

Table 3-20 EVALUATION OF PROJECT SITE ALTERNATIVES FOR NEW WHOLESALE MARKET (SUMMARIZED TABLE)

Criteria	Ranking of each alternative site for the criteria	
	UV189 in St. Cruz	Site in La Guardia City
1 Position of wholesale market development in the framework of regional development plan (PDMs and Guidline of Metropolitan Development Plan)	-	+
2 Accessibility for products suppliers (Accessibility from main incoming route i.e. national road No. 4, 7, 9 and 6, railway to Brazil)	Equal	Equal
3 Accessibility for users of the wholesale market in consumption area (proximity to St. Cruz, accessibility to public traffic system for the city dwellers)	+	-
4 Management ability of facilities maintenance of City Government (financial ability, organization/human-resources, experience of similar projects)	+	-
5 Management ability of users' organization (financial/management ability concerned with dominant members)	+	-
6 Sustainability (unstability in coordination for relation between city government, operation organization, users and private developer / sustainability from city government's experience)	+	-
7 Site condition (condition of public utilities)	Equal	Equal
8 Land Acquisition etc. (difficulties of land acquisition, necessity of large scale land preparation, shortage of infrastructure)	-	+
9 Linkage with other project (influence of linkage with other private projects concerned with agri-products marketing)	Equal	Equal
10 Environmental Impact Assessment to the future conditions of Abasto Market / New Wholesale Market (social impact / environmental impact)	+	-
11 Project Evaluation (economic/financial reliabilities and income redistribution)	+	-
12 Effective Technology Transfer to the related persons	+	-

Remark :

The marks shown in this table (+, -, and Equal) have following meanings. If the score of one site is higher than the other's, this site gets "+". On the other hand, if the score of one site is lower than the other's, this site gets "-". And if the scores of 2 alternative sites are equal, 2 sites get "Equal".

Table 3-21 ESTIMATED NUMBER OF WHOLESALERS TRANSFERRED FROM ABASTO MARKET TO THE NEW WHOLESALE MARKET

Name of organization	Number of wholesalers through criteria						Traded volume by wholesalers qualified (tons/week)	
	Samples	Qualification Criteria (1)					Case 1 (2)	Case 2 (3)
		1	2	3	4	5		
I, Abasto Market								
Coperativa	46	24	24	23	23	19	520	450
19 Marzo	56	32	32	30	30	25	854	689
ASPROA	33	8	8	8	8	7	118	108
Non association	27	7	7	7	6	5	122	99
ACPAMA	5	1	1	1	1	1	14	14
ASOPROCA	23	13	13	8	8	2	256	134
AIPPA	14	11	11	9	9	6	132	84
<i>Subtotal</i>	<i>234</i>	<i>96</i>	<i>96</i>	<i>86</i>	<i>85</i>	<i>65</i>	<i>2016</i>	<i>1556</i>
2, Mutualista Market								
	30	3	3	3	3	2	42	22
<i>Total</i>	<i>264</i>	<i>99</i>	<i>99</i>	<i>89</i>	<i>88</i>	<i>67</i>	<i>2058</i>	<i>1578</i>
	(100%)			(33%)	(25%)			

Assumption:

(1) Qualification criteria

- 1) Traded volume by wholesalers more than 10 tons/week
- 2) Traded amount by wholesalers more than \$US 10,000
- 3) Activity as wholesaler: selling percentage for general consumers less than 40%
- 4) Mode of payment: cash
- 5) Willingness to move: yes

(2) Case 1: Traded volume by qualified wholesalers with criteria 1 to 4

(3) Case 2: Traded volume by qualified wholesalers with criteria 1 to 5

Source: Field Survey of Phase I of Feasibility Study for the Improvement of Agricultural Marketing System in Santa Cruz, Bolivia, 1998

Table 3-22 REVENUE AND EXPENDITURE OF EXISTING WHOLESALERS (1/5)

POTATO			Unit: Bs
Item	Fixed Cost	Viable cost	Sum
1. Revenue (sales)	-	722,800	722,800
2. Expenditure (purchase)	-	676,000	676,000
Gross income	-	46,800	46,800
3. Other expenditure	4,454	16,016	20,470
(1) Labor cost	-	15,600	15,600
(2) Packing material cost	-	416	416
(3) Sales section rental fee	2,681	-	2,681
(4) O/M cost	1,473	-	1,473
(5) Tax	300	-	300
4. Profit before tax	-	-	26,630
5. Profit after tax	-	-	26,330

Remarks:

(1) Assumption

- Product : Potato
- Handling volume : 10 ton/week = 520 ton/year
- Loss in wholesale stage : 0%
- Purchasing price : Bs 15/@ = Bs 1.30/kg = Bs 1,300/ton x 520 ton/year = Bs 676,000/year
- Sales price : Bs 16/@ = Bs 1.39/kg = Bs 1,390/ton x 520 ton/year = Bs 722,800/year
- Labor cost : Bs 3/bag = Bs 0.03/kg = Bs 30/ton x 520 ton/year = Bs 15,600/year
- Packing material cost : Bs 2/bag (Life span: 25 times use) x 10 bags/ton = Bs 20/ton/25 times = Bs 0.8/ton x 520 ton/year = Bs 416/year
- Sales section rental fee : Bs 2,681/year
- Operation/maintenance cost (O/M): Bs 1,473/year
- Tax : Bs 300/year

(2) Sales section rental fee

- Construction cost of existing cooperativa 2 Junio building: US\$ 1.5 x 10⁶
- Depreciation period and interest: 25 years, 14%/year
- Number of sales lot: 452 sections
- Depreciation cost per sales section: US\$1.5 x 10⁶ x 0.1455 = US\$ 218.25 x 10³/year = US\$483/year/section = Bs 2,681/year/section

(3) O/M cost

- Salary/wages of cooperativa staff: Bs 14,400/year x 30 staff = Bs 432,000/year = Bs 956/year/section
- Utility cost of cooperativa building: Bs 16,000/month = Bs 192,000/year = Bs 425/year/section
- Maintenance cost: 0.5% of construction cost/year
US\$ 1.5 x 10⁶ x 0.005 = US\$ 7,500/year = Bs 41,625/year = Bs 92/year/section
- Total O/M cost = Bs 1,473/year/section

(4) Tax: simplified tax. RTS standard setting for uncalculated sales profit

Table 3-22 REVENUE AND EXPENDITURE OF EXISTING WHOLESALERS (2/5)

Item	TOMATO		Unit: Bs
	Fixed Cost	Viable cost	Sum
1. Revenue (sales)	-	453,960	453,900
2. Expenditure (purchase)	-	390,000	390,000
Gross income	-	63,960	63,960
3. Other expenditure	7,135	9,620	16,755
(1) Labor cost	-	7,800	7,800
(2) Packing material cost	-	1,820	1,820
(3) Sales section rental fee	5,362	-	5,362
(4) O/M cost	1,473	-	1,473
(5) Tax	300	-	300
4. Profit before tax	-	-	47,505
5. Profit after tax	-	-	47,205

Remarks:

(1) Assumption

- Product : Tomato
- Handling volume : 10 ton/week = 520 ton/year
- Loss in wholesale stage : 3%
- Purchasing price : Bs 15/box = Bs 0.75/kg = Bs 750/ton x 520 ton/year
= Bs 390,000/year
- Sales price : Bs 18/box = Bs 0.90/kg = Bs 900/ton x 520 ton/year x 0.97
= Bs 453,960/year
- Labor cost : Bs 3/10 box = Bs 0.015/kg = Bs 15/ton x 520 ton/year
= Bs 7,800/year
- Packing material cost : Bs 3.5/box (Life span: 50 times use) x 50 box/ton
= Bs 175/ton/50 times = Bs 3.5/ton x 520 ton/year = Bs 1,820/year
- Sales section rental fee : Bs 2,681/year
- Operation/maintenance cost (O/M) : Bs 1,473/year
- Tax : Bs 300/year

(2) Sales section rental fee

- Construction cost of existing cooperativa 2 Junio building: US\$ 1.5 x 10⁶
- Depreciation period and interest: 25 years, 14%/year
- Number of sales lot: 452 sections
- Depreciation cost per sales section: US\$1.5 x 10⁶ x 0.1455 = US\$ 218.25 x 10³/year
= US\$483/year/section = Bs 2,681/year/section

(3) O/M cost

- Salary/wages of cooperativa staff: Bs 14,400/year x 30 staff = Bs 432,000/year = Bs 956/year/section
- Utility cost of cooperativa building: Bs 16,000/month = Bs 192,000/year = Bs 425/year/section
- Maintenance cost: 0.5% of construction cost/year
US\$ 1.5 x 10⁶ x 0.005 = US\$ 7,500/year = Bs 41,625/year = Bs 92/year/section
- Total O/M cost = Bs 1,473/year/section

(4) Tax: simplified tax. RTS standard setting for uncalculated sales profit

Table 3-22 REVENUE AND EXPENDITURE OF EXISTING WHOLESALERS (3/5)

ONION			Unit: Bs
Item	Fixed Cost	Viable cost	Sum
1. Revenue (sales)	-	270,400	270,400
2. Expenditure (purchase)	-	202,800	202,800
Gross income	-	67,600	67,600
3. Other expenditure	4,454	16,016	20,470
(1) Labor cost	-	15,600	15,600
(2) Packing material cost	-	416	416
(3) Sales section rental fee	2,681	-	2,681
(4) O/M cost	1,473	-	1,473
(5) Tax	300	-	300
4. Profit before tax	-	-	47,430
5. Profit after tax	-	-	47,130

Remarks:

(1) Assumption

- Product : Onion
- Handling volume : 10 ton/week = 520 ton/year
- Loss in wholesale stage : 0%
- Purchasing price : Bs 4.5/@ = Bs 0.39/kg = Bs 390/ton x 520 ton/year = Bs 202,800/year
- Sales price : Bs 6.0/@ = Bs 0.52/kg = Bs 520/ton x 520 ton/year = Bs 270,400/year
- Labor cost : Bs 3/bag = Bs 0.03/kg = Bs 30/ton x 520 ton/year = Bs 15,600/year
- Packing material cost : Bs 2/bag (Life span: 25 times use) x 10 bags/ton = Bs 20/ton/25 times = Bs 0.8/ton x 520 ton/year = Bs 416/year
- Sales section rental fee : Bs 2,681/year
- Operation/maintenance cost (O/M) : Bs 1,473/year
- Tax : Bs 300/year

(2) Sales section rental fee

- Construction cost of existing cooperativa 2 Junio building: US\$ 1.5 x 10⁶
- Depreciation period and interest: 25 years, 14%/year
- Number of sales lot: 452 sections
- Depreciation cost per sales section: US\$1.5 x 10⁶ x 0.1455 = US\$ 218.25 x 10³/year = US\$483/year/section = Bs 2,681/year/section

(3) O/M cost

- Salary/wages of cooperativa staff: Bs 14,400/year x 30 staff = Bs 432,000/year = Bs 956/year/section
- Utility cost of cooperativa building: Bs 16,000/month = Bs 192,000/year = Bs 425/year/section
- Maintenance cost: 0.5% of construction cost/year
 $US\$ 1.5 \times 10^6 \times 0.005 = US\$ 7,500/\text{year} = Bs 41,625/\text{year} = Bs 92/\text{year}/\text{section}$
- Total O/M cost = Bs 1,473/year/section

(4) Tax: simplified tax. RTS standard setting for uncalculated sales profit

Table 3-22 REVENUE AND EXPENDITURE OF EXISTING WHOLESALERS (4/5)

Item	BANANA		Unit: Bs
	Fixed Cost	Viable cost	Sum
1. Revenue (sales)	-	166,400	166,400
2. Expenditure (purchase)	-	143,000	143,000
Gross income	-	23,400	23,400
3. Other expenditure	4,454	2,600	7,054
(1) Labor cost	-	2,600	2,600
(2) Packing material cost	-	-	0
(3) Sales section rental fee	2,681	-	2,681
(4) O/M cost	1,473	-	1,473
(5) Tax	300	-	300
4. Profit before tax	-	-	16,646
5. Profit after tax	-	-	16,346

Remarks:

(1) Assumption

- Product : Banana (Platano)
- Handling volume : 10 ton/week = 520 ton/year
- Loss in wholesale stage : 25%
- Purchasing price : Bs 5.5/racimo (20kg) = Bs 275/ton x 520 ton/year = Bs 143,000
- Sales price : Bs 8/racimo (20kg) = Bs 400/ton x 520 ton/year x 0.8 = Bs 166,400
- Labor cost : Bs 0.1/racimo = Bs 5/ton x 520 ton/year = Bs 2,600/year
- Packing material cost : 0
- Sales section rental fee : Bs 2,681/year
- Operation/maintenance cost (O/M) : Bs 1,473/year
- Tax : Bs 300/year

(2) Sales section rental fee

- Construction cost of existing cooperativa 2 Junio building: US\$ 1.5 x 10⁶
- Depreciation period and interest: 25 years, 14%/year
- Number of sales lot: 452 sections
- Depreciation cost per sales section: US\$1.5 x 10⁶ x 0.1455 = US\$ 218.25 x 10³/year = US\$483/year/section = Bs 2,681/year/section

(3) O/M cost

- Salary/wages of cooperativa staff: Bs 14,400/year x 30 staff = Bs 432,000/year = Bs 956/year/section
- Utility cost of cooperativa building: Bs 16,000/month = Bs 192,000/year = Bs 425/year/section
- Maintenance cost: 0.5% of construction cost/year
 $US\$ 1.5 \times 10^6 \times 0.005 = US\$ 7,500/\text{year} = Bs 41,625/\text{year} = Bs 92/\text{year/section}$
- Total O/M cost = Bs 1,473/year/section

(4) Tax: simplified tax. RTS standard setting for uncalculated sales profit

Table 3-22 REVENUE AND EXPENDITURE OF EXISTING WHOLESALERS (5/5)

CITRUS FRUITES				Unit: Bs
Item	Fixed Cost	Viable cost	Sum	
1. Revenue (sales)	-	389,880	389,880	
2. Expenditure (purchase)	-	376,200	376,200	
Gross income	-	13,680	13,680	
3. Other expenditure	4,454	5,970	10,424	
(1) Labor cost	-	2,550	2,550	
(2) Packing material cost	-	3,420	3,420	
(3) Sales section rental fee	2,681	-	2,681	
(4) O/M cost	1,473	-	1,473	
(5) Tax	300	-	300	
4. Profit before tax	-	-	3,556	
5. Profit after tax	-	-	3,256	

Remarks:

