


JAPAN INTERNATIONAL COOPERATION AGENCY

DEPARTMENT OF SUSTAINABLE DEVELOPMENT  
PREFECTURE OF SANTA CRUZ DEPARTMENT  
GOVERNMENT OF THE REPUBLIC OF BOLIVIA

FEASIBILITY STUDY  
FOR THE IMPROVEMENT OF AGRICULTURAL MARKETING SYSTEM  
IN  
SANTA CRUZ

MAIN REPORT

JUNE 1999

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SYSTEM SCIENCE CONSULTANTS INC.  
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### MAIN REPORT

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## PREFACE

In response to the request from the Government of the Republic of Bolivia, the Government of Japan decided to conduct a Feasibility Study for the Improvement of Agricultural Marketing System in Santa Cruz and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Bolivia a study team headed by Mr. Tateo Kusano, System Science Consultants Inc. three times between July 1998 and March 1999.

The team held discussions with the officials concerned of the Government of the Republic of Bolivia, and conducted field surveys at the study area. After the team returned to Japan, further studies were made and the present report was prepared.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Bolivia for their close cooperation extended to the team.

June 1999



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Kimio Fujita  
President

Japan International Cooperation Agency



June 1999

Mr. Kimio Fujita  
President  
Japan International Cooperation Agency  
Tokyo, Japan

Letter of Transmittal

We are pleased to submit to you the report on the Feasibility Study for the Improvement of Agricultural Marketing System in Santa Cruz, Bolivia.

The report contains the results of the work and investigation carried out by the Study Team from June 1998 to May 1999 with the advice and assistance from the relevant Japanese and Bolivian officials and counterpart.

The current conditions, problems and development needs of fruit and vegetable marketing in the production and consumption sites in Santa Cruz Prefecture were investigated. Based on the findings of these investigations, the Study Team proposed a widespread fruit and vegetable marketing network system improvement project that closely links the production areas to the consumption area.

The project includes Collection and Distribution Centers in production areas, New Wholesale Market and improvement of existing Abasto Market in consumption area. The project components comprise not only facilities and equipment but also law/ regulation, organization, operation and management system, training and technology assistance, project implementation system and plan, monetary procurement plan, and environmental preservation considerations. Feasibility evaluation was conducted to confirm the viability of the project.

The project is expected to contribute to the improvement of the fruit and vegetable marketing in Santa Cruz Prefecture with beneficiaries being the producers, wholesalers, small-scale traders (mainly women), transporters, and ordinary consumers within and outside Santa Cruz Prefecture.

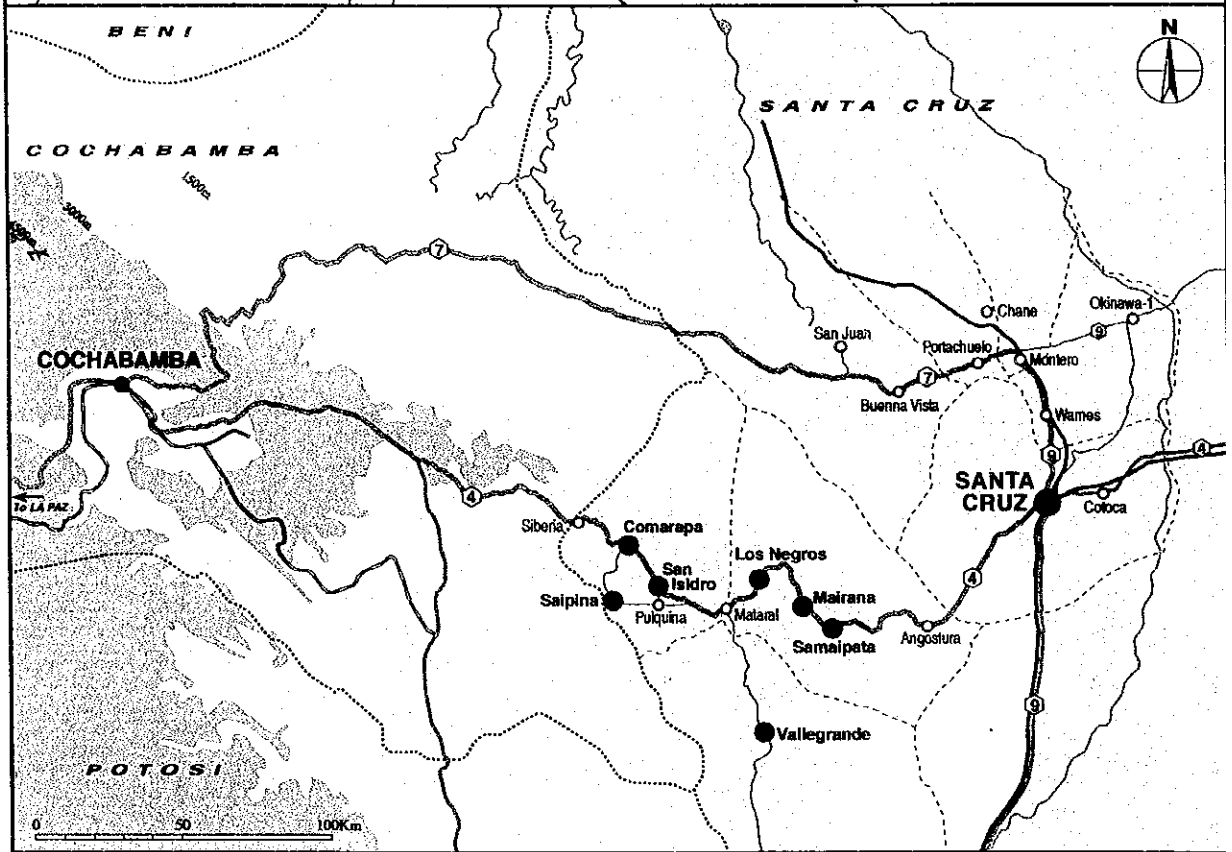
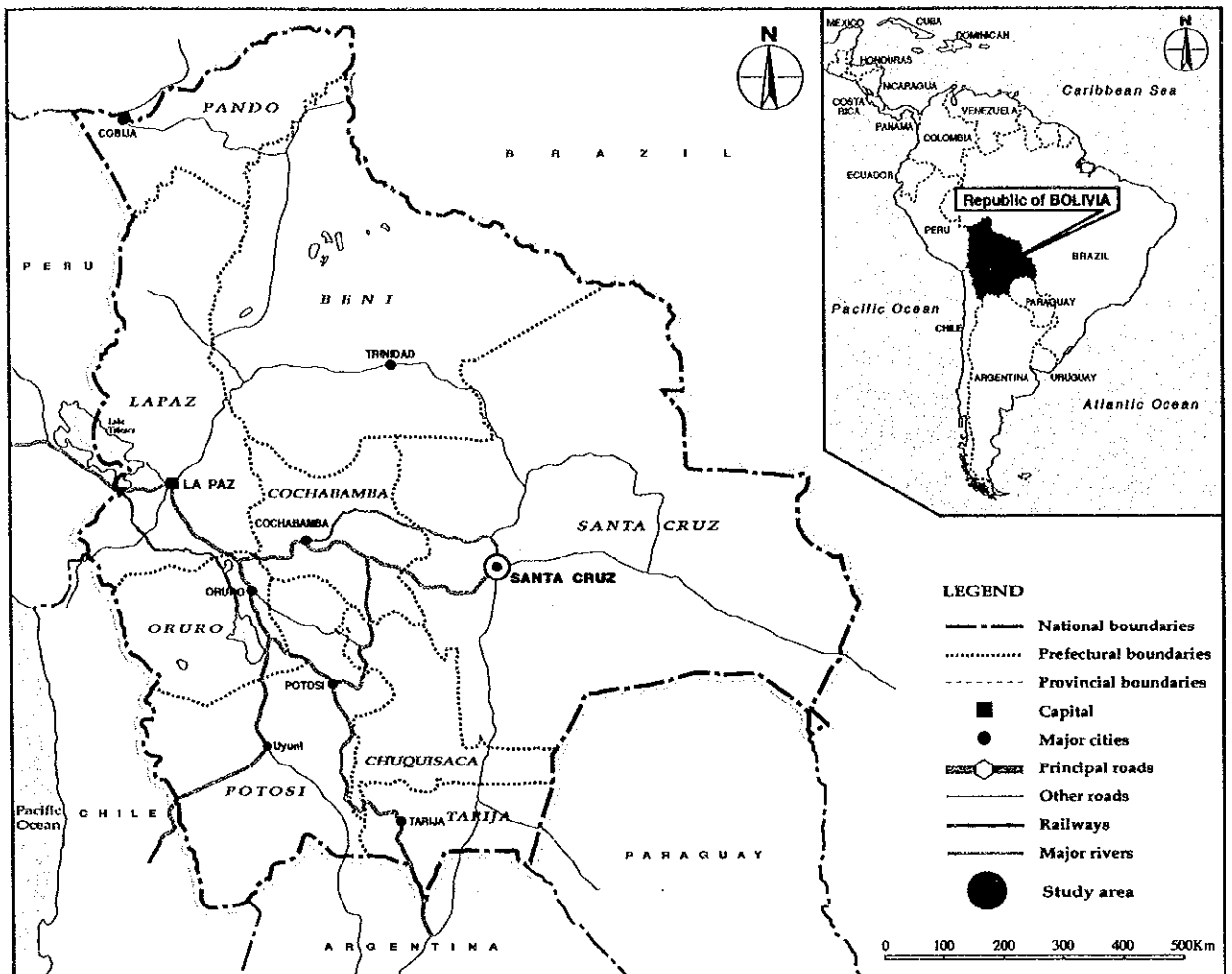
We wish to express our deep appreciation and gratitude to the personnel concerned of your Agency, La Paz and Santa Cruz offices, Embassy of Japan in La Paz, Ministry of Foreign Affairs, and the Ministry of Agriculture, Forestry and Fisheries. We also wish to express our sincere gratitude to the concerned officials of the Ministry Agriculture, Cattle and Rural Development, Vice-Ministry of Public Investment and External Finance, Department of Sustainable Development of the Prefecture of Santa Cruz Department, and municipal governments of Santa Cruz City and Valley areas in Santa Cruz Prefecture, for their close cooperation and assistance extended to the team during the study.

