PD-AAB-538-B1 5980440 (2)

23p.

NON-CAPITAL PROJECT PAPER

(PROP) 598-15-260-440

Country: Regional Project No.:

Submission Date: November 1970 Original - X

Project Title: Agricultural Marketing Systems Development

U.S. Obligation Span: FY 1971 - FY 74

Physical Implementation Span: FY 1971 through FY 1974

Gross Life of Project Financial Requirements:

U.S. Dollars -		$637,000
CICOM Budget - *		$1,124,000
Brazil	$300,000	
OAS	824,000	
Total		$1,761,000

SUMMARY DESCRIPTION

It has become widely recognized that the inefficient and poorly organized marketing systems of many Latin American countries are a deterrent to increased agricultural production and improvement in consumers' diets. Unstable and unremunerative producer prices are a disincentive to farmers, while unduly high retail prices are a burden upon consumers--especially low income consumers who spend large proportions of their earnings on food. Improvements in the marketing system can stimulate the supply of agricultural products and, through reductions in retail prices, increase the consumers' effective demand for food and non-food products. (See Attachment A.)

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* Current yearly budget expenditures projected through calendar year 1973.

A.I.D. has recently been assisting the Latin American nations in improving their marketing systems. The Food and Feed Grain Institute of Kansas State University, under AID/TAB contract (AID/csd-1588), has provided technical assistance in the specialized area of grain storage and handling. They have supplied short-term specialists to Guyana, Ecuador, Guatemala and the Dominican Republic. In addition, the Institute conducted a three-week Grain Storage and Marketing Short Course (June of 1970) involving eighteen participants from six Latin American countries.

The Latin American Market Planning Center (LAMP) of Michigan State University, under contract with A.I.D. (AID/ter-786 and AID/la-364), has studied the food marketing systems of Puerto Rico; Recife, Brazil; La Paz, Bolivia; and Cali, Colombia. LAMP has developed an approach for examining the marketing system from farm production through urban consumption, diagnosing the weaknesses and inefficiencies within the system. The end product of LAMP's research activities has been overall recommendations for improvements in the organization and operation of internal marketing systems, including suggested policy changes. Most recently LAMP has been engaged in advising Colombia on the design of marketing research and the planning and implementation of marketing reforms.

The USDA, through a PASA with A.I.D./TAB (PROP dated 8/5/70), has also been contracted to provide technical assistance in food marketing. Their varied experience in such areas of agricultural marketing as grades and standards, market reporting, locational and transportation economies, marketing and processing facilities, marketing

and price policies will provide an important source of technical expertise needed by the Latin American countries.

In order to maximize the potential impact of the technical resources at our disposal, LA/DR/RD has formulated a policy to draw upon the particular expertise of each resource (see Attachment B). This policy provides for the following division of labor: (1) LAMP will have the responsibility for technical assistance in organizing and guiding research projects directed toward analyzing overall marketing systems and identification of problem areas within these systems. Upon request, LAMP will also provide assistance to institutions which have responsibility for planning and implementing marketing reform programs; (2) USDA will be assigned the primary responsibility for advising on the conduct of research at the operational level (locational and physical distribution studies, feasibility studies for proposed marketing facilities, consumer acceptance and market demand studies, economic analysis of alternative marketing and price policies, and market reporting feasibility studies) and technical assistance in specific areas such as the development of grades and standards, marketing reporting programs, development of marketing facilities and transportation systems and price stabilization policies; (3) The specialized expertise of Kansas State University will be called upon to provide assistance in planning, evaluation and development of programs of grain storage and handling.

This project proposes that the accumulated experience of the Latin American Market Planning Center (LAMP) and the USDA be focused upon two objectives:

1. To provide for the immediate needs of Latin American nations desiring technical assistance in conducting overall diagnostic studies of their internal marketing systems and advice in planning and implementing programs of marketing improvement.

2. To increase the capacity of personnel within Latin America to deal with present and future problems in agricultural marketing through formal training and working associations with U.S. technical advisors.