(1) Assumption

- Product : Citrus Fruitess (Naranju), Seasonal fruitess harvest 4 month/year
- Handling volume : 10 ton/week = 171 ton/year
- Loss in wholesale stage : 5%
- Purchasing price : Bs 22/100 unidad = Bs 22/10kg = Bs 2,200/ton x 171 ton/year
= Bs 376,200/year
- Sales price : Bs 24/100 unidad = Bs 24/10kg = Bs 2,400/ton x 171 ton x 0.95
= Bs 389,880/year
- Labor cost : Bs 1.5/10 box (10kg) = Bs 0.015/kg = Bs 15/ton x 170 = Bs 2,550/year
- Packing material cost : Bs 5/box (Life span 25 times use) x 100 box/ton = Bs 500/ton/25 times
= Bs 20/ton x 171 ton/year = Bs 3,420/year
- Sales section rental fee : Bs 2,681/year
- Operation/maintenance cost (O/M) : Bs 1,473/year
- Tax : Bs 300/year

(2) Sales section rental fee

- Construction cost of existing cooperativa 2 Junio building: US\$ 1.5 x 10⁶
- Depreciation period and interest: 25 years, 14%/year
- Number of sales lot: 452 sections
- Depreciation cost per sales section: US\$ 1.5 x 10⁶ x 0.1455 = US\$ 218.25 x 10³/year = US\$ 483/year/section
= Bs 2,681/year/section

(3) O/M cost

- Salary/wages of cooperativa staff: Bs 14,400/year x 30 staff = Bs 432,000/year = Bs 956/year/section
- Utility cost of cooperativa building: Bs 16,000/month = Bs 192,000/year = Bs 425/year/section
- Maintenance cost: 0.5% of construction cost/year
US\$ 1.5 x 10⁶ x 0.005 = US\$ 7,500/year = Bs 41,625/year = Bs 92/year/section
- Total O/M cost = Bs 1,473/year/section

(4) Tax: simplified tax. RTS standard setting for uncalculated sales profit

Table 3-23 BREAK-EVEN POINT OF WHOLESALER

Item	Unit: Bs				
	Potato	Tomato	Onion	Banana	Citrus fruites
FC (Bs.)	4,454	7,135	4,454	4,454	4,454
VC (Bs.)	692,016	399,620	218,816	145,600	382,170
Vcu (Bs/kg)	1.331	0.769	0.421	0.28	2.23
Pu (Bs/kg)	1.390	0.900	0.520	0.40	2.40
Pu-Vcu (Bs/kg)	0.059	0.131	0.099	0.12	0.17
Qe (kg/year)	75,492	54,465	44,989	37,117	26,220
Qe (ton/week)	1.50	1.05	0.87	0.71	0.50

Remarks:

(1) Equation of Break Even Point

$$Q_e = FC / Pu - V_{cu}$$

Qe = Break-even point (kg)

FC: Fixed Cost (Bs.)

VC: Variable Cost (Bs.)

Vcu: Variable Cost per unit (Bs/kg)

Pu: Unit Price (Bs/kg)

Table 4-1 POSSIBLE SITE FOR NEW WHOLESALE MARKET IN UV189 AND NEIGHBORING DISTRICT

	Site A	Site B	Site C
1. Location	<ol style="list-style-type: none"> 1. This site is convenient to users because it's along directly to Route 4. 2. No room for future extension 3. In UV189 	<ol style="list-style-type: none"> 1. Located approx. 400m south-east from route 4 2. There is room for future extension. 3. In UV189 	<ol style="list-style-type: none"> 1. Located approx. 1.4 km from Route 4 and 500 m from Ring Road 8th. 2. Room for future extension is large 3. In ZAPU next to UV189
2. Infrastructure	Equipped with road and main line of potable water, electricity / telephone. (in the zone of non sewage)	<ol style="list-style-type: none"> 1. City Gov'nt has projected road from Route 4. It's necessary to prepare access road to Ring Road 8th. 2. Equipped with electric main line. 3. Not equipped with potable water main line. (in the zone of non sewage) 	<ol style="list-style-type: none"> 1. City Gov'nt has projected roads from Rout 4 and Ring Road 8th (projected road from Ring Road dose not touch with Site C directly). Budget and construction schedule are now under investigation. (*1). 2. Not equipped with potable water main line. (in the zone of non sewage) 3. Not equipped with electric main line
3. Social Impact etc.	<ol style="list-style-type: none"> 1. High tonnage truck flow to/from Site will disturb the traffic flow of future Route 4 (It's now under construction for hi-way). 2. Inflow of wasted water from new wholesale market to Route 4 will lessen the value of Route 4. 3. Predicted street venders will disturb the traffic flow on Route 4. 	<ol style="list-style-type: none"> 1. Temporal residences and chicken farm facilities exist in the site. Social problems from expropriation will supposedly occur. 	<ol style="list-style-type: none"> 1. Benefit of projected road from Route 4/Ring Road 8th will rise-up by new wholesale market. 2. No possibility of traffic jam and social problems
4. Land Price	Highest	Low	Lowest

Remark *1 : Budget and construction schedule of these 2 projected roads are now under investigation. But according to the explanation by Director of Public Work Section of Santa Cruz City, road pavement budget of 1999 dose not includes the budget for these 2 projected roads.

Table S-1 REQUIRED FLOOR AREA FOR PRODUCTS COLLECTION AND DISTRIBUTION CENTER

Production Area	Products Item	Planned handling volume				No. of unloading trucks			Sorting			Produce stocking			Loading			Boo/basket stocking area			Total platform area		
		peak collection volume (ton/month) A	planned average handling volume (ton/day) B	planned operation days per month C	planned average handling volume (ton/day) D=C*1.5	unloading tonnage of dominant trucks (ton) E	no. of unloading trucks (trucks/day) F=D/E	sorter's working capacity (ton/day/worker) G	required sorters (person/day) H=D*F	required floor area for sorter (m ² /person) I=H*G	required floor sorting area (m ²) J=H*G	required stockable in 1 m ² (ton/m ²) K=J*1.5	required stocking area (m ²) L=J*1.5	required unloading/loading area (approx. m ²) M=K*0.27	required tomato-box stocking area (m ²) N=D*1.34	required lettuce-basket stocking area (m ²) O=D*0.45	required pimient-basket stocking area (m ²) P=(M+N+O)*1.5	required total boo/basket stocking area (m ²) Q=H+K+P	total floor area of platform and boo/basket stocking area R=Q*1.125m ²	Required no. of platform U=R/112.5m ²			
Sannajpata	Potato	530	17.67	30	26.50	3.00	8.83	1.25	21.20	2.00	42.40	0.5	79.50	4.48									
	Tomato	120	4.00	30	6.00	3.00	2.00	1.25	4.80	2.00	9.60	0.6	15.00	9.70									
	Other Fruits	260	8.67	30	13.00	3.00	4.33	1.25	10.40	2.00	20.80	0.6	32.50	14.18									
	Total	910			45.50		15.17		36.40		72.80		127.00	34.29								255.36	2.14
Mairna	Potato	130	4.33	30	6.50	3.00	2.17	1.25	5.20	2.00	10.40	0.5	19.50	3.73									
	Tomato	100	3.33	30	5.00	3.00	1.67	1.25	4.00	2.00	8.00	0.6	12.50										
	Lettuce	120	4.00	30	6.00	0.75	8.00	-	0.00	0.00	0.00	0.09	160.00	13.33									
	Total	350			18.50		11.83		14.40		28.80		182.50	52.18									352.69
P. Grande	Potato	830	28.33	30	42.50	3.00	14.17	1.25	34.00	2.00	68.00	0.5	127.50	7.46									
	Tomato	200	6.67	30	10.00	3.00	3.33	1.25	8.00	2.00	16.00	0.6	25.00	7.46									
	Lettuce	250	8.33	30	12.50	0.75	16.67	-	0.00	0.00	0.00	0.09	208.33	27.78									
	Total	1,440			72.00		36.50		47.60		95.20		378.33	102.15									628.54
Comarapa	Potato	580	19.33	30	29.00	3.00	9.67	1.25	23.20	2.00	46.40	0.5	87.00	7.09									
	Tomato	190	6.33	30	9.50	3.00	3.17	1.25	7.60	2.00	15.20	0.6	23.75										
	Piment	50	1.67	30	2.50	0.60	4.17	-	0.00	0.00	0.00	0.07	53.57	6.94									
	Total	880			44.00		18.00		33.20		66.40		171.82	46.39									305.66
San Isidro	Potato	680	22.67	30	34.00	3.00	11.33	1.25	27.20	2.00	54.40	0.5	102.00	7.09									
	Tomato	190	6.33	30	9.50	3.00	3.17	1.25	7.60	2.00	15.20	0.6	23.75										
	Com.	410	13.67	30	20.50	3.00	6.83	1.25	16.40	2.00	32.80	0.5	61.50										
	Total	1,540			77.00		25.67		61.60		123.20		219.75	59.33									412.92
Suipina	Potato	890	29.67	30	44.50	3.00	14.83	1.25	35.60	2.00	71.20	0.5	133.50	17.54									
	Tomato	470	15.67	30	23.50	3.00	7.83	1.25	18.80	2.00	37.60	0.6	58.75										
	Other Veggies	120	4.00	30	6.00	3.00	2.00	1.25	4.80	2.00	9.60	0.6	15.00										
	Total	1,480			74.00		24.67		59.20		118.40		207.25	55.96									407.91
V. Grande	Potato	500	16.67	30	25.00	3.00	8.33	1.25	20.00	2.00	40.00	0.5	75.00	13.81									
	Tomato	370	12.33	30	18.50	3.00	6.17	1.25	14.80	2.00	29.60	0.6	46.25										
	Other Veggies	80	2.67	30	4.00	3.00	1.33	1.25	3.20	2.00	6.40	0.6	10.00										
	Total	1,240			64.00		15.83		38.00		76.00		172.50	46.58									334.25

Table 5-2 REQUIRED FLOOR AREA FOR MARKETING HALL - 1 IN NEW WHOLESALE MARKET

Target year	Planned handling Volume										Products stocking area		Units
	Estimated consumption volume in Sama Cruz City (ton/year)	Planned handling volume in Abasto Market and New Wholesale Market (ton/year)		Products items and their planned handling volume in New Wholesale Market A		planned operation days per year B	Planned average handling volume (ton/day) C=A/B	peak handling volume (ton/day) D=C*1.5	tonnage stockable in 1 m2 (ton/m2) I	required stocking area (m2) J=D/I	required no. of wholesalers section K=J/1.25m2		
		Abasto Market	New W. Market	Item	volume (ton/year)								
2005	380,000	103,000	239,000	Potato / Onion	116,000	365	317.81	476.71	0.5	953.42			
				Banana	29,000	365	79.45	119.18	0.4	297.95			
				Fruits (Citrus)	38,000	365	104.11	156.16	0.6	260.27	Fruit Box		
				Tomato	56,000	365	153.42	230.14	0.6	86.76	Fruit Box		
				Total	239,000			982.19		2,109.82	187.54		
2010	451,000	122,000	284,000	Potato / Onion	136,000	365	372.60	558.90	0.5	1,117.81			
				Banana	35,000	365	95.89	143.84	0.4	359.59			
				Fruits (Citrus)	48,000	365	131.51	197.26	0.6	328.77	Fruit Box		
				Tomato	65,000	365	178.08	267.12	0.6	445.21	Fruit Box		
				Total	284,000			1,167.12		2,509.36	223.05		

Remark :
 1. Wholesalers unit 3 m x 5 m
 2. 1 cluster of wholesalers unit : 56 units
 2005 : 56 units/cluster x 3 cluster + 20 units = 188 units
 2010 : 56 units/cluster x 4 cluster = 224 units

Table 6-1 PROPOSED RULES AND REGULATIONS FOR NEW WHOLESALE MARKET

Item of rules/regulations	Contents of the proposed rules/regulations
1. Organization	
Management Committee	Establishment of Management Committee composed of the representatives of wholesalers associations, associate members (retailer, transporter) and observers (Prefecture and Municipal Government).
Management Body	Establishment of Management Body under Management Committee. Management Body is in charge of operation/Maintenance under the supervisor of Municipal Government.
Users Organizations	Users organizations (wholesalers, retailers, transporters and producers associations) undertake operation/maintenance under the instruction of Management Body.
2. Management	
• Kind of commodities	Fruits and Vegetables and fresh product
• Qualification and registration of users	Qualification of the wholesalers: trading and financial capacity, experience of wholesale activity, management capability, wholesale activity
• Transaction system	<ul style="list-style-type: none"> • Direct negotiation and consignment • Daily payment by cash after delivery • Prohibition of transaction among wholesalers
• Tariff (fee)	<ul style="list-style-type: none"> • Rental charge of sales section • Entrance and parking charge of vehicles by capacity
• Operating days and hours	<ul style="list-style-type: none"> • Operating hours for wholesale market <ul style="list-style-type: none"> For wholesale activity: 7 a.m. ~ 1 p.m. For cleaning: 1 p.m. ~ 6 p.m. For entering and unloading of trucks: 6 p.m. ~ 7 a.m. • Operation hours for farmers market <ul style="list-style-type: none"> Hours: 2 p.m. ~ 5 p.m. Days: Two days per week
• Standard of product packing	Standard of packing: Sack, box basket and pack by product
• Collection/Publication of marketing information	Collection of information on price and volume of fruits and vegetables everyday and publication by newspaper and radio.
• Monitoring of utilization of selling section	Monitoring on utilization efficiency of sales section. Loss of qualification by low efficiency of utilization through monitoring
• Utilization of facilities	Rule of utilization of facilities
• Prohibition/Penalties	
3. Operation/Maintenance	
• Security control	
• Price/weight control	
• Control of entering, circulating and parking of vehicle	
• Mediation of conflict	
• Sanitary control	
• Garbage collection	

Source: (1) Law/Regulation - Law/Regulation on Wholesale Market in Japan, Brazil and Germany
 - Regulation on Abasto Market in Bolivia.

