

Algodon Chancay - Huaral Aucallama belong the national farmer's organization has put into practice as technical assistance, dealing of production material and supporting cotton's commercialization for farmers.

1-2 Population

According to the 1981 census, the total population in Peru was 17,005,210 and the population its density shown 13.2 persons per km². Most of its population concentrates to the coastal region particularly to the Lima metropolitan area with rapid pace.

The population and household in the Chancay-Huaral Valley are shown in Table F-1-14 and F-1-15, and transition of its population is also shown in Table F-1-16. From these Tables, the centralization of population to urban area can be seen strikingly. (Refer to Table F-1-17, on the transition of population by department.)

In the Chancay-Huaral Valley, the annual population growth rate was 5.1% during a period of 10 years from 1972 to 1981, it is rather high compared with national average of 2.6% and Lima Department of 3.5%. The economic activities population of the agricultural sector Chancay-Huaral Valley is accounted at 46.1% of that of the whole industries in the valley (Refer to Table F-1-18).

1-3 Land Holding

The land holding system in Peru has been changed by the Agrarian Reform in the 1970's, and the land of plantation had transferred to cooperatives by common land ownership resulting in the desolution of the plantation. After that, with the change of social and economical situation, the land was parcelled a lot for members of cooperative and mini and small scale farmers are taken shape due to subdivision of the land. (See Table 2-2-2-1 in main report.) As mentioned at 2-1, there are 5 cooperatives which has no subdivision, but their farming are not always large scale except Huando cooperative (See Table F-1-12).

1-4 Land Use in the River Basin

The land use in the Chancay River basin is shown in Table F-1-19. The farm land at the coastal zone in the project area is only 7.1% among the whole Chancay River basin area. As much as 60% of the basin area accounts for desert and wasteland. Existing land use in the project area is as shown in Table 2-3-1-1 of main Report. The figures in the table show that the land use in the project area definitely classified by water use condition as follows;

Fruits growings in the upper part, traditional croppings in the middle part and vegetables in the lower part where water amount is ample.

The fallow land in the project area and the surrounding area are flexibly used as to cultivation on the humid period where looking is the sufficient water.

2. Agricultural Economy

2-1 Amount of Agricultural Production

The main agricultural products in the project area contain of cotton, maize as traditional products, fruits, vegetables, etc.. Though these cultivated areas and amount of agricultural production have varied yearly, the limitation is caused by following conditions;

- Meteorology (temperature, frost damage)
- Soils (soil texture, salt injury)
- Water use (irrigation, drainage)
- Farming technique
- Farming capital
- Market price

The specific features on farm management in the project area are two points to be cited as following;

- Planted area is oversensitive to fluctuations in market prices on account of neighbouring the market in Lima (flexible planting).
- Generally, it has high farming technique as compared with another region (national average) since many exemplary good farmers are living in the project area.

2-2 Import and Export of Agricultural Products

An amount of exporting agricultural products was 6.5% in the total amount of exportation in 1983, included cotton of 1.5%. In 1982, share of cotton export was 2.6%. Therefore, the export of cotton in 1983 was declined to about 50% of normal year due to decrease of cotton production caused by abnormal weather (See Table F-2-4 and Fig.F-2-1).

The exporting volume of cotton has fluctuated with its production, which is affected by available irrigation water, though farmers intend to be increasing cultivation. Exporting destination of cotton is mainly Asia and western Europe countries. In 1982, it was exceed 50% among the total volume of cotton exports to Asian countries.

Domestic production, exports and domestic consumption of cotton are shown in Fig. F-2-1 and tabulated below.

Production and Exports 1982/1983

	<u>Production</u>	<u>Exports</u>	<u>Unit price FOB Callao</u>
1982	256,100M/T	1,287,000 /qq	US\$66.1 /qq
1983	104,400	670,000	US\$66.4 /qq

Major import foods of Peru are wheat, maize and vegetable oil. The cost of the imported foods are reaches US\$425 millions in 1983 together with another foods, and maize accounts for 14.3% among the alimentations (See Table F-2-5).

2-3 Food Consuming Plan

As food consuming pattern in Peru is shown in Table F-2-6, the project area produces the majority of fresh vegetables and fruits in Lima market, and is performed important role as a source of nutrition supply for Lima metropolitan area. Moreover, the centralization of population to Lima has brought forth demand increase to provide their food.

As population concentrated, it is not only expected an increase in production of corps and fresh vegetables in the project area, but its diversification is also desired.

Ministry of Agriculture and the concerned authorities of Peru have taken measures to meet these situation.

2-4 Price and Earnings (including production costs)

Agricultural products in Peru have dealings with free market. Therefore, the market price has fluctuated in loose end.

The price tendency of agricultural products is shown in Table F-2-7. and Fig.F-2-5 according to the statistics of the Ministry of Agriculture.

Table F-2-9 presents the earnings per hectare by each product.

- Production costs of main agricultural products are estimated based on the production cost inquiry by Chancay-Huaral Agriculture and Livestock Administration Office and Agrarian Bank of Peru. The results of the estimation are shown in Table F-2-8.

- Regarding the earnings, it has been examined on the assumption that the whole products are sold in both case of with project and without project (See Table F-2-7).

2-5 Agro-industry and Commercialization

Commercial channels of agricultural products have some different ways corresponding their own features. Generally, they have dealing with traditional commercial behavior, such as collecting, storage, transport and wholesale business through brokers and wholesalers.

The distinctive feature of commercial pattern on every agricultural products is as follows;

- Cotton

Commercial channel of cotton is comparatively well-organized in Chancay - Huaral valley, and the dealings of raw cotton is carried on there as follow ;

<u>Dealer</u>	<u>Ratio of handling volume</u>
Central de cooperativas del valle	60.0 %
Comite de productores de algodonoero	20.0 %
Cotton dealer who has burling mill <u>1/</u>	10.0 %
Cotton dealers (Broker) and Other <u>2/</u>	10.0 %

Note: 1/ Industrias Pacocha S.A.

2/ SALGUERO, GABRIEL REYES and ENCI-Huaral

Spinning and textile plants and exporters of cotton fiber which produce in the project area are as :

Algodones Peruano,
 Fabrica Textil "San Jacinto",

Calixto Romero S.A.,
Grupo Coral and
La Fabril S.A.- Huacho, etc.

There are 6 cotton burling mills in the vicinity of the project area, but one is not operated (Refer to Fig.F-2-2,and Table F-2-10).

- Vegetables

Most of vegetable growers are small scale farmer so that their foundation on the farm management have a weak constitutions. Therefore, the commercial channel of vegetables and the prices are controlled firmly by brokers and shipping agencies. The dealings is doing in boundary of farm yard. In recent years, the horticultural cooperative has been established in the project area, but does not fulfill its function. From these circumstances, it is desired that improvement of commercial mechanization and technical assistance on the farming shall be enforced in the earliest stage.

There is a modern food processing plant (tomato ketchup) in the project area, but its operation rate is low. (See Fig. F-2-4.)

- Fruits

Commercial channel of fruit is simple, most of fruit grower have dealings with wholesaler in Lima market. Maracuya is planted under the contract basis with food processing plant.

3. Farm Household Economy

3-1 Actual Situation of Model Farmers

For a diagnosis of the farm household economy in the project area, eight model farmers are selected from the farm management inquiry, which has been conducted by PLANREHATIC, in consideration of the specific features of the farming patterns and farm scales in each area.

Actual situation of farming patterns and farm scales in the project area are described in 2-3-1 of the main report. And actual farm household economy of selected model farmers are mentioned as summary in Table 2-3-3-1 of the said report. While their farm management and financial situations are analysed by the following conditions and its results are shown in the Table F-3-1.

- An expression of currency is given by US dollar in order to avoid the influence of strong inflation.
- Exchange rate ; US\$ 1.0 is equivalent to s/.2,342 (average on January, 1984).
- Other expenditure includes water charge and miscellaneous expenses, in case Model A and E are including fuel expenses and repairing costs.
- Depreciation for machinery contain that of farming instruments and tractors.

In case of mini scale model farmers, their farm management depends upon to brokers' capital on the farming funds.

3-2 Farm Household Economy with Project

For selected model farmers mentioned in 3-1, the profit and loss on their farm household economy with project has been calculated.

This calculation is computed assuming the following conditions.

- Existing farming systems are not subject to extremely alternation.
- Farming patterns of model farmers are shown in the Table F-3-2.
- Production will be increase of by the grade-up of farm technique and the establishment of water management after completion of the project (Refer to Table F-2-1).

- Cropped area will be expanded by the solution of the problems on water management.
- Annual production cost after completion of the project is equal to the cost corresponding to the yield in the target year.
- Depreciation rate is applied on the regulations.
- O & M cost is evaluated as described in Annex J.
- Social insurance for hired-worker and home workeris counterd up.
- Annual interest rate of 62.0% is adopted for the credit.

The results are shown in Table F-3-3 -- F-3-4.

Even small scale farmer will be expected introducing of new farming technique and improvement of living standards by stabilization of the farm household economy. On the other hand, the justification of the project can be seen through these farm household economy (Refer to Table F-3-2 -- 3).

Tables and Figures

Table F-1-1 Gross Domestic Production

Producto Bruto Interno
 Índices del valor real
 (1979 = 100)

	Porcentaje del valor total 1/	1982	1983	TRIMESTRES				
				1982	1983			
				IV	I	II	III	IV
Agropecuario	13	110	101	106	113	102	91	97
Pesca	1	82	49	69	55	29	56	56
Mineria	10	99	91	99	83	94	96	91
Manufactura	22	102	85	98	92	83	83	81
Construcción	5	135	106	127	108	105	104	107
Gobierno	9	106	108	107	107	108	108	109
Otros	40	109	96	106	101	96	93	95
PRODUCTO BRUTO INTERNO	100	107	94	104	99	94	92	93

* Cifras desestacionalizadas y preliminares.
 1/ De 1983

Table F-1-2 LOAN BY TYPE AND CLASS OF HUACHO BRANCH, BANCO AGRARIO DEL PERU

Fiscal Year No. 51 From February to December 1982

Huacho Branch
-thousand soles-

TIPO Y CLASE	TOTALES			SURURSAL P.D.			AG.			AG.			CASMA		
	NO.	MONTO	NO.	MONTO	NO.	MONTO	NO.	MONTO	NO.	MONTO	NO.	MONTO	NO.	MONTO	
TOTALES	5,029	31,430,152	1,504	16,066,615	826	1,121,024	1,835	11,170,631	860	3,071,882					
UNIODES ASOCIATIVAS	217	22,301,604	118	12,288,052	4	247,580	77	8,052,572	18	1,673,000					
SOSTENIMIENTO	197	18,929,912	112	11,695,552	2	5,080	67	5,728,280	16	1,501,000					
CAPITAL IZACION	14	1,735,000	6	592,500	2	242,500	4	728,000	2	172,000					
COMERCIALIZACION	6	1,636,692					6	1,636,692							
AGRICULTORES INDIVIDUALES	4,812	9,128,548	1,386	3,778,563	822	873,444	1,762	3,077,659	842	1,398,882					
SOSTENIMIENTO	4,731	8,509,785	1,353	3,471,075	821	863,444	1,735	2,544,241	822	1,231,025					
CAPITAL IZACION	81	618,763	33	307,488	1	10,000	27	133,418	20	167,857					
COMERCIALIZACION															

Table F-1-3(1) LOAN BY EACH AGRICULTURAL PRODUCTS AND OTHER HUACHO BRANCH

Fiscal Year No. 51 From February to December 1982

-thousand soles-

RECURSOS PROPIOS	TOTAL		UNIDADES		AGRICULTORES		TOTAL GENERAL
	FINALIDAD CULTIVO O DESTINO		ASOCIATIVAS		INDIVIDUALES		
	MONTO	HAS. O UNID.	MONTO	HAS. O UNID.	MONTO	HAS. O UNID.	
TOTAL GENERAL	31,430,152		22,301,604		5,128,548		
1- FINALIDAD AGRICOLA	27,830,462	44,386.2	19,491,395	26,443.5	8,339,067	17,942.7	
AJI	398,705	849.2			300,755	674.2	
AJO	48,710	38.0			48,710	38.0	
AJONJOLI	320	1.5			320	1.5	
ALCACHOFA	52,800	7.0	50,000		2,800	7.0	
ALFALFA	31,400	54.0	15,000	30.0	16,400	24.0	
ALGODON	7,250,013	9,700.5	6,351,382	7,864.0	898,631	1,836.5	
ARVEJA	26,530	103.6	2,000	10.0	24,530	93.6	
ARVEJON	42,740	154.8	13,800	36.0	28,940	118.8	
APIO	27,850	60.5			27,850	60.5	
CAMOTE	57,575	139.5	37,550	70.0	19,625	69.5	
CANA DE AZUCAR	3,456,300	2,672.0	3,407,100	2,614.0	49,200	58.0	
CEBADA CERVECERA	77,781	355.5	49,000	219.0	28,781	136.5	
CEBADA NO CERVECERA	26,499	155.0	7,750	31.0	18,749	124.0	
CEBOLLA	5,020	10.0			5,020	10.0	
COL	39,611	138.0	9,600	33.0	30,011	105.0	
COLIFLOR	5,780	24.5			5,780	24.5	
CHIRIMOYA	8,600	12.0			8,600	12.0	
DURAZNO	794,795	834.1	338,800	282.0	455,995	552.1	
FRESA	2,300	6.5			2,300	6.5	
FRIJOL	400,903	1,538.7	178,310	713.5	222,593	825.2	
HABA	2,000	6.0			2,000	6.0	
MAIZ AMARILLO DURO	5,300,293	14,208.6	3,404,100	8,373.0	1,896,193	5,835.6	
MAIZ AMILACEO	61,192	211.5			61,192	211.5	
MAIZ CHALA	25,500	127.0	23,000	120.0	2,500	7.0	
MAIZ CHOCLO	278,605	997.1	139,500	420.0	139,105	577.1	
MANGO	15,300	41.0			15,300	41.0	

Table F-1-3(2) LOAN BY EACH AGRICULTURAL PRODUCTS AND OTHER

Fiscal Year No. 51 From February to December 1982

-thousand soles-

RECURSOS PROPIOS	FINALIDAD	TOTAL		UNIDADES ASOCIATIVAS		AGRICULTORES INDIVIDUALES		TOTAL GENERAL
		MONTO	HAS. O UNID.	MONTO	HAS. O UNID.	MONTO	HAS. O UNID.	
	CULTIVO O DESTINO							
	VIC NO VINIFERA	105,840	238.0	71,600	153.0	34,240	85.0	
	VID VINIFERA	4,400	4.0			4,400	4.0	
	YUCA	176,640	577.5	29,700	76.0	146,940	501.5	
	ZANAHORIA	20,770	75.7			20,770	75.7	
	ZAPALLO	166,825	399.9	50,190	114.0	116,635	285.5	
	2- FINALIDAD PECUARIA	485,818		43,000		446,818		
	ALIMENTOS-AV	24,560				24,560		
	COMPRA DE AVES	13,940	25,015			13,940	25,015	
	VACUNOS-CN	285,601	1,633			285,601	1,633	
	OTR. ALIMENTOS VA.-CN	31,379				31,379		
	OTR. GTUS. EXPLOT. VA-CN	6,038				6,038		
	OTR. ALIMENTOS POR.-CN	34,000				34,000		
	VACUNOS-LC	58,000	92	27,000	32	31,000	60	
	FURRAJES VACUNOS-LC	16,000	40	16,000	40			
	OTR. ALIM. VA.-LC	10,000				10,000		
	INSTALACIONES VA.-LC	8,500				8,500		
	OTRAS EXPLOTACIONES	1,800				1,800		
	3- MAQUINAS E IMPLEMENTOS	995,329		677,157		318,172		
	MOTORES	80,025		43,674		36,351		
	TRACTORES	471,433	30	316,266	19	155,167	11	
	VEHICULOS	47,705	5	41,709	4	6,000	1	
	IMPLEMENTOS	127,981		98,511		29,470		
	OTRAS MAQUINAS	268,181		176,997		91,184		
	5- COMERCIALIZACION DE PRODUCTOS	1,636,692		1,636,692				
	ALGODON	1,636,692		1,636,692				