To accomplish these dual objectives LAMP will provide technical assistance to Latin American nations in conducting diagnostic studies of their agricultural marketing systems and, upon request, assist these countries in developing and implementing internal marketing improvement programs. Such programs will be designed to improve the efficiency (reduce marketing costs and improve marketing services) and performance (allocation of resources and distribution of economic rewards of the agricultural marketing system) in order to stimulate production and reduce the cost of food to the consumer. At the same time LAMP will assist the Centro Interamericano de Commercializacion (CICOM) and/or other Latin American institutions to develop a capacity to respond to similar requests for consultive and advisory assistance in area of agricultural marketing. At present CICOM seems to offer the greatest potential for developing into a regional institution which could provide Latin America with this type of technical services. Although this project should retain sufficient flexibility to assist other institutions--such as CEPA and IICA--which might become involved in agricultural marketing activities, the focus of this PROP will be upon CICOM's development.

CICOM is an on-going institution funded by OAS and the Government of Brazil, which is presently engaged in training Latin American officials in the subject area of marketing systems and marketing improvement as related to economic development. Although it has expressed a desire to become involved in research and technical assistance, CICOM is currently unable to respond to requests for advisory services due to limitations in its manpower and lack of staff experience. LAMP will assist CICOM to assume major responsibilities for technical assistance in marketing in the hemisphere at the termination of this project. In addition LAMP will provide personnel to strengthen CICOM's training and research program while this institution is adjusting to an enlarged scope of activities. LAMP will also assist CICOM in improving its curriculum -- providing for specialized courses and seminars in agricultural marketing -- and developing a resource center of marketing publications.

The USDA will be involved in this project by providing short-term technical assistance directly to Latin American countries in such specialized areas as the development of grades and standards, of marketing information systems; planning and development of marketing and processing facilities; and advising on price stabilization programs. USDA will also be called upon to strengthen CICOM's training effort by providing specialists to lecture in such areas as physical distribution, grades and standards, market information systems, crop storage and marketing facility planning. The need for the type of assistance to be provided by the USDA will result from changes in the curriculum offered in CICOM's training activities and requests from Latin American countries where LAMP and CICOM assisted studies have identified particular problems within the marketing system which require

the attention of a specialist.

The following targets should be met in the course of project:

1. LAMP and CICOM should have assisted at least five Latin American nations in conducting a diagnostic study of their agricultural marketing systems by the termination of the project (in addition to those areas where LAMP studies have already been conducted). Initially these technical assistance efforts may be expected to be largely LAMP efforts with CICOM observing. Later they will become joint efforts and by the termination of the project CICOM should have begun conducting technical assistance projects on its own.

2. LAMP should have responded to requests for technical assistance in the planning and implementation phase of marketing improvement programs in at least three Latin American nations, with CICOM observing and participating in one or more of these technical assistance activities during the course of the project.

3. CICOM should have a functioning "market information resource center" by mid FY-72 and be providing a regular "newsletter" describing new marketing research publications and marketing programs in the hemisphere by the end of FY-72.

4. CICOM should have presented, with the assistance of LAMP and USDA, at least four specialized short-courses on agricultural marketing outside of Brazil by the termination of the project. Ideally, these courses would precede diagnostic studies of the agricultural marketing systems within the countries selected for the short-courses.

5. CICOM should have provided for specialization within their longer training courses conducted in Rio de Janeiro, Brazil, including a specialized curriculum in agricultural and food marketing.

6. USDA should have provided specialized short-term technical assistance to at least three Latin American countries.

The general approach of this project is for LAMP to provide 12 to 18 man-months of high-level professional assistance annually in residence at CICOM. This professional time will be used primarily to provide technical assistance to Latin American nations and assist CICOM in building its capacity to provide similar technical assistance at the termination of the project, although the individuals involved will also assist in strengthening CICOM's curriculum and developing its "marketing information resource center" activities. Three to four graduate research assistants, provided through LAMP, will be located within Latin America for periods of 18 months. They will preferably be Latin American Ph.D. candidates with a specialization in agricultural marketing. These research assistants might be located at CICOM headquarters and divide their time between research projects related to the technical assistance program of LAMP and CICOM and staff responsibilities (teaching, curriculum development, development of the "marketing information resource center") with CICOM. Alternatively, they could be stationed within countries where LAMP and CICOM are assisting in conducting marketing studies. Here their responsibilities would be to assist in the host nation's marketing research activities.