(2) Field Survey of Phase I of Feasibility Study for the Improvement of Agricultural Marketing System in Santa Cruz, Bolivia, 1998

Table 6-2 CHARACTERISTICS OF THREE OPTIONS FOR THE MANAGEMENT BODY OF THE NEW WHOLESALE MARKET

1. Contents of the Project	Option 1 Local Gov.	Option 2 Public Corporation	Option 3 Private Sector
1. Acquisition of the Land	S.C. Municipal Gov. acquires the land	S.C. Municipal Gov. acquires the land	S.C. Municipal Gov. acquires the land
2. Construction Stage (Fund & Construction)			
(1) Implementation Agency	S.C. Municipal Gov. is burdened the construction fund. Prefecture Gov. gives technical/financial assistance for Municipal Gov.	S.C. Prefecture, Municipal Gov. and User's jointly invest and establish the public corporation	Users establish the organization (wholesale company) and provide the fund. S.C. Prefecture and Municipal Gov. support the users' organization to provide the fund because the market has a public function.
(2) Basic Infrastructure	S.C. Prefecture & Municipal Gov. construct by their own or public fund.	Public Corporation constructs by provided fund.	S.C. Prefecture & Municipal Gov. construct.
(3) Common Facilities	S.C. Prefecture & Municipal Gov. construct by their own or public fund.	Public Corporation constructs by provided fund.	Construction is done by Users Organization, Prefecture & Municipal Gov. Support provision of fund.
(4) Users Facilities	S.C. Municipal Gov. construct the facilities and rent/sell to users in order to recover the investment	Public Corporation constructs the facilities and rent/sell to users.	Users constructs the facilities
(5) Common equipment (Fork Lift, Computers etc.)	S.C. Municipal Gov. Purchases the equipment and rent/sell to users in order to recover the investment.	Public Corporation purchases and rent/sell to users.	Wholesale Company purchases.
(6) Private Owned Equipment	Users are burdened.	Users are burdened.	Individual Users are burdened.
3. Management/Operation Stage (Fund and Operation)			
(1) Implementation Agency	S.C. Municipal Gov. has responsibility for Management/Operation. Actually Management Committee manages and operates the market under the supervision of Municipal Gov.	Public Corporation establishes the Board of Directors. The Board of Director has responsibility for Management/Operation.	Private Users Organization is established through the legal procedure. (Wholesale Company based upon cooperative law or commercial law).
(2) Management System	Management Committee monitors and inspects the operational conditions, and instructs to improve the management/operation if necessary	Board of Director monitors the operational conditions every year and audits the financial conditions.	Board of directors composed of members of company monitors and secures soundness of the business. (Profitability, fairness)

Source : Field survey of Feasibility study for the Improvement of Agricultural Marketing System in Santa Cruz, Bolivia, 1998.

Table 6-3 EVALUATION OF THREE OPTIONS ON MANAGEMENT BODY OF THE NEW WHOLESALE MARKET

	Option 1 Municipal GOV.	Option 2 Public Corporation	Option 3 Private Sector
1. Construction			
(1) Provision of fund	Prefecture and Municipal GOV. can provide fund from their own capital or domestic and international sources.	Prefecture and Municipal GOV. can provide fund from their own capital or domestic and international sources.	Municipal GOV. Prepares the premise and infrastructure. Small-scale traders have not their own capital and it's difficult to get loan from City bank.
(2) Repayment of fund	Municipal GOV. bears the depreciation cost. Users only pay the management/ operation cost.	Users have pay depreciation cost and interest.	Users are burdened by depreciation cost and high interest.
(3) Supervision during construction	Municipal GOV. has competent engineers.	Public corporation have to employ engineer	Private sector has to employ engineer.
2. Management/Operation			
(1) Set-up management/operation system	Municipal GOV. has many project and experiences to set-up management system.	It is difficult to collect competent persons.	It takes a long time to unify many users organization and set-up one organization.
(2) Competent of management/operation	Initiative of management by public agencies is limited because it has possibility to be under the political influence.	There are possibilities to exclude small-scale producers and traders except member of corporation.	Private sector has not competent to mediate conflict among users organizations
(3) Provision of operation fund	Municipal GOV. can collect rental fee of sections as a part of operational fund and cover the deficit in case of red figure.	There is a possibility to be unable to repay loan.	There is a possibility to be unable to repay loan.
(4) Securing talents	Municipal GOV. has many talents except commercial business.	Securing talent from private sector is difficult.	Securing talent from private sector is difficult.
(5) Efficiency of management/operation	Government officer has not competent on commercial business.	Public corporation can employ a talent on commercial business.	Efficiency of management/ operation is low if there is no cooperation among user organizations.
(6) Securing equality of use	Conditions same as Abasto Market under CRAMA will be taken place in the New Wholesale Market. Wholesale function in the New Wholesale Market will be lost.	There is a possibility of monopolization by Board of Director.	It is possible to exclude the persons without member of users' organizations.
(7) Promotion of marketing industries	It is difficult to promote private wholesaler's organization.	There is a possibility that public corporation oppress private sectors.	Users can operate business unrestricted under unified organization.
3. Environmental control			
	It is no problem if rules/ regulations on sanitary control and garbage treatment will be followed.	It is no problem if rules/ regulations on sanitary control and garbage treatment will be followed under one organization.	It is no problem if rules/ regulations on sanitary control and garbage treatment will be followed under one organization.

Source: Field survey of Feasibility study for the Improvement of Agricultural Marketing System in Santa Cruz, Bolivia, 1998.

Table 6-4 PROPOSED OPERATION/MAINTENANCE SYSTEM OF NEW WHOLESALE MARKET

	Municipal Government	Management Committee and Body	Users Organization
(1) Management System			
a. Basic Infrastructure	O/M and rehabilitation by Municipal GOV.	Request rehabilitation for Municipal GOV.	Request rehabilitation for Management Committee.
b. Common Facilities	O/M and rehabilitation by Municipal GOV.	Request rehabilitation for Municipal GOV.	Request rehabilitation for Management Committee.
c. Users Facilities	O/M and rehabilitation by Municipal GOV.	Request rehabilitation for Municipal GOV.	Request rehabilitation for Management Committee.
d. Common Equipment	O/M and rehabilitation by Municipal GOV.	Request rehabilitation for Municipal GOV.	Request rehabilitation for Management Committee.
e. Private Owned Equipment	-	-	Users conduct O/M.
(2) Operation/Maintenance System			
1) Product traded (target product are fruits/vegetables. However, there is a possibility to trade other product.)	Supervision by Municipal GOV.	Decision by Management Committee.	Request for Management Committee.
2) Qualification and registration of users	Supervision by Municipal GOV.	Judgement of qualification.	-
3) Transaction System (Face to Face transaction, cash payment at the same day, Prohibition of trade between wholesalers)	Supervision by Municipal GOV.	Decision by Management Committee.	Operation and execution.
4) Tariff System	Supervision and collection tariff by Municipal GOV.	Decision by Management Committee.	Request of revision of tariff.
5) Operational Days and Times	Supervision by Municipal GOV.	Decision by Management Committee.	Request of revision by users' organization.
6) Standard of Packing	Supervision by Municipal GOV.	Decision by Management Committee.	Request of revision by users' organization.
7) Collection and Publishing of Marketing Information	Supervision by Municipal GOV.	Collection and Publishing by Management Committee.	Obligation of provision of information.
8) Monitoring the Utilization of Sales sections	Supervision by Municipal GOV.	Monitoring by Management Committee.	Obligation of efficient utilization.
9) Rules of Utilization of Facilities	Supervision by Municipal GOV.	Monitoring of implementation of rules.	Obligation of implementation of rules.
10) Penalty	Supervision by Municipal GOV.	Implementation	Prevention of Violation.
11) Security Control	Supervision by Municipal GOV.	Implementation	Obligation of Cooperation.
12) Price and Weight Control	Supervision by Municipal GOV.	Monitoring	Implementation
13) Control of Vehicles Circulating inside the Market	Supervision by Municipal GOV.	Implementation	Obligation of Cooperation.
14) Mediation of Dispute	Supervision by Municipal GOV.	Mediation of dispute between users organizations.	Mediation of dispute between members.
15) Sanitary Control and Garbage Disposal	Supervision by Municipal GOV.	Implementation	Obligation of Cooperation

Remarks: O/M; Operation/maintenance

Sources: Field survey of Feasibility Study for the Improvement of Agricultural Marketing system in Santa Cruz, Bolivia, 1998

Table 7-1

PROPOSED IMPLEMENTATION SCHEDULES FOR INSTITUTIONAL TRAINING AND TECHNICAL EXTENSION PROGRAMS - 1/2

C/D Center	Program	Year											Implementation	
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 & on		
San Isidro	Inst. Training Program													By Project
	1. Preparatory Stage													
	- Mass Guidance													
	- Training Program													By C/D center
	2. Initial Stage													
	- Guidance/Training Program													
	3. Advanced Stage													Need basis by CIAT
	- Training Program													
	Extension Program													
	1. Preliminary Survey													
2. Verification Trial														
3. Demonstration Plot														
4. Field Extension Activities														
5. Staff Training														
6. Farmers Training														
7. Short Farmers Training														
8. Mass Guidance														
9. Study Tour														
10. Marketing Guidance/Trials														
Samaipata	Inst. Training Program													By Project
	1. Preparatory Stage													
	- Mass Guidance													
	- Training Program													By C/D center
	2. Initial Stage													
	- Guidance/Training Program													
	3. Advanced Stage													Need basis by CIAT
	- Training Program													
	Extension Program													
	1. Preliminary Survey													
2. Verification Trial														
3. Demonstration Plot														
4. Field Extension Activities														
5. Staff Training														
6. Farmers Training														
7. Short Farmers Training														
8. Mass Guidance														
9. Study Tour														
10. Marketing Guidance/Trials														
Vallegrande	Inst. Training Program													By Project
	1. Preparatory Stage													
	- Mass Guidance													
	- Training Program													By C/D center
	2. Initial Stage													
	- Guidance/Training Program													
	3. Advanced Stage													Need basis by CIAT
	- Training Program													
	Extension Program													
	1. Preliminary Survey													
2. Verification Trial														
3. Demonstration Plot														
4. Field Extension Activities														
5. Staff Training														
6. Farmers Training														
7. Short Farmers Training														
8. Mass Guidance														
9. Study Tour														
10. Marketing Guidance/Trials														
Saipina	Inst. Training Program													By Project
	1. Preparatory Stage													
	- Mass Guidance													
	- Training Program													By C/D center
	2. Initial Stage													
	- Guidance/Training Program													
	3. Advanced Stage													On need basis by CIAT
	- Training Program													
	Extension Program													
	1. Preliminary Survey													
2. Verification Trial														
3. Demonstration Plot														
4. Field Extension Activities														
5. Staff Training														
6. Farmers Training														
7. Short Farmers Training														
8. Mass Guidance														
9. Study Tour														
10. Marketing Guidance/Trials														

Table 7-1

PROPOSED IMPLEMENTATION SCHEDULES FOR INSTITUTIONAL TRAINING AND TECHNICAL EXTENSION PROGRAMS - 2/2

C/D Center	Program	Year											Implementation
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
Mairana	Inst. Training Program												_____ By Project _____ By C/D center - - - - - Need basis by CIAT - - - - - Combined with P. Grande/Comarapa
	1. Preparatory Stage												
	- Mass Guidance												
	- Training Program												
	2. Initial Stage												
	- Guidance/Training Program												
	3. Advanced Stage												
	- Training Program												
	Extension Program												
	1. Preliminary Survey												
	2. Verification Trial												
3. Demonstration Plot													
4. Field Extension Activities													
5. Staff Training													
6. Farmers Training													
7. Short Farmers Training													
8. Mass Guidance													
9. Study Tour													
10. Marketing Guidance/Trials													
Pampa Grande	Inst. Training Program											_____ By Project _____ By C/D center - - - - - Need basis by CIAT - - - - - Combined with Mairana & Comarapa	
	1. Preparatory Stage												
	- Mass Guidance												
	- Training Program												
	2. Initial Stage												
	- Guidance/Training Program												
	3. Advanced Stage												
	- Training Program												
	Extension Program												
	1. Preliminary Survey												
	2. Verification Trial												
3. Demonstration Plot													
4. Field Extension Activities													
5. Staff Training													
6. Farmers Training													
7. Short Farmers Training													
8. Mass Guidance													
9. Study Tour													
10. Marketing Guidance/Trials													
Comarapa	Inst. Training Program											_____ By Project _____ By C/D center - - - - - Need basis by CIAT - - - - - Combined with Mairana/P. Grande	
	1. Preparatory Stage												
	- Mass Guidance												
	- Training Program												
	2. Initial Stage												
	- Guidance/Training Program												
	3. Advanced Stage												
	- Training Program												
	Extension Program												
	1. Preliminary Survey												
	2. Verification Trial												
3. Demonstration Plot													
4. Field Extension Activities													
5. Staff Training													
6. Farmers Training													
7. Short Farmers Training													
8. Mass Guidance													
9. Study Tour													
10. Marketing Guidance/Trials													

Table 9-1 PROPOSED ORGANIZATION SET-UP OF PROJECT AND SUB-PROJECT OFFICE AND ESTIMATED ADMINISTRATION COSTS

I. Organization

Projects Office in Santa Cruz Organization	Functions	Staffing (No. of Staff)				
		Year 2000 - 2001	2002 - 2003	2004 - 2008	2004 - 2008	2004 - 2008
- Coordination with Santa Cruz Municipal Authority in improvement of agricultural marketing system in the department					Project Manager	1
- Financial support to municipal government during initial stage C/D operation					Administrative Staff	1
					Secretary	1
Sub-Project Office in San Isidro C/D Center						
Organization	Functions	Staffing (No. of Staff)				
		Year 2000 - 2001	2002 - 2003	2004 - 2008	2004 - 2008	2004 - 2008
Sub-Project Manager	- Guidance & support for development & Operation of C/D centers				Sub-Project Manager	1
Planning & Development Section	- Monitoring development & operation of C/D centers				Section Chief	3
Technical & Institutional Guidance Section	- Institutional training & technical extension program to farmers & personnel concerned				Technical Staff	2
Administration Section					Administrative Staff	1

II. Estimated Administration Costs

Cost Items	Year										Total	Remarks
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2008		
1. Personnel Expenses	104,000	104,000	118,000	118,000	92,000	92,000	92,000	92,000	92,000	92,000	904,000	
- Project Manager	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	180,000	US\$20,000/year
- Sub-Project Manager	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	135,000	US\$15,000/year
- Section Chief	36,000	36,000	36,000	36,000	24,000	24,000	24,000	24,000	24,000	24,000	264,000	US\$12,000/year
- Technical Staff	16,000	16,000	24,000	24,000	16,000	16,000	16,000	16,000	16,000	16,000	160,000	US\$ 8,000/year
- Administrative Staff	12,000	12,000	18,000	18,000	12,000	12,000	12,000	12,000	12,000	12,000	120,000	US\$ 6,000/year
- Secretary	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	45,000	US\$ 5,000/year
2. Procurements of Vehicle/Equipment etc.	45,000	11,000	40,000								96,000	
- Vehicle	40,000		40,000								80,000	US\$40,000/unit
- Motorcycle		6,000									6,000	US\$ 3,000/unit
- Others	5,000	5,000									10,000	computer, furnitures etc.
3. Operation & Administration Costs	31,200	31,200	35,400	35,400	27,600	27,600	27,600	27,600	27,600	27,600	271,200	30% of personnel expenses
Total Costs	180,200	146,200	193,400	153,400	119,600	119,600	119,600	119,600	119,600	119,600	1,271,200	