Very truly yours,



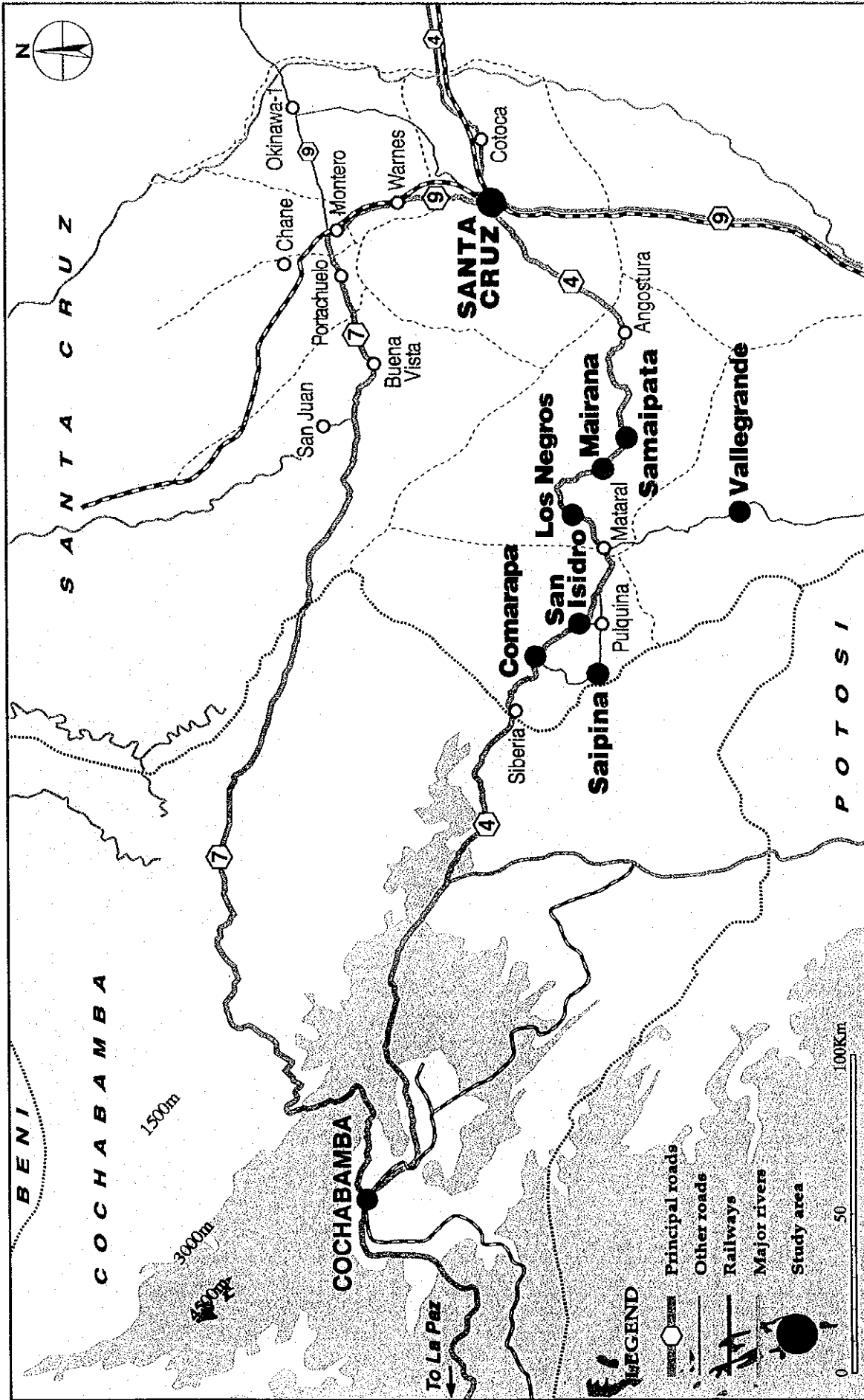
Tatco Kusano

Team Leader for the Feasibility Study for the  
Improvement of Agricultural Marketing  
System in Santa Cruz



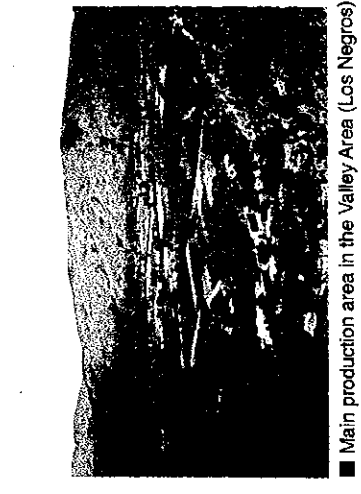
**MAP OF THE STUDY AREA**





**DETAIL MAP OF THE STUDY AREA**

«MAIN PRODUCTION AREA OF FRUITS AND VEGETABLES IN SANTA CRUZ PREFECTURE [VALLEY AREAS]»



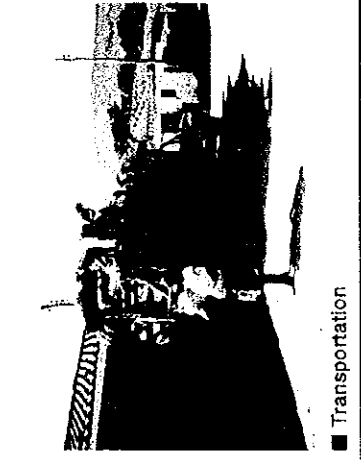
■ Main production area in the Valley Area (Los Negros)



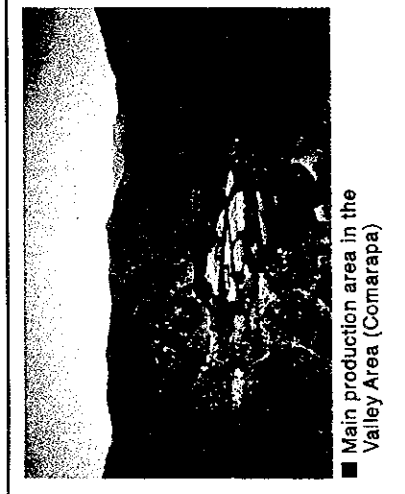
■ Main road in the production area



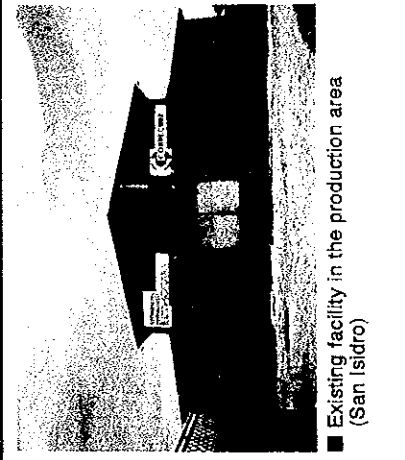
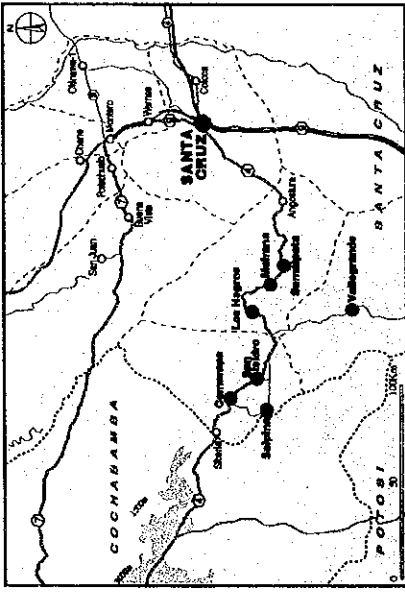
■ Transportation



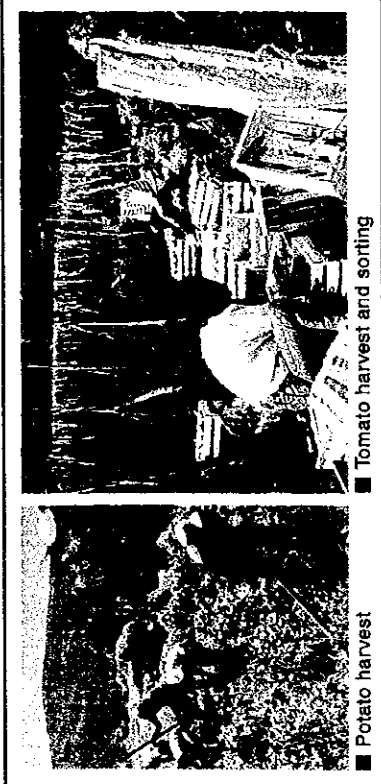
■ Transportation



■ Main production area in the Valley Area (Comarapa)



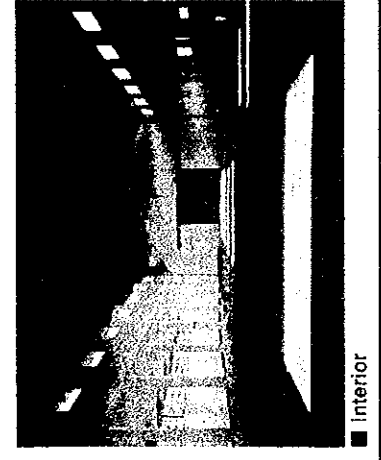
■ Existing facility in the production area (San Isidro)



■ Tomato harvest and sorting



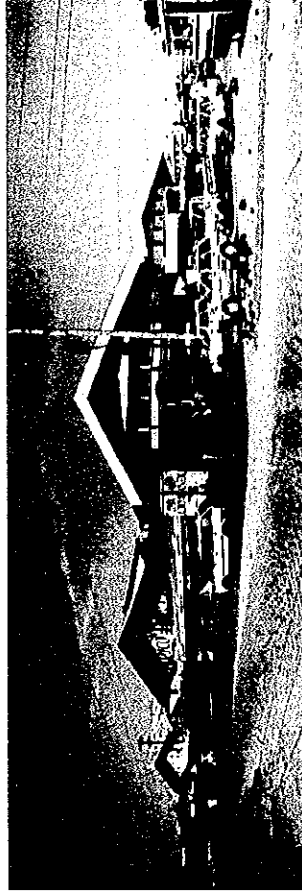
■ Unpaved access road in farms



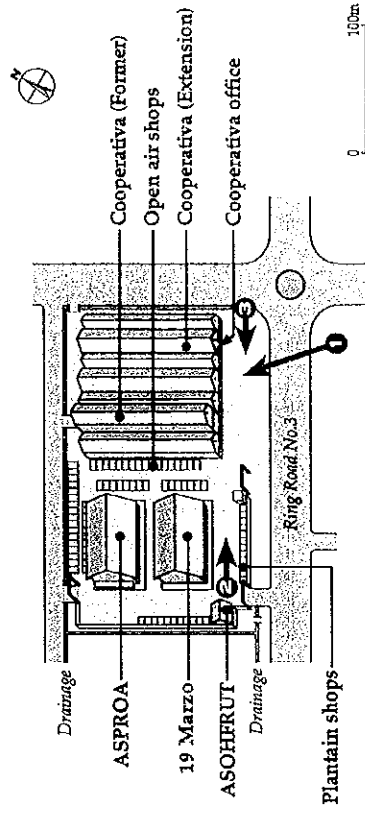
■ Interior

«CONSUMPTION AREA · SANTA CRUZ CITY [ABASTO MARKET - 1]»

ABASTO MARKET IN 1998



① ■ The building on the right was extended by the Cooperativa.