Finally, LAMP will provide 12 to 18 man-months of campus-based consultants whose primary responsibility is providing technical assistance in marketing research and development in various Latin American nations. Again CICOM staff will be progressively involved in these technical assistance programs in order to enable CICOM to accept the major responsibility for such activities at the termination of the project.

The USDA will provide 100 days of short-term technical assistance in FY-73 and 200 days in FY-74. This portion of the project must be extremely flexible in order to tailor the assistance to the particular needs which emerge as the result of the other project activities.

Marketing workshops can contribute to an overall program of encouraging and assisting Latin American nations in their efforts to understand and improve agricultural marketing. Such workshops would provide for the extension of present knowledge with respect to identifying marketing problems and implementing programs of marketing improvement to L.A. decision-makers and technicians. It could also become a forum for discussion of ongoing market research and reforms. This project provides a modest amount for material support for workshops of this type, which would supplement CICOM, LAMP and the USDA's participation in a workshop activity.

PLANNED INPUTS: FY-71 THROUGH FY-74

This project will contract with the LAMP Center of Michigan State University and the USDA to provide technical assistance as follows:

	FY-71	FY-72	FY-73	FY-74
LAMP				
Professional (L.A.)	6 man/mo	18 man/mo	18 man/mo	12 man/mo
Professional (campus-based)	4 man/mo	12 man/mo	12 man/mo	18 man/mo
Graduate Research Assistants (L.A.)	6 man/mo	48 man/mo	48 man/mo	42 man/mo
Total man-months	16 man/mo	78 man/mo	78 man/mo	72 man/mo
Personnel Budget	$40,500	$148,000	$148,000	$143,000
Travel Budget	5,000	18,000	18,000	18,000
Other Costs	5,000	10,000	10,000	10,000
Total LAMP Budget	$50,500	176,000	176,000	171,000
USDA				
Short-Term Consultants	-0-	-0-	100 days	200 days
Total Budget	-0-	-0-	$14,500	$29,000
MARKETING WORKSHOPS				
Budget	$10,000		$10,000	
TOTAL	$60,500	$176,000	$200,500	$200,000

Fiscal Years	Total $	Cont.[1/]	Personnel Services A.I.D.	Personnel Services PASA	Personnel Services Cont.	Participants U.S. Agencies	Participants Cont.	Commodities Direct & U.S. Agcy.	Commodities Cont.	Other Costs Direct & U.S. Agcy.	Other Costs Cont.
FY-71	$60,500	50,500	0	0	50,500	0	0	0	0	10,000	0
FY-72	176,000	176,000	0	0	176,000	0	0	0	0	0	0
FY-73	200,500	176,000	0	14,500	176,000	0	0	0	0	10,000	0
FY-74	200,000	171,000	0	29,000	171,000	0	0	0	0	0	0
Total Life	$637,000	573,500	0	43,500	573,500	0	0	0	0	20,000	0

STRATEGY

The strategy involved in this project is to provide technical assistance in the area of agricultural marketing to selected L.A. countries and at the same time build the institutional capacity within Latin America to supply assistance of this type in the future. The approach may be thought of as "institutional apprenticeship". LAMP has over a period of five years accumulated considerable experience in research directed toward diagnosing weaknesses in agricultural marketing systems and in providing advisory services to agencies charged with the responsibility of marketing reform. CICOM, and perhaps other Latin American institutions such as CEPA and IICA, will be increasingly involved in LAMP technical assistance activities during the life of the project. As a result they should benefit from LAMP's accumulated experiences and to obtain first-hand experience in marketing research and marketing improvement implementation prior to assuming major responsibility for these activities in Latin America. As well as developing competence, this approach should help establish the creditability of a Latin American institution as a source of high-level technical assistance. In addition LAMP will assist CICOM in further developing their present training program which should also enhance their particular status as a center of marketing expertise. LAMP and CICOM should be prepared to assist other L.A. institutions in developing or upgrading training programs in agricultural marketing.