Table 9-2 PROPOSED DEVELOPMENT SCHEDULE OF C/D CENTERS

Collection Center/Development Step	Year					
	1999	2000	2001	2002	2003	2004
San Isidro C/D Center(Pilot Project)						
Steering Committee for Development	-----	-----				
Trial Operation at PETHOSAM Facility	-----	-----				
Institutional Training to Potential Users	-----	-----				
Guidance & Organization of Users Groups		-----	-----	-----	-----	-----
Construction		-----	-----	-----	-----	-----
Operation & Management Arrangement		-----	-----	-----	-----	-----
Steering Committee for O&M		-----	-----	-----	-----	-----
Preparatory Stage	-----	-----				
Operation Stage			-----	-----	-----	-----
Samaipata C/D Center						
Steering Committee for Development			-----	-----	-----	-----
Trial Operation at Existing Facility			-----	-----	-----	-----
Institutional Training to Potential Users			-----	-----	-----	-----
Guidance & Organization of Users Groups				-----	-----	-----
Construction				-----	-----	-----
Operation & Management Arrangement				-----	-----	-----
Steering Committee for O&M				-----	-----	-----
Preparatory Stage			-----	-----	-----	-----
Operation Stage					-----	-----
Vallegrande & Saipina C/D Centers						
Steering Committee for Development			-----	-----	-----	-----
Institutional Training to Potential Users			-----	-----	-----	-----
Guidance & Organization of Users Groups				-----	-----	-----
Construction				-----	-----	-----
Operation & Management Arrangement				-----	-----	-----
Steering Committee for O&M				-----	-----	-----
Preparatory Stage			-----	-----	-----	-----
Operation Stage					-----	-----
Mairana, Pampa Grande & Comarapa C/D Center						
Steering Committee for Development				-----	-----	-----
Institutional Training to Potential Users				-----	-----	-----
Guidance & Organization of Users Groups					-----	-----
Construction					-----	-----
Operation & Management Arrangement					-----	-----
Steering Committee for O&M					-----	-----
Preparatory Stage				-----	-----	-----
Operation Stage					-----	-----

Table 9-3

OVERALL IMPLEMENTATION PLANS FOR DEVELOPMENT AND OPERATION OF C/D CENTERS - 1/2

C/D Center/Development Stage & Activities	Agencies	Year											
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Project & Sub-Project Office	Prefecture	-----											
San Isidro C/D Center (Pilot Project)													
Development Stage													
- Preparatory Stage	-	---	---	---	---	---	---	---	---	---	---	---	---
- Initial Stage	-			---	---	---	---	---	---	---	---	---	---
- Advanced Stage	-								---	---	---	---	---
Development Activities													
- Steering Committee for Development	A	---	---	---	---	---	---	---	---	---	---	---	---
- Trial Operation at PETHOSAM Facility	B	---	---	---	---	---	---	---	---	---	---	---	---
- Institutional Training	C	---	---	---	---	---	---	---	---	---	---	---	---
	D			---	---	---	---	---	---	---	---	---	---
- Technical Extension	E			---	---	---	---	---	---	---	---	---	---
	D								---	---	---	---	---
- Construction	F		---	---	---	---	---	---	---	---	---	---	---
- Operation & Management Arrangement	A		---	---	---	---	---	---	---	---	---	---	---
- Steering Committee for O & M	A		---	---	---	---	---	---	---	---	---	---	---
- Operation of C/D Center	D												
Samalpata C/D Center													
Development Stage													
- Preparatory Stage	-			---	---	---	---	---	---	---	---	---	---
- Initial Stage	-					---	---	---	---	---	---	---	---
- Advanced Stage	-									---	---	---	---
Development Activities													
- Steering Committee for Development	A			---	---	---	---	---	---	---	---	---	---
- Trial Operation at Existing Facility	B			---	---	---	---	---	---	---	---	---	---
- Institutional Training	C			---	---	---	---	---	---	---	---	---	---
	D					---	---	---	---	---	---	---	---
- Technical Extension	E					---	---	---	---	---	---	---	---
	D									---	---	---	---
- Construction	F				---	---	---	---	---	---	---	---	---
- Operation & Management Arrangement	A				---	---	---	---	---	---	---	---	---
- Steering Committee for O & M	A				---	---	---	---	---	---	---	---	---
- Operation of C/D Center	D												
Vallegrande & Saipina C/D Center													
Development Stage													
- Preparatory Stage	-			---	---	---	---	---	---	---	---	---	---
- Initial Stage	-					---	---	---	---	---	---	---	---
- Advanced Stage	-									---	---	---	---
Development Activities													
- Steering Committee for Development	A			---	---	---	---	---	---	---	---	---	---
- Institutional Training	C			---	---	---	---	---	---	---	---	---	---
	D					---	---	---	---	---	---	---	---
- Technical Extension	E					---	---	---	---	---	---	---	---
	D									---	---	---	---
- Construction	F				---	---	---	---	---	---	---	---	---
- Operation & Management Arrangement	A				---	---	---	---	---	---	---	---	---
- Steering Committee for O & M	A				---	---	---	---	---	---	---	---	---
- Operation of C/D Center	D												

Remark: Agencies --- Implementation agencies of development activities: A = Sub-project office, B = Sub-project office/ASOFRUT, C = Sub-project office, D = C/D center, E = Sub-project office/CIAT, F = Municipal Gov.

Table 9-3 OVERALL IMPLEMENTATION PLANS FOR DEVELOPMENT AND OPERATION OF C/D CENTERS - 2/2

Collection Center/Development Activities	Agencies	Year											
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Project & Sub-Project Office	Prefecture	-----											
Mairana C/D Center													
Development Stage													
- Preparatory Stage	-				-----								
- Initial Stage	-					-----							
- Advanced Stage	-											-----	-----
Development Activities													
- Steering Committee for Development	A				=====								
- Institutional Training	C				=====								
	D					=====							
- Technical Extension	E					=====							
	D											=====	
- Construction	F					=====							
- Operation & Management Arrangement	A					=====							
- Steering Committee for O & M	A					=====							
- Operation of C/D Center	D											=====	
Pampa Grande C/D Center													
Development Stage													
- Preparatory Stage	-				-----								
- Initial Stage	-					-----							
- Advanced Stage	-											-----	-----
Development Activities													
- Steering Committee for Development	A				=====								
- Institutional Training	C				=====								
	D					=====							
- Technical Extension	E					=====							
	D											=====	
- Construction	F					=====							
- Operation & Management Arrangement	A					=====							
- Steering Committee for O & M	A					=====							
- Operation of C/D Center	D											=====	
Comarapa C/D Center													
Development Stage													
- Preparatory Stage	-				-----								
- Initial Stage	-					-----							
- Advanced Stage	-											-----	-----
Development Activities													
- Steering Committee for Development	A				=====								
- Institutional Training	C				=====								
	D					=====							
- Technical Extension	E					=====							
	D											=====	
- Construction	F					=====							
- Operation & Management Arrangement	A					=====							
- Steering Committee for O & M	A					=====							
- Operation of C/D Center	D											=====	

Remark: Agencies --- Implementation agencies of development activities: A = Sub-project office, B = Sub-project office/ASOFRUT, C = Sub-project office, D = C/D center, E = Sub-project office/CIAT, F = Municipal Gov.

Table 9-4 IMPLEMENTATION SCHEDULE OF THE PROJECT AND TRAINING AND TECHNICAL ASSISTANCE FOR THE NEW WHOLESALE MARKET, ABASTO MARKET, AND C/D CENTERS

Item	1999			2000			2001			2002			2003			2004			2005			2006			2007			2008			2009			2010		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Development of the Project Structure																																				
1. Preparation and submission of request letter on financial aid and technical assistance																																				
2. Office for project preparation																																				
3. Preparation Committee																																				
4. Mixed Board																																				
5. Project Office for NWM, Abasto Mkt. & C/D Centers																																				
Development of NWM and Abasto Market																																				
1. Management Committee of NWM																																				
2. Management Body of NWM																																				
3. Management Committee of Abasto Market																																				
4. Management Body of Abasto Market																																				
5. Development of Law/Regulation of NWM																																				
6. Development of Law/Regulation of Abasto Market																																				
7. Qualification / Registration of Wholesalers																																				
8. Land Acquisition and Site Preparation																																				
9. Design and Construction of the NWM																																				
10. Management and O/M of the NWM																																				
11. Management and O/M of the Abasto Market																																				
Training in NWM																																				
1. Program of Domestic Training and Technical Assist.																																				
2. Implementation of Domestic Training and TA																																				
For Group A - Marketing System																																				
- Law/Regulation and Organization																																				
- Management and O/M																																				
For Group B - Marketing System																																				
- Law/Regulation																																				
- Management and O/M																																				
For Group C - Organizing Small Scale Producer/Trader																																				
- Rule/Regulation and O/M																																				
3. Study Tour in CBB																																				
For Group A																																				
For Group B																																				
Development of C/D Centers in Production Areas																																				
1. Program of Domestic Training and Technical Assist.																																				
2. Sub-Project Office (Pilot Project)																																				
San Isidro C/D Center (Pilot Project)																																				
Steering Committee for Development																																				
Trial Operation at PETHOSAM Facility																																				
Technical Extension																																				
Construction																																				
Steering Committee for O & M																																				
Operation of C/D Center																																				
3. Samajona C/D Center																																				
Steering Committee for Development																																				
Trial Operation at Existing Facility																																				
Technical Extension																																				
Construction																																				
Steering Committee for O & M																																				
Operation of C/D Center																																				
4. Vallegrande & Saipina C/D Center																																				
Steering Committee for Development																																				
Technical Extension																																				
Construction																																				
Steering Committee for O & M																																				
Operation of C/D Center																																				
5. Mairana, Pampa Grande, & Comarapa C/D Centers																																				
Steering Committee for Development																																				
Technical Extension																																				
Construction																																				
Steering Committee for O & M																																				
Operation of C/D Center																																				
Training in C/D Centers																																				
1. San Isidro C/D Center (Pilot Project)																																				
Institutional Training																																				
Technical Extension																																				
Joint Shipment and Selling																																				
Quality Control and Accounting																																				
2. Samajona C/D Center																																				
Institutional Training																																				
Technical Extension																																				
Joint Shipment and Selling																																				
Quality Control and Accounting																																				
3. Vallegrande & Saipina C/D Center																																				
Institutional Training																																				
Technical Extension																																				
Joint Shipment and Selling																																				
Quality Control and Accounting																																				
4. Mairana, Pampa Grande, & Comarapa C/D Centers																																				
Institutional Training																																				
Technical Extension																																				
Joint Shipment and Selling																																				
Quality Control and Accounting																																				
Training in Foreign Country and Technical Assistance by Foreign Expert																																				
1. Preparation and submission of Request Letter for TA for Foreign Country																																				
2. Program of Training and TA by Foreign Country																																				
3. TA by Expert from Advanced Country																																				
I. Preparation Stage																																				
A- Long Term Technical Advisor for C/D, NWM, and Abasto Market (2 years)																																				
B- Short Term Technical Advisor for C/D Pilot Project (1 year)																																				
II. Implementation Stage																																				
C- Long Term Technical Advisor for Coordination and Rationalization of Marketing (4 years)																																				
D- Long Term Technical Advisor for C/D, Joint Shipment and Sales (7 years)																																				
E- Long Term Technical Advisor for Quality Control and Accounting System (on Joint Collector/Producer/Trader for Management and O/M of NWM and Abasto Market (2 years))																																				
F- Long Term Technical Advisor for Management and O/M of NWM and Abasto Market (4 years)																																				
4. Training in an Advanced Country																																				
For Group A																																				
5. Study Tour in MERCOSUR Country																																				
For Group A																																				

Remarks: NWM: New Wholesale Market; C/D Center: Collection/Distribution Center; MC: Management Committee; MB: Management Body; O/M: Operation/Maintenance

Table 9-5 OVERALL COSTS FOR PROJECT IMPLEMENTATION TO BE FINANCED BY THE PROJECT OFFICE NO.1

Unit: US\$ 1,000

Cost Items	Year											Total
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008		
1. Institutional Training & Technical Extension Program Costs	9.0	26.4	83.8	159.0	163.8	131.7	119.2	63.0	66.9	27.5		850.3
- Institutional Training Program Costs	9.0	15.5	57.2	105.2	48.0							234.9
- Technical Extension Program Costs		10.9	26.6	53.8	115.8	131.7	119.2	63.0	66.9	27.5		615.4
2. Administration Costs of Project Office & Sub-Project Office		180.2	146.2	193.4	153.4	119.6	119.6	119.6	119.6	119.6		1271.2
Total Costs for Project Implementation	9.0	206.6	230.0	352.4	317.2	251.3	238.8	182.6	186.5	147.1		2,121.5

Remarks 1: Institutional Training & Technical Extension Program Costs --- details are shown in Tables A.1.6-6 & 6-8.

Remarks 2: Administration Costs of Project Office & Sub-Project Office --- details are shown in Tables A.1.7-1.

Table 9-6 INCOME STATEMENT AND CASH FLOW FOR MANAGEMENT BODY OF NEW WHOLESALE MARKET

Unit: US\$

Income Statement	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
A. Revenue	173,724	348,071	348,909	349,548	350,624	351,701	352,778	353,854	354,931	356,008	357,084	358,161	359,237	
1) Rental fee of space	162,367	324,733	324,733	324,733	324,733	324,733	324,733	324,733	324,733	324,733	324,733	324,733	324,733	
2) Entering truck charge	11,357	23,338	24,076	24,815	25,891	26,968	28,045	29,121	30,198	31,274	32,351	33,428	34,504	
B. Expense	293,362	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	
1) Operation	66,744	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	
2) Maintenance	28,641	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	
3) Depreciation	187,977	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	
4) Interest														
C. Income before Depr. & Interest	78,338	157,301	158,039	158,778	159,854	160,931	162,008	163,084	164,161	165,237	166,314	167,391	168,467	
D. Net Income	-109,639	-218,654	-217,915	-217,176	-216,100	-215,023	-213,947	-212,870	-211,793	-210,717	-209,640	-208,564	-207,487	
Cash Flow														
A. Source of Funds	8,152,423	8,424,904	158,039	158,778	159,854	160,931	162,008	163,084	164,161	165,237	166,314	167,391	168,467	
1) Government	8,152,423	8,346,566												
2) Loan														
3) Own equity														
4) Depreciation	187,977	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	
5) Net income	-109,639	-218,654	-217,915	-217,176	-216,100	-215,023	-213,947	-212,870	-211,793	-210,717	-209,640	-208,564	-207,487	
B. Uses of Funds	8,152,423	8,346,566												
1) Building	8,073,969	8,298,337												
2) Equipment	78,454													
3) Reinvestment														
4) Repayment of loan														
C. Net cash flow	78,338	157,301	158,039	158,778	159,854	160,931	162,008	163,084	164,161	165,237	166,314	167,391	168,467	

Remarks:

1. Revenue (rental and truck charge) and Expenses (Operation, maintenance and depreciation) during the 1st year of operation will be approximately half of normal years operation due to phased construction.
2. Rental space charged at Bs.25/day for one lot (15 sepm)
3. Truck charge at Bs.1 for jeep, Bs.3 for 5 ton truck, Bs.5 for 10 ton truck, and Bs.10 for 20 ton truck.
4. Depreciation, Maintenance and Reinvestment costs are calculated based on 65% of Building/Equipment cost assuming depreciation, maintenance & reinvestment are undertaken at local prices by local contractors/suppliers.
5. Operation expense (personnel, utilities, electricity, etc.) rationalized for effective operation.

