1970s, Brazil designed and carried out an ambitious programme to modernize the infrastructure of supply. Mexico and Argentina also set up large supply centres for their capital cities. In other countries, despite the great shortcomings of their supply systems, it has not yet been possible to finance the construction of new facilities for their capital cities or to create the necessary infrastructure for the large inland cities.

final components of integrated systems of infrastructure designed to standardize all distribution processes. There would also be a need for rural dispatching markets, bulking centres at junction points for production and, finally, facilities for the co-operative distribution of production and for consumption.

For a variety of reasons, it has not yet been possible to create and maintain integrated systems in any Latin American country. The power of vested interests makes it impossible to modernize marketing systems by State action alone.

b) *The placement of human settlements*

In the human settlements which have spontaneously formed around large cities, vast sectors of the low-income population have settled in marginal areas remote from the central markets and without adequate transport networks to facilitate a normal supply of basic foods; this process will probably intensify, or at least will not abate, in the next few years.

In the absence of specific policies for regulating and directing migratory movements, social pressure continues to be felt in particular areas. The official responses which such pressure eventually elicits usually take the form of authorizations for expanding the networks of public services, transport, schools and low-income housing. Generally speaking, appropriate infrastructure for the supply of foodstuffs is not included in the services provided. Low-income families must therefore obtain their provisions from distant markets or resort to the scattered retail outlets of the marketing chain. Although the latter are very costly and inefficient, their location and mode of operation respond to the needs of the marginal urban population.

The supply of food to the cities is therefore a matter which goes beyond the subject of marketing; an integral analysis of the problem must therefore include other aspects relating to social and demographic conditions and the location of human settlements.

c) *Energy*

In specifying the main components of supply, energy-related aspects of the issue should also be analysed. All the technologies

used in crop-farming and stock-raising, in harvesting, in transporting goods for bulking at central markets and their subsequent distribution and redistribution among urban centres, in agroindustrial processing, in cold chains, in the processing of pre-cooked foods, in family food preparation, and in the distribution of urban wastes are just so many more links in the long energy chain which mobilizes the integral process of food supply. The energy problems confronting Third World countries will make it necessary to restructure and replace a number of links in this energy chain.

A very large amount of energy is used in supplying food to the population of developed countries (and to high-income groups in developing countries) because of its high content of animal proteins and processed products and its dependence on a very complex marketing chain. This is due, firstly, to the conversion of plants by animals (a process during which potential food energy is lost) and, secondly, to the fact that much more commercial energy is used in the processing, transport, marketing and preparation of food than in its initial production on farms.

Estimates of the amount of energy used in the food system of the United States confirm that only a quarter of the total is accounted for by farming. The rest is consumed at intermediate stages in the food chain. The process involved in bringing food from the countryside to the consumer's table required 10.6 million Kcal per person in 1970; this can be broken down into the following figures: 2.5 million Kcal (23.6%) in the countryside; 4.1 million (38.7%) in food processing; and 4.0 million Kcal (37.7%) in marketing and household food preparation (Borgstrom, 1974). In 1970, the food system accounted for 12.8% of total energy use in that country. The items that absorbed the most energy were domestic refrigeration and cooking of food, the food processing industry, commercial refrigeration and cooking, and fuel for transport within the processing industry. Direct fuel use on farms barely reached fifth place.

The supply of 3 300 Kcal of food energy (Borgstrom, 1974) per day for a person living in the United States in 1970 can be broken down into 1 869 calories of plant origin and 1 431 calories of animal origin. However, if the sup-

plementary energy represented by fodder for stock-raising is included in the total balance of primary food calories (an extremely important measurement which is not often calculated), then the total number of calories needed to feed an average person in the United States would actually be 11 886 primary calories, rather than the 3 300 traditionally cited, since 10 017 calories in fodder have to be used in order to produce 1 431 calories of animal origin,

If the same type of calculation is made for an average Mexican citizen, an average of 2 614 calories (2 321 of plant origin and 293 of animal origin) is consumed. A total of 2 051 calories in fodder must be used in order to produce those 293 calories of animal origin, making a total of 4 372 primary calories instead of the figure of 2 614 calories which is usually given.