An additional part of the strategy is to provide for workshops in Latin America which can extend the accumulated experience of LAMP, CICOM, USDA, Kansas State University, and other sources of technical expertise to individuals from a larger number of L.A. nations who have the

responsibilities of initiating, planning and implementation of marketing research and development. Such workshops would provide a forum for discussion of marketing problems, approaches to identifying marketing problems, and analysis of methods used to improve agricultural marketing. In addition it will increase the knowledge of CIOCM among Latin American nations as a center of agricultural marketing expertise.

A strategy would be of little value, however, if it did not result in improvements in the efficiency and performance of agricultural marketing systems in Latin America. This project may be thought of as an initial step in accomplishing marketing reforms within individual nations. Improvements in agricultural marketing systems usually involves the following sequence of events: (1) recognition of the need for improvements in the marketing system, (2) determination of the weaknesses in the present system, (3) planning marketing improvement programs, (4) acquiring needed financial resources, and (5) implementing the needed changes. Although the importance of marketing to economic development is currently acknowledged within most countries, the relationship is likely to be only vaguely understood. There is probably even less understanding of how to pursue a program of marketing improvements. This project through technical assistance to individual nations, support of marketing training activities, and marketing workshops attempts to provide an understanding of the role of marketing improvements in agricultural development and a basic knowledge of how to approach the problem of improving marketing systems. Further, LAEP and eventually CIOCM--and/or other institutions--will provide guidance to Latin American countries in scientifically diagnosing the weaknesses in their marketing systems and advising them on developing programs for implementing the required changes

and improvements. A modest amount of technical expertise will also be available from USDA specialists to assist with feasibility analysis, planning, and initiation of improvements in specific areas (such as those previously mentioned). Additional technical assistance and project financing will undoubtedly be required to complete the sequence of marketing improvement activities. As a logical development from this project, USAID/S might consider providing loan funds to help finance the implementation phase of marketing improvement programs. Or, additional technical assistance may be required in the course of planning or implementing a nation's program which might be provided through Mission funding. The present project is designed to motivate changes in the agricultural marketing systems, assist in training Latin Americans in the area of marketing, help provide a sound factual basis for planning marketing improvement programs, and assist the responsible institutions in developing such programs. It will be the responsibility of the individual nations and USAID/S to provide for the continuation of marketing improvement activities through their fruition.

Approach

The LASF Center personnel will provide four types of inputs: (1) assistance in the development of diagnostic market research programs and marketing improvement directly to countries requesting aid of this type, (2) assistance in developing the research and advisory capacity of CICOM and possibly other L.A. institutions, (3) assistance to CICOM in further developing their training program, and (4) assistance to CICOM in developing a "marketing information resource center". To supply these inputs LASF will provide three types of personnel: high-level

professionals based on the MSU campus, and advanced graduate students in residence in Latin America (in accordance with the staffing pattern provided on p. 9).

Although there should be considerable flexibility in the assignment of responsibilities, the following breakdown should provide a guideline. Graduate students could be assigned for periods of 18 months and during that period devote approximately half-time assisting CICOM through teaching, curriculum development, and developing the "marketing information resource center". This will provide the graduate student staff and teaching experience and strengthen the CICOM staff so that existing personnel can become involved in additional research and advisory responsibilities. It is understood that this is a temporary expansion of the CICOM staff and that CICOM will need to have expanded its staff to handle this additional workload by the end of the project. The remaining half of the graduate student's time would involve research related to CICOM and LAMP activities which would also provide the student with thesis material. Alternatively, graduate students could be located in countries with on-going marketing studies assisted by LAMP and CICOM. These students would be engaged in projects which would contribute to the overall research activity.

The professional(s) located in CICOM headquarters will be primarily concerned with providing technical assistance to Latin American nations and assisting CICOM to develop its research and advisory capacity. A small proportion of this professional time will be devoted to curriculum development and advising on the development of the "marketing information resource center".