FINALIDAD	TOTAL	UNIDSADES ASOCIATIVAS		AGRICULTORES INDIVIDUALES	
		HAS. O UNID.	MONTO	HAS. O UNID.	MONTO
CULTIVO O DESTINO	MONTO	HAS. O UNID.	MONTO	HAS. O UNID.	MONTO
6- AGRO-INDUSTRIAL	86,741		73,241		13,500
ALMACENES	46,254		32,754		13,500
OTROS	40,487		40,487		
7- IRRIGACION	304,255		293,264		10,991
CANALES DE REGADIO	113,680		112,580		1,100
EQUIPOS DE RIEGO	11,960		11,000		960
POZOS	22,764		18,464		4,300
REPRESAS	3,931				3,931
RESERVORIOS	700				700
OTROS	151,220		151,220		
8- MEJORAMIENTO DE TIERRAS	86,855		86,855		
DEFENSA DE RIOS	21,106		21,105		

FINALIDAD CALTIIVO O DESTINO	TOTAL		UNIDADES ASOCIATIVAS		AGRICULTORES INDIVIDUALES	
	MONTO	HAS. O UNID.	MONTO	HAS. O UNID.	MONTO	HAS. O UNID.
MANI	81,115	212.5	32,550	61.0	48,565	151.5
MANZANO	886,779	1,276.0	292,590	291.0	594,185	985.0
MELON	37,225	71.0	8,000	13.0	29,225	58.0
NARANJO	1,934,325	1,866.8	1,585,800	1,494.0	348,525	372.8
OTROS CULTIVOS	17,200	48.0			17,200	48.0
OTROS FRUTALES	1,655,328	1,219.1	1,217,093	841.5	438,235	377.6
OTRAS HORTALIZAS	17,605	58.9	700	3.0	16,905	55.9
PALTO	48,525	142.6	17,500	88.0	31,025	54.6
PALLAR	66,130	222.9	23,650	64.0	42,480	158.5
PAPA	3,111,646	3,379.5	1,493,530	1,356.5	1,618,116	2,023.0
PERAL	32,500	50.5	25,500	19.0	7,000	31.5
PEPINO	4,600	13.0			4,600	13.0
PORO	1,200	3.0			1,200	3.0
SANDIA	236,620	502.4	76,700	174.0	159,520	328.4
SORGO ESCOBERO	750	3.0			750	3.0
TOMATE	751,740	1,381.7	441,050	705.0	310,690	676.7
TORONJA	1,000				1,000	
TRIGO	23,599	142.2			23,595	142.2
VAINITA	10,978	51.5			10,978	51.5

Table F-1-4 LOAN BY EACH AGRICULTURAL PRODUCTS AND OTHERS

Fiscal Year No. 51 From February to December 1982

-thousand soles-

RECURSOS PROPIOS	FINALIDAD	TOTAL		UNIDADES ASOCIATIVAS		AGRICULTORES INDIVIDUALES		TOTAL GENERAL
		MONTO	HAS. O UNID.	MONTO	HAS. O UNID.	MONTO	HAS. O UNID.	
	CULTIVO O DESTINO							
	NIVELACION/DESEMPIEDR	65,750		65,750				

Table F-1-5 An Area for Credit by Crops in Chancay-Huaral Valley

Crops	Area
Cotton	5,000 Ha
Maize	4,000 "
Potato	200 "
Fruits	3,700 "
Others	2,000 "

Table F-1-6 Credit Condition in Huaral Office of Agrarian Bank of Peru

Crop	Period	Amount of Credit per Ha.
Cotton	10 month	S/. 2,000,000
Maize	6	S/. 1,400,000
Potato	8	S/. 4,500,000
Fruits	12	S/. 3,000,000
Fruits	36	S/. 7,000,000
Others	4	S/. 1,300,000

Table F-1-7 INTEREST FOR CREDIT OF AGRARIAN BANK OF PERU

Use	Interest	Commission	Period
Production Cost (Annual Crop. Permanent Crop)			
Cotton	60%	2%	Short
Maize	60	2	"
Potato	46.5	2	"
Vegetables	46.5	2	"
Fruits	46.5	2	Long
Capital Investment			
Tractor, Pump and Others	54%	3%	Long
Milk Cow	54	3	"
Stockbreeding			
Fattening Cattle	46.5	2	short
Hog Raising	46.5	2	"
Poultry	60	2	"
Duck and Turkey	60	2	"
Farming Cost	60 - 46.5%	2%	
Commercial Cost	60 - 46.5	2	
Capital Investment	60 - 50.5	3	

Interest is decided in proportion to inflation rate.

Table F-1-8 Fiscal Budget 1983 of Ministry of Agriculture

ASIGNACION PRESUPUESTAL PUEGO MINISTERIO DE AGRICULTURA

(Millones de Soles)

USO	Tesoro Publico	Ingresos Propios	Endeuda- miento	Ingresos P. Transfer	Total	%
Gastos Corrientes	52,735.0	9,312.0	-	-	62,047.0	51.8
Gastos de capital	-	1,796.0	32,946	23,026	57,768.0	48.2
Total:	52,735.0	11,108.0	32,946	23,026	119,815	
%	44.0	9.3	27.5	19.2	100.0	

Table F-1-9 Fiscal budget 1983 of Ministry of Agriculture

ESTRUCTURA DEL PRESUPUESTO DE INVERSION 1983 DEL PLIEGO MINISTERIO DE AGRICULTURA POR TIPO DE ASIGNACION Y FUENTES DE FINANCIAMIENTO

	ASIGNACION			FUENTES DE FINANCIAMIENTO		
	Presupuesto 1983	Estudios	Obras	Bienes de Capital	Ingresos Propios	Ingresos por Transferencia
MINISTERIO DE AGRICULTURA (1)	16,629.0	1,853.0	14,674.0	102.0	-	5,762.0
%	28.80	19.60	32.10	3.90	-	26.20
INSTITUTOS	41,139.0	7,580.0	31,078.0	2,481.0	1,796.0	17,264.0
%	71.20	80.40	67.90	96.10	100.0	73.80
- INSTITUTO NACIONAL DE DESARROLLO AGROINDUSTRIAL - INDDA.	565.0	13.0	220.0	332.0	-	565.0
%	0.98	0.14	0.48	12.85	-	2.45
- INSTITUTO NACIONAL FORESTAL Y FAUNA - INFOR.	360.0	70.0	290.0	-	-	360.0
%	0.62	0.74	0.63	-	-	1.56
- INSTITUTO NACIONAL DE AMPLIACION DE LA FRONTERA AGRICOLA INAF	31,669.0	2,825.0	28,694.0	150.0	-	13,919.0
%	54.82	29.95	62.72	5.81	-	60.45
- INSTITUTO NACIONAL DE INVESTIGACION Y PROMOCION AGROPECUARIA - INIPA.	8,545.0	4,672.0	1,874.0	1,999.0	1,796.0	2,420.0
%	14.79	49.53	4.09	77.40	100.0	10.50
TOTAL:	57,768.0	9,433.0	45,752.0	2,583.0	1,796.0	23,026.0
		100%				

(1) Incluye las Unidades Presupuestarias, Desarrollo Central y Regulacion Lima y Provincias.

Table F-1-10 Fiscal budget 1983 of INAF, Ministry of Agriculture

06 INSTITUTO NACIONAL DE AMELIACION		31,669.0	2,825.0	28,694.0	150.0	-	17,750.0	13,919.0
DE LA FRONTERA AGRICOLA (INAF)								
0602	Estudios							
	01 Estudio Integral de Cuencas Tacna y Moquegua	100.0	100.0	-	-	-	-	100.0
	02 Estudios de Nuevas Irrigaciones en la Sierra	410.0	410.0	-	-	-	-	410.0
	03 Proyecto Chuquibambilla	50.0	50.0	-	-	-	-	50.0
	04 Plan Piloto Valle de Moquegua	100.0	100.0	-	-	-	-	100.0
0604	Proyecto Especial Plan REHATIC							
	01 Plan REHATIC I Etapa	4,819.0	619.0	4,050.0	150.0	-	1,619.0	3,200.0
	02 Plan REHATIC III Etapa	200.0	200.0	-	-	-	-	200.0
0605	Proyecto Especial Irrigacion Puyango Tumbes							
	01 Irrigaciones en Tumbes	410.0	410.0	-	-	-	-	410.0
0606	Proyecto Especial Pequenas y Medianas Irrigaciones							
	01 Linea Global de Riego N° 2	18,742.0	350.0	18,392.0	-	-	12,832.0	5,910.0
	02 Plan Meria I Etapa	2,945.0	15.0	2,930.0	-	-	1,542.0	1,403.0
	03 Plan Meris II Etapa	3,480.0	207.0	3,273.0	-	-	1,757.0	1,723.0
0607	Proyecto Especial Ampliacion de la Frontera Agric. por Tecn. de Riego							
		413.0	364.0	49.0	-	-	-	413.0

Table F-1-11 The Water Irrigation Commission (Comision de Regantes) in
Chancay - Huaral Valley

<u>District</u>	<u>Sectionary Area</u>	<u>Irrigation Area</u>	<u>Area</u>	<u>Irrigated Area</u>
		(SAUME)	323.17	290.41
		PALPA - CAQUI	2,709.02	2,650.29
	AUCALLAMA 01	MIRAFLORES	791.17	788.55
		BOZA AUCALLAMA	1,505.89	1,423.02
		PASAMAYO	936.46	926.42
		(SAN MIGUEL)	191.51	180.25
		CUYO-HUAYAN	985.02	980.25
	ESPERANZA 02	LA ESPERANZA	3,518.54	3,353.72
		HUANDO	1,459.78	1,442.53
		JESUS DEL VALLE		
		ESQUNEL	2,711.25	2,627.19
		RETES-NATUNALES	2,375.17	2,260.53
	HUARAL 03	CHANCAY ALTO	758.65	687.06
		CHANCAY BAJO	2,172.80	1,934.38
		SALINAS	429.86	390.32
		CHANCAYLLO	1,482.86	1,242.33
TOTAL			22,351.21	20,875.00

* Project Area: 20,706 ha (from the down stream of the Chancay River)

Table F-1-12 Agricultural Cooperatives in Chancay - Huaral Valley

Cooperatives		Members	Area of farm land Ha.
1.	CAT. HUERTA MARGARET <u>1/</u>	29	75.60
2.	CAT. HUANDO <u>1/</u>	634	1,129.05
3.	CAU. LA CANDELARIA	84	433.61
4.	CAU. SAN MARTIN DE RETES	90	414.83
5.	CAU. JECUAN	60	455.27
6.	CAU. UNION TORREBLANCA	148	405.28
7.	CAU. LOS LAURELES	134	586.64
8.	CAT. PASAMAYO <u>1/</u>	32	190.35
9.	CAU. BOZA	74	453.21
10.	CAU. SAN JOSE - MIRAFLORES	104	451.37
11.	CAU. VILLA HERMOSA	105	584.32
12.	CAU. ESQUIVEL	85	507.50
13.	CAU. JESUS DEL VALLE	53	265.74
14.	CAU. LA HUACA	92	582.39
15.	CAU. LAS MERCEDES	104	407.48
16.	CAU. STO. DOMINGO DE BOZA	135	590.36
17.	CAU. PASAMAYO	63	349.19
18.	CAU. EL ROSARIO	188	1,140.80
19.	CAU. BUENA VISTA	82	993.06
20.	CAU. PALPA	314	1,359.79
21.	CAT. CUYO <u>1/ 2/</u>	103	689.82

	Cooperatives		Members	Area of farm land
22.	CAU. JESUS DEL VALLE	*	128	465.34
23.	CAT. ESQUIVEL	<u>1/</u>	58	183.22
24.	CAU. ESPERANZA		215	2,307.91
25.	CAU. EL PORVENIR		115	874.84
26.	CAU. VIRGEN DE FATINA		64	88.00
27.	CAU. SANTA ROSA		47	195.77
Total			3,340	15,980.74

1/ Land Holds' Cooperative (Community work)

2/ Out side of the project area

* At present, the cooperative is parcelling their land in a lot to members, moreover, it has been organized Huaral Horticultural Cooperative - COOP. AGRARIA HORTICULTORES DE HUARAL LTDA.

Source: Central de Cooperative

Tab. F-1-13 Dealing Amount of Central de Cooperativas del Valle

Articles	Saling amount/Perchasing amount	Remarks
Fertilizers	S/. 469,826,375	
Chemicals	S/. 420,349,957	
Seeds	S/. 78,804,560	Cotton, Maize, Beans, Potato
Instruments	S/. 23,315,884	
Cotton	S/. 1,202,103,331	S/. 75,000/Quintal
Maize	S/. 294,617,100	S/. 400/kg

Source: Central de Cooperativas del Valle

Table F-1-14 Population of Chancay - Huaral Valley

Administrative	District	Total	URBAN	%	RURAL	%
	Huaral	45,983 ^P	34,235	74.45	11,748	25.55
	Chancay	25,250	18,993	75.22	6,257	24.78
	Aucallama	10,835	3,349	30.86	7,491	69.14
	Sub-total	82,068	56,572	68.93	25,496	31.07
	Highland	20,051	10,386	51.80	9,665	48.20
	Total	102,119	66,958	65.57	35,161	34.43

Source: CENSUS 1981

Table F-1-15 Household of Chancay - Huaral Valley

AREA	POPULATION		HOUSEHOLD		FAMILY FORMATION	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
COASTAL AREA	56,572	25,496	9,397	4,201	6	6
HIGHLAND AREA	10,386	9,665	2,134	1,871	4	4
Total	67,958	35,161	11,531	6,072		
TOTAL	102,119		17,603			

Source: CENSUS 1981

Table F-1-16 TRANSITION OF POPULATION IN CHANCAY - HUARAL VALLEY

YEAR	POPULATION	URBAN	%	RURAL	%
1940	23,127	7,773	33.6	15,354	66.4
1961	38,961	18,134	46.5	20,827	53.5
1968	50,792	25,177	49.6	25,615	50.4
1972	65,144	32,502	49.9	32,642	50.1
1981	102,119	67,958	65.6	35,161	34.4
1984 <u>1/</u>	107,326	70,400	65.6	36,926	34.4

1/ Annual growth rate: 5%

Source: CENSUS 1981

Table F-1-17 TRANSITION OF POPULATION BY DEPARTMENT

PERU: POBLACION ESTIMADE AL 30-VI DE CADA AÑO,
SEGUN DEPARTAMENTOS: 1981/1983

(en miles)

DEPARTAMENTOS	POBLACION ESTIMADE AL 30 DE JUNIO		
	1981	1982	1983
<u>REPUBLICA</u>	<u>17,754.8</u>	<u>18,225.7</u>	<u>18,707.0</u>
Amazonas	268.0	275.1	282.4
Ancash	853.6	876.2	899.3
Apurimac	342.8	351.9	361.2
Arequipa	738.1	757.8	777.8
Ayacucho	523.6	537.5	551.7
Cajamarca	1,082.8	1,111.5	1,140.9
Callao	454.1	466.2	478.5
Cuzco	874.1	897.3	921.0
Huancavelica	361.4	371.0	380.8
Huanuco	505.4	518.8	532.5
Ica	446.7	458.6	470.7
Junin	896.6	920.4	944.7
La Libertad	991.5	1,017.8	1,044.7
Lambayeque	708.5	727.3	746.5
Lima	4,991.0	5,123.3	5,258.6
Loreto	474.8	487.4	500.2
Madre de Dios	35.8	36.7	37.7
Moquegua	103.3	106.0	108.8
Pasco	230.9	237.0	243.3
Piura	1,155.2	1,185.8	1,217.1
Puno	910.0	934.1	958.8
San Martín	331.6	340.3	349.3
Tacna	147.6	151.5	155.5
Tumbes	108.0	110.9	113.8
Ucayali	219.4	225.3	231.2

Nota. - Las estimaciones por departamentos estan sujetas a revision

Fuente: INSTITUTO NACIONAL DE ESTADISTICA. - Direccion General
de Demografia.