Thus, the actual difference between the number of calories consumed by an average person in the United States and in Mexico is not 686 calories, but 7 514. In percentage terms, the difference is not 8.7% but 63%.

The United States food system is much more demanding in terms of total energy consumption. Studies conducted by FAO (1977) indicate that feeding the world population by using a system similar to that of the United States would absorb between 40% and 60% of the total amount of commercial energy currently available in the world.

In response to the heavy use of commercial energy involved in this type of production and food system, many agricultural producers—especially in the United States, France, Great Britain, the Federal Republic of Germany, Switzerland and Japan—have been developing what has come to be called organic agriculture. According to recent estimates, some 20 000 farms in the United States, 6 000 in France and many more farmers in Europe have joined the International Federation of Organic Agricultural Movements, which was founded in 1972. Various studies on systems of organic agriculture (United States Department of Agriculture, 1980) indicate that the yield of this type of agriculture is comparable to that of traditional farming and that the income from both types of agriculture is more or less the same owing to the former's lower level of spending on fertilizers and pesticides. This type of agriculture is much better than the

traditional type in so far as the energy balance is concerned. A study conducted in France shows that the cost, in terms of energy, of fertilizers and the maintenance of wheat crops is 3 to 4 times lower than in the traditional system, while in the United States (New York and Pennsylvania), organic farmers growing the same crop used almost 30% less energy per acre than traditional farmers. Research and outreach services in the Latin American countries should delve more deeply into the potential of organic agriculture for small-and medium-scale agricultural producers.

d) *Advertising and collective consumption patterns*

In order to replace certain technologies in the food chain, however, the relative prices of some goods and services would have to be changed and consumption patterns would have to be modified. In many cases, these patterns are the result of specific advertising campaigns financed by large multinational corporations.

Mass consumption patterns change as time goes by. The consumption of carbonated soft drinks, products containing wheat flour and canned goods are only a few examples of such trends. In a number of Third World countries, the introduction of new consumption patterns was initiated by specific legislation, such as law 480 of the United States which promoted food aid based on its wheat surpluses. In other instances, however, such changes were brought about by advertising campaigns launched by international trading companies with a view to the systematic penetration of markets. On the other hand, there has been no deliberate long-term campaign in any country of the region designed to create collective consumption patterns that would be geared to the prevailing income situation in a society or to cultural patterns and local production potential.

The past thirty years have seen the consolidation of a new international system of production, distribution, consumption, control and regulation of agriculture as it relates to food. Transnational corporations are its main operational mechanism; they control and determine decisive components of the dynamics and structure of agricultural production and international trade. Their intervention has gradually been diminishing the room for man-

oeuvre in the formulation and execution of national agricultural policies.

Under the influence of the persistent action of these companies, the countries gear their production more to the demand of the international food system than to the basic needs of their own inhabitants. Entrepreneurial agriculture, which is in the main based on medium-sized and large landholdings, takes part in this process. The large agricultural food industries open up national markets for new agroindustrial products of mass consumption by means of systematic advertising campaigns. By creating or reinforcing domestic and external demand for certain products, it becomes easy to control, indirectly, the production of foodstuffs and raw materials (PROCADES, 1981).

e) *Educating the population about food*

In view of the critical situation of the food supply in most Latin American cities, high priority should be given to educational programmes designed to teach people to recognize the qualities of foods; to develop new consumption patterns; to observe basic rules of hygiene in handling food; to take full advantage of the nutritional value of food; to use appropriate technologies in its preservation and preparation; and to produce food for household use.

Intensive campaigns of social education on a mass scale are needed in order to introduce the practices of associative organization to people in neighbourhoods, schools, factories, work stations, offices, unions, etc. Such campaigns could foster a greater critical awareness among the population; families could band together in order to stay within their budgets, adopt hygienic practices in the handling of food, control weights and measures, and monitor price control programmes.