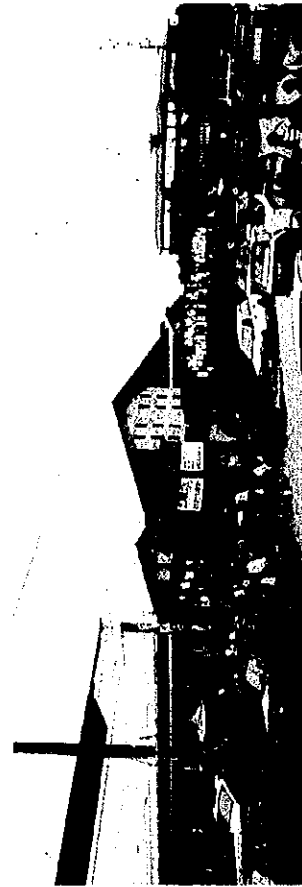
Abasto Market Location Plan in 1998



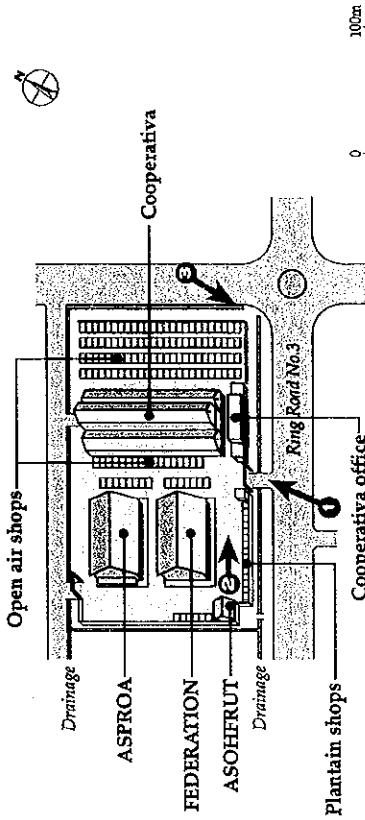
② ■ The road after its rehabilitation.

③ ■ The drainage after its rehabilitation.

ABASTO MARKET IN THE STUDY STAGE OF MASTER PLAN IN 1994



① ■ Main entrance situation. The building at the right was built by the Cooperativa.



Abasto Market Location Plan in 1994



② ■ The muddy condition of the unpaved road after a rain.

③ ■ Drainage around the market.

«CONSUMPTION AREA · SANTA CRUZ CITY [ABASTO MARKET - 2]»



1 ■ Building managed by ASPROA



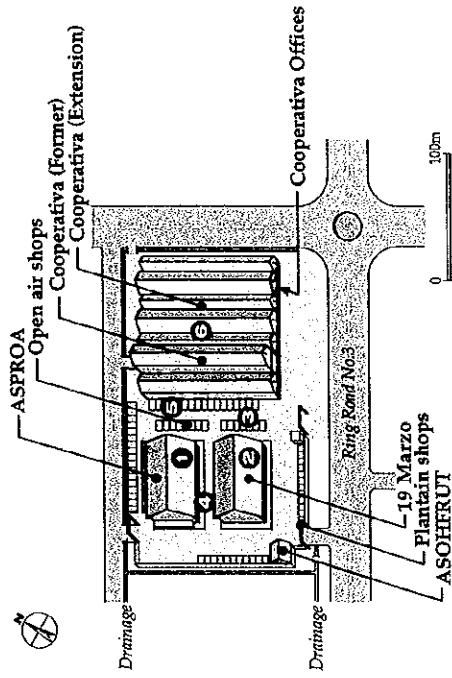
2 ■ Onions sold right from the truck



3 ■ The building built by the Cooperativa Multiactiva 2 de Junio



4 ■ Building managed by FEDERACIÓN UNICA



Abasto Market Location Plan in 1998



6 ■ Vegetable shops



7 ■ Open air shops



5 ■ Congestion situation



8 ■ There are also general stores

# 《CONSENSUS BUILDING》

## (1) Workshop



In Comarapa



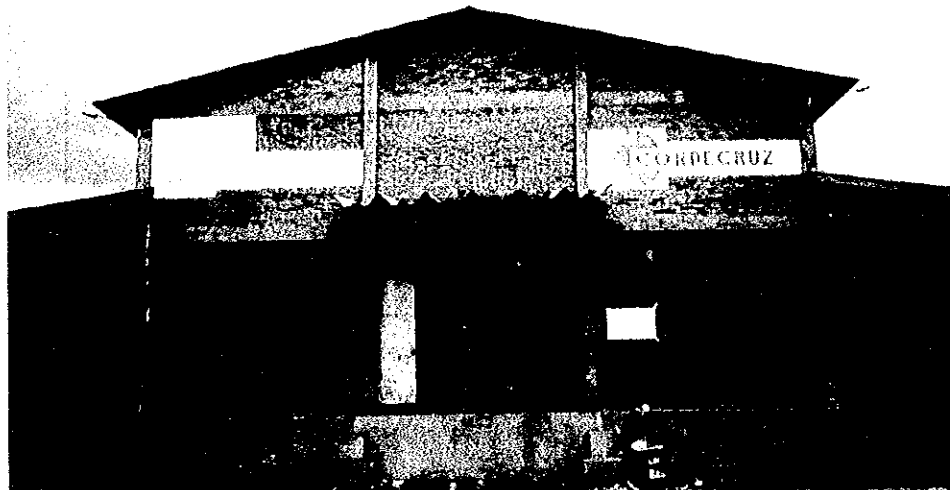
Wholesalers in Santa Cruz



Retailers in Santa Cruz

# 《CONSENSUS BUILDING》

## (2) Cooperative Collection and Shipment Demonstration



PETHOSAM



Selection



Abasto Market

# 《CONSENSUS BUILDING》

## (3) Study Tour



CAISY



Conference



Observation





## SUMMARY

### 1 Introduction

#### 1.1 Background of the Study

The government of Bolivia has allocated reforms of the fruit and vegetable marketing system as a priority issue among the radical structural reforms of the agricultural sector being targeted, with the aim of assisting small-scale producers and rural women retailers.

"Master Plan for the Improvement of Agricultural Marketing System in Santa Cruz" (M/P, completed in 1995) which focussed on implementing reforms and improvements of the fruit and vegetable marketing system in the Santa Cruz Department, the largest agricultural area in Bolivia, was formulated with the cooperation of the Japanese government.

The Bolivian government requested the technical cooperation of the Japanese government in April 1996 based on a proposal stemming from this project and a F/S on the establishment of facilities, institutions and organizations for the improvement of agricultural marketing system. Based on this request, the Japanese government dispatched a preliminary study team in November 1997 and the S/W was signed between the two countries on December 4, 1997. A full-scale study by the Study Team began in June 1998.

#### 1.2 Objective

Targeting the Department of Santa Cruz, a feasible and appropriate improvement plan of the fruit and vegetable marketing system will be formulated. Also, technology transfer to the Bolivian counterparts on the procedure/ approach of project planning, survey method, etc. will be implemented.

#### 1.3 Outline of the Study

The Study has clarified possibility of improving the fruit and vegetable marketing system, through investigating constraints/ issues of the traditional marketing system of fruits and vegetables and its changes from the M/P stage (1994) to the present (1998). In addition, an outline of the Project to solve such problems and issues was shaped. The Study Team has attained consensus with relevant personnel of the Prefecture and municipalities, supporting organizations as well as users' representatives through a series of discussions and Study Tour/ Demonstration for technology transfer. The results are reflected in revising the outline of the Project. Based on this outline of the Project, the feasibility of the proposed Project was examined. Recommendations on measures to be undertaken by the Bolivian government was issued subsequently.

#### 1.4 Study Approach

The Study was implemented in two phases. In phase I (June to October 1998), the existing conditions pertaining to fruit and vegetable production, marketing, consumption, and export were analyzed and the basic concepts as well as the outline of the improvement plan were delineated. In phase II (October 1998 to May 1999), plans to improve fruit and vegetable collection and distribution, design of the wholesale market, proposal to strengthen the organizational structure was formulated together with their implementation

plans and evaluations. Draft Final Report (DF/R) that encompassed the results of phase I and phase II study was prepared, and was explained and discussed in Bolivia. The Study Team received comments from the Bolivian side, based on which the Team revised the DF/R to finalize the Final Report. JICA submitted this Final Report to the Bolivian side in June 1999.

## **2 Correlation with Upper Schemes**

The national agricultural policy of the Bolivian government is in its final stages of preparation. Following the enactment of the Decentralization Law in 1995, the Santa Cruz Department and each municipality (Santa Cruz City and other municipalities) began drawing up regional and city planning measures which are currently in the final stages of completion. The Project for the Improvement of the Agricultural Marketing System proposed in this Study will be included in these priority plans.