Table F-1-18 EFFECTIVE LABOR FORCE IN PROVINCIA HUARAL (OVER 15 age) (1)

ITEM	LABOR FORCE (OVER 15)	PROFESSIONAL OCCUPATION									
		Person	Psm.	ENGINEER	SPECIALIST PERSONEL ADMINISTRATER	PERSONEL MANAGER EMPLOYEE	MERCHANT SALES MAN SERVICE	FARMER FOREST WORKER FISHER MAN	NON-FARMER OPERATOR DRIVER	OTHER	Psm.
TOTAL	32,088	1,363	60	3,105	3,288	1,465	14,834	5,541	2,432		
1. AGRICULTURE, FORESTRY AND FISHERY	15,486	79	2	229	19	59	14,802	296			
AGRICULTURE	14,797	72	-	203	18	51	14,210	243			
FORESTRY	2	-	-	-	-	-	2	-			
FISHERY	687	7	2	26	1	8	590	53			
2. MINING	540	34	5	39	-	10	-	452			
3. INDUSTRIES	1,920	90	43	127	27	47	32	1,551	3		
CONSUMPTION GOOD	1,672	71	39	109	22	42	32	1,354	3		
INTERMEDIATE MATERIAL	105	4	1	10	5	5	-	80	-		
CAPITAL GOOD	143	15	3	8	-	-	-	117	-		

ITEM	LABOR FORCE (OVER 15)	PROFESSIONAL OCCUPATION										
		SPECIALIST ENGINEER	PERSONEL ADMINISTRATER	MANAGER EMPLOYEE	MERCHANT SALES MAN	SERVICE FISHER MAN	FARMER FOREST WORKER	NON-FARMER OPERATOR DRIVER	OTHER	Psm.	Psm.	Psm.
4. ELECTRIC, GAS WATER SUPPLY	82	5	1	19	-	4	-	53	-	-	-	-
5. CONSTRUCTION	969	9	-	8	-	6	-	946	-	-	-	-
6. COMMERCE, RESTAURANT HOTEL	3,819	24	2	118	3,239	316	-	120	-	-	-	-
WHOLESALE	212	2	2	37	117	4	-	50	-	-	-	-
RETAIL STORE	3,227	21	-	73	3,052	11	-	70	-	-	-	-
RESTAURANT, HOTEL	380	1	-	8	70	301	-	-	-	-	-	-
7. TRANSPORTATION, WAREHOUSE COMMUNICATION	1,463	9	1	113	-	8	-	1,330	-	-	-	2
8. FINANCE, SERVICE	423	93	3	221	2	94	-	5	-	-	-	5
9. SOCIAL ORGANIZATION	4,975	1,020	3	2,207	1	921	-	788	-	-	-	35
RECREATION SERVICE	3,509	999	3	2,202	1	228	-	57	-	-	-	19

(3)

ITEM	LABOR FORCE (OVER 15)	PROFESSIONAL OCCUPATION									
		SPECIALIST ENGINEER	PERSONNEL ADMINISTRATOR	MANAGER EMPLOYEE	MERCHANT SALES MAN	SERVICE	FARMER FOREST WORKER FISHER MAN	NON-FARMER OPERATOR DRIVER	OTHER		
	Person	Psm.	Psm.	Psm.	Psm.	Psm.	Psm.	Psm.	Psm.	Psm.	
INDIVIDUAL SERVICE	933	21	-	5	-	160	-	731	-	16	
HOME SERVICE	533	-	-	-	-	533	-	-	-	-	
10. OTHER	1,614	-	-	24	-	-	-	-	-	1,590	
11. JOB SEEKER	797	-	-	-	-	-	-	-	-	797	

Table F-1-19 LAND USE CLASIFICACION IN CHANCAY - HUARAL VALLEY

ARABLE LAND IN COASTAL AREA	24,412 ha	7.1 %
ARABLE LAND IN HIGH LAND AREA	2,092 "	0.6 %
NATURAL PASTURE	92,900 "	26.9 %
FORESTAL AREA	22,000 "	6.4 %
URBAN AREA	400 "	0.1 %
DESERT, NON-ARABLE LAND	203,390 "	58.9 %
TOTAL	345,390 ha	100.0 %

Source: Ministry of agriculture

Table F-2-1 TRANSITION OF MAIN AGRICULTURAL PRODUCTION AND
PLANTED AREA IN NATIONAL LEVEL

	77		78		79		80		81		82	
	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION
		M.T.		M.T.		M.T.		M.T.		M.T.		M.T.
PAPA	246,843	1,615,582	247,191	1,695,324	242,003	1,695,116	194,142	1,379,648	199,269	1,678,606	209,380	1,768,965
	ha		ha		ha		ha		ha		ha	
MAIZ AMA.	224,289	230,579	214,538	210,871	213,771	213,134	153,445	151,800	173,562	196,935	136,754	202,448
ALCODON	109,937	173,328	115,698	198,542	134,719	243,885	149,017	256,355	157,257	285,781	154,150	277,228
MAIZ DURO	166,641	503,294	136,370	379,143	157,266	408,323	121,494	300,356	141,989	389,820	141,731	434,616
FRIJOL	59,186	48,884	55,714	47,148	57,014	47,693	45,032	39,342	49,882	43,562	53,444	47,606

Source: Ministry of agriculture

Table F-2-2 TRANSITION OF MAIN AGRICULTURAL PRODUCTION AND
PLANTED AREA IN DEPARTMENT LIMA

	77		78		79		80		81		82	
	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION
	ha	M.T.	ha	M.T.	ha	M.T.	ha	M.T.	ha	M.T.	ha	M.T.
PAPA	10,310	142,570	9,798	142,985	8,615	122,528	6,629	98,731	9,060	139,599	9,500	149,150
MAIZ AMA.	2,060	3,379	1,920	2,676	2,025	2,413	-	-	745	1,021	1,000	1,400
ALCODON	16,188	35,614	20,465	46,046	28,550	63,381	31,400	71,033	34,232	78,673	28,500	65,550
MAIZ DURO	33,000	128,700	28,395	115,000	23,685	97,819	16,609	69,083	17,787	77,769	17,300	80,100

Table P-2-3 TRANSITION OF MAIN AGRICULTURAL PRODUCTION AND
PLANTED AREA IN CHANCAY - HUARAL VALLEY

	78		79		80		81		82		83	
	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION
	ha	M.T.	ha	M.T.	ha	M.T.	ha	M.T.	ha	M.T.	ha	M.T.
PAPA	1,303	15,741	667	7,840	419	7,704	606	9,966	608	8,799	281	3,498
MAIZ HIBRID	3,666	8,177	2,523	4,949	2,481	10,572	2,486	8,005	4,403	17,408	3,325	14,837
ALGODON	2,947	8,154	5,072	11,476	5,930	13,827	5,000	14,250	4,878	14,604	4,007	6,036
MAIZ CHOCLO	270	3,109	173	2,552	-	-	416	6,775	674	6,123	636	4,939

Table F-2-4 EXPORTATION FOB FOR MAIN PRODUCTS IN PERU

	Million of Dollar			
	1980	1981	1982	1983
Steel mining	1,755	1,425	1,257	1,614
Petroleum and by products	792	692	719	544
Agriculture <u>1/</u>	226	170	218	196
Fishery	195	141	202	79
Other traditionals	103	134	135	63
No traditionals	845	693	762	555
Total	3,916	3,255	3,293	3,015

1/ Agriculture:

	1000 Quintal	
	1982	1983
Cotton	85(1,285)	44(670)
Sugar	20(60)	35(89)
Coffee	113(44)	117(56)
Total	218	196

Source : BCR

Table F-2-5 IMPORTATION FOB FOR MAIN PRODUCTS

	Million of Dollar	
	1982	1983
Principal aliments	359	425
Wheat	155	152
Maize and sorgum	56	61
Rice	17	40
Sugar	-	63
Potato	-	3
Soy bean's oil	28	46
Dairy products	60	39
Meats	43	21
Other consumption goods	402	218
Other producer's goods	1,024	718
Capital goods	1,411	880
Public	518	437
Through foreign public loan	415	300
Through exchange market	103	137
Private	893	443
Direct investiment	198	130
Through exchange market	695	313
Donation	65	100
Diverses and adjustment	460	347
Total	3,721	2,688

Source: BCR

Table F-2-6 Food Consuming Pattern in Peru

**CONSUMO PROMEDIO FAMILIAR PERCAPITA MENSUAL DE LOS PRINCIPALES
ALIMENTOS Y PRODUCTOS ALIMENTICIOS POR
AREAS DE RESIDENCIA DEL PAIS
(Período: Agosto 1971 - Agosto 1972)**

PRODUCTO	LIMA METROPOLITANA		GRANDES CIUDADES		CENTROS POBLADOS		AREA RURAL	
	Kg/mes	% respecto Gasto Total	Kg/mes	% respecto Gasto Total	Kg/mes	% respecto Gasto Total	Kg/mes	% respecto Gasto Total
I. CEREALES Y DERIVADOS	7.1	19.6	6.3	21.5	7.3	21.8	7.8	21.9
Arroz	2.8	7.6	2.3	7.6	2.4	7.1	1.2	3.6
Cebada	*	0.1	*	0.1	0.2	0.7	0.9	2.8
Mafz grano (Harina)	0.1	0.2	0.1	0.4	0.7	2.2	1.9	5.5
Mafz fresco (choclo)	0.4	1.1	0.3	1.1	0.3	1.0	0.6	1.9
Quinua	*	0.1	*	0.1	0.1	0.2	0.3	0.9
Trigo	0.1	0.4	0.1	0.6	0.4	0.1	0.8	2.8
Pan Francés	2.2	6.1	0.8	2.6	1.2	3.6	0.3	1.0
Pan Manteca	0.5	1.2	2.0	6.6	1.3	4.0	0.7	2.1
Fideos	1.0	2.8	0.7	2.5	0.7	2.1	0.6	1.8
II. TUBERCULOS Y RAICES	5.1	13.8	4.6	14.9	6.9	20.3	12.8	37.7
Camote	0.6	1.5	0.3	1.0	0.3	0.8	0.3	0.9
Oca y Olluco	0.2	0.6	0.1	0.4	0.2	0.8	0.8	2.3
Papa	4.0	10.8	3.4	11.3	6.3	16.8	9.4	27.6
Chuño	*	0.1	0.1	0.3	0.3	0.9	0.4	1.3
Yuca	0.3	0.8	0.5	1.7	0.7	2.0	1.5	4.3
Otros tubérculos	*	*	0.1	0.2	0.1	0.2	0.4	1.3
III. AZÚCARES Y DERIVADOS	1.7	4.7	1.4	4.8	1.7	5.2	1.1	3.2
Azúcar blanca	1.7	4.6	0.9	3.1	0.9	2.7	0.3	0.8
Azúcar rubia	*	0.1	0.5	1.7	0.8	2.6	0.8	2.4
IV. LEGUMINOSAS	0.9	2.6	0.8	2.8	1.2	3.6	1.4	4.0
Arvejas	0.4	1.0	0.3	1.0	0.4	1.1	0.4	1.0
Frijoles	0.3	0.9	0.3	1.0	0.4	1.2	0.6	1.4
Habas	0.2	0.7	0.2	0.8	0.4	1.3	0.5	1.8
V. FRUTOS Y DERIVADOS	3.7	10.1	3.0	9.9	2.9	8.1	2.0	6.3
Limón	0.3	0.8	0.2	0.8	0.2	0.5	*	0.1
Manzana	0.3	0.8	0.2	0.6	0.2	0.4	*	0.1
Naranja	0.8	2.2	0.6	1.7	0.6	1.4	0.1	0.3
Plátanos Isla y Seda	1.0	2.8	0.6	2.0	0.8	1.7	0.2	0.7
Otros plátanos	0.1	0.4	0.6	1.8	0.8	2.4	1.5	4.4
Otras frutas	1.2	3.3	0.9	3.0	0.8	1.7	0.2	0.7
VI. HORTALIZAS Y DERIVADOS	3.5	9.4	2.3	7.9	2.3	7.2	1.2	3.2
Tomate	0.8	2.3	0.6	2.2	0.6	1.8	0.2	0.6
Col y Colliflor	0.3	0.7	0.3	1.1	0.3	1.0	0.3	0.8
Zapallo	0.6	1.6	0.2	0.8	0.2	0.7	0.1	0.4
Cebolla	1.2	3.2	0.8	2.5	0.8	2.4	0.4	1.1
Zanahoria	0.6	1.6	0.4	1.3	0.4	1.3	0.2	0.4
VII. CARNES Y HUEVOS	3.4	9.3	3.1	10.4	2.9	8.5	1.4	4.3
Cordero	0.3	0.8	0.5	1.7	0.7	2.0	0.3	0.8
Vacuno	1.1	2.9	1.1	3.7	0.9	2.8	0.3	0.8
Pollo	0.8	2.2	0.4	1.3	0.3	1.0	0.1	0.4
Menudencias	0.3	0.9	0.3	1.0	0.3	0.8	0.1	0.3
Pescado "bonito"	0.3	0.8	0.2	0.6	0.1	0.3	*	0.1
Mariscos de mar	0.2	0.6	0.1	0.4	0.1	0.2	*	0.1
Pescado de río (fresco)	—	—	0.1	0.5	0.1	0.2	0.3	0.8
Otras carnes	*	0.1	0.2	0.5	0.2	0.6	0.2	0.6
Huevo de gallina	0.4	1.0	0.2	0.7	0.2	0.6	0.1	0.4
VIII. LECHE Y DERIVADOS	4.6	12.5	3.4	11.7	2.4	7.1	1.1	2.9
Leche fresca de vaca	3.0	8.1	2.8	9.6	1.8	5.2	0.8	2.2
Leche evaporada	1.5	4.0	0.5	1.8	0.6	1.6	0.1	0.3
Quesos	0.1	0.4	0.1	0.4	0.1	0.3	0.2	0.4
IX. ACEITES	0.8	1.7	0.6	1.9	0.6	1.7	0.3	1.0
Ácidos	0.6	1.7	0.5	1.7	0.5	1.4	0.2	0.6
Mantecas	*	*	0.1	0.2	0.1	0.3	0.1	0.4
SUB-TOTAL	30.6	83.7	26.4	85.8	28.2	83.5	28.6	84.8
OTROS ALIMENTOS	6.4	16.3	4.6	14.2	6.8	18.6	5.4	15.5
TOTAL CONS.PROM.FAM. PERCAPITA MES	37.0	100.0	30.0	100.0	34.0	100.0	34.0	100.0
GASTO TOTAL PROMEDIO FAMILIAR PERCAPITA MES	1300.0	100.0	800.0	100.0	700.0	100.0	400.0	100.0
GASTO EN ALIMENTOS FAMILIAR PERCAPITA MES	547.0	43.5	387.5	48.4	387.2	58.3	289.8	86.6

* Menos del 0.1

FUENTE: La Alimentación en el Perú (NOV. 81) Carlos Amat y León, Dante Currosley.