The education and organization of families could serve as a basis for adopting new strategies for an integral treatment of the issues of urban food supplies.⁵

⁵There is insufficient information about this important aspect, PROCADES in compiling a systematic bibliography on existing cases of the formation of urban associations in various Latin American cities devoted to improving the food supply.

f) *Hygiene and soil use*

Mass campaigns should draw attention to the importance of problems of hygiene and should pressure the public authorities to allocate more funds to the adoption of strict sanitary regulations in order to minimize the high social cost in terms of health of current food practices. Poor public health conditions stemming from improper food handling harm both individuals and society and are currently a major problem in most Latin American cities.

Inadequate basic sanitation, especially as regards the water supply for large urban populations, is one of the main causes of health problems. This issue cannot be addressed without due consideration being given to soil use in urban areas and in the rural zones surrounding large cities, as well as the pollution of rivers and lakes which provide the water supply for large cities. The water used to irrigate the valleys surrounding urban centres are often sources of pollution and of the transmission of parasitic diseases, especially among the low-income population.

Civil legislation and specific codes have been enacted to regulate and supervise soil use. Unfortunately, in most large cities of Latin America, they are not enforced, and there is inadequate supervision of sanitary practices and of the ways in which individuals use and abuse natural resources. For example, very fertile valleys are gradually given over to land speculation and construction with alarming frequency. Because of their proximity to urban centres, these resources could provide an important means of solving some of the food supply problems affecting large cities. In addition, anachronistic systems of land tenure and the migratory flows which they produce have led, in many cities, to the establishment of makeshift human settlements on the hills surrounding urban areas. The pressing social needs prevailing in these settlements lead to the destruction of natural preserves, indiscriminate logging, the degradation of river basins and the gradual deterioration of ecosystems.

g) *Nutrition*

The nutritional status of the population may be unsatisfactory even when food prices and markets are completely normal. A population's nutritional status is largely determined by in-

come levels and distribution, cultural habits and the extent of general knowledge about ways of using and preserving food.

The food supply in Latin America has gradually increased in relation to need as a result of a slight growth in total food production and a considerable rise in the per capita volume of food imports. In 1969-1971, the daily ration of calories per person in relation to the amount required was 107.7% and reached 109% in 1977-1979; this puts the region in second place, following the Near East among developing countries.

Data provided by FAO (1982) concerning the period 1975-1977 indicate that, out of a total of 22 Latin American countries, seven have caloric intake indexes of over 110%, six of between 100% and 109%, and nine of under 100%. The first group consists of Argentina, Costa Rica, Cuba, Jamaica, Mexico, Paraguay and Uruguay; among these, Argentina and Paraguay have the highest levels (127% and 120%, respectively). The six countries in the second group are Brazil, Chile, Guyana, Nicaragua, Panama and Venezuela, with Chile, Nicaragua and Brazil having the highest levels. The remaining countries, which have indexes of under 100%, make up the third group; Bolivia and Haiti, with 89% and 90% respectively, have the lowest levels among this group of countries. In general, almost all the countries have raised their caloric intake levels during the 1970s, the largest increases being achieved by those which were initially in the worst position.

With regard to the amount of food consumed and the diet of the population, great differences exist not only from one country to another but also within a single country, as a result of ecological factors, unequal income levels and the location of the population (in rural or urban areas) which combine to create different consumption structures.

Generally speaking, the diet of the urban population is more varied than that of people in rural areas; it includes more animal products (meat, dairy products, eggs and fish) and more fruits and vegetables, being a diet less affected by seasonal fluctuations. In terms of calories, there is less consumption of traditional grains, these having been replaced by wheat products. The consumption of dried legumes, roots and tubers is declining, while the number of calories sup-

plied by sugars is rising. Vegetable oils and processed goods produced by agroindustries are used more in the cities, as are carbonated beverages and other processed foods of little nutritional value.

The way in which the urban consumption pattern has changed has been influenced by the social and cultural environment of the population, through the effects of the advertising done by food companies and by national and transnational agroindustries, supermarkets and the imitation of the consumption patterns of high-income groups. More and more people have lunch and dinner outside the home; however, because of the prices charged at restaurants and cafeterias, the food and beverages consumed are usually of little nutritional value.