## **3 Conditions in Marketing of Fruits and Vegetables**

### **3.1 Marketing Conditions in the Production Site**

The production areas of fruits and vegetables in Santa Cruz Department are roughly divided between the Valley areas and Lowlands. The Valley areas, comprised of the provinces of Florida, Caballero and Vallegrande, produce a little under 120,000t of fruits and vegetables annually as of 1998. The cultivated areas amount to 10,000ha, out of which more than 6,500ha are irrigated. The number of farm households that own irrigated farms are over 4,500 (breakdown by provinces are shown in Fig. S-1). A cooperative system of collection/distribution by farmers has not been created in the production areas. There were attempts to establish cooperatives in the past, but due to the lack of organizational expertise on a cooperative distribution system and the low degree of trust by farmers toward organizations in general, the outcome was unsuccessful. In addition, due to the lack of a planned system of production, a stable product supply and methods that guarantee quality products in keeping with the trends and demands do not exist. In order to resolve these issues, improved access to substantive training and market information (transport and telecommunication information) is essential. Bolivia's alliance with MERCOSUR is anticipated in the near future and technology transfer to farmers in the areas of production, marketing, and cooperative distribution as measures to strengthen international market competitiveness is urgently needed.

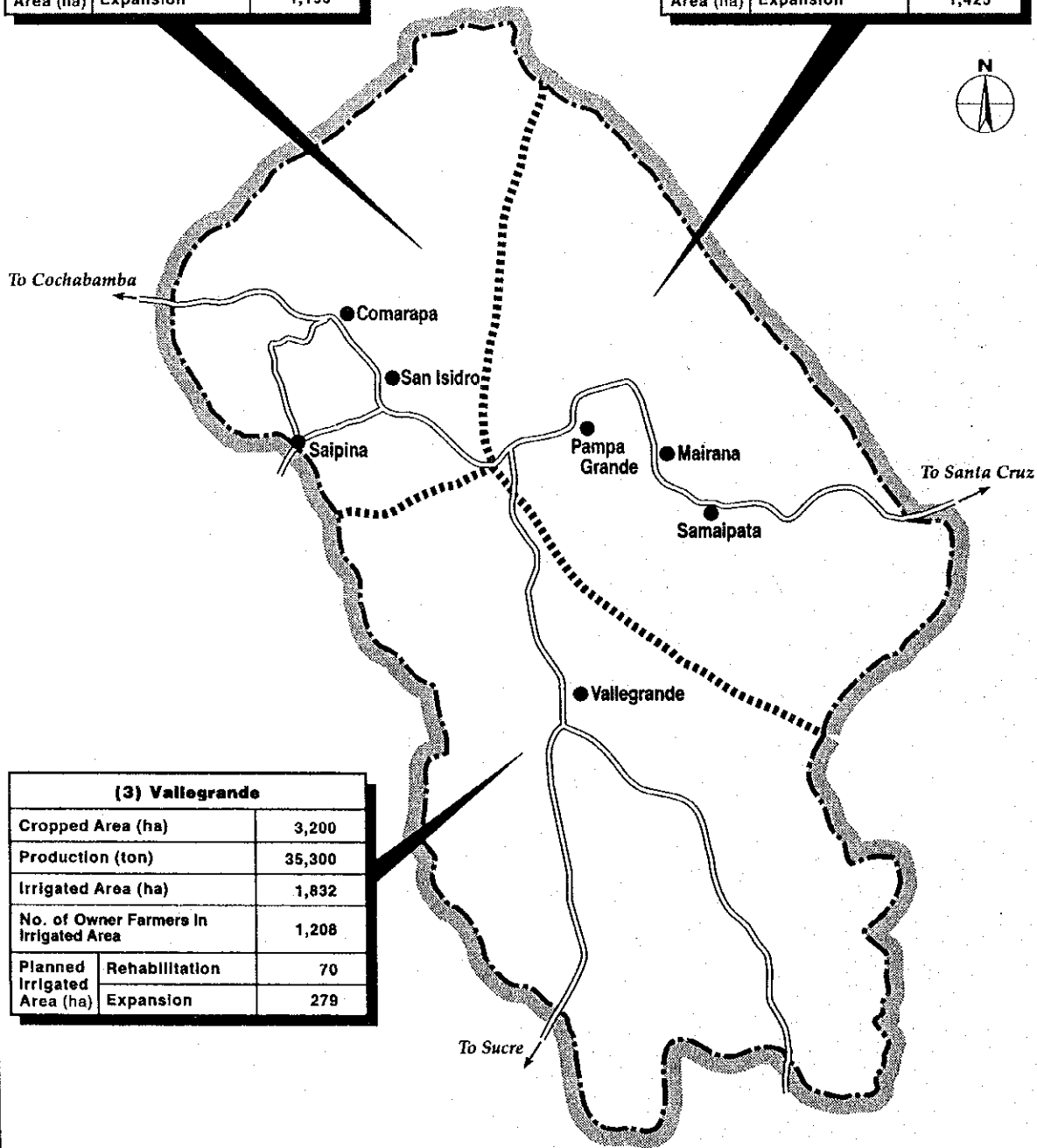
### **3.2 Marketing Conditions in the Consumption Site**

In Santa Cruz City whose population is projected to reach one million in the near future, the consumption volume is mounting with the population growth. As demonstrated in the changes in the consumers' purchasing patterns and increasing inclination towards high-quality products as indicated by the increase in establishment of new supermarkets, the structural demand of products have diversified. In addition, the origins of products have grown to cover a wide area, including supply from neighboring countries (see Fig. S-2). The trend in internationalization and the growth of wholesale market functions has been conspicuous and rapid. However, the scale of the existing wholesale market facilities and their operations have encountered many problems due to their inability to meet these expanded and diversified wholesale market demands. It is a pressing matter to transfer the wholesale function from the existing Abasto Market, to establish law/regulation and

organizations for the wholesale market, to implement relevant technology transfer to local government personnel regarding managing the wholesale market, and to qualified wholesalers (wholesale market users) regarding management/use of facilities and law/regulation. In as much as this being an urgent task, the existing Abasto Market needs to be transformed into an effective retail market. Small-scale retailers and producers engaged in direct sales, mostly consisting of female users of the existing Abasto Market, are expected to benefit considerably from improved efficiency of the Market use to be realized through reducing congestion and simplifying marketing function.

<b>(2) Caballero</b>		
Cropped Area (ha)		3,520
Production (ton)		38,900
Irrigated Area (ha)		3,362
No. of Owner Farmers In Irrigated Area		2,414
Planned Irrigated Area (ha)	Rehabilitation	3,132
	Expansion	1,193

<b>(1) Florida</b>		
Cropped Area (ha)		3,420
Production (ton)		42,600
Irrigated Area (ha)		1,317
No. of Owner Farmers In Irrigated Area		907
Planned Irrigated Area (ha)	Rehabilitation	317
	Expansion	1,425



<b>(3) Vallegrande</b>		
Cropped Area (ha)		3,200
Production (ton)		35,300
Irrigated Area (ha)		1,832
No. of Owner Farmers In Irrigated Area		1,208
Planned Irrigated Area (ha)	Rehabilitation	70
	Expansion	279

Fig. S-1 Cropped Area, Production Volume, Irrigation Area, No. of Owner Farmers in Irrigated Area, and Planned Irrigated Area of Fruits and Vegetables in the Valley Area in Santa Cruz Department in 1998

Feasibility Study for the Improvement of  
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Republic of Bolivia  
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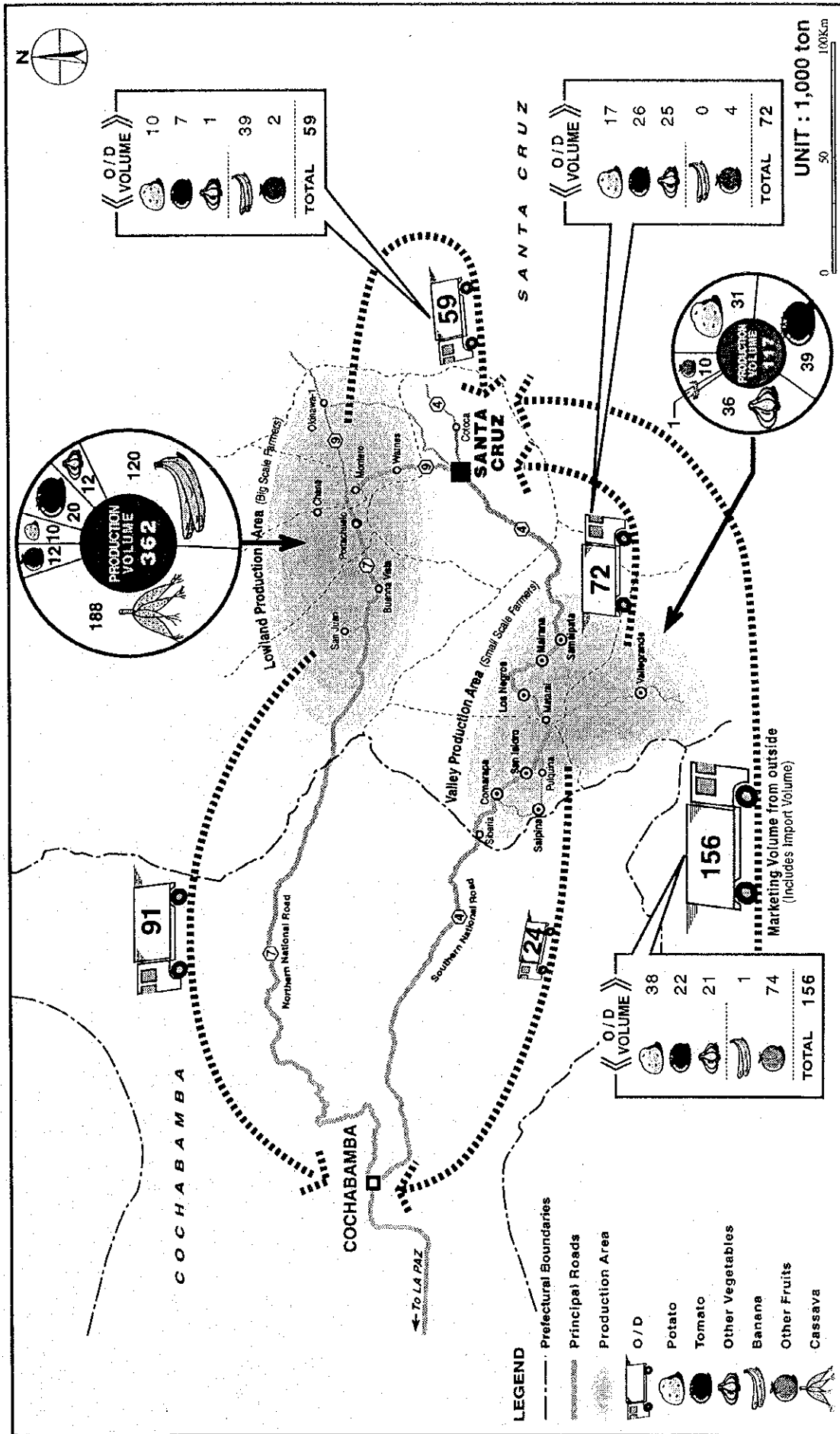