Table F-2-7 PRICE TENDENCY

									[Unit : US\$/ton]
CROP	'78	'79	'80	'81	'82	'83	'84	Proposed Price	
NARANJA	100	210	310	310	340	360		360	
							Export	470	470
MANDARINA							Domestic	300	300
MANZANO	130	150	260	310	290	210	250	240	
MARACUYA							140	140	
VID	180	180	280	470	490	480	400	240	Retailing 630
PALTO					220		130	(130)	280
MELOCOTON							530	(480)	Retailing 790
ALGODON (FOB CALLAO)					Jun. 1,503 Nov. 1,602	Feb. 1,348 May 1,421 Aug. 1,785 Nov. 1,791		1,700	Loading charge 1% Domestic freight \$5/ton
								1,739	
N.Y. PRICE				1,701	1,437	1,646	1,799		
MAIZ (A) (DOMESTIC)	100	190			180	150	200	200	
MEXICAN GULF					110	124			
CHICAGO				129	101	126	140	230	On Huaral \$230/ton Shipment freight \$100/ton
FRIJOL SECO	520	530	680	870	810	680	850 1,610	1,100	Domestic freight \$10/ton
FRIJOL (VELDE)	170	190	240	330	330	320	240	180	Retailing 250 - 540

CROP	'78	'79	'80	'81	'82	'83	'84	[Unit : US\$/ton]	
								Proposed Price	
TOMATE	70	140	160	210	170	160	100 200	120	Retailing \$260
PAPA.	70	140	210	150	180	220 310	240 320	240	Retailing \$340
CAMOTE	40	70	80	80	90	110	70 80	55	Retailing \$126
CHOCLO	50	80		90	140 180	120	125	125	
COL							110	80	
COLIFLOR							110	80	
AJI							160 170	160	
CAIGUA							170	170	
ZANAHORIA				130			100	100	Retailing 125 - 250
CHALA							8	8	
ALFALEA							40 60	50	

Note ; Price except Algodon are
at the farm gate.

Table F-2-8(1) Production Cost (1)

Algodon

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	91	1.9	172.9	106.0	201.4
Tractor	21 hr.	7.0	147.0	21.0hr.	147.0
Operation	21 hr.	0.5	10.5	21.0hr.	10.5
Sub total			330.4		358.9
Special Cost					
Seed			7.8		7.8
Fertilizer			141.6		202.3
Insecticide			183.5		183.5
Pesticide			-		-
Sub total			332.4		393.6
General Cost					
Social Insurance			105.1		121.5
Administration			16.5		17.9
Miscellaneous			117.7		133.8
Sub total			239.3		273.2
TOTAL			902.1		1,025.7
					114%

Aji

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	73.0	1.9	138.7	79.0	150.1
Tractor	13.0hr.	7.0	91.0	13.0hr.	91.0
Operation	13.0hr.	0.5	6.5	13.0hr.	6.5
Sub total			236.2		247.6
Special Cost					
Seed			73.9		105.5
Fertilizer			101.9		145.6
Insecticide			138.3		138.3
Pesticide			-		-
Sub total			314.1		389.4
General Cost					
Social Insurance			83.2		89.8
Administration			11.8		12.4
Miscellaneous			96.8		110.9
Sub total			191.8		213.1
TOTAL			742.1		850.1
					115%

Table F-2-8(2) Production Cost (2)

Maize A

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	51	1.9	96.9	55.0	104.5
Tractor	18 hr.	7.0	126.0	19.0hr.	133.0
Operation	18 hr.	0.5	9.0	19.0hr.	9.5
Sub total			231.9		247.0
Special Cost					
Seed			16.0		22.8
Fertilizer			99.0		141.4
Insecticide			27.7		27.7
Pesticide			-		-
Sub total			142.7		191.9
General Cost					
Social Insurance			60.7		65.4
Administration			11.6		12.4
Miscellaneous			67.0		77.5
Sub total			139.3		155.3
TOTAL			513.9		594.2
					116%

Maize Choclo

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	47.0	1.9	89.3	50.0	95.0
Tractor	13.0hr.	7.0	91.0	13.0hr.	91.0
Operation	13.0hr.	0.5	6.5	13.0hr.	6.5
Sub total			186.8		192.5
Special Cost					
Seed			32.8		46.8
Fertilizer			86.7		123.8
Insecticide			52.4		52.4
Pesticide			-		-
Sub total			171.9		223.0
General Cost					
Social Insurance			54.9		58.2
Administration			9.3		9.6
Miscellaneous			63.4		72.5
Sub total			127.6		140.3
TOTAL			486.3		555.8
					114%

Table F-2-8(3) Production Cost (3)

Tomate

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	106	1.9	201.4	124.0	235.6
Tractor	12 hr.	7.0	84.0	12.0hr.	84.0
Operation	12 hr.	0.5	6.0	12.0hr.	6.0
Sub total			291.4		325.6
Special Cost					
Seed			30.4		30.4
Fertilizer			155.3		221.9
Insecticide			106.0		106.0
Pesticide			-		-
Sub total			291.6		358.3
General Cost					
Social Insurance			118.9		138.5
Administration			14.6		16.3
Miscellaneous			107.5		125.8
Sub total			241.0		280.6
TOTAL			824.0		964.5
					117%

Col

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	73.0	1.9	138.7	79.0	150.1
Tractor	12.0hr.	7.0	84.0	12.0hr.	84.0
Operation	12.0hr.	0.5	6.0	12.0hr.	6.0
Sub total			228.7		240.1
Special Cost					
Seed			13.5		19.3
Fertilizer			73.8		105.4
Insecticide			40.1		40.1
Transportation			8.3		11.8
Sub total			135.7		176.6
General Cost					
Social Insurance			83.0		89.5
Administration			11.4		12.0
Miscellaneous			68.8		77.7
Sub total			163.2		179.2
TOTAL			527.6		595.9
					113%

Table F-2-8(4) Production Cost (4)

Maize Chala

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	40	1.9	76.0	42.0	79.8
Tractor	13 hr.	7.0	91.0	13.0hr.	91.0
Operation	13 hr.	0.5	6.5	13.0hr.	65.0
Sub total			173.5		177.3
Special Cost					
Seed			32.8		46.8
Fertilizer			25.0		35.0
Insecticide			7.0		7.0
Pesticide			-		-
Sub total			64.8		88.8
General Cost					
Social Insurance			47.3		49.5
Administration			8.7		8.9
Miscellaneous			44.1		48.7
Sub total			100.1		107.1
TOTAL			338.4		373.2
					110%

Papa

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	55.0	1.9	104.5	58.0	110.2
Tractor	27.0hr.	7.0	189.0	28.0hr.	196.0
Operation	27.0hr.	0.5	13.5	28.0hr.	14.0
Sub total			307.0		320.2
Special Cost					
Seed			440.8		550.0
Fertilizer			161.4		230.6
Insecticide			123.9		123.9
Pesticide			-		-
Sub total			725.3		904.5
General Cost					
Social Insurance			67.6		71.2
Administration			15.4		16.0
Miscellaneous			167.3		196.8
Sub total			250.3		284.0
TOTAL			1,282.6		1,508.7
					118%

Table F-2-8(5) Production Cost (5)

Camote

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	39	1.9	74.1	43.0	81.7
Tractor	14 hr.	7.0	98.0	15.0hr.	105.0
Operation	14 hr.	0.5	7.0	15.0hr.	7.5
Sub total			179.1		194.2
Special Cost					
Seed			12.8		12.8
Fertilizer			74.5		106.4
Insecticide			13.8		13.8
Pesticide			-		-
Sub total			101.1		133.0
General Cost					
Social Insurance			46.5		51.1
Administration			9.0		9.7
Miscellaneous			50.4		58.2
Sub total			105.9		119.0
TOTAL			386.1		446.2
					116%

Califlor

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	73.0	1.9	138.7	79.0	150.1
Tractor	12.0hr.	7.0	84.0	12.0hr.	84.0
Operation	12.0hr.	0.5	6.0	12.0hr.	6.0
Sub total			228.7		240.1
Special Cost					
Seed			6.6		9.4
Fertilizer			73.8		105.4
Insecticide			29.3		29.3
Transportation			13.0		18.5
Sub total			112.7		162.6
General Cost					
Social Insurance			83.0		89.5
Administration			11.4		12.0
Miscellaneous			65.4		75.6
Sub total			159.8		177.1
TOTAL			501.2		579.8
					116%

Table F-2-8(6) Production Cost (6)

Zanahoria

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	77	1.9	146.3	83.0	157.7
Tractor	12 hr.	7.0	84.0	12.0hr.	84.0
Operation	12 hr.	0.5	6.0	12.0hr.	6.0
Sub total			236.3		247.7
Special Cost					
Seed			33.7		48.2
Fertilizer			95.6		136.5
Insecticide			87.4		87.4
Pesticide			-		-
Sub total			216.7		272.1
General Cost					
Social Insurance			87.3		93.8
Administration			11.8		12.4
Miscellaneous			82.8		93.9
Sub total			181.6		200.1
TOTAL			634.9		719.9
					113%

Caigua

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	82.0	1.9	155.8	88.0	167.2
Tractor	12.0hr.	7.0	84.0	12.0hr.	84.0
Operation	12.0hr.	0.5	6.0	12.0hr.	6.0
Sub total			245.8		257.2
Special Cost					
Seed			21.0		30.0
Fertilizer			132.4		189.2
Insecticide			180.1		180.1
Transportation			-		-
Sub total			333.5		399.3
General Cost					
Social Insurance			92.8		99.3
Administration			12.3		12.9
Miscellaneous			102.7		115.3
Sub total			207.8		227.5
TOTAL			787.1		884.0
					112%

Table F-2-8(7) Production Cost (7)

Frijol Canario (seco)

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	42	1.9	79.8	44.0	83.6
Tractor	10 hr.	7.0	70.0	11.0hr.	77.0
Operation	10 hr.	0.5	5.0	11.0hr.	5.5
Sub total			154.8		166.1
Special Cost					
Seed			63.8		79.8
Fertilizer			34.4		49.2
Insecticide			125.4		125.4
Pesticide			-		-
Sub total			223.6		254.4
General Cost					
Social Insurance			48.6		51.1
Administration			7.7		8.3
Miscellaneous			65.2		72.0
Sub total			121.5		131.4
TOTAL			499.9		551.9
					110%

Frijol Comon (V)

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	32.0	1.9	60.8	34.0	64.6
Tractor	9.0hr.	7.0	63.0	10.0hr.	70.0
Operation	9.0hr.	0.5	4.5	10.0hr.	5.0
Sub total			128.3		139.6
Special Cost					
Seed			18.2		22.8
Fertilizer			17.4		24.9
Insecticide			76.1		76.1
Pesticide			-		-
Sub total			111.7		123.8
General Cost					
Social Insurance			37.4		39.9
Administration			6.4		7.0
Miscellaneous			42.6		46.5
Sub total			86.4		93.4
TOTAL			326.4		356.8
					109%

Table F-2-8(8) Production Cost (8)

Maracuya

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	102	1.9	198.8	110.0	209.0
Tractor			-		-
Operation			-		-
Sub total			198.8		209.0
Special Cost					
Fertilizer			280.6		400.8
Pesticide			94.2		94.2
Insecticide			-		-
Sub total			374.8		495.0
General Cost					
Social Insurance			114.0		119.8
Administration			9.9		10.5
Miscellaneous			104.6		125.1
Sub total			228.5		255.4
TOTAL			802.1		959.4
					120%

Vid

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	68.0	1.9	129.2	73.0	138.7
Tractor	6.0hr	7.0	42.0	6.0hr	42.0
Operation	6.0hr	0.5	3.0	6.0hr	3.0
Sub total			174.2		183.7
Special Cost					
Fertilizer			149.3		213.3
Pesticide			74.4		74.4
Insecticide			-		-
Sub total			223.7		287.7
General Cost					
Social Insurance			75.8		81.2
Administration			8.7		9.2
Miscellaneous			72.4		84.3
Sub total			156.9		174.7
TOTAL			554.8		646.1
					117%

Table F-2-8(9) Production Cost (9).

Mandarin (Apply same value to Naranja W.N)

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	136	1.9	258.4	146.0	277.4
Tractor	81 hr.	7.0	567.0	87.0hr.	609.0
Operation	81 hr.	0.5	40.5	87.0hr.	43.5
Sub total			865.9		929.9
Special Cost					
Fertilizer			362.5		517.8
Pesticide			986.0		1,059.0
Insecticide			-		-
Sub total			1,348.5		1,576.8
General Cost					
Social Insurance			171.4		184.0
Administration			43.3		46.5
Miscellaneous			364.4		410.6
Sub total			579.1		641.1
TOTAL			2,793.5		3,147.8
					113%

Manzana

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	92.0	1.9	174.8	98.0	186.2
Tractor	3.0hr.	7.0	21.0	3.0hr.	21.0
Operation	3.0hr.	0.5	1.5	3.0hr.	1.5
Sub total			197.3		208.7
Special Cost					
Fertilizer			288.0		411.0
Pesticide			142.0		162.5
Insecticide			-		-
Sub total			430.0		573.5
General Cost					
Social Insurance			101.1		107.6
Administration			9.9		10.4
Miscellaneous			110.7		135.0
Sub total			221.7		253.0
TOTAL			849.0		1,035.2
					122%

Table F-2-8(10) Production Cost (10)

Paltos

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	103	1.9	195.7	110.0	209.0
Tractor	3 hr.	7.0	21.0	3.0hr.	21.0
Operation	3 hr.	0.5	1.5	3.0hr.	1.5
Sub total			218.2		231.5
Special Cost					
Fertilizer			230.2		328.9
Pesticide			43.2		43.2
Insecticide			-		-
Sub total			273.4		372.1
General Cost					
Social Insurance			113.1		120.7
Administration			10.9		11.6
Miscellaneous			92.3		110.4
Sub total			216.3		242.7
TOTAL			707.9		846.3
					120%

Melcoton

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	171.0	1.9	324.9	183.0	347.7
Tractor	3.0hr.	7.0	21.0	3.0hr.	21.0
Operation	3.0hr.	0.5	1.5	3.0hr.	1.5
Sub total			347.4		370.2
Special Cost					
Fertilizer			181.9		259.9
Pesticide			280.9		280.9
Insecticide			89.7		128.1
Sub total			552.5		668.9
General Cost					
Social Insurance			187.1		200.2
Administration			17.4		18.5
Miscellaneous			165.7		188.7
Sub total			370.2		407.4
TOTAL			1,270.1		1,446.5
					114%

Table F-2-8(11) Production Cost (11)

Alfalfa (1 ano)

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	54	1.9	102.6	61.0	115.9
Tractor	12 hr.	7.0	84.0	12.0hr.	84.0
Operation	12 hr.	0.5	6.0	12.0hr.	6.0
Sub total			192.6		205.9
Special Cost					
Seed			41.5		59.3
Fertilizer			99.0		141.4
Insecticide			121.7		121.7
Transportation			-		-
Sub total			262.2		322.4
General Cost					
Social Insurance			62.3		69.9
Administration			9.6		10.3
Miscellaneous			79.0		91.3
Sub total			150.9		171.5
TOTAL			605.7		699.8
					116%

Alfalfa (2-6 ano)

	Without Project			With Project	
	Quantity	Unit Price	Amount	Quantity	Amount
Cultivation Cost		US\$	US\$		US\$
Wage	56.0	1.9	106.4	66.0	125.4
Tractor	1.0hr.	7.0	7.0	1.0hr.	7.0
Operation	1.0hr.	0.5	0.5	1.0hr.	0.5
Sub total			113.9		132.9
Special Cost					
Seed			-		-
Fertilizer			-		-
Pesticide			-		-
Insecticide			44.8		44.8
Sub total			44.8		44.8
General Cost					
Social Insurance			61.3		72.2
Administration			5.9		6.6
Miscellaneous			33.9		38.5
Sub total			101.1		117.3
TOTAL			259.8		295.0
					114%

Note :

Production cost (Table F-2-8(1)-(11)) is estimated assuming the following conditions.

1. The cost of each item is estimated referring the information from ATDA Huaral and BAP.
2. The yield of crops, with project and without project, is shown in Table E-2-6.
3. The social insurance for farm labor including operator is estimated to be 55.33% for wage.
4. The administration cost is estimated to be 5% for cultivation cost.
5. To apply for economic evaluation water charge and interest of credit for production are excluded. (Water charge is appropriated separately to operation and maintenance cost in economic evaluation.)
6. While other expense equivalent to 15% of production cost is included on the production costs.