**Table 9-7 INCOME STATEMENT AND CASH FLOW FOR MANAGEMENT BODY OF NEW WHOLESALE MARKET
(REVENUE INCREASED TO COVER DEPRECIATION)**

Unit: US\$

Income Statement	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
A. Revenue	285,500	566,248	567,725	569,202	571,356	573,509	575,662	577,815	579,969	582,122	584,275	586,428	588,582	590,735	592,888	595,041	
1) Rental fee of space	259,786	519,573	519,573	519,573	519,573	519,573	519,573	519,573	519,573	519,573	519,573	519,573	519,573	519,573	519,573	519,573	
2) Entering truck charge	22,714	46,675	48,152	49,629	51,783	53,936	56,089	58,242	60,396	62,549	64,702	66,855	69,009	71,162	73,315	75,468	
B. Expense	283,362	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	
1) Operation	66,744	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	
3) Maintenance	28,641	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	
4) Depreciation	187,977	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	
5) Interest	187,115	375,478	376,955	378,432	380,586	382,739	384,892	387,045	389,199	391,352	393,505	395,658	397,811	399,965	402,118	404,271	
C. Income before Dep. & Interest	-862	-476	1,001	2,478	4,631	6,785	8,938	11,091	13,244	15,398	17,551	19,704	21,857	24,010	26,164	28,317	
D. Net Income	8,152,423	8,535,681	375,478	376,955	378,432	380,586	382,739	384,892	387,045	389,199	391,352	393,505	395,658	397,811	399,965	402,118	404,271
E. Source of Funds	8,152,423	8,535,681	375,478	376,955	378,432	380,586	382,739	384,892	387,045	389,199	391,352	393,505	395,658	397,811	399,965	402,118	404,271
Cash Flow	8,152,423	8,535,681	375,478	376,955	378,432	380,586	382,739	384,892	387,045	389,199	391,352	393,505	395,658	397,811	399,965	402,118	404,271
1) Government																	
2) Loan																	
3) Own equity																	
4) Depreciation	187,977	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954
5) Net income	-862	-476	1,001	2,478	4,631	6,785	8,938	11,091	13,244	15,398	17,551	19,704	21,857	24,010	26,164	28,317	30,470
B. Uses of Funds	8,152,423	8,535,681	375,478	376,955	378,432	380,586	382,739	384,892	387,045	389,199	391,352	393,505	395,658	397,811	399,965	402,118	404,271
1) Building	8,073,969	8,298,337															
2) Equipment	78,454	48,229															
3) Reinvestment																	
4) Reinvestment of loan																	
C. Net cash flow	187,115	375,478	376,955	378,432	380,586	382,739	384,892	387,045	389,199	391,352	393,505	395,658	397,811	399,965	402,118	404,271	406,424

Remarks

1. Revenue (rental and truck charge) and Expenses (Operation, maintenance and depreciation) during the 1st year of operation will be approximately half of normal years operation due to phased construction.
2. Rental space charged at Ba.40/day for one lot (15 sqm)
3. Truck charge at Ba.2 for jeep, Ba.6 for 5 ton truck, Ba.10 for 10 ton truck, and Ba.20 for 20 ton truck.
4. Depreciation, Maintenance and Reinvestment costs are calculated based on 65% of Total Cost assuming depreciation, maintenance & reinvestment are undertaken at local prices by local contractors/suppliers.
5. Operation expense (personnel, utilities, electricity, etc.) rationalized for effective operation.

Table 10-1 ENVIRONMENTAL IMPACT ASSESSMENT -COLLECTION / DISTRIBUTION CENTER (REHABILITATION AND NEW CONSTRUCTION) - 1/2

Activity	Potential Impact	Classification	Countermeasures to be Considered
EXECUTION / CONSTRUCTION STAGE			
Land Preparation, Site clearing / tree cutting	- Stripping of existing vegetation and some trees	T, D, Lc, A	To replant trees and other landscaping work after construction completed.
Infrastructure Preparation, Excavation (Cut and Fill)	- Removal of some soil - Importing of soil to use as fill	T, D, Lc, A	Unwanted or unsuitable excavated soil should be disposed off in a proper place.
Infrastructure / Superstructure Rehabilitation / Construction	- Construction activities on site will create noise, dust, and increase construction traffic on road	T, D, Lc, A	Construction activities should be restricted to working hours and constructional plant traffic should be cautioned to travel at low speed especially passing through populated areas.
Utilities, Temporary services (water, electricity, telephone) supply	- Construction activities will make use of water & electricity supply on the site	T, D, Lc, A	Capacity of existing water & electricity supply to be investigated by the contractor to ensure that these services are adequate and will not disrupt the supply to the surrounding areas of the project site.
Employment - Construction labour force	- labour force will create demand for services (transport, restaurant, etc.) at the site	T, D, Lc, B, R	Encourage the contractor to hire local labourers from the community.
Scenery - Landscaping	- landscaping of the site will seek to improve the scenery and reduce the vision impact of the structures.	P, D, Lc, B, R	Encourage the planting of hardy trees and plants suitable for the local environment.
MARKETING ACTIVITIES, OPERATION / MAINTENANCE			
Traffic / Vehicle movements	- Impact on physiological system in terms of increase traffic flow to the area creating noise, and dust.	T, D, Lc, A, R	Low number / frequency of traffic will not require new traffic control requirements.
Solid waste	- Solid waste if not properly handled may cause bad odour, pollution, breed rodents and vectors, and create a health hazard	T, D, Lc, A	Solid waste will be minimal and majority will be organic in nature which could be recycled into compost for use on the farm. Project to provide proper facilities to handle the solid waste..
Sewage discharge	- Major pollutants such as suspended solids, BODs, fecal coliforms, etc. will cause pollution, contamination of ground water, and health problems if not properly treated / handled.	P, D, Lc, A	Sewage discharge will be minimal due to small number of users. Project to provide septic tank to handle the sewage.
Market activities - loading / unloading, parking/waiting, packing/sorting, sales of products	- These activities will create new jobs and opportunities in the market and surrounding area. These activities will impact on the life-style and communal needs of the users.	T, D, Lc, B, R	Opportunities should be given to local inhabitants and people affected (eg. porters in Abasto market) by the relocation of wholesale function.
Maintenance activities of equipment, facilities / building			

Table 10-1 ENVIRONMENTAL IMPACT ASSESSMENT - COLLECTION / DISTRIBUTION CENTER (REHABILITATION AND NEW CONSTRUCTION) - 2/2

Activity	Potential Impact	Classification	Countermeasures to be Considered
FUTURE INDUCE EFFECTS			
- Promote related activities nearby	- Operation of the center will impact indirectly on the surrounding commerce/ activities of the area in future creating new job opportunities.	P, I, Lc, B, R	Future development of the area surrounding the center will need to be considered by the municipalities.
ABANDONMENT			
- Notice to close	- This will impact on the jobs and surrounding business associated with the center.	P, D, Lc, A, R	In case of closure, alternative use of the facilities must be found to lessen the impact of the closure on the area and people associated with the center.
EXTENSION ACTIVITIES			
- Training / education	- Knowledge empowerment will impact on behavioral changes that may lead to improved quality of life. Impact on the increase in production and commercialization will also improve the economic situation of the farmers	P, I, St, B, R	Equity of access to be assured by the user group and management body of the center.

Legend:

T = Temporary impact
Lc = Local impact

P = Permanent impact
St = Strategic impact

I = Indirect impact
B = Beneficial impact

D = Direct impact
A = Adverse impact

Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

R = Reversible
I = Irreversible

Table 10-2 ENVIRONMENTAL IMPACT ASSESSMENT - NEW WHOLESALE MARKET - 1/2

Activity	Potential Impact	Classification	Countermeasures to be Considered
EXECUTION / CONSTRUCTION STAGE			
Land Preparation, Site cleaning / tree cutting	- Stripping of existing vegetation and some trees	T, D, Lc, A	To replant trees and other landscaping work after construction completed.
Infrastructure Preparation, Excavation (Cut and Fill)	- Removal of some soil - Importing of soil to use as fill	T, D, Lc, A	Unwanted or unsuitable excavated soil should be disposed off in a proper place.
Demolition / Relocation	- Brick factories to be demolished and activities to be relocated elsewhere.	T, D, Lc, A	Compensation for the demolition and relocation must be acceptable to the owners.
Infrastructure / Superstructure Construction	- Construction activities on site will create noise, dust, and increase construction traffic on road	T, D, Lc, A	Construction activities should be restricted to working hours and construction plant traffic should be cautioned to travel at low speed especially passing through populated areas.
Utilities, Temporary services (water, electricity, telephone) supply	- Construction activities will make use of water & electricity supply on the site	T, D, Lc, A	Capacity of existing water & electricity supply to be investigated by the contractor to ensure that these services are adequate and will not disrupt the supply to the surrounding areas of the project site.
Employment - Construction labour force	- labour force will create demand for services (transport, restaurant, etc.) at the site	T, D, Lc, B, R	Encourage the contractor to hire local labourers from the community.
Scenery - Landscaping	- landscaping of the site will seek to improve the scenery and reduce the vision impact of the structures.	P, D, Lc, B, R	Encourage the planting of hardy trees and plants suitable for the local environment.
MARKETING ACTIVITIES, OPERATION / MAINTENANCE			
Traffic / Vehicle movements	- Impact on physiological system in terms of increase traffic flow to the area creating noise, dust, and increase safety hazard to local inhabitants.	T, D, Lc, A, R	Dedicated road to the project site will minimize the impact on the local residents. Traffic control (traffic lights, overpass, etc.) should be considered by urban planning authorities to ensure smooth integration of traffic into main trunk road.
Solid waste collection	- Solid waste if not properly handled may cause bad odour, pollution, breed rodents and vectors, and create a health hazard	T, D, Lc, B, R	Project to provide proper facilities to handle the solid waste. Coordination with the Municipality on waste collection system to be arranged together with the micro-enterprise contracted to collect the waste for disposal at municipal landfill.
Surface water drainage, cleaning / washing water discharge	- The surface water if not properly handled may cause flooding and erosion on the site and surrounding areas.	P, D, Lc, A, R	Project design to incorporate waste separation and proper discharge of surface water to the water drainage system running underneath the road.
Sewage treatment & discharge	- Major pollutants such as suspended solids, BODs, fecal coliforms, etc. will cause pollution, contamination of ground water, and health problems if not properly treated / handled.	P, D, Lc, A, R	Project to provide sewage treatment facilities to meet the require permissible discharge standards of the Environmental law and regulation.

Table 10-2 ENVIRONMENTAL IMPACT ASSESSMENT - NEW WHOLESALE MARKET - 2/2

Activity	Potential Impact	Classification	Countermeasures to be Considered
Market activities - loading / unloading, parking/waiting, packing/sorting, sales of products Maintenance activities of equipment, facilities / building	- These activities will create new jobs and opportunities in the market and surrounding area. These activities will impact on the life-style of the users and beneficiaries of the market.	T, D, Lc, B, R	Opportunities should be given to local inhabitants and people affected (eg. porters in Abasto market) by the relocation of wholesale function.
FUTURE INDUCE EFFECTS			
- Value of the surrounding land	- The location of the project in the sub-urban / rural location will improve the value of the surrounding land. Future value of the land will depend on the future development in the area.	P, I, Lc, B	Land for the project should include enough space for future expansion so that future increase of surrounding land value will not affect the project's expansion plans.
- Promote related activities nearby	- Operation of the market will impact indirectly on the surrounding commerce/ activities of the area. Related businesses such as storage, warehouse, workshops, etc. will start up in future creating new job opportunities..	P, I, Lc, B, R	Future development of the area surrounding the market will need to be considered by the urban planning authorities to conform to the development plans of the city.
ABANDONMENT			
- Notice to close	- This will impact on the jobs and surrounding business associated with the market. Closure of the market will also impact on the value of the land in the area.	P, D, Lc, A, R	In case of closure, alternative use of the facilities must be found to lessen the impact of the closure on the area and people associated with the market.
EXTENSION ACTIVITIES			
- Training / education	- Knowledge empowerment will impact on behavioral changes that may lead to improved quality of life.	P, I, St, B, R	Equity of access to be assured by the user group.