Fig. S-2 Origin / Destination (O/D) and Marketing Volume of Fruits and Vegetables for Santa Cruz Department in 1998

Feasibility Study for the Improvement of  
Agricultural Marketing System in Santa Cruz  
Republic of Bolivia  
Japan International Cooperation Agency

## 4 Issues in Fruit and Vegetable Marketing

### 4.1 Issues of the Production Areas

#### (1) Inadequate system of assistance for production in the Valleys areas

In the Valley areas, a traditional system of production and marketing of fruits and vegetables based on producers' individualism has been formulated through their self-help efforts. However, an inadequate government system of assistance on production technology and marketing has hindered development of cooperative collection and distribution system and planned production of fruits and vegetables, which has furthered the seriousness of lagged rationalization and modernization of fruit and vegetable marketing system.

#### (2) Lagging improvements to the marketing system in the lowlands

The lowlands are the center of large-scale operations for products grown for export and domestic market production is cultivated by self-sufficient farmers or as a supplementary economic activity. Subsequently, a marketing system of products has remained undeveloped. In response to international competition from MERCOSUR member countries in recent years, the large-scale farms in the lowlands have begun improving productivity, successively lowering production costs, rationalizing distribution and marketing operations, and implementing reforms throughout the entire process from production of agricultural products that include production to consumption. The Japanese farmers' cooperatives and others have taken up the issue of rationalizing wholesale functions to improve the agricultural marketing system in order to accommodate large volume production, including citrus fruits.

#### (3) Lack of quality control system

A large volume of agricultural pesticides are used by farmers for disease and pest control and this has become an issue in terms of health and environmental hygiene for the farmer and consumer alike. Each farmer grows his products in the garden and employs traditional methods of harvesting, sorting, and packing based on his respective experience and consequently, efforts to improve product quality face numerous obstacles. Since a quality control/inspection system by the government is nonexistent, production that meet international quality standards required by MERCOSUR and the neighboring countries can not be guaranteed. In addition, there is a large inflow volume of low cost products from neighboring countries due to high prices induced by low productivity and lack of a quality control inspection system for imported products (including a system of phytosanitary inspection), which has affected the production activities of small-scale producers.

#### (4) Lack of marketing information system

Since farmers do not have access to consistent information on product incoming volume to the wholesale market, wholesale prices, and the conditions of each production site, this has triggered skyrocketing prices stemming from underproduction and waste disposal costs of overproduction

and it has dissipated resources. It is also one of the major factors underlying low farmer income and increased costs paid by consumers.

#### 4.2 Issues of Consumption Sites

- (1) Absence of wholesale market to handle the marketed volume of fruits and vegetables

In reviewing the supply and demand and the product inflow volume, there is a tendency for the imported volume from neighboring countries and the inflow volume from outside the Department to be expanding. Furthermore, this tendency is expected to increase rapidly following Bolivia's participation into MERCOSUR (see Table S-1).

**Table S-1 Seasonal Variation of Commodity-wise Inflow Volume to Abasto (1998)**

Product	1st Phase Study August 1998					2nd Phase Study November 1998				
	Valley	Low-land	Outside SC	Import	Total	Valley	Low-land	Outside SC	Import	Total
Root-crops	209	155	78	240	682 (21.1%)	197	0	63	791	1,051 (39.1%)
Vegetables	545	231	712	0	1,488 (46.1%)	346	20	205	0	571 (21.2%)
Fruits	20	263	774	4	1,061 (32.8%)	76	293	694	6	1,069 (39.7%)
<b>Total</b>	<b>774 (24.0%)</b>	<b>649 (20.1%)</b>	<b>1,564 (48.4%)</b>	<b>244 (7.6%)</b>	<b>3,231 (100%)</b>	<b>619 (22.9%)</b>	<b>313 (11.6%)</b>	<b>962 (35.7%)</b>	<b>797 (29.6%)</b>	<b>2,691 (100%)</b>

Remark: The data from 2nd phase study is multiplied by 3.5 for two days' inflow volume. The data from 1st phase study is for successive 7 days' inflow volume.

Source: JICA Study Team, November and August 1998

Approximately 90 percent of the consumption volume of Santa Cruz City is handled by Abasto Market. An efficient wholesale-specific market capable of handling this high distribution ratio within the market does not exist.

- (2) Complex business transactions and inefficiency at Abasto Market

As shown in Fig. S-3, 258,000t of fruits and vegetables were brought in to Abasto Market by producers and intermediaries in 1998. The ratios of purchasers are; wholesalers 66%, retailers 18%, and the rest (16%) is directly sold by the producers who brought the products in. Half of wholesalers' purchased volume are traded to retailers within Abasto Market, resulting in the retailers within Abasto handling 53% of the total inflow volume. This illustrates the confused state of the existing Market with both wholesaling and retailing taking place.

In 1993/94 when the M/P Study was conducted, products in Abasto Market were mostly brought in by producers, while producers' direct selling was also much more prevalent. Currently, the majority of fruits and vegetables that come into Abasto Market are handled by traders as described above, signifying a vast decline in producers' direct sales in the past 5 years (see Figures 2-8 and 2-9 in the Main Report).

This substantial decline in producers' direct selling is caused by; decreasing sales competitiveness of producers in Abasto Market since the establishment of Decentralization Law in 1995; impeded convenience of access to Abasto

resulting from rapid urbanization; congestion of the Market aggravated by increased number of informal sector dealers (mostly small-scale retailers). In addition, after Decentralization Law came into effect, the seriousness of confused and chaotic trading system ranging from retailing to wholesaling in Abasto Market has further hampered realization of effective wholesaling.



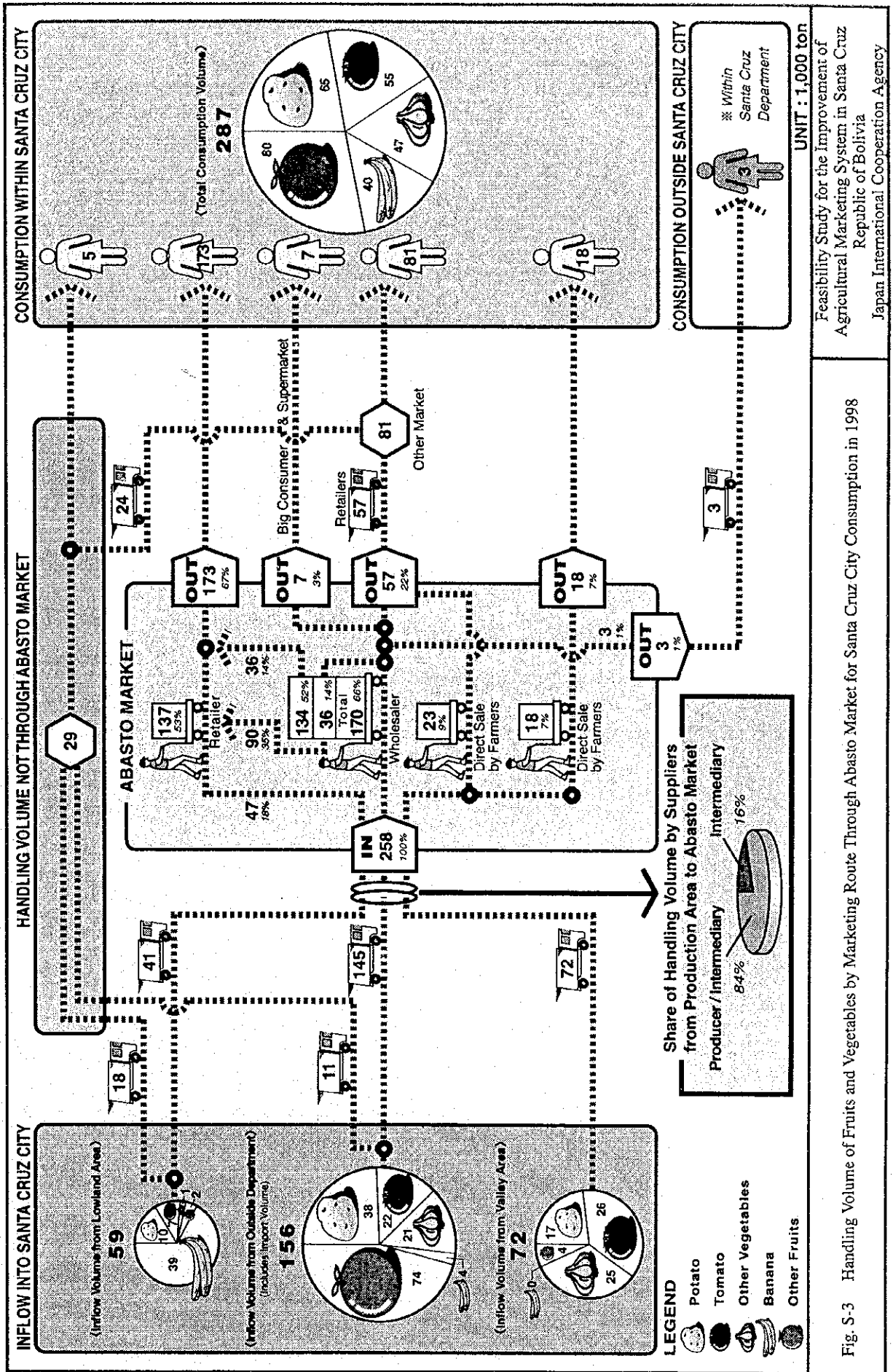


Fig. S-3 Handling Volume of Fruits and Vegetables by Marketing Route Through Abasto Market for Santa Cruz City Consumption in 1998

(3) Absence of law/regulation and management/operation body of Abasto Market

Abasto Market is a municipal market (public market) established in accordance with the Santa Cruz municipal ordinance and farmers' market based on the former Ministry of Farmers and Livestock (MACA) law. Integrating these two dissimilar types of market into one entity has created confusion legally and operationally. An attempt to draw up a draft regulations on management/operation was carried out several times in the past, but it was never effective. Moreover, CRAMA, the ineffective management committee of Abasto Market, inevitably lapsed following the enactment of the Decentralization Law. As a result, Abasto Market has continued to exist as an unregulated and segmented market operating according to the interests of various user groups.