Table F-2-9 Earnings Per Hectare By Each Product

Crop	Without Project			With Project		
	Yield (M.T.)	Unit Price (US\$)	Total Amount (US\$)	Yield (M.T.)	Unit Price (US\$)	Total Amount (US\$)
Naranja	18.0	360.0	6,480.0	23.0	360.0	8,280.0
Mandarina	20.0	470.0	6,340.0	26.0	470.0	8,242.0
		300.0			300.0	
Manzano	10.5	240.0	2,520.0	14.0	240.0	3,360.0
Maracuya	10.0	140.0	1,400.0	15.0	140.0	2,100.0
Vid	6.0	240.0	1,440.0	9.0	240.0	2,160.0
Palto	10.0	130.0	1,300.0	13.0	130.0	1,690.0
Melocoton	7.0	480.0	3,360.0	10.5	480.0	5,040.0
Algodon	2.7	0.4 x 1,700	1,897.6	4.0	0.4 x 1,700	2,811.2
		38.0			38.0	
Maiz Amal.	4.5	230.0	1,035.0	7.0	230.0	1,610.0
Frijol Seco	1.0	1,100.0	1,100.0	1.3	1,100.0	1,430.0
Frijol Verde	4.0	180.0	720.0	6.0	180.0	1,080.0
Abono Verde						
Papa	15.0	240.0	3,600.0	22.0	240.0	5,280.0
Camote	16.0	55.0	880.0	24.0	55.0	1,320.0
Tomate	17.0	120.0	2,040.0	25.0	120.0	3,000.0
Coli	17.0	80.0	1,360.0	25.0	80.0	2,000.0
Coliflor	17.0	80.0	1,360.0	25.0	80.0	2,000.0
Choclo	9.0	125.0	1,125.0	13.0	125.0	1,625.0
Aji	10.0	160.0	1,600.0			
Caigua	7.0	170.0	1,190.0	10.0	170.0	1,700.0
Zanahoria				22.0	100.0	2,200.0
Chala	35.0	8.0	280.0			
Alfalfa	18.0	50.0	900.0	25.0	50.0	1,250.0

Table F-2-10 Burling Mills and Cotton Dealers in The Project Area

Burling Mills

<u>MILL</u>	<u>CAPACITY</u>
La Candelaria	8.5 Quintal/h
Jesus del Valle	25.0 Quintal/h
Industrias Pacocha S.A.	30.0 Quintal/h
Hornillos	8.5 Quintal/h
Reyes	5.0 Quintal/h
Palpa	No operated

Cotton dealers

Algodones Peruano,	Grupo Coral,
ENCI,	La Fabril,
Romero,	Fabrica Textil "San Jacinto",
Pacocha	

Broker

Salguero,	Central de Cooperativa,
Gabriel Reyes.	Cas. el Porvenir,
Comite de Productores de Algodonero	

Table F-3-1 (A-1)

EXISTING FARM MANAGEMENT OF MODEL FARMER

MODEL A

AREA		La Esperanza					
FARMING PATTERN		Fruits					
FARMING SCALE		15.0 ha					
FARMING SYSTEM		Washington Orange 13.5 ha, Mandarin Orange 1.5 ha					
FAMILY		6 persons, Home-worker: 2 persons					
TECHNICAL SYSTEM		Machinery utilization system					
CROPPING PATTERN	ITEM \ YEAR						
		SUMMER					
		WINTER					
	Cropping 15.0 ha		Oranges				
WORKING HOUR		300 days					
FARM OUTPUT	GROSS INCOME		PRODUCTION COSTS		AGRICULTURAL PRODUCTION POWER		
	ITEM	VALUE	ITEM	COST	INDICES	VALUE	
	FARM INCOME	Washington Orange 243,800 kg @800/kg	S/. 194,400,000	WAGE	S/. 180,000,000	AGRICULTURAL INCOME	S/. 30,325,220
		Mandarin Orange 30,000 kg @1,300/kg	39,000,000	SEEDS		INCOME PER CAPITA FOR HOMEWORKER	15,162,610
				FERTILIZERS	7,855,000		
				PESTICIDES	15,850,000	FARM LABOR INCOME PER DAY	50,542
				RENTAL FEE TRACTOR			
				INTEREST OF CREDIT	7,500,000	INCOME PER HA.	2,021,681
				SOCIAL INSURANCE	12,383,280		
			WATER TARIFF	76,500	PRODUCTION COST PER HA.	13,538,318	
		REPAIRING EXPENSE	8,700,000				
		MISCELLANEOUS	92,040,000				
SELF-SUSTENANCE			DEPRECIATION	40,670,000			
TOTAL	233,400,000			203,074,780			

Source: Result of field study

Table F-3-1 (A2) EXISTING FARM MANAGEMENT OF MODEL FARMER
 SUMMARIZED TABLE OF FARM HOUSEHOLD ECONOMY
 MODEL A

ITEM	VALUE		REMARK
	LOCAL CURRENCY	U.S.DOLLER	
FARM HOUSEHOLD INCOME	S/. 30,325,220	US\$ 13,049	
AGRICULTURAL INCOME	30,325,220	13,049	
GROSS INCOME	233,400,000	100,430	
PRODUCTION COSTS	203,074,780	87,381	
NON AGRICULTURAL INCOME	-	-	
NON AGRICULTURAL EARNINGS	-	-	
NON AGRICULTURAL EXPENDITURE	-	-	
LIVING COST	18,560,000	7,986	
SURPLUS FARM HOUSEHOLD ECONOMY	11,765,220	5,063	

Note: Miscellaneous is included fuel (for tractors, trucks and machines), carton box (for orange) and others.

Holding machinery: 2 trucks, 2 tractors and 2 motor sprayers.

Table F-3-1 (B-1)

EXISTING FARM MANAGEMENT OF MODEL FARMER

MODEL B

AREA		Esquelvel					
FARMING PATTERN		Cotton, Maize					
FARMING SCALE		6.0 ha					
FARMING SYSTEM		Cotton 3.5 ha, Maize 2.5 ha					
FAMILY		3 persons, Home-worker: 1 person					
TECHNICAL SYSTEM		Machinery utilization system					
CROPPING PATTERN	YEAR						
	ITEM	SUMMER	Cotton				
	Rotation Cropping	WINTER	Maize				
WORKING HOUR		300 days					
FARM OUTPUT	GROSS INCOME		PRODUCTION COSTS		AGRICULTURAL PRODUCTION POWER		
	ITEM	VALUE	ITEM	COST	INDICES	VALUE	
	FARM INCOME	Cotton 210 qq @84,000/qq	S/. 17,640,000	WAGE	S/. 1,419,000	AGRICULTURAL INCOME	S/. 11,844,887
		Maize 9,950 kg @500/kg	4,975,000	SEEDS	304,000	INCOME PER CAPITA FOR HOMEWORKER	11,844,887
				FERTILIZERS	3,000,000		
				PESTICIDES	760,000	FARM LABOR INCOME PER DAY	39,483
				RENTAL FEE TRACTOR	900,000		
				INTEREST OF CREDIT	2,880,000	INCOME PER HA.	1,974,148
				SOCIAL INSURANCE	813,513		
			WATER TARIFF	30,600	PRODUCTION COST PER HA.	1,799,185	
		REPAIRING EXPENSE					
SELF-SUSTENANCE	Maize 50kg	25,000	MISCELLANEOUS	638,000			
			DEPRECIATION	50,000			
TOTAL		22,640,000		10,795,113			

Source: Result of field study

Table F-3-1 (B-2) EXISTING FARM MANAGEMENT OF MODEL FARMER
 SUMMARIZED TABLE OF FARM HOUSEHOLD ECONOMY
 MODEL B

ITEM	VALUE		REMARK
	LOCAL CURRENCY	U.S. DOLLER	
FARM HOUSEHOLD INCOME	S/. 11,844,887	US\$ 5,097	
AGRICULTURAL INCOME	11,844,887	5,097	
GROSS INCOME	22,640,000	9,742	
PRODUCTION COSTS	10,795,113	4,645	
NON AGRICULTURAL INCOME	-	-	
NON AGRICULTURAL EARNINGS	-	-	
NON AGRICULTURAL EXPENDITURE	-	-	
LIVING COST	4,980,000	2,143	
SURPLUS FARM HOUSEHOLD ECONOMY	6,864,887	2,954	

Note: Saling period: Cotton - May, 1984
 Maize - Set., 1983

Table F-3-1 (C-1)

EXISTING FARM MANAGEMENT OF MODEL FARMER

MODEL C

AREA		Jecuan				
FARMING PATTERN		Cotton, Maize				
FARMING SCALE		4.5 ha				
FARMING SYSTEM		Cotton 3.5 ha, Maize 1.0 ha				
FAMILY		4 persons, Home-worker: 1 person				
TECHNICAL SYSTEM		Machinery utilization system				
CROPPING PATTERN	ITEM	YEAR				
	Rotation Cropping (3.5 ha)	SUMMER	Cotton			
	(1.0 ha)	WINTER	Maize			
WORKING HOUR		300 days				
FARM OUTPUT	GROSS INCOME		PRODUCTION COSTS		AGRICULTURAL PRODUCTION POWER	
	ITEM	VALUE	ITEM	COST	INDICES	
					VALUE	
	Cotton 175 qq @84,000/qq	S/. 14,700,000	WAGE	S/. 950,000	AGRICULTURAL INCOME	S/. 10,281,475
	Maize 4,200 kg @450/kg	1,890,000	SEEDS	214,000	INCOME PER CAPITA FOR HOMEWORKER	10,281,475
			FERTILIZERS	1,110,000	FARM LABOR INCOME PER DAY	34,272
			PESTICIDES	330,000	INCOME PER HA.	2,284,772
			RENTAL FEE TRACTOR	450,000	PRODUCTION COST PER HA.	1,401,894
			INTEREST OF CREDIT	1,300,000		
			SOCIAL INSURANCE	1,576,575		
		WATER TARIFF	22,950			
		REPAIRING EXPENSE				
		MISCELLANEOUS	305,000			
		DEPRECIATION	50,000			
		TOTAL	16,590,000	6,308,525		

Source: Result of field study

Table F-3-1 (C-2)

EXISTING FARM MANAGEMENT OF MODEL FARMER
 SUMMARIZED TABLE OF FARM HOUSEHOLD ECONOMY
 MODEL C

ITEM	VALUE		REMARK
	LOCAL CURRENCY	U.S.DOLLER	
FARM HOUSEHOLD INCOME	S/. 10,281,475	US\$ 4,424	
AGRICULTURAL INCOME	10,281,475	4,424	
GROSS INCOME	16,590,000	7,138	
PRODUCTION COSTS	6,308,525	2,714	
NON AGRICULTURAL INCOME	-	-	
NON AGRICULTURAL EARNINGS	-	-	
NON AGRICULTURAL EXPENDITURE	-	-	
LIVING COST	6,200,000	2,668	
SURPLUS FARM HOUSEHOLD ECONOMY	4,081,475	1,756	

Note: Saling period: 1984

Table F-3-1 (D-1)

EXISTING FARM MANAGEMENT OF MODEL FARMER

MODEL D

AREA		Esquivel						
FARMING PATTERN		Vegetable, Maize						
FARMING SCALE		6.0 ha						
FARMING SYSTEM		Celery 1.0 ha, Radish 1.0 ha, Cabbage 0.5 ha, Maize 3.5 ha						
FAMILY		6 persons, Home-worker: 1 person						
TECHNICAL SYSTEM		Machinery utilization system						
CROPPING PATTERN	YEAR							
	Rotation Cropping	SUMMER	Celery , Radish					
		WINTER	Maize , Cabbage					
WORKING HOUR		280 days						
FARM OUTPUT	GROSS INCOME		PRODUCTION COSTS		AGRICULTURAL PRODUCTION POWER			
	ITEM	VALUE	ITEM	COST	INDICES	VALUE		
	FARM INCOME	Celery 15,000 kg @750/kg	S/. 11,250,000	FARM INPUT	WAGE	S/. 830,000	AGRICULTURAL INCOME	S/. 9,069,920
		Radish 5,000 kg @100/kg	500,000		SEEDS	310,000	INCOME PER CAPITA FOR HOMEWORKER	9,069,920
		Cabbage 9,600 kg @200/kg	1,920,000		FERTILIZERS	1,415,000	FARM LABOR INCOME PER DAY	32,392
		Maize 17,500 kg @460/kg	8,050,000		PESTICIDES	500,000	INCOME PER HA.	1,511,653
	SELF-SUSTENANCE				RENTAL FEE TRACTOR	---	PRODUCTION COST PER HA.	2,108,346
					INTEREST OF CREDIT	970,000		
					SOCIAL INSURANCE	1,438,980		
					WATER TARIFF	30,600		
		REPAIRING EXPENSE	1,000,000					
		MISCELLANEOUS	1,505,500					
		DEPRECIATION	4,650,000					
TOTAL	21,720,000			12,650,080				

Source: Result of field study

Table F-3-1 (D-2) EXISTING FARM MANAGEMENT OF MODEL FARMER
 SUMMARIZED TABLE OF FARM HOUSEHOLD ECONOMY
 MODEL D

ITEM	VALUE		REMARK
	LOCAL CURRENCY	U.S.DOLLER	
FARM HOUSEHOLD INCOME	S/. 13,469,920	US\$ 5,795	
AGRICULTURAL INCOME	9,069,920	3,902	
GROSS INCOME	21,720,000	9,345	
PRODUCTION COSTS	12,650,080	5,443	
NON AGRICULTURAL INCOME	4,400,000	1,893	
NON AGRICULTURAL EARNINGS	5,000,000	2,151	
NON AGRICULTURAL EXPENDITURE	600,000	258	
LIVING COST	6,574,000	2,828	
SURPLUS FARM HOUSEHOLD ECONOMY	6,895,920	2,967	

Note: Saling period: 1983
 Holding one tractor (45 HP)

Table F-3-1 (E-1) EXISTING FARM MANAGEMENT OF MODEL FARMER
MODEL E

AREA		Chancy Bajo					
FARMING PATTERN		Vegetable					
FARMING SCALE		4.5 ha					
FARMING SYSTEM		Choclo 4.5 ha, Pumpkin 4.5 ha					
FAMILY		5 persons, Home-worker: 1 person					
TECHNICAL SYSTEM		Machinery utilization system					
CROPPING PATTERN	YEAR						
	ITEM						
	Rotation Cropping (4.5 ha)	SUMMER	Punpkin				
	(4.5 ha)	WINTER	Choclo				
WORKING HOUR		323 days					
FARM OUTPUT	GROSS INCOME		PRODUCTION COSTS		AGRICULTURAL PRODUCTION POWER		
	ITEM	VALUE	ITEM	COST	INDICES	VALUE	
	FARM INCOME	Pumpkin 90,000 kg @100/kg	S/. 9,000,000	WAGE	S/. 920,000	AGRICULTURAL INCOME	S/. 13,085,910
		Choclo 38,250 kg @300/kg	11,475,000	SEEDS	550,000	INCOME PER CAPITA FOR HOMEWORKER	13,085,910
				FERTILIZERS	1,045,000		
				PESTICIDES	770,000	FARM LABOR INCOME PER DAY	
				RENTAL FEE TRACTOR	450,000		40,513
				INTEREST OF CREDIT	742,500	INCOME PER HA.	
				SOCIAL INSURANCE	2,465,440		2,907,980
			WATER TARIFF	22,950	PRODUCTION COST PER HA.		
SELF-SUSTENANCE			REPAIRING EXPENSE	---		1,642,020	
			MISCELLANEOUS	373,200			
			DEPRECIATION	50,000			
TOTAL		20,475,000		7,389,090			

Source: Result of field study

Table F-3-1 (E-2) EXISTING FARM MANAGEMENT OF MODEL FARMER
 SUMMARIZED TABLE OF FARM HOUSEHOLD ECONOMY
 MODEL E

ITEM	VALUE		REMARK
	LOCAL CURRENCY	U.S.DOLLER	
FARM HOUSEHOLD INCOME	S/. 13,085,910	US\$ 5,631	
AGRICULTURAL INCOME	13,085,910	5,631	
GROSS INCOME	20,475,000	8,810	
PRODUCTION COSTS	7,389,090	3,179	
NON AGRICULTURAL INCOME	-	-	
NON AGRICULTURAL EARNINGS	-	-	
NON AGRICULTURAL EXPENDITURE	-	-	
LIVING COST	6,920,000	2,978	
SURPLUS FARM HOUSEHOLD ECONOMY	6,165,910	2,653	