The campus-based professionals will be concerned with short-term technical assistance to Latin American nations requesting assistance in developing marketing research and development programs. This source of technical manpower will supplement the CICOM-based professional in supplying technical assistance. They will increasingly coordinate their efforts with CICOM staff in order to provide CICOM with the benefit of additional professional background and assist this institution in developing its own operational competencies for providing similar assistance in the future. The campus-based personnel will also be available to assist other L.A. institutions that might become involved in providing technical assistance in the area of agricultural marketing. At the termination of the project several countries will have benefitted from technical assistance in internal marketing research and development and institutional capacity will have been developed within L.A. to respond to requests for technical assistance in this region.

The USDA will be utilized to provide short-term technical assistance in specialized areas. Its activities will result from specific needs which emerge in the course of developing marketing improvement programs within various Latin American nations.

Workshops on agricultural marketing will contribute to the overall program of encouraging and assisting L.A. nations in their efforts to improve agricultural marketing. The funds budgeted for this workshop activity will assist CICOM, LAMP and USDA in their participation by providing modest material support for these programs. These funds are budgeted on an every-other-year basis under the assumption that workshops would be held at two year intervals. These workshops should be designed

so as to provide information of practical use to decision-makers and technicians in Latin America who will have the responsibility for their nation's marketing research and development.

David Peacock:mn: LA/DR/A-I: 11/6/70

ATTACHMENT "A"

A DISCUSSION OF AGRICULTURAL MARKETING IN LATIN AMERICA

The importance of improvements in the efficiency and performance of agricultural marketing systems to the overall economic development of Latin American nations is being increasingly recognized. Such improvements not only serve as a stimulus to agricultural (and perhaps non-agricultural) development, but have welfare implications for both the consumer and producer.

Consumer

Most of the urban centers in Latin American countries have a large proportion of low income families who spend a high percentage of their earnings on food. This can be illustrated by data taken from LAMP's research in Cali, Colombia.

TABLE 1.---Percentage of population and total food expenditures by income levels in Cali, Colombia

Range of Per Capita Income (Pesos/Month)	Percent of the Population	Percent of Income Spent on Food
1. Less than 125	26	82
2. 125 - 240	29	63
3. 241 - 500	25	47
4. More than 500	20	28

This would suggest that a reduction in food prices through improved efficiency in the agricultural marketing system would have a sizable real income effect on a large percentage of consumers in Cali, Colombia. This assumption is undoubtedly valid for most other urban areas within Latin America. LAMP provides this estimate of the effect of a 10% reduction in food prices (Table 2.).

TABLE 2.---Estimated effect of a 10% in food prices on the demand for additional food and non-food products by levels of income. 2/

Range of Per Capita Income (Pesos/Month)	Expenditures per Capita per Month (Pesos)			
	Present		After 10% Reduction in Food Prices	
	Food	Non-Food	Food	Non-Food
1. Less than 150	75.19	15.43	70.44	20.18
2. 150 - 240	112.27	64.65	105.09	71.83
3. 241 - 500	161.08	178.86	149.32	190.62
4. More than 500	294.02	769.59	267.85	795.76

5. Average	152.30	227.12	140.68	238.74

a/ (One U.S. $ = 17.4 Colombian Pesos - 1969)

As illustrated in Table 2, consumers would be expected to spend less total pesos for food and more for non-food items. This would provide a stimulus to the non-food consumption goods industries as effective demand for these items increases as much as 30% for the lowest income groups. At the same time, consumers would be buying additional food with part of their increased real income. According to IAMP's research the consumers of Cali, Colombia would purchase 2% more food on the average, with the lowest income group increasing food consumption by 4% (because of a higher elasticity for food products). This increase in effective demand would, in turn, stimulate additional agricultural production.

Farmer

Efforts to develop agriculture have traditionally been placed upon ways of increasing production, usually involving new technologies requiring purchased inputs. Adopting new agricultural methods involves a considerable amount of risk, especially among low-income farmers. The farmer cannot be expected to purchase new inputs or try new methods if he is uncertain that a remunerative price can be obtained for his products. The producer price of agricultural products is the result of the interaction of supply and effective demand (as transmitted through the marketing system), not food needs. As a consequence, increased supplies without increased effective demand will result in depressed prices. Increased effective demand, through improvements in the marketing system as described above, could result in greater volume flow of agricultural goods at present prices and higher farm incomes if such prices are consistent with profitable production. Another possibility is that increased efficiency in marketing could be partially absorbed in higher produce prices which would stimulate increased production and encourage the use of modern higher-yielding production methods.