#### 4.3 Common issues of Production and Consumption Sites

(1) Small-scale producers and traders

Under the present Study, investigation into the income levels of the Valley area producers and traders (intermediaries engaged in trading business from the Valley areas to Abasto Market, retailers and wholesalers in Abasto Market), albeit limited number of samples, was conducted. The results are described below.

Although the average income level of farmers engaged in fruit and vegetable production is higher than the income of the average Bolivian citizen, the discrepancies in income between farmers are large, due to the difference in the scale of farming operations (As seen in Table S-2, income by the size of farm owned by Valley area producers, the average large-scale producer earns Bs.69,000/year, almost three times as much the average small-scale producer's annual income at Bs.24,000). Furthermore, Table S-3 shows that the scale of operations of traders is small and the difference in the income level between farmers and traders is minimal. The income and expenditure of the intermediaries are similar to middle-scale producers, retailers in Abasto to small-scale producers, and wholesalers to middle-scale producers.

Table S-2 Farmer Incomes in the Valley Areas (1998)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Avg.
Small-scale	12	23	26	20	25	24	40	24
Middle-scale	17	14	54	41	63	56	31	40
Large-scale	36	37	56	73	117	52	52	69
Average	22	24	40	54	59	32	32	42

Remarks:

- 1 Obtained from the F/S survey "Socio-economic Survey" (implemented August 1998)
- 2 (1) Mairana (2) Samaipata (3) Pampa Grande (4) Comarapa (5) San Isidro (6) Saipina (7) Vallegrande
- 3 Small farms (<2.0ha), medium farms (2.0-5.0ha), large farms (>5.0ha)

**Table S-3 Incomes Of Farmers/Traders and their Household Expenditures (1998)**

	unit: Bs.					
	Annual Income			Household Expenditure		
	Avg.	Min.	Max.	Avg.	Min.	Max.
1 Producer						
(1) large-scale	69,280	36,915	117,144	30,658	11,560	50,039
(2) middle-scale	39,546	13,966	63,277	15,302	9,408	22,684
(3) small-scale	24,251	12,007	40,204	12,727	6,989	26,880
2 Intermediary (Small-scale, by place of residence)						
(1) S.C. City	33,950	9,600	100,000	22,489	5,250	53,160
(2) Rural area	32,590	8,000	75,000	22,093	13,360	47,440
3 Retailer (operating in Abasto)	18,857	-	-	11,207	6,400	18,100
4 Wholesalers (operating for side-business in Abasto)	18,800	-	-	15,456	10,560	22,160

Remarks:

- 1 Obtained from the F/S survey "Socio-economic Survey" (implemented August 1998)
- 2 The figures for annual income/expenditure each indicate the average, maximum, and minimum value for each target group

(2) Lack of farmers' and traders' organizations

Small collection and distribution operations and marketing system by small groups, individual farmers and traders exist and organizing a modern marketing system in both the production and consumption sites is an important issue.

In other words, rationalization of the marketing system both in production and consumption sites through organizing small-scale producers and traders into groups is an urgent task.

The major underlying reasons that attempts to organize producers and traders have been unsuccessful are the producer/trader distrust of parties responsible for managing the organization, the unclear management of the financial system, and the lack of technical knowledge on organizational management.

(3) Ineffective pricing mechanism

The wholesale prices of fruits and vegetables in Santa Cruz city are higher than the wholesale prices in other areas in Bolivia and they are prone to extreme seasonal fluctuations. In addition, the wholesale price is much higher in Bolivia than in neighboring countries. This is due to absence of planned production system, as well as the smaller scale of farm production which are unable to keep up with the growing demand, with the exception of certain crops. This is also an indication of the declining self-sufficiency ratio of departmental production. The profit margin of wholesalers in Abasto Market is fixed and they are not subject to price fluctuations. This is due to lack of competition among wholesalers.

(4) Considerable portion of transportation cost in the price

The ratio of transport cost in the product price from the production to the consumption site is high (especially for fruits and vegetables requiring rapid packing to maintain freshness) and rationalization of transport operations is an important issue. The transport cost per ton/kilometer successively decreases according to distance and there is a tendency for the range of long distance transport to grow, including import.

(5) Poor international competitiveness

In addition to the production issues explained in the section on " Issues of the production areas", an organizational and legal system in the area of marketing is conspicuously lacking.

Marketing is characterized by such factors as small transactions, difficulty in securing a stable supply of products, the lack of competitive pricing, etc. Product transactions lack quality control system and are dependent on various traditional units of weight. It is essential that quality control system and unit of weight be standardized.

Basic knowledge of the legal and organizational aspects of marketing by government personnel, farmers, and traders is inadequate and they have been unable to gain sufficient experience in these areas in the past. Adequate training and guidance for relevant personnel are essential to improving international competitiveness by implementing a systematic and organized system of marketing and establishing communal use of marketing facilities. In tandem with these guidance and training activities, a phytosanitary inspection system for imported and exported products is also needed.

(6) Inadequate relevant banking and public financing system development

- Loan system: With the exception of certain designated areas, an informal credit system does not exist. Although formal credit systems such as FINDESA S.A.M., FDC, Cooperativa de Ahorro Y Credito "La Merced" Ltda, BOLINVEST, ASOFRUT, NGO, etc. exist, their use by farmers is minimal, due to high interest rate policy guided by IMF structural adjustment, and restriction of access to organized farmers.
- Revenue and expenditures of municipalities: Although a segment of the public finances of Santa Cruz Department and Santa Cruz city is available to cover business and operational costs, the use of financial resources to improve the fruit and vegetable marketing system is nonexistent.

#### 4.4 Establishing Consensus

The consensus of government personnel was obtained at each stage of the study. Emphasis was placed on obtaining the consensus of relevant personnel during Phase II Study of the Project. Meetings to provide summarized explanations of the Project, workshops utilizing the PCM method, study tours aimed at raising the awareness of farmers, demonstrations of farmers' cooperative activities for product collection and distribution, and other activities were held to actively promote participation in the Project and its design by the targeted group of users. A summary of the views expressed by the

target groups are listed below. These views were incorporated into the planning and design of the Project.

- (1) The scale of operations of farmers and wholesalers is small, which should be steered towards expansion and modernization in the future.
- (2) The operation of the Project should be carried out by users' organizations.
- (3) User-friendly operating system and a trustworthy management should be established.

## **5 Development Concept of the Project**

### **5.1 Development Needs of the Project**

Needs for the improvement of fruit and vegetable marketing system in the Department of Santa Cruz is summarized as below in response to the items presented in "Issues in Fruit and Vegetable Marketing" in the previous chapter.

- (1) Development needs in the production area
  - 1) Establishment of the system of assistance for production in the Valley areas
  - 2) Promotion of improvements to the marketing system in the Lowlands
  - 3) Development of quality control system
  - 4) Development of marketing information system
- (2) Development needs in the consumption area
  - 1) Development of New Wholesale Market (NWM) to handle marketed volumes of fruits and vegetables
  - 2) Development of efficient business transactions in Abasto Market
  - 3) Establishment of law/regulation and management/operation bodies of Abasto Market
- (3) Common development needs
  - 1) Increasing of scales of business of producers and traders
  - 2) Establishment of organizations of producers and traders
  - 3) Establishment of appropriate pricing mechanism
  - 4) Reducing the portion of transportation cost in the price
  - 5) Enhancing international competitiveness
  - 6) Promoting enforcement of policies regarding relevant banking and public financing system

The above items are urgent needs to be taken into consideration for all users of existing fruit and vegetable marketing system (producers, intermediaries, wholesalers, retailers, and consumers).

## 5.2 Concept of the Project

The fruit and vegetable marketing system is a widespread network system stretching from production stage in the production area to consumption in the consumption area. The Project's objective is to improve this marketing network system in a comprehensive manner.

Implementing technology transfer to relevant personnel (government staff to promote the project, representatives of supporting agencies and users) through the implementation of the Project will help develop the production sites and rationalize the entire process of production, marketing, and consumption. The Project will enable a marketing system of fruits and vegetables to be created that will improve product quality as well as promote international competitiveness in conjunction with Bolivia's participation in MERCOSUR.

The Project is shown in the Fig. S-4. A collection and distribution center (C/D) will be created in the major production areas of the Valley and a cooperative collection and distribution system will be developed. The wholesale functions will be separated from the existing Abasto Market in the consumption area of Santa Cruz City and a New Wholesale Market (NWM) will be established. The existing Abasto Market will function only as a retail market. Valley farmers will collect and distribute their products via the cooperative collection and distribution center to the New Wholesale Market (this is dependent on successfully organizing farmers). Collection and distribution activities in the Valley areas will be carried out at seven centers and farmer organizations that utilize these communal Collection and Distribution Centers will be given priority in obtaining selling sections of the New Wholesale Market (on the condition that they qualify to participate in the wholesale market). The production and consumption sites will be connected by a widespread marketing network system that will include information on product volume and prices, as well as fruit and vegetable marketing functions.

In conjunction with the improvements to the traditional marketing system, new benefits will also be created for new target groups not utilizing the existing Abasto Market. The agricultural cooperatives of the lowlands (CAISY, CAICO) that wish to utilize the New Wholesale Market, the Supermarket Association, and new farmer groups who wish to organize in order to participate in wholesale activities are just some of the new target groups pinpointed.

The following new benefits will also be created by the Project for small traders who are mainly women and small farmers that are unable to utilize the New Wholesale Market directly.