Note: Saling period: Pumpkin - May, 1983
 Choclo - Dec., 1983

Table F-3-1. (F-1)

EXISTING FARM MANAGEMENT OF MODEL FARMER

MODEL F

AREA		Los Laureles						
FARMING PATTERN		Vegetable						
FARMING SCALE		1.0 ha						
FARMING SYSTEM		Tomato 1.0 ha, Choclo 1.0 ha, Cauliflower 1.0 ha						
FAMILY		2 persons, Home-worker: 1 person						
TECHNICAL SYSTEM		Machinery utilization system						
CROPPING PATTERN	YEAR		1983		1984			
	Rotation Cropping (1.0 ha)	SUMMER	Tomato					
		WINTER	Choclo Cauliflower					
WORKING HOUR		300 days						
FARM OUTPUT	GROSS INCOME		PRODUCTION COSTS			AGRICULTURAL PRODUCTION POWER		
	ITEM	VALUE	ITEM	COST	INDICES	VALUE		
	FARM INCOME	Tomato 21,000 kg @200/kg	2/. 4,158,000	FARM INPUT	WAGE	S/. 450,000	AGRICULTURAL INCOME	S/. 2,873,975
		Choclo 7,025 kg @150/kg	1,053,750		SEEDS	240,000	INCOME PER CAPITA FOR HOMEWORKER	2,873,975
		Cauliflower 1,287 Doz @2,000/Doz	2,574,000		PESTICIDES	1,559,000	FARM LABOR INCOME PER DAY	9,580
					RENTAL FEE TRACTOR	300,000	INCOME PER HA.	2,873,975
					INTEREST OF CREDIT	---		
					SOCIAL INSURANCE	1,289,925		
					WATER TARIFF	5,100		
			REPAIRING EXPENSE					
SELF-SUSTENANCE	Tomato 210 kg	42,000		MISCELLANEOUS	332,000			
	Choclo 175 kg	26,250		DEPRECIATION	50,000			
	Cauliflower 13 Doz	26,000						
TOTAL		7,880,000			5,006,025			

Source: Result of field study

Table F-3-1 (F-2) EXISTING FARM MANAGEMENT OF MODEL FARMER
 SUMMARIZED TABLE OF FARM HOUSEHOLD ECONOMY
 MODEL F

ITEM	VALUE		REMARK
	LOCAL CURRENCY	U.S.DOLLER	
FARM HOUSEHOLD INCOME	S/. 3,053,975	US\$ 1,314	
AGRICULTURAL INCOME	2,873,975	1,237	
GROSS INCOME	7,880,000	3,391	
PRODUCTION COSTS	5,006,025	2,154	
NON AGRICULTURAL INCOME	180,000	77	
NON AGRICULTURAL EARNINGS	180,000	77	
NON AGRICULTURAL EXPENDITURE	-	-	
LIVING COST	3,560,000	1,532	
SURPLUS FARM HOUSEHOLD ECONOMY	506,025	218	

Note: Saling period: Tomate - Feb., 1984
 Choclo - Jul., 1983
 Cauliflower - Oct., 1983

Table F-3-1 (G-1)

EXISTING FARM MANAGEMENT OF MODEL FARMER

MODEL G

AREA		Palpa					
FARMING PATTERN		Cotton, Maize, Bean					
FARMING SCALE		1.96 ha					
FARMING SYSTEM		Vainita bean 1.0 ha, Choclo 1.0 ha, Cotton 1.0 ha					
FAMILY		2 persons, Home-woker: 1 person					
TECHNICAL SYSTEM		Machinery utilization system					
CROPPING PATTERN	ITEM		YEAR				
	Rotation Cropping (1.0 ha)	SUMMER	Vainita bean	Cotton			
		WINTER	Choclo				
	(1.0 ha)						
WORKING HOUR		253 days					
FARM OUTPUT	GROSS INCOME		PRODUCTION COSTS			AGRICULTURAL PRODUCTION POWER	
	ITEM	VALUE	ITEM	COST	INDICES	VALUE	
	FARM INCOME	Vainita bean 3,000kg @250/kg	s/. 750,000	WAGE	s/. 540,000	AGRICULTURAL INCOME	s/. 2,734,549
		Choclo 9,000kg @200/kg	1,800,000	SEEDS	200,000	INCOME PER CAPITA FOR HOMEWORKER	2,734,549
		Cotton 52 @85,000/kg	4,420,000	FERTILIZERS	875,000		
				PESTICIDES	305,000	FARM LABOR INCOME PER DAY	10,808
				RENTAL FEE TRACTOR	390,000		
				INTEREST OF CREDIT	705,500		
				SOCIAL INSURANCE	1,179,851	INCOME PER HA.	1,395,178
			WATER TARIFF	9,900			
		REPAIRING EXPENSE		PRODUCTION COST PER HA.	4,485,451		
SELF-SUSTENANCE	Vainita bean 1,000 kg	250,000	MISCELLANEOUS	230,200			
			DEPRECIATION	50,000			
TOTAL		7,220,000		4,485,451			

Source: Result of field study

Table F-3-1 (G-2) EXISTING FARM MANAGEMENT OF MODEL FARMER
 SUMMARIZED TABLE OF FARM HOUSEHOLD ECONOMY
 MODEL G

ITEM	VALUE		REMARK
	LOCAL CURRENCY	U.S. DOLLER	
FARM HOUSEHOLD INCOME	S/. 3,004,549	US\$ 1,293	
AGRICULTURAL INCOME	2,734,549	1,179	
GROSS INCOME	7,220,000	3,107	
PRODUCTION COSTS	4,485,451	1,930	
NON AGRICULTURAL INCOME	270,000	116	
NON AGRICULTURAL EARNINGS	270,000	116	
NON AGRICULTURAL EXPENDITURE	-		
LIVING COST	3,560,000	1,532	
SURPLUS FARM HOUSEHOLD ECONOMY	-555,451	-239	

Note: Saling period: Vainita - Jun., 1983
 Choclo - Set., 1983
 Cotton - May, 1983

Table F-3-1 (H-1) EXISTING FARM MANAGEMENT OF MODEL FARMER
MODEL H

AREA		San Jose - Aucallama						
FARMING PATTERN		Fruits, Vegetable						
FARMING SCALE		6.0 ha						
FARMING SYSTEM		Apple 2.5 ha, Maracuya 2.0 ha, Water melon 1.5 ha						
FAMILY		4 persons, Home-worker: 2 persons						
TECHNICAL SYSTEM		Machinery utilization system						
CROPPING PATTERN	YEAR							
	ITEM							
	Cropping (1.5 ha)	SUMMER	Water melon					
	(2.0 ha)	WINTER	Maracuya					
Cropping (2.5 ha)		Apple						
WORKING HOUR		514 days						
FARM OUTPUT	GROSS INCOME		PRODUCTION COSTS		AGRICULTURAL PRODUCTION POWER			
	ITEM	VALUE	ITEM	COST	INDICES	VALUE		
	FARM INCOME	Apple 15,000 kg @350/kg	2/ 5,250,000	FARM INPUT	WAGE	2/ ---	AGRICULTURAL INCOME	2/ 10,544,743
		Maracuya 20,000 kg @250/kg	5,000,000		SEEDS	20,000	INCOME PER CAPITA FOR HOMEWORKER	1,272,371
		Water melon 42,000 kg @110/kg	4,620,000		FERTILIZERS	773,000		
					PESTICIDES	304,000	FARM LABOR INCOME PER DAY	10,257
					RENTAL FEE TRACTOR	200,000		
					INTEREST OF CREDIT	---	INCOME PER HA.	1,757,457
					SOCIAL INSURANCE	1,768,057		
			WATER TARIFF	30,600	PRODUCTION COST PER HA.	720,876		
		REPAIRING EXPENSE	500,000					
SELF-SUSTENANCE			MISCELLANEOUS	629,600				
			DEPRECIATION	100,000				
	TOTAL	14,870,000		4,325,257				

Source: Result of field study

Table F-3-1 (H-2) EXISTING FARM MANAGEMENT OF MODEL FARMER
 SUMMARIZED TABLE OF FARM HOUSEHOLD ECONOMY
 MODEL H

ITEM	VALUE		REMARK
	LOCAL CURRENCY	U.S. DOLLER	
FARM HOUSEHOLD INCOME	S/. 10,544,743	US\$ 4,537	
AGRICULTURAL INCOME	10,544,743	4,537	
GROSS INCOME	14,870,000	6,398	
PRODUCTION COSTS	4,325,257	1,861	
NON AGRICULTURAL INCOME	-	-	
NON AGRICULTURAL EARNINGS	-	-	
NON AGRICULTURAL EXPENDITURE	-	-	
LIVING COST	6,574,000	2,829	
SURPLUS FARM HOUSEHOLD ECONOMY	3,970,743	1,708	

Note: Holding one pick up truck.

Table F-3-2(1) Cropping Patterns of Model Farmers

Model	Farm Scale	Cropping Patterns
A	15.0 Ha	--- ORANGES -----
B	6.0 Ha	-- COTTON (2.75 Ha) -- C.MANURE ----- -- BEANS(DRY) (2,75 Ha) --MAIZE ----- -- VEGETABLE (0.5 Ha x 2.5 Plants/Year) -----
C	4.5 Ha	-- COTTON (1.75 Ha) -- G.MANURE ----- -- BEANS(dry) (1.75 Ha) -- MAIZE ----- -- VEGETABLE (1.0 Ha x 2.5 Plants/Year) -----
D	6.0 Ha	-- MAIZE (2.0 Ha) -- BEANS(DRY) ----- -- BEANS(DRY) (2.0 Ha) -- MAIZE ----- -- VEGETABLES (2.0 Ha x 2.5 Plants/Year) -----

Table F-3-2(2) Cropping Patterns of Model Farmers

Model	Farm Scale	Cropping Patterns
E	4.5 Ha	-- MAIZE (2.25 Ha) -- CABBAGE -- G.MANURE -- MAIZE -- CAULIFLOWER -- (per 2 years) -- BEANS(DRY) (2.25 Ha) -- POTATA -- BEANS(DRY) -- POTATA ----- (--- do ---)
F	1.0 Ha	-- TOMATO (0.5 Ha) -- CABBAGE -- BEANS(DRY) -- POTATA -- BEANS(GREEN) ----- (Per 2 years) -- BEANS(DRY) (0.5 Ha) -- POTATA -- BEANS(GREEN) -- TOMATO -- CABBAGE ----- (Per 2 years)
G	2.0 Ha	-- COTTON (1.0 Ha) -- BEANS(GREEN) -- COTTON -- BEANS(Green) ----- (Per 2 years) -- MAIZE (1.0 Ha) -- BEANS -- TOMATO -- CHOCLO ----- (Per 2 years)
G	6.0 Ha	-- APPLE (2.5 Ha) ----- -- MARACUYA (2.0 Ha) ----- -- VEGETABLES (1.5 Ha x 2.5 plants/year) -----

Table F-3-3(1/8) Profit and Loss Statement (Model Farm A)

Unit: us\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Income								
Agricultural Income	92,340	97,200	102,060	106,920	111,780	111,780	111,780	111,780
Miscellaneous Income	0	0	0	0	0	0	0	0
Return of Operational Fund	0	0	0	0	0	0	0	0
Balance (A)	92,340	97,200	102,060	106,920	111,780	111,780	111,780	111,780
Expenditure								
Production Cost	28,577	28,577	28,577	28,577	28,577	28,577	28,577	28,577
O/M Cost	720	720	720	720	720	720	720	720
Interest of Credit	23,119	3,478	0	0	0	0	0	0
Household Expenses	7,986	7,986	7,986	7,986	7,986	7,986	7,986	7,986
Balance (B)	60,402	40,761	37,283	37,283	37,283	37,283	37,283	37,283
(A) - (B)	31,938	56,439	64,777	69,637	74,497	74,497	74,497	74,497
Cost Depreciation	56,602	56,602	56,602	56,602	56,602	56,602	56,602	56,602
Profit after Depreciation	-24,664	-163	8,175	13,035	17,895	17,895	17,895	17,895
Repayment Cost	257	418	573	707	770	770	770	770
Balance	-24,921	-581	7,602	12,328	17,125	17,125	17,125	17,125
Total Amount	-24,921	-25,502	-17,900	-5,572	11,553	28,678	45,803	62,928

Table F-3-3(2/8) Profit and Loss Statement (Model Farm B)

Unit: us\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Income								
Agricultural Income	12.517	13.270	14.470	15.224	16.427	16.427	16.427	16.427
Miscellaneous Income	0	0	0	0	0	0	0	0
Return of Operational Fund	0	0	0	0	0	0	0	0
Balance (A)	12.517	13.270	14.470	15.224	16.427	16.427	16.427	16.427
Expenditure								
Production Cost	7.079	7.079	7.079	7.079	7.079	7.079	7.079	7.079
O/M Cost	288	288	288	288	288	288	288	288
Interest of Credit	3.008	3.040	2.880	2.272	1.248	0	0	0
Household Expenses	2.142	2.142	2.142	2.142	2.142	2.142	2.142	2.142
Balance (B)	12.517	12.549	12.389	11.781	10.757	9.509	9.509	9.509
(A) - (B)	0	721	2.081	3.443	5.670	6.918	6.918	6.918
Cost Depreciation	5.886	5.886	5.886	5.886	5.886	5.886	5.886	5.886
Profit after Depreciation	-5.886	-5.165	-3.805	-2.443	-216	1.032	1.032	1.032
Repayment Cost	102	167	229	283	308	308	308	308
Balance	-5.988	-5.332	-4.034	-2.726	-524	724	724	724
Total Amount	-5.988	-11.320	-15.354	-18.080	-18.604	-17.880	-17.156	-16.432

Table F-3-3(3/8) Profit and Loss Statement (Model Farm C)

Unit: us\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Income								
Agricultural Income	9,826	10,459	11,375	12,009	12,928	12,928	12,928	12,928
Miscellaneous Income	0	0	0	0	0	0	0	0
Return of Operational Fund	0	0	0	0	0	0	0	0
Balance (A)	9,826	10,459	11,375	12,009	12,928	12,928	12,928	12,928
Expenditure								
Production Cost	5,273	5,273	5,273	5,273	5,273	5,273	5,273	5,273
O/M Cost	216	216	216	216	216	216	216	216
Interest of Credit	2,352	2,496	2,576	2,416	2,016	1,200	128	0
Household Expenses	2,667	2,667	2,667	2,667	2,667	2,667	2,667	2,667
Balance (B)	10,508	10,652	10,732	10,572	10,172	9,356	8,284	8,156
(A) - (B)	-682	-193	643	1,437	2,756	3,572	4,644	4,772
Cost Depreciation	1,356	1,356	1,356	1,356	1,356	1,356	1,356	1,356
Profit after Depreciation	-2,038	-1,549	-713	81	1,400	2,216	3,288	3,416
Repayment Cost	77	125	172	212	231	231	231	231
Balance	-2,115	-1,674	-885	-131	1,169	1,985	3,057	3,185
Total Amount	-2,115	-3,789	-4,674	-4,805	-3,636	-1,651	1,406	4,591

Table F-3-3(4/8) Profit and Loss Statement (Model Farm D)