The marketing system's ability to allocate supply and demand of agricultural products in such a way as to avoid unduly wide fluctuation in producer prices is also important in stimulating increases in production. IAMP research in Northeast Brazil indicated that the producer price for beans in September (the month of farm sales volume) was approximately 50% of the average price in May. This seasonal variation in prices, typical of many commodities in Latin American countries, is given in Table 3.

TABLE 3.---Season variations in bean prices at the producer level in Northeast Brazil - 1966.

Month	Average Farm Price (N Cr $)	Price Index (as ratio of average annual price)
January	30.33	89.2
February	32.59	95.5
March	38.90	114.4
April	40.44	118.9
May	42.6[illegible]	125.3
June	40.50 a/	119.1
July	20.0[illegible] a/	58.8
August	22.46	65.8
September	22.15	65.1
October	31.61	93.0
November	31.67	93.1
December	31.56	92.8

a/ Data may be biased due to small number of observations for these months.

The actual range of bean prices received by farmers in the LAMP survey was even wider, from NCr$ 0.13 to NCr$ 0.67. Such wide variations in producer prices can serve as a disincentive to farmers who might reasonably be expected to increase production under more certain conditions.

Farm Inputs

Another important task of the marketing system is to provide the farmer with modern inputs at reasonable prices. According to LAMP research, there is a strong correlation between the local availability of modern inputs and their use in Northeast Brazil. Only 8.0 % of the farmers in the Sao Francisco rice area believed they could buy fertilizer within their municipio (county). This is undoubtedly one of the reasons why few of these farmers -- 11.8% -- were using this input. Another reason is a relatively unfavorable ratio between fertilizer prices and crop values. LAMP estimated that the price of fertilizer at convenient locations would have represented the equivalent of 3.00 kilos of rice in Northeast Brazil as compared to .89 kilos in Pakistan, 1.00 kilos in Japan and 1.02 kilos in the U.S. Rice farmers seemed to be concerned

with these price relationships since 81.1% indicated they would use fertilizer if it were cheaper. Although credit, product prices, and information are also involved in the farmers' adoption of new inputs, increased efficiency in the distribution of these inputs would contribute to their use.

Effects of Inefficiencies Within the Agricultural Marketing System

Inefficiencies in agricultural marketing systems usually result in inadequate marketing services, unnecessarily high margins, undue price fluctuations (as already illustrated), and considerable spoilage. The following examples from LAMP studies illustrate these inefficiencies. One of the services to be provided by a food marketing system is the provision of products of standardized quality. Although consumer acceptability of beans in the Recife, Brazil market was dependent upon the type of bean, color, cleanliness, and hardness or softness of the beans; the buyer normally inspects for these qualities at the time of purchase and bargains accordingly. Samples of these beans purchased by LAMP researchers in the Recife market were found to contain 4 - 5% or more of their weight in rocks and other foreign material. In this case the inadequacy of marketing services was the failure to provide grading and standardization in accordance with consumer preferences.

Small scale, low turnover marketing operations in conjunction with poor vertical coordination, excessive number of transactions, and lack of effective competition can result in unnecessarily high marketing margins for agricultural products, especially in view of the level of marketing services performed. This may be illustrated by a comparison of retail prices in the Recife area between a high volume, low margin retail store--Bom Preco--and other marketing outlets. Through high volume, low margin sales, Bom Preco was able to reduce prices to Recife consumers for several agricultural commodities.