The size of a city also has an impact on the urban consumption pattern. In small and medium-sized cities the prevailing diet is of a type midway between the diet consumed in large metropolises and that of rural areas.

The nutritional status of the urban population is generally higher than that of the rural. The most vulnerable groups in respect of nutrition are found in rural areas and on the outskirts of large cities (where emigrant peasants settle). In such areas environmental and health conditions, sanitary infrastructure and training are much too inadequate to give rise to a better use of foodstuffs. The main nutritional diseases in Latin America are protein-caloric malnutrition, anemia brought on by iron deficiency, endemic goiters, avitaminosis A, dental caries, cardiovascular diseases, diabetes and obesity.

h) *Economic policy*

The political and social implications of food supply problems are a matter of constant concern to economic policy agents in the countries of the region. In order to ease the immediate supply crisis, governments usually resort to a series of instruments related to short-term economic policies. It is infrequent, however, for the supply problem to be addressed in conjunction with long-term economic policy.

The rural development styles of most of the countries in the region thus continue to favour agricultural production for exports, concentration of land-ownership and of rural credit, tech-

nological modernization among medium-sized and large-scale producers, integrated production and agroindustrial processing chains for meeting the consumer demand of the high-income population, the adoption of international consumption patterns and the increasing involvement of transnational corporations in the processing and marketing of agricultural inputs and products. The perpetuation of dependent rural development styles prevents the application of short-term economic policy measures which would have a real effect on soil use, the destination of production, rural employment levels, agricultural technologies, the rural population's income, migration to urban centres and the chronic shortage of jobs and income in urban centres.

The policy measures taken by governments to provide food for the growing population, especially in urban areas, are often in direct conflict with the promotion of local food production and urban supply systems. The policies established in order to benefit the low-income population are confined to opening up imports or laying down retail price controls, to the detriment of employment and agricultural production, which are of special importance in inflationary and recessive situations. Some countries employ direct consumer-price subsidies in order to maintain the consumption of certain essential foods in the diet of the population.

In addition to the application of subsidy policies, many governments have created State marketing firms in order to hold down retail prices; these companies, which are financed out

of the public budget, buy and sell specific commodities in competition with private enterprise (IDEMA in Colombia, CONASUPO in Mexico, EMPROVI in Ecuador and COBAL in Brazil).

In general, there is a tendency to favour government intervention aimed at improving the systems of urban food supply, especially as regards measures designed to protect producers and consumers from domestic oligopolies and monopolies, foreign dumping and other forms of unfair competition which benefit some intermediaries.

Other policy measures taken by governments have included subsidies for technological inputs; the establishment of preferential credit lines for food production, processing and marketing; the planning and construction of physical marketing infrastructure; the provision of special support financing for private investment in this area; the creation and development of price and marketing information systems; the management of some wholesale markets, especially of perishable goods; and controls on quality, weights and measures with respect to the food products sold.

Governments distribute food rations to selected groups of the population on a permanent basis (milk for pregnant women, fortified dairy products for nursing or school-age children). These initiatives are usually part of national food and nutrition programmes. As a point of reference, mention should be made of the experiences of Chile, Brazil, Mexico and Colombia in this respect.

III

Problems of institutional and administrative organization in executing an integrated policy

1. *Institutional and administrative organization for rural development*

In a large number of Third World countries, integrated rural development policies have shown up the weakness of the technical and

administrative institutions in charge of peasant agriculture. In general, the Latin American countries lack a sufficiently strong tradition for addressing the many problems posed by the development of this type of society. The simultaneous execution of more than 15 or 20 dif-

ferent types of activities (the promotion of production, natural resource conservation, preventive health measures, technical assistance, agronomic research, credit, mechanization, input distribution, marketing, education, housing, basic sanitation, health, nutrition, infrastructure, co-operativism) demonstrated the need in these countries to upgrade institutions of their own in order to deal on an integrated basis with the main problems limiting the development of broad segments of the peasant population.