Unit: us\$

	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Y E A R								
Income								
Agricultural Income	13,842	14,796	16,056	16,920	18,180	18,180	18,180	18,180
Miscellaneous Income	0	0	0	0	0	0	0	0
Return of Operational Fund	0	0	0	0	0	0	0	0
Balance (A)	13,842	14,796	16,056	16,920	18,180	18,180	18,180	18,180
Expenditure								
Production Cost	4,793	4,793	4,793	4,793	4,793	4,793	4,793	4,793
O/M Cost	288	288	288	288	288	288	288	288
Interest of Credit	2,544	1,488	0	0	0	0	0	0
Household Expenses	2,828	2,828	2,828	2,828	2,828	2,828	2,828	2,828
Balance (B)	10,453	9,397	7,909	7,909	7,909	7,909	7,909	7,909
(A) - (B)	3,389	5,399	8,147	9,011	10,271	10,271	10,271	10,271
Cost Depreciation	4,696	4,696	4,696	4,696	4,696	4,696	4,696	4,696
Profit after Depreciation	-1,307	703	3,451	4,315	5,575	5,575	5,575	5,575
Repayment Cost	102	167	229	283	308	308	308	308
Balance	-1,409	536	3,222	4,032	5,267	5,267	5,267	5,267
Total Amount	-1,409	-873	2,349	6,381	11,648	16,915	22,182	27,449

Table F-3-3(5/8) Profit and Loss Statement (Model Farm E)

Unit: us\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Income								
Agricultural Income	15,687	16,097	18,250	18,721	20,823	18,721	20,823	18,721
Miscellaneous Income	0	0	0	0	0	0	0	0
Return of Operational Fund	0	0	0	0	0	0	0	0
Balance (A)	15,687	16,097	18,250	18,721	20,823	18,721	20,823	18,721
Expenditure								
Production Cost	7,547	6,708	7,547	6,708	7,547	6,708	7,547	6,708
O/M Cost	216	216	216	216	216	216	216	216
Interest of Credit	3,440	2,720	1,920	0	0	0	0	0
Household Expenses	2,977	2,977	2,977	2,977	2,977	2,977	2,977	2,977
Balance (B)	14,180	12,621	12,660	9,901	10,740	9,901	10,740	9,901
(A) - (B)	1,507	3,476	5,590	8,820	10,083	8,820	10,083	8,820
Cost Depreciation	2,712	2,712	2,712	2,712	2,712	2,712	2,712	2,712
Profit after Depreciation	-1,205	764	2,878	6,108	7,371	6,108	7,371	6,108
Repayment Cost	77	125	172	212	231	231	231	231
Balance	-1,282	639	2,706	5,896	7,140	5,877	7,140	5,877
Total Amount	-1,282	-643	2,063	7,959	15,099	20,976	28,116	33,993

Table F-3-3(6/8) Profit and Loss Statement (Model Farm F)

Unit: US\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Income								
Agricultural Income	4,447	4,440	5,136	5,160	5,825	5,160	5,825	5,160
Miscellaneous Income	0	0	0	0	0	0	0	0
Return of Operational Fund	0	0	0	0	0	0	0	0
Balance (A)	4,447	4,440	5,136	5,160	5,825	5,160	5,825	5,160
Expenditure								
Production Cost	1,517	1,322	1,517	1,322	1,517	1,322	1,517	1,322
O/M Cost	48	48	48	48	48	48	48	48
Interest of Credit	1,550	1,209	744	0	0	0	0	0
Household Expenses	925	925	925	925	925	925	925	925
Balance (B)	4,040	3,504	3,234	2,295	2,490	2,295	2,490	2,295
(A) - (B)	407	936	1,902	2,865	3,335	2,865	3,335	2,865
Cost Depreciation	813	813	813	813	813	813	813	813
Profit after Depreciation	-406	123	1,089	2,052	2,522	2,052	2,522	2,052
Repayment Cost	17	27	38	47	51	51	51	51
Balance	-423	96	1,051	2,005	2,471	2,001	2,471	2,001
Total Amount	-423	-327	724	2,729	5,200	7,201	9,672	11,673

Table F-3-3(7/8) Profit and Loss Statement (Model Farm G)

Unit: us\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Income								
Agricultural Income	4,753	6,220	5,519	7,191	6,271	7,191	6,271	7,191
Miscellaneous Income	0	0	0	0	0	0	0	0
Return of Operational Fund	0	0	0	0	0	0	0	0
Balance (A)	4,753	6,220	5,519	7,191	6,271	7,191	6,271	7,191
Expenditure								
Production Cost	1,959	2,333	1,959	2,333	1,959	2,333	1,959	2,333
O/M Cost	96	96	96	96	96	96	96	96
Interest of Credit	1,148	1,280	864	656	0	0	0	0
Household Expenses	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
Balance (B)	4,734	5,240	4,450	4,616	3,586	3,960	3,586	3,960
(A) - (B)	19	980	1,069	2,575	2,685	3,231	2,685	3,231
Cost Depreciation	1,356	1,356	1,356	1,356	1,356	1,356	1,356	1,356
Profit after Depreciation	-1,337	-376	-287	1,219	1,329	1,875	1,329	1,875
Repayment Cost	34	55	76	94	102	102	102	102
Balance	-1,371	-431	-363	1,125	1,227	1,773	1,227	1,773
Total Amount	-1,371	-1,802	-2,165	-1,040	187	1,960	3,187	4,960

Table F-3-3(8/8) Profit and Loss Statement (Model Farm H)

	Y E A R								Unit: us\$
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)	
Income									
Agricultural Income	12,954	13,922	14,889	15,857	16,824	16,824	16,824	16,824	16,824
Miscellaneous Income	0	0	0	0	0	0	0	0	0
Return of Operational Fund	0	0	0	0	0	0	0	0	0
Balance (A)	12,954	13,922	14,889	15,857	16,824	16,824	16,824	16,824	16,824
Expenditure									
Production Cost	5,451	5,451	5,451	5,451	5,451	5,451	5,451	5,451	5,451
O/M Cost	288	288	288	288	288	288	288	288	288
Interest of Credit	4,898	5,270	5,332	4,867	3,534	806	0	0	0
Household Expenses	2,829	2,829	2,829	2,829	2,829	2,829	2,829	2,829	2,829
Balance (B)	13,466	13,838	13,900	13,435	12,102	9,374	8,568	8,568	8,568
(A) - (B)	-512	84	989	2,422	4,722	7,450	8,256	8,256	8,256
Cost Depreciation	2,984	2,984	2,984	2,984	2,984	2,984	2,984	2,984	2,984
Profit after Depreciation	-3,496	-2,900	-1,995	-562	1,738	4,466	5,272	5,272	5,272
Repayment Cost	102	167	229	283	308	308	308	308	308
Balance	-3,598	-3,067	-2,224	-845	1,430	4,158	4,964	4,964	4,964
Total Amount	-3,598	-6,665	-8,889	-9,734	-8,304	-4,146	818	5,782	5,782

Table F-3-4(1/8) CASH FLOW OF INDIVIDUAL FARM (A)

Unit: us\$

	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Initial Fund								
Balance Brought Forward	0	31,681	87,702	151,906	220,836	294,563	368,290	442,017
Own Fund	0	0	0	0	0	0	0	0
Long Term Debt	0	0	0	0	0	0	0	0
Short Term Debt	37,290	5,610	0	0	0	0	0	0
Balance (A)	37,290	37,291	87,702	151,906	220,836	294,563	368,290	442,017
Interm Fund Required								
Production Cost	22,911	22,911	22,911	22,911	22,911	22,911	22,911	22,911
O/M Cost	720	720	720	720	720	720	720	720
Social Insurance	5,666	5,666	5,666	5,666	5,666	5,666	5,666	5,666
Household Expenses	7,986	7,986	7,986	7,986	7,986	7,986	7,986	7,986
Balance (B)	37,283	37,283	37,283	37,283	37,283	37,283	37,283	37,283
Interm Income								
(A) - (B)	7	8	50,419	114,623	183,553	257,280	331,007	404,734
Amount of Proceeds	92,340	97,200	102,060	106,920	111,780	111,780	111,780	111,780
Miscellaneous Revenue	0	0	0	0	0	0	0	0
Balance (C)	92,347	97,208	152,479	221,543	295,333	369,060	442,787	516,514
Term End Fund Required								
Payment of Long Term Debt	0	0	0	0	0	0	0	0
Payment of Short Term Debt	37,290	5,610	0	0	0	0	0	0
Interest Cost of Short Term Debt	23,119	3,478	0	0	0	0	0	0
Repayment Cost	257	418	573	707	770	770	770	770
Balance (D)	60,666	9,506	573	707	770	770	770	770
(C) - (D)	31,681	87,702	151,906	220,836	294,563	368,290	442,017	515,744
Amount Carried Forward	31,681	87,702	151,906	220,836	294,563	368,290	442,017	515,744

Table F-3-4(2/8) CASH FLOW OF INDIVIDUAL FARM (B)

	Y E A R								Unit: us\$
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)	
Initial Fund									
Balance Brought Forward	0	49	603	2,456	5,616	10,979	17,589	24,200	
Own Fund	150	0	0	0	0	0	0	0	
Long Term Debt	0	0	0	0	0	0	0	0	
Short Term Debt	9,400	9,500	9,000	7,100	3,900	0	0	0	
Balance (A)	9,550	9,549	9,603	9,556	9,516	10,979	17,589	24,200	
Interm Fund Required									
Production Cost	6,161	6,161	6,161	6,161	6,161	6,161	6,161	6,161	
O/M Cost	288	288	288	288	288	288	288	288	
Social Insurance	918	918	918	918	918	918	918	918	
Household Expenses	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	
Balance (B)	9,509	9,509	9,509	9,509	9,509	9,509	9,509	9,509	
Interm Income									
(A) - (B)	42	40	95	47	8	1,470	8,081	14,691	
Amount of Proceeds	12,517	13,270	14,470	15,224	16,427	16,427	16,427	16,427	
Miscellaneous Revenue	0	0	0	0	0	0	0	0	
Balance (C)	12,559	13,310	14,565	15,271	16,435	17,897	24,508	31,118	
Term End Fund Required									
Payment of Long Term Debt	0	0	0	0	0	0	0	0	
Payment of Short Term Debt	9,400	9,500	9,000	7,100	3,900	0	0	0	
Interest Cost of	3,008	3,040	2,880	2,272	1,248	0	0	0	
Short Term Debt									
Repayment Cost	102	167	229	283	308	308	308	308	
Balance (D)	12,510	12,707	12,109	9,655	5,456	308	308	308	
(C) - (D)	49	603	2,456	5,616	10,979	17,589	24,200	30,810	
Amount Carried Forward	49	603	2,456	5,616	10,979	17,589	24,200	30,810	

Table F-3-4(3/8) CASH FLOW OF INDIVIDUAL FARM (C)

Unit: us\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Initial Fund								
Balance Brought Forward	0	69	80	580	1,833	4,386	7,756	12,197
Own Fund	800	300	0	0	0	0	0	0
Long Term Debt	0	0	0	0	0	0	0	0
Short Term Debt	7,350	7,800	8,050	7,550	6,300	3,750	400	0
Balance (A)	8,150	8,169	8,130	8,130	8,133	8,136	8,156	12,197
Interm Fund Required								
Production Cost	4,547	4,547	4,547	4,547	4,547	4,547	4,547	4,547
O/M Cost	216	216	216	216	216	216	216	216
Social Insurance	698	698	698	698	698	698	698	698
Household Expenses	2,667	2,667	2,667	2,667	2,667	2,667	2,667	2,667
Balance (B)	8,128	8,128	8,128	8,128	8,128	8,128	8,128	8,128
Interm Income								
(A) - (B)	22	42	2	2	5	9	28	4,069
Amount of Proceeds	9,826	10,459	11,375	12,009	12,928	12,928	12,928	12,928
Miscellaneous Revenue	0	0	0	0	0	0	0	0
Balance (C)	9,848	10,501	11,378	12,011	12,933	12,937	12,956	16,997
Term End Fund Required								
Payment of Long Term Debt	0	0	0	0	0	0	0	0
Payment of Short Term Debt	7,350	7,800	8,050	7,550	6,300	3,750	400	0
Interest Cost of Short Term Debt	2,352	2,496	2,576	2,416	2,016	1,200	128	0
Short Term Debt								
Repayment Cost	77	125	172	212	231	231	231	231
Balance (D)	9,779	10,421	10,798	16,178	8,547	5,181	759	231
(C) - (D)	69	80	580	1,833	4,386	7,756	12,197	16,766
Amount Carried Forward	69	80	580	1,833	4,386	7,756	12,197	16,766

Table F-3-4(4/8) CASH FLOW OF INDIVIDUAL FARM (D)

Unit: us\$

	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Initial Fund								
Balance Brought Forward	0	3,286	8,517	16,435	25,162	35,124	45,086	55,048
Own Fund	0	0	0	0	0	0	0	0
Long Term Debt	0	0	0	0	0	0	0	0
Short Term Debt	7,950	4,650	0	0	0	0	0	0
Balance (A)	7,950	7,936	8,517	16,435	25,162	35,124	45,086	55,048
Interm Fund Required								
Production Cost	3,909	3,909	3,909	3,909	3,909	3,909	3,909	3,909
O/M Cost	288	288	288	288	288	288	288	288
Social Insurance	884	884	884	884	884	884	884	884
Household Expenses	2,828	2,828	2,828	2,828	2,828	2,828	2,828	2,828
Balance (B)	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909
Interm Income								
(A) - (B)	41	27	608	8,525	17,252	27,215	37,177	47,139
Amount of Proceeds	13,842	14,796	16,056	16,920	18,180	18,180	18,180	18,180
Miscellaneous Revenue	0	0	0	0	0	0	0	0
Balance (C)	13,882	14,822	16,664	25,445	35,432	45,394	55,356	65,319
Term End Fund Required								
Payment of Long Term Debt	0	0	0	0	0	0	0	0
Payment of Short Term Debt	7,950	4,650	0	0	0	0	0	0
Interest Cost of Short Term Debt	2,544	1,488	0	0	0	0	0	0
Repayment Cost	102	167	229	283	308	308	308	308
Balance (D)	10,596	6,305	229	283	308	308	308	308
(C) - (D)	3,286	8,517	16,435	25,162	35,124	45,086	55,048	65,011
Amount Carried Forward	3,286	8,517	16,435	25,162	35,124	45,086	55,048	65,011

Table F-3-4(5/8) CASH FLOW OF INDIVIDUAL FARM (E) Unit: us\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Initial Fund								
Balance Brought Forward	0	1,430	4,781	10,199	18,807	28,659	37,248	47,100
Own Fund	0	0	0	0	0	0	0	0
Long Term Debt	0	0	0	0	0	0	0	0
Short Term Debt	10,750	8,500	6,000	0	0	0	0	0
Balance (A)	10,750	9,930	10,781	10,199	18,807	28,659	37,248	47,100
Interm Fund Required								
Production Cost	6,573	5,835	6,573	5,835	6,573	5,835	6,573	5,835
O/M Cost	216	216	216	216	216	216	216	216
Social Insurance	974	873	974	873	974	873	974	873
Household Expenses	2,977	2,977	2,977	2,977	2,977	2,977	2,977	2,977
Balance (B)	10,740	9,901	10,740	9,901	10,740	9,901	10,740	9,901
Interm Income								
(A) - (B)	10	29	41	298	8,067	18,758	26,503	37,199
Amount of Proceeds	15,687	16,097	18,250	18,721	20,823	18,721	20,823	18,721
Miscellaneous Revenue	0	0	0	0	0	0	0	0
Balance (C)	15,697	16,126	18,291	19,019	28,890	37,479	47,331	55,920
Term End Fund Required								
Payment of Long Term Debt	0	0	0	0	0	0	0	0
Payment of Short Term Debt	10,750	8,500	6,000	0	0	0	0	0
Interest Cost of Short Term Debt	3,440	2,720	1,920	0	0	0	0	0
Repayment Cost	77	125	172	212	231	231	231	231
Balance (D)	14,267	11,345	8,092	212	231	231	231	231
(C) - (D)	1,430	4,781	10,199	18,807	28,659	37,248	47,100	55,689
Amount Carried Forward	1,430	4,781	10,199	18,807	28,659	37,248	47,100	55,689