- (1) The shift of wholesalers to the New Wholesale Market from the existing Abasto Market will improve the efficiency of the retail activities at Abasto Market and provide increased opportunities for direct retail activities by farmers and small traders in the informal sector.
- (2) Due to assistance from private firms, NGOs, and donor countries, farmers will not be limited to using the improved farmers' market, but will be able to participate in wholesale activities and to sell their products to wholesalers at the New Wholesale Market, and thereby are given increased opportunities to raise their income.

- (3) The shift of wholesalers from the existing Abasto Market to the New Wholesale Market will enable farmers to curtail losses of time and (opportunity costs) generated by the entire marketing process which includes harvesting, transport, and retail activities at the existing Abasto Market.
- (4) The alleviation of the chaotic marketing activities and overcrowding at the existing Abasto Market will raise the efficiency of the marketing activities of small women traders who have traditionally conducted small transactions there.

# SUPPLY

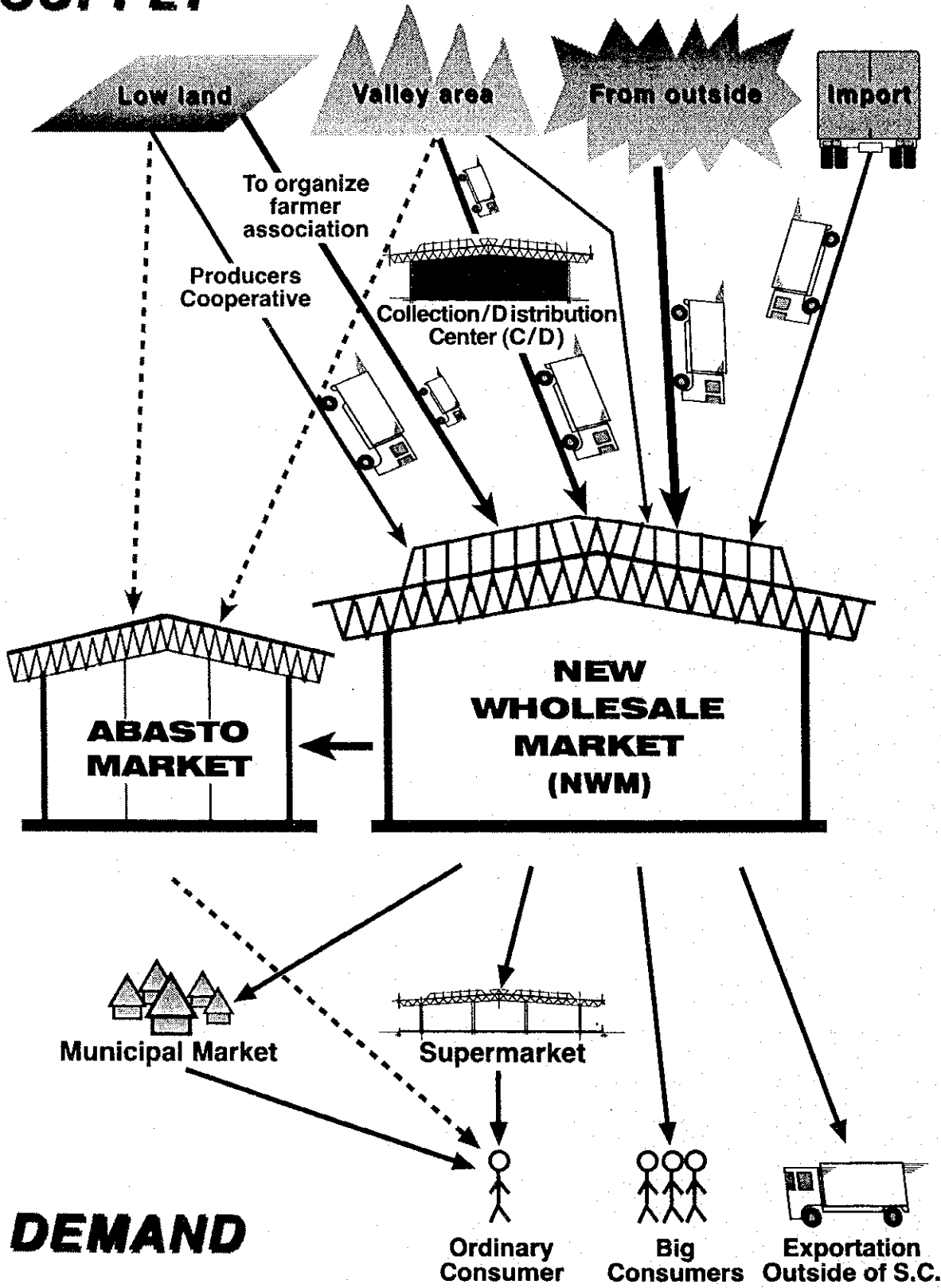


Fig. S-4 Concept of Proposed Project  
(New Marketing System of Fruits and Vegetables)

Feasibility Study for the Improvement of  
Agricultural Marketing System in Santa Cruz  
Republic of Bolivia  
Japan International Cooperation Agency



## **6 Outline of the Project Plan**

### **6.1 Objective**

Improve the widespread produce marketing system mainly in Santa Cruz Department

### **6.2 Target Groups**

Groups targeted as users of the New Wholesale Market and the Collection and Distribution Centers are not limited to users of the existing marketing facilities, but will also include farmer and trader organizations which fulfill the qualification to participate in the newly created system of collection/distribution, and wholesale activities. In addition, the small traders who are mainly women are projected to be the indirect beneficiaries of this new marketing system which will improve the efficiency of the existing Abasto Market when the wholesale functions are transferred to the new facility.

### **6.3 Outline of the Project**

The New Wholesale Market will be established in the large consumption area of Santa Cruz city, and laws/ regulations and organizations will be established for the NWM as well as Abasto Market. In the production area, the Collection and Distribution Centers will be introduced through new construction or renovation of the existing facilities, along with development of laws/ regulations and organizations to carry out production and collection/distribution activities to enable the production areas to meet the needs of the market. These two facilities will be used as a marketing point as well as technology transfer point for production and marketing. Training and technical assistance activities for the target groups utilizing these two facilities on product marketing system, law/ regulation and institution will promote the production area, contribute to the efficiency of marketing activities, and strengthen international competitiveness in readiness for Bolivia's participation in MERCOSUR.

#### **(1) Production area**

At the first stage, a pilot project will be set up in San Isidro in Caballero Province and the aim is to gradually improve the fruit and vegetable marketing system throughout the entire Valley areas by overseeing the results under this pilot project. The major role of this pilot project is to establish cooperative collection and distribution system and planned production/ marketing system from production to sales. It is intended to develop through this pilot project a model of improving fruit and vegetable marketing and information network. This model consists of collection and distribution system, price and supply/ demand information system, introduction and extension of cooperative collection and distribution system and planned production system, and the system of qualifying producers as wholesalers and participation in wholesaling.

The second and third stages cover the establishment of collection and distribution centers at the remaining 6 sites while observing the results of the pilot project.

Major facilities and equipment for sorting, packing, and a reloading platform, technology transfer and marketing information are targeted. A management system for farmer organizations will be established and carried out by each municipality with the assistance of relevant institutions to be gradually transferred to producers' own management.

(2) Consumption area- New Wholesale Market (NWM)

The New Wholesale Market site is located in the periphery of Santa Cruz city. The major roles taken up by the NWM are to establish wholesale function in the metropolis, to separate wholesale and retail functions, and in the long run to develop the market into an internationally competitive wholesale market.

Law/regulation pertaining to the management/operation of the wholesale market need to be established in order to create an efficient and effective wholesale market (relevant and attainable clauses to be selected from the current draft compiled by the Municipal and Prefecture governments) and the market will be managed by an organization mainly comprised of users. Measures to privatize market management and operation will be carried out when users have achieved independent and sustainable management/operation following a short-term period of technology transfer.

Major facilities and equipment are the market hall (including individual wholesale sections and common transaction space for non-reserved products), parking lot, administrative office (for market management/ operation, offices for user organizations, rooms for technology transfer activities).

(3) Consumption area- Existing Abasto Market

In line with the establishment of NWM, the existing Abasto Market is to be gradually transformed into a retail market.

1) Effective use of the space formerly occupied by wholesalers transferred to NWM and promotion of transfer to NWM

The space and facility formerly used by the wholesalers who transferred to the NWM are to be utilized to extend access of small-scale retailers and producers. As to promoting transfer to the NWM, the following measures will be taken.

- A municipal ordinance issued by the City of Santa Cruz will establish regulation on trading, as well as restrain large trucks entry to the existing Abasto Market.
- Restriction of incoming large trucks within Ring Road No. 3 where the existing Abasto Market is located will be continued.
- Street vending in the surrounding area of Abasto Market will be prohibited.

2) Establishment of Abasto Market Management Committee

Retailers in the Market and producers and intermediaries engaged in direct selling belong to the informal sector, where they conduct individual small-scale marketing business. Existing Abasto Market will be turned into a retail-specific

market with the establishment of the Management Committee comprised of representatives of groups of these people and/ or other voluntary groups.

3) Enhancing effective use of Abasto Market

Abasto Market Management Committee will change the circulation and sales section layout within the existing Abasto Market (sales on the passages in the Market are prohibited and will be taken over by sales within the facility). This change in the layout includes securing space for producers' direct sales as well as for retailing of fruits and vegetables that were not sold in the NWM.

4) Improvement of accessibility to NWM marketing information

Retailers and producers using Abasto Market will gain access to wholesaling information (on price and inflow of products) through the marketing information section of the Management Body from the NWM. Other producers will be able to obtain the same information through C/D centers' Management Body.