In the quest for feasible solutions, a variety of options have been tried out in the region; these can be summed up in terms of two different models.

In the first model, the complexity of the problem points to the need to strengthen intersectoral-planning mechanisms in national and regional planning bodies. These institutions must complete all the stages of co-ordination necessary to ensure the technical formulation and efficient assesment of projects. To complement this effort at the regional level, special administrative units are created to co-ordinate the heterogeneous activities of different institutions, thus guaranteeing an adequate linkage among the numerous executing agencies. In this model, co-ordination assumes a deliberate effort on the part of these institutions, induced by a high level of awareness among their principal directors.

In order for this model to be reasonable effective, it must be coupled with an efficient operational planning system capable of plotting out a course for the institutions while also defining the goals, activities and inputs which must be mobilized in co-ordination with other institutions and the programmes for achieving integrated rural development.

Experience has shown that interinstitutional co-ordination mechanisms often do not work because their authorities do not rightly know which activities of the various bodies should be co-ordinated, and how and when, in order to achieve their shared objectives. The frequency with which this type of situation arises has pointed to the need to create alternative concepts which recognize in advance that interinstitutional co-ordination, through the deliberate decision of its authorities, does not al-

ways keep to the rules and thus jeopardizes the achievement of the objectives of integrated rural development.

In the second model, the assumption is that agriculture requires a simultaneous and efficient supply of many services and activities involving a considerable volume of financial resources if it is to become profitable. Because of their importance, the management of these services could not be left in the hands of the traditional agricultural public administration, regardless of the co-ordinated action that might have been proposed by its authorities.

According to this concept, agriculture conducted by peasant and by small-and medium-scale producers could become a profitable enterprise, but it would have to be professionally managed as an efficient business, for which the co-ordination of different activities and services is a requirement inherent in entrepreneurial management and not the result of individual will. This would apply, for example, in the administration of the purchasing of production, transport, bulking, storage, sorting, agroindustries, input distribution, technical assistance, mechanization, distribution to markets and credit.

It would exclude, however, the permanent social services such as agronomic research, sanitation, farming reorganization programmes and large-scale irrigation projects, which should continue to be administered by the State.

Efficient co-operatives would be necessary in order to handle the integrated management of the former category of services; if such co-operatives did not exist or were very weak, State companies would have to be created which could assume responsibility for the direct and integrated administration of the main activities and services needed for agriculture and for the material progress of peasant families (Figuerola, 1977).

In time, with the gradual consolidation of such co-operatives, they could open the way for a subsequent change-over to private ownership on the basis of associative management.

According to this model, a portion of any financial surplus generated by production as a result of efficient entrepreneurial activity could be placed in a rural social development fund

which would be used to supplement the government resources provided for this purpose.

The model is based on the following principles:

a) State involvement in the provision of capital for the companies as well as in managing their operations should give rise to deliberate initiatives as regards policy decisions which demonstrate its interest in contributing to the integral development of peasant societies.

b) Operations and professional administration should be on a large scale in order to ensure good management.

c) State management firms should see to it that the surpluses generated by the peasant economy are retained in the area and are used to speed up the economic and social progress of producers.

d) A sufficiently large scale of operations creates new conditions which allow the peasant economy to penetrate into the cycles of agroindustrial processing, financing and marketing.

e) The existence of State management firms makes it possible to adopt some components of the first institutional model, inasmuch as the units in charge of regional co-ordination for integrated rural development would perform the functions of planning units while delegating a large part of the specific measures of implementation to the companies.

In both models, the aim is to improve the management of rural development.

The experience which many countries have had with integrated rural development projects is gradually leading to efficient solutions. Meanwhile, capitalist, commercial and entrepreneurial agriculture based on medium-sized and large landholdings, which makes no distinction between the domestic and external markets in the placement of its output, is rapidly modernizing its organization and is borrowing the most efficient managerial techniques and procedures from the national or multinational modern entrepreneurial private sector in order to achieve its economic and financial objectives.