Table 4---Average retail prices for Recife area as compared to Bom Preco prices

Product	Retail Prices		
	Recife Average (NCr$)	Bom Preco (NCr$)	Difference
Beans	.470	.430	- 8.5%
Rice	.780	.680	-12.8%
Manios	.480	.450	- 6.3%
Bananas	.025	.025	0.0
Tomato	.590	.530	-10.2%
Pumpkin	.370	.280	-24.3%
Eggs	.109	.090	-17.4%
Chicken	2.610 (live)	3.050 (dressed)	+16.9%
Cheese	3.520	3.450	- 2.0%

As indicated by Table 4, the use of modern merchandising techniques resulted in lower consumer prices. In addition the quality of the products was also improved. Of particular interest is the case of rice where Bom Preco achieved a certain amount of market channel integration by acquiring a rice milling in the production area. The competitive force resulting from Bom Preco's merchandising practices affected the margins of other self-service and to a lesser extent traditional market outlets. The lower margin competition from Bom Preco caused an average decrease of gross margins of 32% among the other self-service retailers, with total sales volume increasing in most cases. Similar opportunities for improvement in efficiency and services occur in assembly, transportation, processing and wholesaling of agricultural products in less developed countries.

Spoilage, due to poor handling and storage practices, is persistent problem in less developed countries.

Table 5 presents spoilage losses for various commodities at different points in the marketing channel.

Table 5---Spoilage losses at various points in the marketing channel for selected commodities in Recife, Brazil and Cali, Colombia.

Product	Producer %	Assembler %	Wholesale %	Retail %
Beans--Recife a/	8.2	3.8	2.8	1.8
b/	3.1	2.4	2.8	1.8
Potatoes--Cali	N.A.	1.0	4.0	7.01--15.0 c/
Oranges	N.A.	N.A.	12.0	16.0
Tomatoes	N.A.	N.A.	8.0	8.0 + 13.0
Grains (dry beans, rice and corn)	N.A.	N.A.	2.0--4.0	2.0--4.0

a/ Beans from the Alagoas-Pernambuco bean producing area.
b/ Beans from the Irece (Bahia) producing area.
c/ Range in losses represents differences in losses reported by different classes of retailers. For example, self-service stores reported 7.0% losses on potatoes as compared with 15.0% reported by tienda operators.

This table suggests significant opportunities for decreasing spoilage. At the retail level in Recife, product deterioration and spoilage was found to be considerably greater among traditional small-scale retailers than for larger self-service retailers (who are undoubtedly better equipped to store and handle products). Table 6 illustrates the difference in spoilage between these forms of retail organizations.

Table 6---Spoilage rates for selected commodities by retail type in Recife, Brazil.

Product	Atomistic Small-scale Retailers		Self-Service Retailers	
	Salable at Reduced price	Unsalable	Salable at Reduced Price	Unsalable
Rice	7.4%	2.5%	0.5%	0.5%
Beans	9.2%	2.8%	0.3%	0.3%
Manioc Flour	8.4%	3.2%	0.6%	0.5%
Poultry	18.9%	9.2%	0.0%	0.4%
Eggs	11.5%	6.9%	0.6%	1.1%

These illustrations suggest that improved handling and storage could reduce spoilage and reduce this loss to the economic system.

Typical Causes of Inefficiencies In Marketing Systems

There are many possible causes of marketing inefficiencies and the situation is different for each country. Nonetheless there are certain general characteristics of marketing systems which seem to have been identified in recent research. One such characteristic is the existence of numerous small, low volume, marketing enterprises at each level in the marketing channel. These firms tend to have high gross margins despite the fact that they represent an atomistically competitive market structure. Their high margins are due to the lack of economies of scale and high rates of spoilage due to inadequate handling and storage methods.

Secondly, there are typically opportunities to improve coordination within the marketing channel and eliminate unnecessary handling and transactions, thereby reducing the farm-retail price spread. Lack of market information and recognized grades and standards reduce the degree of coordination possible within the marketing system. Marketing firms tend to be related in a fragmentary manner and unable to influence each other's behavior in order to achieve adequate and orderly flows of products and market services at a minimum marketing cost for the channel as a whole. Ad hoc solutions for improving market coordination may involve such approaches as establishing grades and standards, market information systems, contracting, improving public wholesale facilities, encouraging voluntary retail chains and full-line wholesalers, establishing freight forwarders, and perhaps vertical integration of certain marketing functions.

Finally, there is often inadequate storage and institutional capacity to rationalize supply and demand in order to stabilize prices. Price stabilization, through improved storage and institutional programs,

can provide a more certain decision-making environment reducing marketing risks for both producers and marketing firms.