Legend:

T = Temporary impact
Lc = Local impact

D = Direct impact
A = Adverse impact

I = Indirect impact
B = Beneficial impact

R = Reversible
Ir = Irreversible

Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table 11-1 PROJECT COST OF PRODUCTS COLLECTION AND DISTRIBUTION CENTERS

No.	Items	San Isidro Total (US\$)	Samaipata Total (US\$)	Valle Grande Total (US\$)	Saipina Total (US\$)	Mairana Total (US\$)	Pm. Grande Total (US\$)	Comarapa Total (US\$)	Grand Total (US\$)
1	Building Construction Cost								
	(1) Building Reform Works - Direct Construction Cost	27,043	25,291	0	0	0	0	0	52,334
	(2) Building Works - Direct Construction Cost	0	0	226,761	270,636	270,636	358,386	226,761	1,353,180
	(3) External Works	34,980	17,000	35,570	38,410	38,410	65,620	35,570	265,560
	(4) Main Line of Infrastructure in the Site	0	0	12,550	35,550	18,600	12,550	12,550	91,800
	(5) Total Direct Construction Cost	62,023	42,291	274,881	344,596	327,646	436,556	274,881	1,762,874
	(6) Overhead and Profit	23,569	16,071	104,455	130,946	124,505	165,891	104,455	669,892
	(7) Consulting service fee	3,101	2,115	13,744	17,230	16,382	21,828	13,744	88,144
	(8) Grand Total Cost for Building Construction	88,692	60,476	393,080	492,772	468,534	624,275	393,080	2,520,909
2	Equipment Procurement Cost	49,350	40,950	49,350	49,350	37,800	49,350	40,950	317,100
Financial Cost - Grand Total (US\$)		138,042	101,426	442,430	542,122	506,334	673,625	434,030	2,838,009
Economic Cost - Grand Total (US\$)		125,799	92,883	392,808	479,760	447,673	595,804	384,632	2,519,359

Remark:

1. Land acquisition for projected city roads, access road to projected road, and project site is not included in the project cost estimate

Table 11-2 PROJECT COST OF THE NEW WHOLESALE MARKET (TOTAL)

No.	Items	Total Project Cost		Phase 1 Cost		Phase 2 Cost	
		Financial Cost (US\$)	Economic Cost (US\$)	Financial Cost (US\$)	Economic Cost (US\$)	Financial Cost (US\$)	Economic Cost (US\$)
1 Land Preparation Cost (Bolivian Side Works)							
1	Tree Cutting	595	522	595	522	0	0
2	Land Cut-off	225,000	197,280	225,000	197,280	0	0
3	Sand Filling	793,000	695,302	793,000	695,302	0	0
	- Sub-total					0	0
4	Overhead and Profit	387,066	278,688	387,066	278,688	0	0
5	Consulting service fee	50,930	22,409	50,930	22,409	0	0
6	Total Cost	1,456,591	1,194,201	1,456,591	1,194,201	0	0
2 Infrastructure Extension Cost (Bolivian Side Works)							
1	Electric Main Line	10,000	8,768	10,000	8,768	0	0
2	Telephone Main Line	1,000	877	1,000	877	0	0
3	Potable Water Main Line	150	132	150	132	0	0
4	Potable Water Measure Meter	824	722	824	722	0	0
5	Access roads (projected city road)	270,000	236,736	270,000	236,736	0	0
6	Access road to Site	137,500	120,560	137,500	120,560	0	0
7	Rain drainage ditch	97,200	85,225	97,200	85,225	0	0
	- Sub-total					0	0
8	Overhead and Profit	196,336	141,362	196,336	141,362	0	0
9	Consulting service fee	25,834	11,367	25,834	11,367	0	0
10	Total Cost	738,844	605,749	738,844	605,749	0	0
3 Building Construction Cost							
1 Building Works - Direct Construction Cost							
F-1	Marketing Hall						
	Marketing Hall - 1	4,110,720	3,608,521	1,027,680	902,130	3,083,040	2,706,391
	Marketing Hall - 2	1,618,596	1,420,855	0	0	1,618,596	1,420,855
F-2	Administration Office	1,148,832	983,656	1,148,832	983,656	0	0
F-3	Canteen	507,225	431,922	507,225	431,922	0	0
F-4	Shops	240,472	207,414	240,472	207,414	0	0
F-5	Electric Power Station	336,189	294,905	336,189	294,905	0	0
F-6	City Water Reservoir / Elevated Water Tank	285,184	251,035	285,184	251,035	0	0
F-7	Public W.C.	584,712	512,983	391,757	343,698	192,955	169,284
F-8	Wasted Water Treatment / Seepage Pit	493,500	474,222	493,500	474,222	0	0
F-9	Garbage Collection Yard	57,120	50,446	28,560	25,223	28,560	25,223
F-10	Guard Box	10,030	8,350	10,030	8,350	0	0
	- Sub-total	9,392,580	8,244,308	4,469,429	3,922,555	4,923,151	4,321,753
2 External Works							
A	Concrete interlocking block pavement	1,263,600	1,107,924	505,440	443,170	758,160	664,755
B	Concrete pavement	262,400	230,072	157,440	138,043	104,960	92,029
C	Lawn planting	21,300	18,676	10,650	9,338	10,650	9,338
D	Crushed stone pavement	29,250	25,646	29,250	25,646	0	0
E	Concrete wall for land adjustment	70,560	61,867	70,560	61,867	0	0
F	Concrete drainage ditch	290,400	254,623	145,200	127,311	145,200	127,311
G	Gate	7,500	6,576	7,500	6,576	0	0
H	Fence	68,000	59,622	0	0	68,000	59,622
I	Street lights	19,200	16,512	14,400	12,384	4,800	4,128
	- Sub-total	2,032,210	1,781,519	940,440	824,336	1,091,770	957,183
3 Main Line of Infrastructure in the Site							
A	Electricity Main Line						
	HV Incoming System	104,600	89,956	104,600	89,956	0	0
	Main Feeder System	244,183	209,997	97,673	83,999	146,510	125,998
	External Lighting Work	180,450	155,187	135,338	116,390	45,113	38,797
	Telephone System	288,000	247,680	288,000	247,680	0	0
	Public Address System	13,950	11,997	10,463	8,998	3,488	2,999
	Lightning Protection System	15,300	13,158	15,300	13,158	0	0
B	City Water Main Line	57,500	49,450	23,000	19,780	34,500	29,670
C	Wasted Water Main Line (incl. seepage pipe)	57,750	49,665	23,100	19,866	34,650	29,799
	- Sub-total	961,733	827,090	697,473	599,827	264,260	227,263
4 Special Equipment							
E-1	Handling Tool	26,460	26,447	3,704	3,703	22,756	22,745
E-2	Telephone/Fax	11,550	11,545	11,550	11,545	0	0
E-3	Computer	31,500	31,485	31,500	31,485	0	0
E-4	Measurement Tool						
	Truck Scale	16,485	16,477	16,485	16,477	0	0
	Balance	22,050	22,040	3,087	3,086	18,963	18,954
E-5	Apparatus for food inspection	10,500	10,495	10,500	10,495	0	0
E-6	High pressure water cleaner	8,138	8,134	1,628	1,627	6,510	6,507
	- Sub-total	126,683	126,622	78,454	78,417	48,229	48,206
5	Engineer/Supervisor Dispatch	14,500	14,355	4,350	4,307	10,150	10,049
6	Total Cost	12,527,706	10,993,895	6,190,146	5,429,441	6,337,559	5,564,454
7	Overhead and Profit	2,718,512	2,385,675	1,343,262	1,178,189	1,375,250	1,207,486
8	Consulting service fee	1,252,771	1,099,390	619,015	542,944	633,756	556,445
9	Grand Total Cost for Building Construction	16,498,988	14,478,960	8,152,423	7,150,574	8,346,566	7,328,386
Grand Total Cost (US\$)		18,694,423	16,278,909	10,347,857	8,950,524	8,346,566	7,328,386

Remark:

1 Land acquisition cost for projected city roads, access road to projected city road, and project site is not included in the project cost estimate.

Table 11-3 ISSUES, DEVELOPMENT POLICIES AND IMPACT OF THE PROJECT (1/2)

ISSUES	DEVELOPMENT POLICY	IMPACT OF THE PROJECT (OUTLINE OF DEVELOPMENT PLAN)	POSITIVE AND NEGATIVE IMPACT FOR EACH TARGET GROUP												
			FARMER		INTERMEDIARY		WHOLESALE		RETAILER		CONSUMER		TRANSPORTER		
			POS.	NEG.	POS.	NEG.	POS.	NEG.	POS.	NEG.	POS.	NEG.			
I. ISSUES IN THE PRODUCTION SITE			DEVELOPMENT POLICY FOR THE PRODUCTION AREA			ESTABLISHMENT OF COLLECTION AND DISTRIBUTION CENTER IN THE PRODUCTION AREA									
(1) ISSUES REGARDING PRODUCTION			(1) TECHNICAL IMPROVEMENT IN THE PRODUCTION SYSTEM												
1) Stagnant productivity and difficulty in production adjustment	1) Strengthening technical / guidance system	Merit: • Strengthening of technical guidance under the Project will raise the income of the farmers all well as other beneficiaries through improvement of productivity, quality and reduction of post harvest losses.	○	○	○	○	○	○	○	○	○	○	○	○	○
2) Stagnant harvest volume, late introduction of crop rotation, low-level technology of fruit production	2) Introduction of production planning with consideration of demand and production trend in other areas														
3) Pest damage, increase in agricultural chemicals (growing discrepancy from consumers' awareness on product quality: Supermarkets are purchasing organic produce from farmers)															
4) Inadequate system of technology introduction and extension															
5) Declining competitiveness against other production areas of the country (Lowland within the prefecture and outside the prefecture) and neighboring countries including MERCOSUR															
6) Underdevelopment of planned production system and loss from consequent overproduction															
(2) ISSUES REGARDING COLLECTION / DISTRIBUTION AND TRANSPORTATION			(2) Development of collection and distribution centers to improve collection and distribution system and establish cooperative marketing system												
1) Maintaining traditional systems of collection/ distribution, selection and packing of products (based on individual experiences of farmers)	1) Disseminating the benefits / significance of its introduction	Merit: • Farmers benefit from promoting their price bargaining power, advancing commercialization, more stable prices, and saving cost and time. • With the improvement of utility in the new wholesale market and existing Abasto market, the Center will benefit farmers as: (1) collection and distribution depot of agricultural cooperatives' wholesaling, (2) collection and distribution depot of wholesale division of supermarkets, (3) efficient fruit and vegetable providing site to farmers' direct sales spot and wholesalers.	○	○	○	○	○	○	○	○	○	○	○	○	○
2) Non-use of existing collection centers (from lack of consensus, lack of leading farmers, and/ or indistinct merit for users)	2) Raise the awareness through pilot project operation.														
3) Time loss resulting from lack of facilities such as collection center, cold storage, etc.	3) Stage-wise development of collection & distribution centers	Demerit: • Farmers may be adversely affected by the loss of opportunity to engage in direct sales by joining cooperative collection and distribution.	○												
4) Unstable system of remuneration for market price fluctuation and inefficient bargaining power of farmers	4) Technology transfer through model collection and distribution system (pilot project)														
5) Difficulty in collection and distribution arrangement caused by lack of access to information on market trend and prices															
6) High share of transportation fee in the wholesale price and farmers' direct sales price, resulting in lowering the farmgate price and margins.															
7) Underdevelopment of distribution system of citrus fruits increasingly produced in lowlands															
(3) ISSUES REGARDING LAW/ INSTITUTION/ ORGANIZATION			(3) Strengthening of institutional guidance, instruction and extension of agricultural organization (aiming at collection and distribution)												
1) Inefficient agricultural organizations and inadequate leadership		Merit: • When it is fully implemented, well-controlled collection and distribution system will be realized.	○	○	○										
2) Insufficient experience in cooperative collection and distribution															
3) Insufficient collective/ cooperative system among producers, producers' organizations (e.g., ASOHKUT), transporters and local governments		Demerit: • Accustomed individual trading method may be dispensed with for collective rules.	○												
(4) FINANCE SOURCES			(4) Development of sound and appropriate credit system and its dissemination to farmers												
1) Difficulty in accessing to formal credit systems for small-scale farmers' insufficient capital to qualify		Demerit: • Participants are expected to bear some fee corresponding to benefit	○												
2) Deficiency in capital for project investment and operation due to difficulty in accessing to local government's financial sources															
ISSUES IN THE CONSUMPTION SITE			DEVELOPMENT POLICY FOR THE CONSUMPTION AREA			ESTABLISHMENT OF THE NEW WHOLESALE MARKET IN THE CONSUMPTION AREA									
(1) SCALE OF CONSUMPTION AND MARKETING			(1) Commercialization of fruits and vegetables corresponding to consumers request (supply volume, quality, and price)												
Intra-prefectural production unable to respond to the rapid population growth of Santa Cruz City and expanding needs for higher quality products		Merit: • With the promotion of commercialization, the farmers can expect income increase through production that suits the demand. Consumers will benefit from stable supply and higher quality of fruits and vegetables.	○	○	○	○	○	○	○	○	○	○	○	○	○

Remark: ● Direct, ○ Indirect

Table 11-3 ISSUES, DEVELOPMENT POLICIES AND IMPACT OF THE PROJECT (2/2)

ISSUES	DEVELOPMENT POLICY	IMPACT OF THE PROJECT (OUTLINE OF DEVELOPMENT PLAN)	POSITIVE AND NEGATIVE IMPACT FOR EACH TARGET GROUP											
			FARMER		INTERMEDIARY		WHOLESALE		RETAILER		CONSUMER		TRANSPORTER	
			POS.	NEG.	POS.	NEG.	POS.	NEG.	POS.	NEG.	POS.	NEG.	POS.	NEG.
(2) MARKETING SYSTEM														
1) Increase of marketing volume bypassing Abasto market (ascribed to the emergence of supermarkets, who, however are interested in buying products from the market)	(2) Increasing benefits of the target group through separating and relocating wholesale function (farmers' direct sales, employment of small-scale intermediaries, efficient wholesalers and retailers, and users' benefits); the combined effect of the new wholesale market and existing Abasto market concentrating on retailing.	<p>Merit:</p> <ul style="list-style-type: none"> Wholesalers in the new wholesale market (large-scale wholesalers relocating from Abasto market, wholesalers' groups organized to meet the qualifications, farmers and wholesale division of supermarkets newly participating in wholesale activities) will increase their income through improving their management. <p>• At the existing Abasto market after wholesalers' relocation, the target group who mainly engage in retail activities will further their benefit in use of the market, farmers will be able to revive their direct sale function, more intermediaries can join, retailers will improve their sales efficiency, and consumers will benefit from efficient shopping.</p> <p>• Living environment of existing Abasto market will improve.</p> <p>Demerit:</p> <ul style="list-style-type: none"> Surrounding environment of the new wholesale market will deteriorate. 	○		○		○							
2) Restricted truck accommodation capacity of existing Abasto market accompanied by the increase in distance covered and loading volume of trucks as fruit and vegetable marketing area expands			○		○		○		○					
3) Emergence of intermediaries in Abasto market in the place of farmers, raising marketing cost			○		○		○		○		○		○	
4) Retail function is prevailing over wholesale operation in Abasto after the issue of Decentralization Law			○		○		○		○		○		○	
5) Price formulation mechanism: The unstable employment situation in the informal sector coupled with the low purchasing power of the ordinary consumers acts to restrain the retail price fluctuation range.			○		○		○		○		○		○	
6) Fruit and vegetable quality control: inadequate standards of packing materials and its manufacturing cost			○		○		○		○		○		○	
7) International metric system shall be adopted for trade of fruit and vegetable.			○		○		○		○		○		○	
(3) MERCOSUR														
Rapid increase of cheap imports not statistically recorded and lack of import control	(3) Raise the awareness on quality improvement, safety aspects, and develop quality improvement and safety certification system	<p>Merit:</p> <ul style="list-style-type: none"> Farmers and consumers will directly benefit from the new market. It is expected that coordination between collection/distribution center and the new wholesale market will develop in order to offer high quality and stable supply of products and to be competitive in the international market. 	○		○		○		○		○			
(4) QUALIFICATION FOR PARTICIPATING IN THE NEW WHOLESALE MARKET														
1) Wholesalers qualified to relocate from Abasto: Only 33% of wholesalers in Abasto are qualified by the criteria set in this project (who handle half of total traded fruit and vegetable volume in Abasto)	(4) Modernization/ rationalization of the wholesale function and provision of equitable opportunities for wholesalers	<p>Merit:</p> <ul style="list-style-type: none"> Among small-scale farmers in the Valley areas, those who have the intention to participate in wholesale activities are able to qualify by organizing themselves, which may bring them higher income. Large-scale farmers of lowlands can curtail marketing cost by conducting wholesaling in the new market. Large scale wholesalers can also increase their income by organizing themselves. Supermarkets can save collection cost by establishing their wholesale division in the new wholesale market instead of individually building collection depot. 	○		○		○		○		○			
2) Unqualified wholesalers: The remaining 67%, who are trading in smaller volumes maybe qualified through collective re-organization			○		○		○		○		○		○	
3) Potential future participants: small-scale farmers in the Valley areas, large-scale farmers in lowland and wholesale division of supermarkets			○		○		○		○		○		○	
(5) SOCIO-ECONOMY														
1) Income differential between wholesalers and retailers	(5) Formalization of informal employment in existing Abasto market by establishment of the new wholesale market	<p>Merit:</p> <ul style="list-style-type: none"> Small-scale intermediaries (mostly women) can expect to improve their access to the existing Abasto market. 	○		○		○		○		○			
2) Securing employment opportunities for retailers			○		○		○		○		○			
3) Limited opportunities for new intermediaries			○		○		○		○		○		○	
(6) ABASTO MARKET MANAGEMENT														
1) Confusion over laws and regulations: Farmers' Market founded upon MACA Law and Municipal Market upon municipal act.	(6) Establishing feasible and controllable laws and regulations and management system	<p>Merit:</p> <ul style="list-style-type: none"> All target groups using the new wholesale market and existing Abasto market will be able to benefit from orderly use of the market that reduces time and cost. 	○		○		○		○		○			
2) Confusion over management system: Dissolution of the management committee and disorganized management caused by disintegration of the component bodies.			○		○		○		○		○		○	
3) Confusion over user system: Use of market by unorganized wholesalers, retailers, intermediaries, farmers in direct trading, and consumers			○		○		○		○		○		○	
4) Confusion over market maintenance: Discrepancy between municipal acts and its implementation (only part of maintenance activities are conducted)			○		○		○		○		○		○	
(7) FINANCE SOURCES														
1) Disagreement over the use of municipal financial sources within the Municipal Council	(7) Identifying fund procurement method through consensus in the Prefecture and Municipal Councils (based upon the results of feasibility study of the Project)	<p>Demerit:</p> <ul style="list-style-type: none"> Each target group is expected to bear some fee corresponding to the benefit they receive. 	○		○		○		○		○			
2) Consensus to be obtained among related organizations regarding distribution of investment funds of the new wholesale market (procuring from the Prefecture, Municipal, users, and/or external sources)			○		○		○		○		○		○	