**6.4 Content of the Project's facilities**

	C/D Centers	New Wholesale Market	Existing Abasto Market
1.Objective	1.Cooperative collection and distribution 2.Planned production assistance 3.Training and technology transfer assistance	1.Wholesale market development 2.Improvement of wholesale activity 3.Training and technology transfer assistance	1.Retail market development 2.Improvement of retail activity
2. Function	1.Collection/ selection/ packing/ transportation/ sales through cooperative method 2.Supporting system for production with cooperation of users organization, research institutes and supporting organizations	1.Wholesaling 2.Use of NWM by those who qualify as wholesaler	1.Retailing 2.Expansion of employment opportunities for small dealers in utilizing the existing Abasto Market
3.Scale			
(1) Handling volume	60,840t/year (7 sites total)	239,000t/year	242,000t/year
(2) No. of vehicles	36 (peak day, 7 sites total)	84 (peak day)	60 (peak day)
(3) Parking	Large-scale 6~12, and small-scale 6~12 at each Center	Large-scale 172, small-scale 77	Middle- and small-scale 50
4. Forms of trading	1.Entrusting to producers' C/D association and/ or contract between individual/ voluntary group of producers 2.Settling of account: Cash payment on the same day of sales at the market	1.Inflow handling: Individual or organized producers, traders and transporters 2.Destination: Retailers of Abasto retail market and other retail markets, Supermarkets 3.Users: Face-to-face trading. Wholesalers are, traders and producers from existing Abasto Market, agricultural cooperatives, supermarkets 4.Method of trading and settling of account: Cash payment upon deal	1.Inflow handling: Producers and intermediaries 2.Sales section: producers' direct selling and retailing 3.Destination: general consumers 4.Method of trading and settling of account: Cash payment upon deal

	C/D Centers	New Wholesale Market	Existing Abasto Market
5.Features of facilities	1.Construction: Transshipment facilities from small vehicles to larger vehicles 2.Equipment: Facility and equipment for training of producers	1.Construction: Market hall-1 (Wholesalers' section), Market hall-2, Parking 2.Equipment: Facilities and equipment for training and management 3.Infrastructure: Access from major lines (road, communication, electricity, water, etc.) and basic infrastructure within the Market	1.Existing farmers' market facilities (2 buildings) to be retail market facilities (retailers' and producers direct selling sections) 2.Part of Cooperativa's facilities formerly used for wholesale to be retailers sections
6.Management	1.Promotion of management system establishment by municipalities 2.Setting up management committee 3.Management body mainly comprised of users 4.Instruction by supporting organizations 5.Improvement of marketing system 6.Enforcement of law/regulation	1.Promotion of management system establishment by municipalities 2.Setting up management committee 3.Management body mainly comprised of users 4.Instruction by supporting organizations 5.Improvement of marketing system 6.Enforcement of law/regulation	1.Promotion of management system establishment by municipalities 2.Setting up management committee 3.Management body mainly comprised of users 4.Instruction by supporting organizations 5.Improvement of marketing system 6.Enforcement of law/regulation 7.Improvement of management system 8.Prohibition of street vending outside the Market 9.Restriction of large-scale vehicle entry

## 6.5 Process of transfer from the existing Abasto Market and new participation in the NWM

The following explains the process in which wholesalers transfer to the NWM from the existing Abasto Market and new applicants' qualification and participation.

### (1) Stage 1

A body organized by the Prefecture and Municipal including representatives of users for implementing the Project is to be established. Qualified wholesalers will be selected from among wholesalers of the existing Abasto Market by fair screening.

- Establishing consensus on transfer: Through discussion with qualified wholesalers on the method of transfer, the location and number of wholesaling sections to be rented by each wholesaler will be decided.
- Promotion of transfer: It is most desirable to have all qualified wholesalers to transfer at the same time. Nonetheless, there will be different timeframes for each wholesaler's closing of wholesale business in Abasto Market and opening of the new section in NWM, along with which piecemeal transfer will be carried out. For pioneering traders who decided to move in earlier stages, favourable treatment will be granted in the NWM (waiving first 6 months'

rental fee for the wholesalers' section, supporting access to financial schemes in funding the relocation) to help easy transfer.

(2) Stage 2

- Qualifying small-scale traders and producers using Abasto Market: Training will be given to traders and producers who may not qualify as individual entrepreneurs to enable them to group themselves for gaining qualification. Especially small-scale traders (mostly female) will be trained on organizing themselves (not simply organization establishment, but includes development of management body run by several co-managers all of whom are expected to improve their individual income from the present level). The organizations qualified after this training will be guided on transfer to the NWM wholesalers' section. The above favorable treatment (exemption of the first 6 months' rent, free training, etc.) will be applied.

(3) Stage 3

- Qualifying producers of the Valley areas: On the condition that producers use C/D centers being the core of the Project in the production site, or that they form their own organization for cooperative collection and distribution instead, training necessary for the qualification of wholesalers to the representative of such a group will be available. The favorable treatment will also be applicable in this case.

(4) Stage 4

- Lowland agricultural cooperatives and wholesale section of supermarkets, who did not find advantage in wholesaling in Abasto Market due to substantial impediments over market management and market use, will have access to wholesalers' section use for possible modernization of marketing and rationalization of management.

## 6.6 Forms of Market use

Forms of the New Wholesale Market use are described as below.

Stage 1: Incoming trucks to the New Wholesale Market receive the admission card at the entrance.

Stage 2

- Route 1: Incoming trucks will directly unload their commodity in Wholesalers' section (Market Hall-1), as suppliers (producers/intermediaries) have had prior arrangements with wholesalers over incoming volume and price, and either of the following three methods of trading would be followed.
  - Trading method 1 (Contract): The wholesaler contracts with the supplier before harvest, to purchase the product at an agreed price.
  - Trading method 2 (Consignment): The wholesaler is consigned to sell the product by the supplier, payment settlement for the product will be done on the same day when the products are sold minus the commission charges for the consignment.

- Trading method 3: (Purchase): The wholesaler purchase the product outright, payment takes place on the spot or at the end of the day.
- Route 2: This is the case in which no prior arrangement between the supplier and wholesaler takes place before shipment. The incoming truck would unload in Market Hall-2 before the Market opens, and supplier would carry the load to Market Hall-1 for wholesaling. Buyers in this case are wholesalers of the Market and retailers of other markets. The account is settled on-the-spot and by cash.

Stage 3: In Market Hall-1, wholesalers would sell products directly unloaded to their section and/ or purchased at Market Hall-2 to retailers. Payment is on-the-spot and by cash.

Stage 4: Entered/ parked trucks are all supposed to present the admission card at the management office, and pay the fee indicated on the card to exit.

Stage 5: The incoming volumes, trading prices, and collected fee are all recorded at both the operation office of the administration building and information center, for publication at any time. Producers will be provided with marketing information (price, inflow volume) at the production site through C/D center or farmers' cooperative. Farmers' association (C/D center users' group or farmers' cooperative) will base their decision on collection and distribution of products on this information.

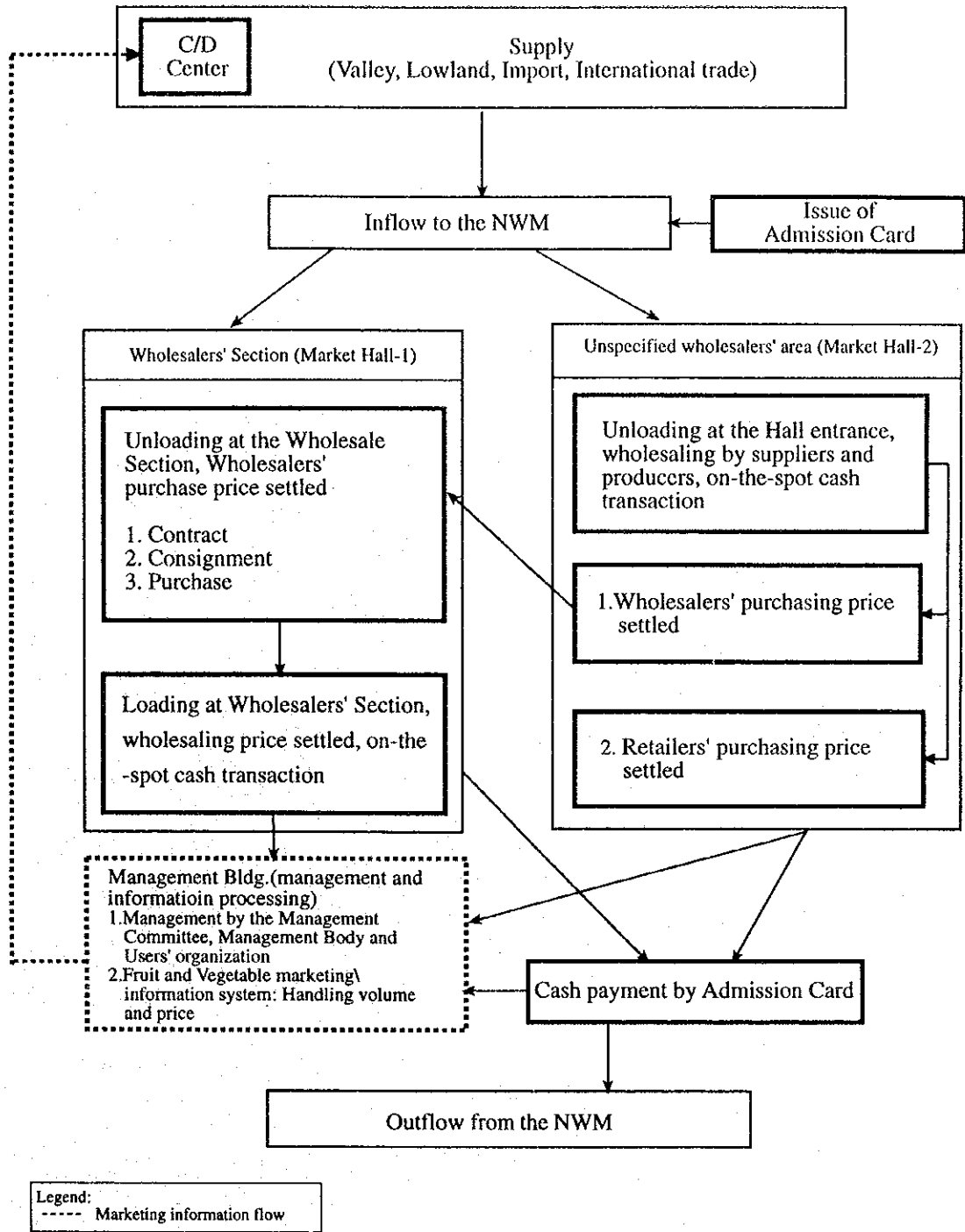


Fig. S-5 Forms of Use and Trade New Wholesale Market