Ministries of agriculture ceased to play a part in the management of this type of agriculture some considerable time ago. Specialized institutes and research departments have been created in order to perform this function. Ministries of planning, finance, economic affairs,

industry and commerce, as well as development banks, central banks and interministerial councils are the bodies directly in charge of running large agricultural and agroindustrial businesses, possibly because of the very important role they play in international economic relations. The private agricultural sector, with its large associations and links with multinational corporations, has created such a great operational and managerial capacity that it has outstripped all possibility of negotiation and discussion with the technical services of ministries of agriculture.

Many countries are setting up programmes to modernize the organization of agriculture. First an attempt was made to restructure agronomic research services, then rural outreach services, and then the agricultural development banks, as well as local and regional units of the ministries of agriculture, input-supply and seed-production services, and mechanized patrols. An attempt is being made in Latin America to create an appropriate institutional framework for the current structures and dynamics of its agriculture. The traditional organizations within the public agricultural sector no longer serve to promote the development of entrepreneurial and modern agriculture, and they were never able to make a real contribution to the transformation of traditional agriculture.

There is still no appropriate institutional framework for agricultural planning as an organizational tool of State involvement in agriculture. It cannot be supplied by ministries of agriculture since, in most countries, the ministries have ceased to control the programmes and policies which influence the main processes of development. Sectors such as credit, prices, taxes, exchange rates and external trade, and export subsectors such as those of sugar cane, coffee, cocoa, meat and basic grains are usually either administered by specialized institutes that are indirectly linked to the Ministry of Agriculture or fall within the sphere of influence of other ministries.

Agricultural planning cannot be assigned to planning ministries either, since these are more concerned with budget management and the co-ordination of sectoral plans. In many cases, they only have a few agricultural specialists to run specific programmes. One could say that agricultural planning is still in search of a ministry.

All this does not mean that the countries lack clearly-defined concepts and programmes concerning the agrarian policies that are of interest to the main sectors of production, processing and marketing. The corresponding units for coordinating relevant decisions, compiling necessary technical data and obtaining the required institutional certifications are always to be had, although in a number of cases agricultural planning offices have cut back on their work programmes and primarily serve the needs of entrepreneurial agriculture.

Once again, this leads to the same conclusion: organized social sectors, powerful private entrepreneurs with the ability to exert pressure and take decisions are always to be found behind agrarian policies that are well run and efficient from the standpoint of those who formulate them. The public sector offices which took after such interest present a different picture; they have modern facilities and their technical and administrative personnel appear optimistic.

In contrast, the technicians and authorities associated with integrated rural development projects and agricultural policy directed towards traditional agriculture or domestic consumers usually express daily frustration with the many obstacles which hinder programme execution. There are no powerful social organizations representing producers, consumers or rural workers which, through organized action, could bring real pressure to bear on behalf of their interests and aspirations. The poor physical working conditions usually to be found in the public offices in charge of such programmes and the situation of their technical and administrative staff are a clear indication of the status of planning as regards this type of agricultural policy.

It should be noted, however, that social needs and pressure in rural and urban areas are intensifying as time goes by; the awareness and persistence of eminent national specialists in the service of this type of programme and the systematic efforts of missions of international experts associated with financing institutions have, little by little, been improving the government's capacity to apply solutions designed to improve the results of this type of agrarian policy. Furthermore, the gradual growth of social movements is speeding up the formation of a greater collective awareness of the need to consolidate com-

munity social organizations in order to support, guide and expedite new social development policies at the rural level.

It must be stressed that the above observations are of a general nature and that important exceptions exist, since the convergence of all these factors, in addition to others that cannot be detailed here, gives rise to different situations in the various Latin American countries. In only a few countries, in fact, have the governments made a deliberate attempt to give a high national priority to rural social development issues.

In those cases, the various measures taken by the public sector reflect the validity and social legitimacy of such guidelines.

2. Institutional and administrative organization to ensure the food supply

What lessons can be learned from prevailing practices in the cities of Latin America? What should be the orientation of our search for appropriate solutions? It is surprising that very few countries in Latin America have tried out appropriate strategies for an integral treatment of the urban supply problem in all its complexity. As a result, it has not been possible to structure or refine a specific institutional structure for dealing with the supply issue on an integrated basis.