Table 11-4 SUMMARY OF BENEFIT ITEMS

Benefit Items	Quantity	Unit: Bs/ year (1998)	US\$/year 2002	US\$/year 2010
1 City Entry Time Restriction				
A = no. of trucks over 10t having to wait for nighttime to enter city limits	13			
B = average waiting time lost due to this restriction (hr)	5			
C = opportunity cost of truck use (Bs/hr)	20			
Total benefit of entry at any time to NWM = A.B.C	Bs1,300 /day	Bs474,500	\$91,772	\$121,140
2 Space Restriction Inside Abasto Market				
A = no. of trucks forced to wait outside the market with their products until parking space is available inside Abasto market	36			
B = average waiting time lost due to this restriction (hr)	9.3			
C1 = opportunity cost of truck use (Bs/hr)	20			
B2a, Benefit of space availability at any time at NWM = A.B.C	Bs6,696 /day	Bs2,444,040	\$472,698	\$623,962
A = no. selling produce from truck	12			
B = time lost due to the method of sale from truck (hr)	19			
C = opportunity cost of truck use (Bs/hr)	20			
B2b, Benefit of immediate unloading for transporter = A.B.C	Bs4,560 /day	Bs1,664,400	\$321,909	\$424,920
D = no. of producers/intermediaries affected	12			
E = producers'/intermediaries' time lost by engaging in selling from truck (hr)	228			
F = opportunity cost of producers'/intermediaries (Bs/hr)	4			
B2c, Benefit of immediate unloading for producers/intermediaries = D.E.F	Bs912 /day	Bs332,880	\$64,382	\$84,984
Total benefit of space restriction inside Abasto Market =		Bs4,441,320	\$858,990	\$1,133,866
3 Selling from truck outside Abasto Market				
A = no. of trucks affected	14			
B = time lost due to the method of sale from truck (hr)	12			
C = opportunity cost of truck use (Bs/hr)	20			
B3a, Benefit of immediate unloading for transporter = A.B.C	Bs3,360 /day	Bs1,226,400	\$237,196	\$313,099
A = no. of trucks affected	14			
T = Tonnage sold outside market (assume average 10 t truck)	140			
C2 = Additional Cost of handling (include parking fee, porter fee) per ton	30			
B3b, Benefit of reduce handling cost for producer/wholesaler = T.C2	Bs4,200 /day	Bs1,533,000	\$296,495	\$391,374
D = no. of producers/intermediaries affected	14			
E = producers'/intermediaries' time lost by engaging in selling from truck (hr)	336			
F = opportunity cost of producers/intermediaries (Bs/hr)	4			
B3c, Benefit of immediate unloading for producers/intermediaries = D.E.F	Bs1,344 /day	Bs490,560	\$94,879	\$125,240
Total benefit of not selling from truck =		Bs3,249,960	\$628,570	\$829,713
4 Reduction of Quality Loss (Value Loss) for Tomato				
A = Minimum price at peak over-supply (Bs/kg)	1.00			
B = Tonnage thrown away per week during over-supply (t)	4			
C = No. of times in a year that experience over supply	24			
D = Tonnage affected by over-supply condition (t)	96			
B4, Benefit of Quality loss = D.A	Bs96,000	Bs96,000	\$19,790	\$25,745
5 Consumer time savings				
A = av. time saved per person per trip due to less congestion (minutes)	10			
B = no. of families affected (2000)	205,036			
C = no. of families affected (2010)	360,254			
D1 = person days saved (2000)	76,889			
D2 = person days saved (2010)	135,095			
E = opportunity cost of consumer day (Bs/day)	10			
Total benefit of time saved (year 2000)	Bs768,885		\$145,144	\$240,383
6 Production Increase				
A = Increase production volume by products (t)				
B = Price of products (70% of net producer's prices)				
Total benefit of Production Increase = A.B				\$1,623,559
7 Commercialization Rate Increase				
A = Volume increase due to commercialization rate increase by products (t)				
B = Price of products (50% of net producer's prices)				
Total benefit of Commercialization Rate increase = A.B				\$469,290

Assumptions:

- Number of trucks affected is based on survey conducted during Phase 1 and 2.
- Yearly truck projection based on marketing volume projection.
- Increase in production volume is based on projections in Annexe 2.
- Projection of commercialization rate increase based on data in Annexe 2.
- Net Producer's Prices of products: Potato US\$220, Tomato US\$135, Lettuce US\$100, Choclo US\$285, Green Pepper US\$205, Beans/Peas US\$435, Peach/Plum US\$420, Citrus US\$135.
- Consumer time saving and number of families affected based on Master Plan data.
- Tonnage of tomatoes thrown away and frequency of over-supply based on interview survey of wholesalers at Abasto Market.
- Exchange rate of Bs5.62 to 1US\$ (Nov. 1998)

Table 12-1 PHYSICAL LIFE, DEPRECIATION, MAINTENANCE COST OF PROJECT COMPONENTS

New Wholesale Market

Facilities & Equipment	Physical Life (years)	Maintenance ratio (%)	Total Cost	Depreciation	Maintenance	Reinvestment Cost			
						5 yr	10 yr	15 yr	20 yr
1. Buildings	30	0.5%	14,768,755	319,990	47,998				
2. Equipment									
- Tel/fax	5	5.0%	11,550	1,502	375	7,508	7,508	7,508	7,508
- Truck scale	10	5.0%	16,485	1,072	536		10,715		10,715
- Jet cleaner	10	5.0%	8,138	529	264		5,290		5,290
- Computers, etc.	5	5.0%	31,500	4,095	1,024	20,475	20,475	20,475	20,475
- Weighing scale	10	5.0%	22,050	1,433	717		14,333		14,333
- Handling tool (cart)	5	2.0%	26,460	3,440	344	17,199	17,199	17,199	17,199
- Furniture	15	2.0%	48,300	2,093	628			31,395	
- Laboratory equipment	5	5.0%	10,500	1,365	341	6,825	6,825	6,825	6,825
3. Pavement	25	0.5%	1,555,250	40,437	5,055				
Total Cost			16,498,988	375,954	57,282	52,007	82,344	83,402	82,344

Remarks:

1. Total cost of facilities & equipment excludes Bolivian side investment in land preparation and infrastructure extension cost.
2. Depreciation, Maintenance and Reinvestment costs are calculated based on 65% of Total Cost assuming depreciation, maintenance & reinvestment are undertaken at local prices by local contractors/suppliers.

Collection and Distribution Centers

Facilities & Equipment	Physical Life (years)	Maintenance ratio (%)	Total Cost	Depreciation	Maintenance	Reinvestment Cost	
						10 yr	20 yr
1. Buildings & pavement	25	0.5%	2,502,009	100,080	12,510		
2. Equipment							
- Furniture and computer	10	5.0%	131,250	13,125	6,563	131,250	131,250
- Vehicle (pick up truck)	10	5.0%	151,200	15,120	7,560	151,200	151,200
- Motorcycle	10	5.0%	53,550	5,355	2,678	53,550	53,550
Total Cost			2,838,009	133,680	29,310	336,000	336,000

Remarks:

1. Depreciation, maintenance, and reinvestment cost are staggered due to staged wise development of the C/D Centers.

Table 12-2 SUMMARY OF ECONOMIC INTERNAL RATE OF RETURN (EIRR) AND NPV

		Base Case	Case 1	Case 2	Case 3	Case 4
Scenario I	Investment Cost	no change	+10%	±0%	-10%	±0%
	Benefit	no change	±0%	+10%	±0%	-10%
	EIRR %	9.7	9.0	11.7	10.4	7.4
	NPV (US\$)	-460,000	-618,000	-73,000	-302,000	-846,000
Scenario II	Investment Cost	no change	+10%	±0%	-10%	±0%
	Benefit	no change	±0%	+10%	±0%	-10%
	EIRR %	11.8	10.5	13.4	13.5	10.2
	NPV (US\$)	-222,000	-1,611,000	1,221,000	1,167,000	-1,665,000
Scenario III	Investment Cost	no change	+10%	±0%	-10%	±0%
	Benefit	no change	±0%	+10%	±0%	-10%
	EIRR %	12.6	11.0	14.2	14.4	10.9
	NPV (US\$)	513,000	-1,100,000	2,177,000	2,126,000	-1,152,000

Table 12-3 SUMMARY OF FINANCIAL INTERNAL RATE OF RETURN (FIRR) AND NPV

		Base Case	Case 1	Case 2	Case 3	Case 4
Scenario I	Investment Cost	no change	+10%	±0%	-10%	±0%
	Benefit	no change	±0%	+10%	±0%	-10%
	FIRR %	-2.2	-3.1	-1.2	-1.2	-3.2
	NPV (US\$)	-1,498,000	-1,696,000	-1,437,000	-1,293,000	-1,559,000
Scenario II	Investment Cost	no change	+10%	±0%	-10%	±0%
	Benefit	no change	±0%	+10%	±0%	-10%
	FIRR %	7.7	6.6	8.9	9.0	6.5
	NPV (US\$)	-3,956,000	-5,355,000	-2,953,000	-2,557,000	-4,959,000
Scenario III	Investment Cost	no change	+10%	±0%	-10%	±0%
	Benefit	no change	±0%	+10%	±0%	-10%
	FIRR %	6.6	5.5	7.7	7.8	5.4
	NPV (US\$)	-4,511,000	-5,806,000	-3,666,000	-3,216,000	-5,356,000

Remarks:

1. Scenario I evaluation assumes Collection and Distribution centers operate only.
2. Scenario II evaluation assumes New Wholesale Market operates only.
3. Scenario III evaluation assumes Collection and Distribution Centers operate in conjunction with NWM.
4. Net Present Value based on social discount rate of 12.07%, and rounded up to nearest thousand.

Table 12-4 INCOME STATEMENT AND CASH FLOW FOR ALL 7 COLLECTION AND DISTRIBUTION CENTERS

Unit: US\$

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
I													
Income Statement													
A. Revenue	62,500	83,400	246,000	453,900	600,600	600,600	600,600	600,600	600,600	600,600	600,600	600,600	600,600
1) User fee	62,500	83,400	246,000	453,900	600,600	600,600	600,600	600,600	600,600	600,600	600,600	600,600	600,600
B. Expense	9,000	26,400	83,800	159,000	163,800	131,700	119,200	63,000	66,900	27,500	27,500	27,500	27,500
1) Inst. training / tech. extension													
1) Operation & management	9,000	26,400	83,800	159,000	163,800	131,700	119,200	63,000	66,900	27,500	27,500	27,500	27,500
2) Depreciation													
3) Interest													
C. Income before Depr. & Interest	-10,600	200	-42,900	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
D. Net Income	-26,800	-16,000	-116,000	-174,800	-122,500	-78,300	-21,700	27,300	48,400	58,400	58,400	58,400	58,400
Cash Flow													
A. Source of Funds	138,042	-10,600	1,086,178	1,571,089	-43,300	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
1) Government	138,042		1,085,978	1,613,989									
2) Loan													
3) Own equity													
4) Depreciation													
5) Net income													
B. Uses of Funds	138,042	1,085,978	1,613,989										
1) Building	138,042		1,085,978	1,613,989									
2) Equipment													
3) Reinvestment													
4) Repayment of loan													
C. Net cash flow	-10,600	200	-42,900	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
II													
Income Statement													
A. Revenue	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500
1) User fee	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500
B. Expense	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500
1) Inst. training / tech. extension													
1) Operation & management	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500
2) Depreciation													
3) Interest													
C. Income before Depr. & Interest	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000
D. Net Income	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500
Cash Flow													
A. Source of Funds	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900
1) Government	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900
2) Loan													
3) Own equity													
4) Depreciation													
5) Net income													
B. Uses of Funds	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900
1) Building													
2) Equipment													
3) Reinvestment													
4) Repayment of loan													
C. Net cash flow													

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
I												
Income Statement												
A. Revenue	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	
1) User fee	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	
B. Expense	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	
1) Inst. training / tech. extension												
1) Operation & management	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	1,057,500	
2) Depreciation												
3) Interest												
C. Income before Depr. & Interest	58,400	58,400	58,400	58,400	58,400	58,400	58,400	58,400	58,400	58,400	58,400	
D. Net Income	58,400	58,400	58,400	58,400	58,400	58,400	58,400	58,400	58,400	58,400	58,400	
Cash Flow												
A. Source of Funds	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	
1) Government	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	
2) Loan												
3) Own equity												
4) Depreciation												
5) Net income												
B. Uses of Funds	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	
1) Building												
2) Equipment												
3) Reinvestment												
4) Repayment of loan												
C. Net cash flow												
II												
Income Statement												
A. Revenue	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500
1) User fee	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500
B. Expense	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500
1) Inst. training / tech. extension												
1) Operation & management	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500
2) Depreciation												
3) Interest												
C. Income before Depr. & Interest	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000
D. Net Income	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500	76,500
Cash Flow												
A. Source of Funds	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900
1) Government	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900
2) Loan												
3) Own equity												
4) Depreciation												
5) Net income												
B. Uses of Funds	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900
1) Building												
2) Equipment												
3) Reinvestment												
4) Repayment of loan												
C. Net cash flow												

Remarks:
1. Institutional training and technology transfer cost to be borne by Government separately and not included in this financial analysis of management body.

Table 12-5 ANNUAL OPERATION COST OF NEW WHOLESALE MARKET

Number of Personnel and Annual Cost

Position	Status		Unit Salary		Annual Salary		Total Annual	Total Annual
	Permanent	Contract	Permanent	Contract	Permanent	Contract	Salary (Bs)	Salary (US\$)
Manager	1		5,000		60,000		60,000	10,676
Administrative chief	1		3,000		36,000		36,000	6,406
Marketing chief	1		3,000		36,000		36,000	6,406
Secretary	1		2,000		24,000		24,000	4,270
Security control	1	5	2,000	1,500	24,000	90,000	114,000	20,285
Finance & account		2	2,000	1,500		36,000	36,000	6,406
Personnel & registration	1	1	2,000	1,500	24,000	18,000	42,000	7,473
Maintenance	1		2,000	1,500	24,000		24,000	4,270
Information	1	2	2,000	1,500	24,000	36,000	60,000	10,676
Monitoring		1	2,000	1,500		18,000	18,000	3,203
Total	8	11			252,000	198,000	450,000	\$80,071 A

Electricity & Water Charges

Electricity & Water charges per day	Bs820
Electricity & Water charges per day	\$146
Electricity & Water charges per year	\$53,256 B

Tel/fax

No. of calls per month	900
Charges per month	\$13
Charges per year	\$161 C

Total Annual Operation Cost (A+B+C) \$133,488

Total Annual Economic Operation Cost \$71,833

Table 12-6 INCOME STATEMENT AND CASH FLOW FOR NEW WHOLESALE MARKET

Unit: US\$

Income Statement	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
A. Revenue	735,771	1,480,165	1,527,398	1,574,631	1,574,700	1,700,769	1,763,839	1,826,908	1,899,977	1,953,047	
1) Net income of wholesalers	724,414	1,458,827	1,503,372	1,549,816	1,611,809	1,673,801	1,735,794	1,797,787	1,859,779	1,921,772	
2) Entering truck charge	11,357	21,338	24,026	24,815	25,891	26,968	28,045	29,121	30,198	31,274	
B. Expense	283,362	366,724	366,724	366,724	366,724	366,724	366,724	366,724	366,724	366,724	
1) Operation	66,744	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	
2) Maintenance	28,641	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	
3) Depreciation	187,977	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	
C. Income before Depr. & Interest	644,386	1,289,395	1,336,628	1,383,861	1,446,930	1,509,999	1,573,069	1,636,138	1,699,207	1,762,276	
D. Net Income	456,408	913,441	960,674	1,007,907	1,070,976	1,134,045	1,197,114	1,260,184	1,323,253	1,386,322	
Cash Flow											
A. Source of Funds	8,152,423	8,990,932	1,289,395	1,336,628	1,383,861	1,446,930	1,509,999	1,573,069	1,636,138	1,699,207	1,762,276
1) Government	8,152,423	8,946,566									
2) Loan											
3) Own equity											
4) Depreciation											
5) Net income											
B. Uses of Funds	8,152,423	8,246,566									
1) Building	8,073,969	8,298,337									
2) Equipment	78,454	48,229									
3) Reinvestment											
4) Repayment of loan											
C. Net cash flow	644,386	1,289,395	1,336,628	1,383,861	1,446,930	1,509,999	1,573,069	1,636,138	1,699,207	1,762,276	

Income Statement	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
A. Revenue	2,016,116	2,079,185	2,142,254	2,205,324	2,268,393	2,331,462	2,394,531	2,457,601	2,520,670	2,583,739	
1) Net income of wholesalers	1,983,765	2,045,757	2,107,750	2,169,743	2,231,735	2,293,728	2,355,721	2,417,713	2,479,706	2,541,699	
2) Entering truck charge	32,351	33,428	34,504	35,581	36,658	37,734	38,811	39,887	40,964	42,041	
B. Expense	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	566,724	
1) Operation	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	
2) Maintenance	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	
3) Depreciation	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	
C. Income before Depr. & Interest	1,825,346	1,888,415	1,951,484	2,014,553	2,077,622	2,140,692	2,203,761	2,266,831	2,329,900	2,392,969	
D. Net Income	1,449,391	1,512,461	1,575,530	1,638,599	1,701,668	1,764,738	1,827,807	1,890,876	1,953,946	2,017,015	
Cash Flow											
A. Source of Funds	1,825,346	1,888,415	1,951,484	2,014,553	2,077,622	2,140,692	2,203,761	2,266,831	2,329,900	2,392,969	
1) Government											
2) Loan											
3) Own equity											
4) Depreciation											
5) Net income											
B. Uses of Funds	1,449,391	1,512,461	1,575,530	1,638,599	1,701,668	1,764,738	1,827,807	1,890,876	1,953,946	2,017,015	
1) Building											
2) Equipment											
3) Reinvestment											
4) Repayment of loan											
C. Net cash flow	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	

Remarks:
 1. Revenue and Expenses during the 1st year of operation will be approximately half of normal years operation due to phased construction.
 2. Net income of wholesalers based on Annex 2, Table A.2-4-26.
 3. Truck charge at Ba.1 for 5-ton truck, Ba.3 for 10-ton truck, and Ba.10 for 20-ton truck.
 4. Depreciation, Maintenance and Reinvestment costs are calculated based on 65% of Building/Equipment cost assuming depreciation, maintenance & re-investment are undertaken at local prices by local contractors/suppliers.
 5. Operation expense (personnel, utilities, electricity, etc.) annualized for effective operation.

Table 12-7 INCOME STATEMENT AND CASH FLOW FOR NWM + C/D CENTERS

	1	2	3	4	5	6	7	8	9	10	11	12
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Date: US\$												
I												
Income Statement												
A. Revenue	3,186,947	3,124,316	3,195,085	3,258,154	3,321,224	3,384,293	3,447,362	3,510,431	3,573,501	3,636,570	3,699,639	3,762,708
1) Net income of vehicles	192,172	198,765	204,577	210,750	216,923	223,173	229,528	235,972	242,501	249,026	255,551	262,076
2) Emerging truck charge	31,274	32,351	33,428	34,504	35,581	36,658	37,734	38,811	39,887	40,964	42,041	43,118
3) User fee	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900	1,115,900
B. Expense	1,624,224	1,624,224	1,624,224	1,624,224	1,624,224	1,624,224	1,624,224	1,624,224	1,624,224	1,624,224	1,624,224	1,624,224
1) Operation (NWM)	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488
2) Maintenance (NWM)	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282
3) Depreciation (NWM)	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954
4) Operation & management (C/D centers)	926,000	926,000	926,000	926,000	926,000	926,000	926,000	926,000	926,000	926,000	926,000	926,000
5) Depreciation (C/D centers)	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500
6) Interest												
C. Income before Dep & Interest	1,952,176	2,015,246	2,078,315	2,141,384	2,204,453	2,267,522	2,330,591	2,393,660	2,456,729	2,519,798	2,582,867	2,645,936
D. Net Income	1,444,722	1,507,791	1,570,861	1,633,930	1,696,999	1,760,068	1,823,137	1,886,206	1,949,275	2,012,344	2,075,413	2,138,482
Cash Flow												
A. Source of Funds	1,952,176	2,015,246	2,078,315	2,141,384	2,204,453	2,267,522	2,330,591	2,393,660	2,456,729	2,519,798	2,582,867	2,645,936
1) Government (NWM)												
2) Government (C/D Centers)												
3) Loan												
4) Own equity												
5) Depreciation (NWM)	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954
6) Depreciation (C/D Centers)	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500	131,500
7) Net income	1,444,722	1,507,791	1,570,861	1,633,930	1,696,999	1,760,068	1,823,137	1,886,206	1,949,275	2,012,344	2,075,413	2,138,482
B. Uses of Funds	151,865	151,865	151,865	151,865	151,865	151,865	151,865	151,865	151,865	151,865	151,865	151,865
1) Building (NWM)												
2) Building (C/D Centers)												
3) Equipment (NWM)	126,683	126,683	126,683	126,683	126,683	126,683	126,683	126,683	126,683	126,683	126,683	126,683
4) Replacement (NWM)	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200
5) Replacement (C/D Centers)												
6) Replacement of bus												
C. Net cash flow	1,800,293	1,957,446	1,946,915	1,989,519	2,052,588	2,115,657	2,178,726	2,241,795	2,304,864	2,367,933	2,430,992	2,494,051
Remarks:												
1. Operation, maintenance and depreciation during the 1st year of operation of NWM will be approximately half of normal years operations due to phased construction.												
2. Land acquisition, preparation and infrastructure construction costs are not included in building cost of NWM.												

Table 12.8 INCOME STATEMENT, CASH FLOW, AND FIRR OF PRIVATIZED WHOLESALERS' SECTION

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
I														
Income Statement														
A. Revenue	327,963	657,174	658,651	660,128	662,281	664,434	666,587	668,741	670,894	673,047	675,200	677,354	679,507	
1) Rental fee of space	305,249	610,498	610,498	610,498	610,498	610,498	610,498	610,498	610,498	610,498	610,498	610,498	610,498	610,498
2) Entering truck charge	22,714	46,676	48,152	49,629	51,783	53,936	56,089	58,242	60,396	62,549	64,702	66,855	69,009	
B. Expense	663,914	947,276	947,276	947,276	947,276	947,276	947,276	947,276	947,276	947,276	947,276	947,276	947,276	
1) Operation	66,744	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	133,488	
2) Maintenance	28,641	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	57,282	
3) Depreciation	187,977	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	375,954	
4) Interest	380,552	380,552	380,552	380,552	380,552	380,552	380,552	380,552	380,552	380,552	380,552	380,552	380,552	
C. Income before Depr.&Interest	232,578	466,403	467,881	469,358	471,111	472,864	474,617	476,370	478,123	479,876	481,629	483,382	485,135	
D. Net Income	-335,951	-290,102	-288,625	-287,148	-285,671	-284,194	-282,717	-281,240	-279,763	-278,286	-276,809	-275,332	-273,855	
Cash Flow														
A. Source of Funds	2,700,000	-147,973	85,652	87,329	88,906	90,559	92,113	93,666	95,219	96,772	98,325	100,000	101,677	103,354
1) Government														
2) Loan														
3) Own equity														
4) Depreciation														
5) Net income														
B. Uses of Funds	2,700,000	16,052	18,219	20,678	23,470	26,638	30,234	34,316	38,948	44,206	50,174	56,948	64,636	73,361
1) Building														
2) Equipment														
3) Reinvestment														
4) Repayment of loan														
C. Net cash flow		-164,025	67,633	66,651	65,337	64,323	62,878	60,950	58,471	55,366	51,551	46,931	41,396	34,824

	2015	2016	2017	2018	2019	2020	2021
I							
Income Statement							
A. Revenue	683,660	683,613	685,967	688,120	690,273	692,426	694,579
1) Rental fee of space	610,498	610,498	610,498	610,498	610,498	610,498	610,498
2) Entering truck charge	73,162	73,115	75,468	77,622	79,775	81,928	84,081
B. Expense	947,276	947,276	947,276	947,276	947,276	947,276	947,276
1) Operation	133,488	133,488	133,488	133,488	133,488	133,488	133,488
2) Maintenance	57,282	57,282	57,282	57,282	57,282	57,282	57,282
3) Depreciation	375,954	375,954	375,954	375,954	375,954	375,954	375,954
4) Interest	380,552	380,552	380,552	380,552	380,552	380,552	380,552
C. Income before Depr.&Interest	490,890	493,043	495,196	497,350	499,503	501,656	503,809
D. Net Income	-263,616	-263,663	-261,309	-259,156	-257,003	-254,850	-252,697
Cash Flow							
A. Source of Funds	110,338	112,492	114,645	116,798	118,951	121,105	123,258
1) Government							
2) Loan							
3) Own equity							
4) Depreciation							
5) Net income							
B. Uses of Funds	83,265	83,265	83,265	83,265	83,265	83,265	83,265
1) Building							
2) Equipment							
3) Reinvestment							
4) Repayment of loan							
C. Net cash flow	27,073	29,227	31,380	33,533	35,686	37,839	40,000

FIRR of Privatized Wholesalers' Section

Year	Investment	Reinvestment	Income before Net Revenue Depr.
2001	2,700,000		232,578
2002			466,403
2003			467,881
2004			469,358
2005			471,111
2006			472,864
2007			474,617
2008			476,370
2009			478,123
2010			479,876
2011			481,629
2012			483,382
2013			485,135
2014			486,888
2015			488,641
2016			490,394
2017			492,147
2018			493,900
2019			495,653
2020			497,406
2021			499,159
FIRR =			13.4%
NPV =			566,305

Remarks:
 1. Investment by private developer.
 2. Loan at 13.5% interest, 25 years loan period, no grace period.

Remarks:
 1. Private developer to build the new wholesale market hall no.1 by own loan. Construction cost reduced by 50%.
 2. Market space rental charge increased 2 times to B650/day. Participation in MERCOSUR may improve economic situation for wholesalers to be able to pay this charge.
 3. Entering truck charge increased 2 times. Participation in MERCOSUR may increase handling volume of import and export to enable truckers to pay this charge.
 4. Revenue, operation, maintenance and depreciation during the 1st year of operation will be approximately half of normal years operation.
 5. Loan at 13.5% interest rate for 25 years with no grace period.