Public sector supply programmes are broken down into many different activities, which are undertaken by various ministries and their provincial and municipal offices. Each of the main components of the private sector has also organized various chambers, trade unions, federations and associations at the national and regional levels. The only groups not represented in this throng of institutions are the rural and urban families that are actually concerned, the permanent protagonist of the drama that daily feeding represents today.

Mexico, with its Mexican Food System, and Colombia, with its programmes for integrated rural development and for food and nutrition, are two examples of countries in which the governments have upgraded their concern for the food supply problem to an official policy.

Brazil, with its programmes for regional development, integrated rural development, metropolitan areas, supply centres, and nutrition, and with the activities of large institutions such as

the Companhia Brasileira de Alimentos, the Companhia Brasileira de Armazenamento and the Comissão de Financiamento da Produção, is the country which appears to have the most public machinery devoted to finding solutions to the urban supply problem.

Mention should also be made of Cuba, Chile, Venezuela, Peru, the Dominican Republic and some Central American countries where urban growth and food supply problems have given rise to specific governmental measures, especially with respect to the nutrition of vulnerable groups.

Nevertheless, no public initiatives have been taken to define and supply consistent strategies for providing an integral solution to the supply problem which incorporate guidelines for co-ordinating a wide range of programmes, such as the following:

- food production;
- the rationalization of the energy chains involved in supply processes;
- sanitary controls on food;
- basic sanitation;
- soil use regulation;
- pollution control of water for irrigation and human consumption;
- inspection of weights and measures;
- marketing infrastructure;
- small- and medium-scale agroindustries;
- foreign trade;
- prices and subsidies;
- human settlements in marginal zones;
- income and employment;
- instruction on nutrition and food technologies;
- mass communications for re-establishing collective consumption patterns;
- urban agricultural development;⁶
- the promotion of rural and urban associations for food supply purposes;
- the organization, regulation and monitoring of the operations of the retail food trade, open-air markets, supply markets in densely

populated areas, central markets and super-markets;

- technological research in areas relating to cold storage, transport, product sorting, packaging, domestic food preparation and integral domestic utilization of food;
- price and market information;
- the creation of data banks on food supplies to aid in the achievement of a variety of objectives, including the improved organization of transport and the reduction of intra-city traffic of food transport vehicles;
- the creation of special infrastructure for marketing, cold storage and outlets in densely-populated marginal areas;
- storage, strategic stockpiles and the regulation of food stocks on an intra- an inter-city basis.

Virtually all of these programmes are being carried out in almost all the countries by a variety of national, provincial and municipal institutions; a large number of private associations, which are attempting to standardize their activities within the complex good supply processes, are also active in this area.

If the isolated, unplanned action of public and private institutions had been enough to resolve the supply problem, there would be no point in underscoring the necessity of defining a unified strategy for co-ordinating the programmes affecting its main components. A number of questions, however, arise in this respect: Which institutions should co-ordinate the main programmes relating to supply? Should this take place at the municipal, provincial or national level? Should a system of co-ordination be organized in conjunction with one national, one provincial and one municipal institution within a large city? If the idea of creating such a system were to be accepted, would it or would it not be advisable to set up a technical base in each major city for urban food supply programming? What would be the scope of such programming?

At present, most of the Latin American countries have not institutionalized agricultural planning practices as a starting point for the design of all agricultural development policies. The mechanisms for short-term agricultural planning have not been finalized, and very few countries have systematically developed annual operating plans. Some specialized marketing and sup-

⁶This includes food cultivation in urban zones, in household gardens, in the green belts along railway lines, in vacant lots, greenhouses, technical schools, and unused land in semi-urban areas belonging to the government, private institutions or the church.

ply institutions, however, do systematically deal with specific components of annual operational programming, especially in connection with buffer stocks, harvest estimates, demand goals for certain products, transport flows, price information and foreign trade balances.

There is no technical team in any large Latin American City, however, that is equipped with information for programming the food supply on a daily, weekly, monthly, bimonthly, biannual and annual basis. Although there are technical teams in many national, provincial or municipal institutions which compile, process and programme some isolated components of the process, so far it has not been possible to carry out integrated food supply programming for each of the short-term periods for which this type of information is needed.

Brazil is one of the countries which currently has the necessary technical infrastructure for each of its 26 major cities. Over the last 15 years, it has made a systematic effort to organize State agricultural planning commissions in each of its states and put them into operation; these commissions are truly interdisciplinary teams made up, on average, of 30 to 50 specialists in planning, programming and rural development projects.

Over the last few years, Colombia has established 20 interdisciplinary technical teams in each of its departments. The regional agricultural planning units were created as permanent bodies. With political determination, financial support and technical assistance, they could become a basic mechanism for designing and executing integrated rural development and food supply programmes.

IV

Final considerations

Even if we make very optimistic assumptions with respect to economic growth, the population dynamics of the region will probably limit the possibilities of significantly reducing current levels of urban unemployment and underemployment unless governments adopt specific employment policies which include concrete programmes for redirecting migratory flows away from the cities and into rural areas.

This could become a reality if the governments take the decision to restructure the rural zones surrounding major cities and to rationalize the production of food for rural and urban populations.⁷

Meanwhile, and for many years, food supply policies will have to be structured on the basis of highly concentrated populations centres in a small number of large and medium-sized cities where income is low and there are great social

needs in the areas of basic sanitation, health, housing, education, consumption and nutrition. In this context, it is possible to foresee that in the coming years the governments will really need to mobilize and orient mass movements of opinion in order to sustain the basis for social organization in urban and rural areas. To this end, it will be necessary to institutionalize the governmental practice of simultaneously directing the planning processes connected with development policy and training as part of extensive social communication programmes.

Because of their extreme complexity, these problems can only be solved once the grassroots communities in urban and rural areas multiply and exert organized pressure for the solution of their particular problems. A growing awareness among these communities and their increased organization will set the stage for governments to design and execute programmes under which true food supply corridors can function that will link the main centres of production and consumption. Programmes of this type may be an essential element in minimizing the social cost of a nutritionally controlled food supply for mil-

⁷In some regions of Brazil, there are already some signs pointing to the application of this type of programme. The pilot colonies being tried out on the outskirts of the city of Curitiba, Paraná State, which have been established for the specific purpose of stemming migration, are one example.

lions of people in rural areas and urban centres. They will also make it possible to organize the activities of the various public and private institutions at all intermediate stages in the marketing process and to unify, in new strategies of concerted action, the different elements of the food supply problem.

In the near future, the basic pillars for the functioning of the new food supply policies will, of course, be the governments, private companies and organized social communities. In this context, the technical specialists working in food programmes and projects can play a role of great social significance; their work will be essential in order to eliminate the weak points in the decision-making process as it relates to the food supply. At the State or regional level, as well as in major cities, planning departments must co-ordinate the basic processes involved in programming rural development and urban food supplies.

There may be some debate as to whether the food supply is necessarily the central element in the study of urban/rural interrelationships in Latin America, but the cogency of one particular

fact should be accepted: the people, in their search for solutions to their daily food problems, will gradually consolidate their own organizational courses.

- As more and more is learned about this subject, theoretical interpretations will be put forward which will contribute to an understanding of the historical nature of rural/urban relationships and the links among the many components which determine the structure and dynamics of these relationships. We should not, however, neglect to study the unique characteristic of institutional and administrative organization in each country. The greater concern for practical aspects may help to define more clearly the theoretical work to be done by focusing it as far as possible on topics that will lead to concrete solutions.

From this standpoint, major Latin American cities are faced with the new challenge of conceiving, formulating and carrying out long-term investment programmes to provide an integrated solution to the problems of rural development, production and food supply.

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⁸This idea is based on an experiment made in Brazil during the 1970s involving export corridors through which all the public and private institutions interested in maximizing exports pooled their efforts and created specific mechanisms for co-ordinating their activities.