Table F-3-4(6/8) CASH FLOW OF INDIVIDUAL FARM (F) Unit: US\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Initial Fund								
Balance Brought Forward	0	390	1,300	3,164	5,982	9,266	12,080	15,364
Own Fund	0	0	0	0	0	0	0	0
Long Term Debt	0	0	0	0	0	0	0	0
Short Term Debt	2,500	1,950	1,200	0	0	0	0	0
Balance (A)	2,500	2,340	2,500	3,164	5,982	9,266	12,080	15,364
Interm Fund Required								
Production Cost	1,267	1,095	1,267	1,095	1,267	1,095	1,267	1,095
O/M Cost	48	48	48	48	48	48	48	48
Social Insurance	250	227	250	227	250	227	250	227
Household Expenses	925	925	925	925	925	925	925	925
Balance (B)	2,490	2,295	2,490	2,295	2,490	2,295	2,490	2,295
Interm Income								
(A) - (B)	10	45	10	869	3,492	6,971	9,590	13,069
Amount of Proceeds	4,447	4,440	5,136	5,160	5,825	5,160	5,825	5,160
Miscellaneous Revenue	0	0	0	0	0	0	0	0
Balance (C)	4,457	4,486	5,146	6,029	9,317	12,131	15,415	18,229
Term End Fund Required								
Payment of Long Term Debt	0	0	0	0	0	0	0	0
Payment of Short Term Debt	2,500	1,950	1,200	0	0	0	0	0
Interest Cost of Short Term Debt	1,550	1,209	744	0	0	0	0	0
Repayment Cost	17	27	36	47	51	51	51	51
Balance (D)	4,067	3,186	1,982	47	51	51	51	51
(C) - (D)	390	1,300	3,164	5,982	9,266	12,080	15,364	18,178
Amount Carried Forward								
	390	1,300	3,164	5,982	9,266	12,080	15,364	18,178

Table F-3-4(7/8)

CASH FLOW OF INDIVIDUAL FARM (G)

Unit: us\$

	Y E A R							
	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Initial Fund								
Balance Brought Forward	0	5	931	1,924	4,405	6,988	10,117	12,700
Own Fund	20	0	0	0	0	0	0	0
Long Term Debt	0	0	0	0	0	0	0	0
Short Term Debt	3,590	4,000	2,700	2,050	0	0	0	0
Balance (A)	3,610	4,005	3,631	3,974	4,405	6,988	10,117	12,700
Interm Fund Required								
Production Cost	1,656	1,985	1,656	1,985	1,656	1,985	1,656	1,985
O/M Cost	96	96	96	96	96	96	96	96
Social Insurance	303	348	303	348	303	348	303	348
Household Expenses	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
Balance (B)	3,586	3,960	3,586	3,960	3,586	3,960	3,586	3,960
Interm Income								
(A) - (B)	24	46	45	14	819	3,028	6,531	8,740
Amount of Proceeds	4,753	6,220	5,519	7,191	6,271	7,191	6,271	7,191
Miscellaneous Revenue	0	0	0	0	0	0	0	0
Balance (C)	4,777	6,266	5,564	7,205	7,090	10,219	12,802	15,931
Term End Fund Required								
Payment of Long Term Debt	0	0	0	0	0	0	0	0
Payment of Short Term Debt	3,590	4,000	2,700	2,050	0	0	0	0
Interest Cost Of	1,148	1,280	864	656	0	0	0	0
Short Term Debt								
Repayment Cost	34	55	76	94	102	102	102	102
Balance (D)	4,772	5,335	3,640	2,800	102	102	102	102
(C) - (D)	5	931	1,924	4,405	6,988	10,117	12,700	15,829
Amount Carried Forward	5	931	1,924	4,405	6,988	10,117	12,700	15,829

Table F-3-4(8/8) CASH FLOW OF INDIVIDUAL FARM (H)

Unit: us\$

	1 (1993)	2 (1994)	3 (1995)	4 (1996)	5 (1997)	6 (1998)	7 (1999)	8 (2000)
Initial Fund								
Balance Brought Forward	0	66	3	764	2,903	7,317	14,459	22,408
Own Fund	680	20	0	0	0	0	0	0
Long Term Debt	0	0	0	0	0	0	0	0
Short Term Debt	7,900	8,500	8,600	7,850	5,700	1,300	0	0
Balance (A)	8,580	8,586	8,603	8,614	8,603	8,617	14,459	22,408
Interm Fund Required								
Production Cost	4,660	4,660	4,660	4,660	4,660	4,660	4,660	4,660
O/M Cost	288	288	288	288	288	288	288	288
Social Insurance	791	791	791	791	791	791	791	791
Household Expenses	2,829	2,829	2,829	2,829	2,829	2,829	2,829	2,829
Balance (B)	8,568	8,568	8,568	8,568	8,568	8,568	8,568	8,568
Interm Income								
(A) - (B)	12	18	35	46	35	49	5,891	13,840
Amount of Proceeds	12,954	13,922	14,889	15,857	16,824	16,824	16,824	16,824
Miscellaneous Revenue	0	0	0	0	0	0	0	0
Balance (C)	12,966	13,940	14,925	15,903	16,859	16,873	22,716	30,664
Term End Fund Required								
Payment of Long Term Debt	0	0	0	0	0	0	0	0
Payment of Short Term Debt	7,900	8,500	8,600	7,850	5,700	1,300	0	0
Interest Cost of Short Term Debt	4,898	5,270	5,332	4,867	3,534	806	0	0
Short Term Debt								
Repayment Cost	102	167	229	283	308	308	308	308
Balance (D)	12,900	13,937	14,161	13,000	9,542	2,414	308	308
(C) - (D)	66	3	764	2,903	7,317	14,459	22,408	30,356
Amount Carried Forward	66	3	764	2,903	7,317	14,459	22,408	30,356

Fig. F-1-1 Ministry of Agriculture

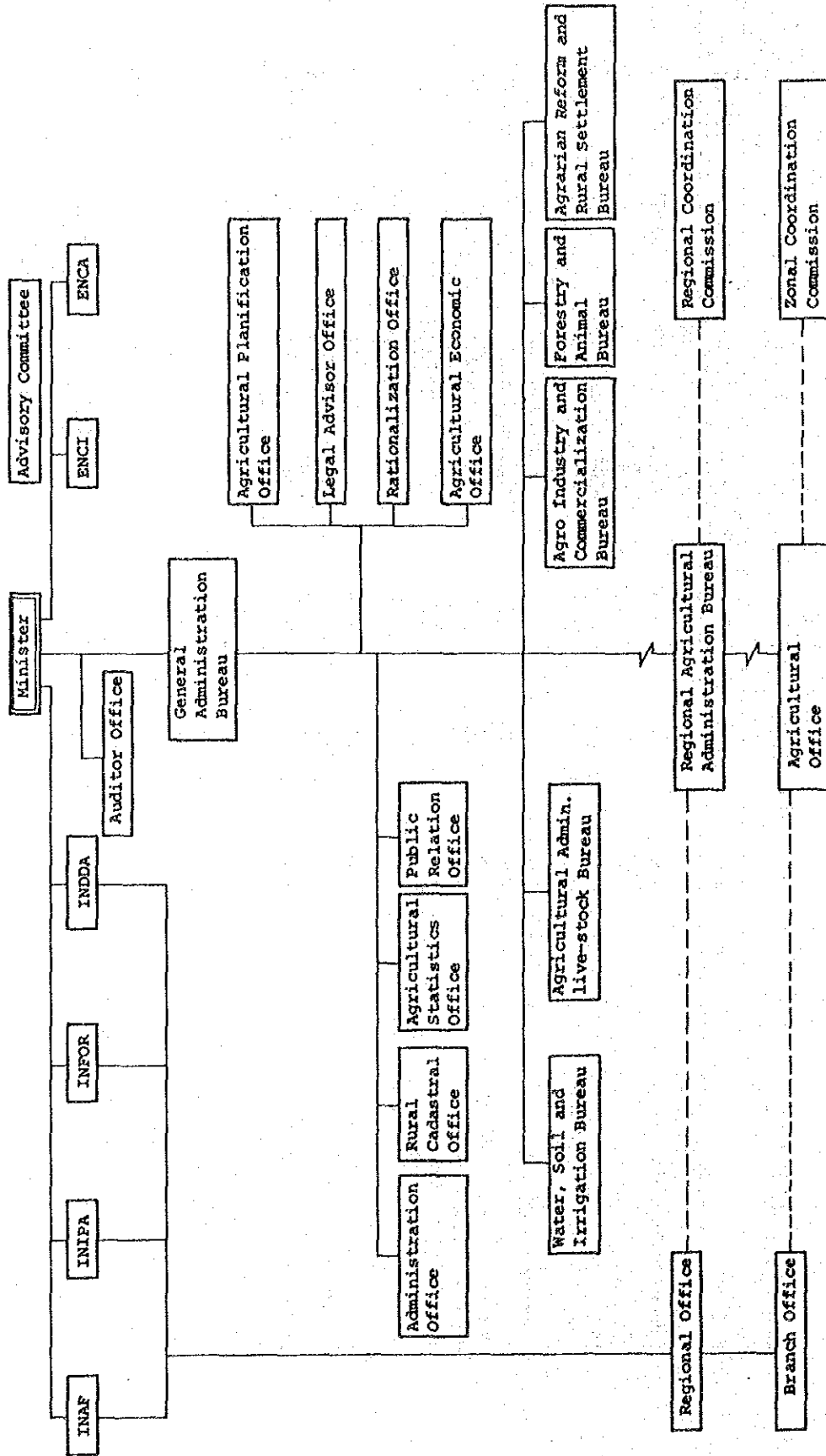


Fig. F-1-2 Regional Agricultural Administration Bureau

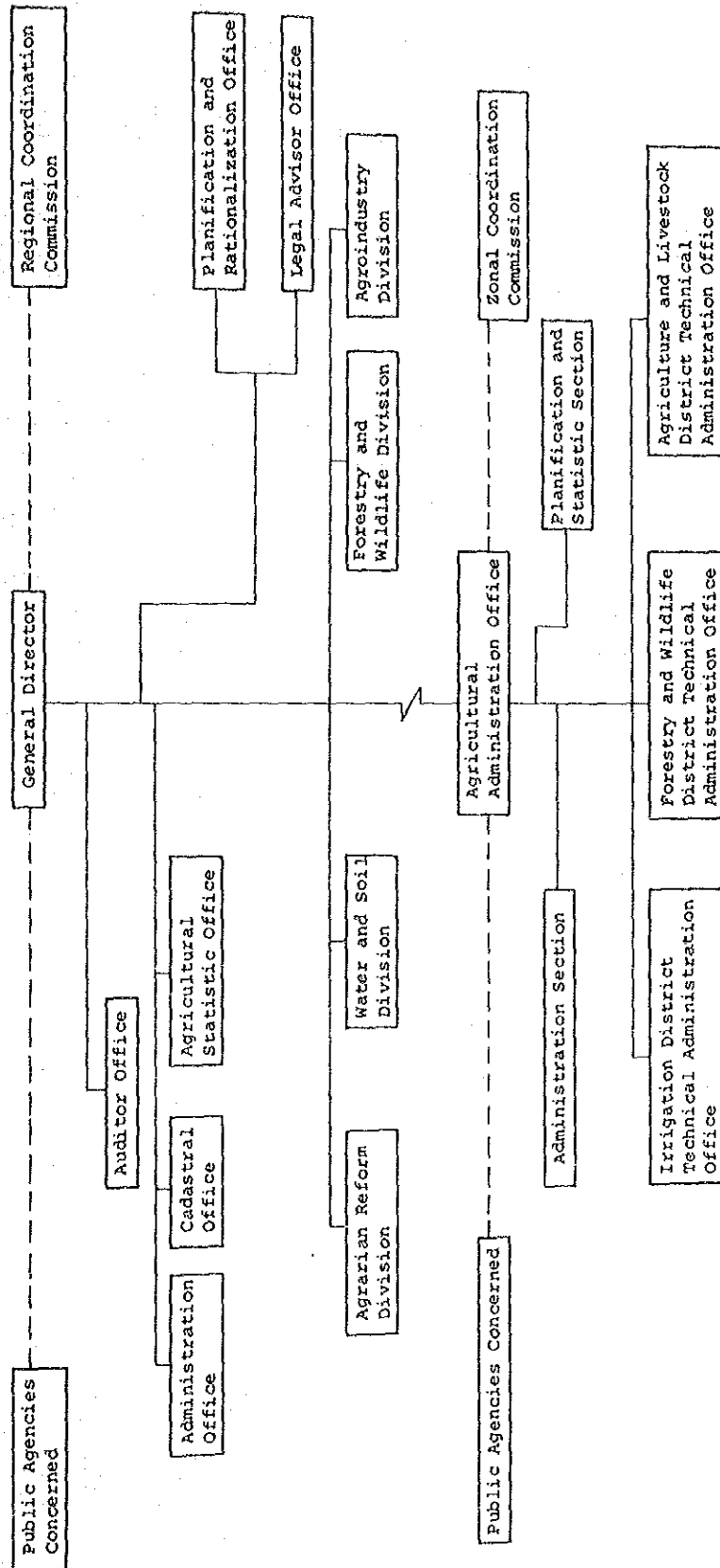


Fig. F-1-3 Huacho Agricultural Office

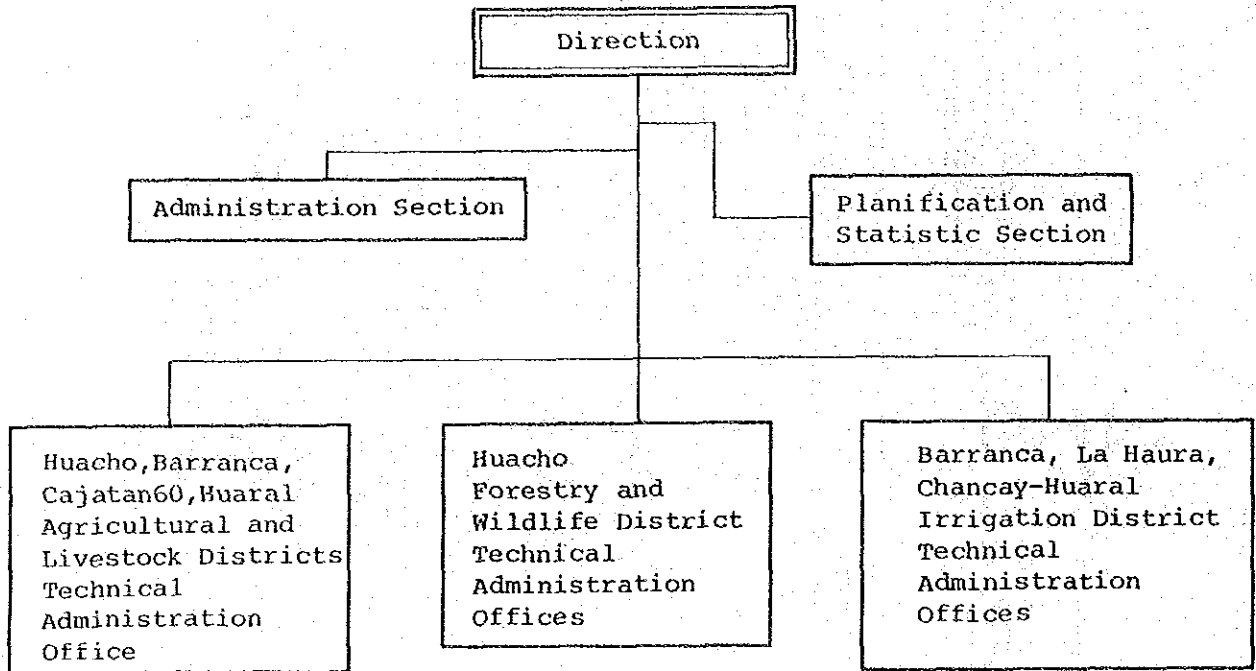


Fig. F-1-4 INAF - Instituto Nacional de Ampliacion de la Frontera Agricola

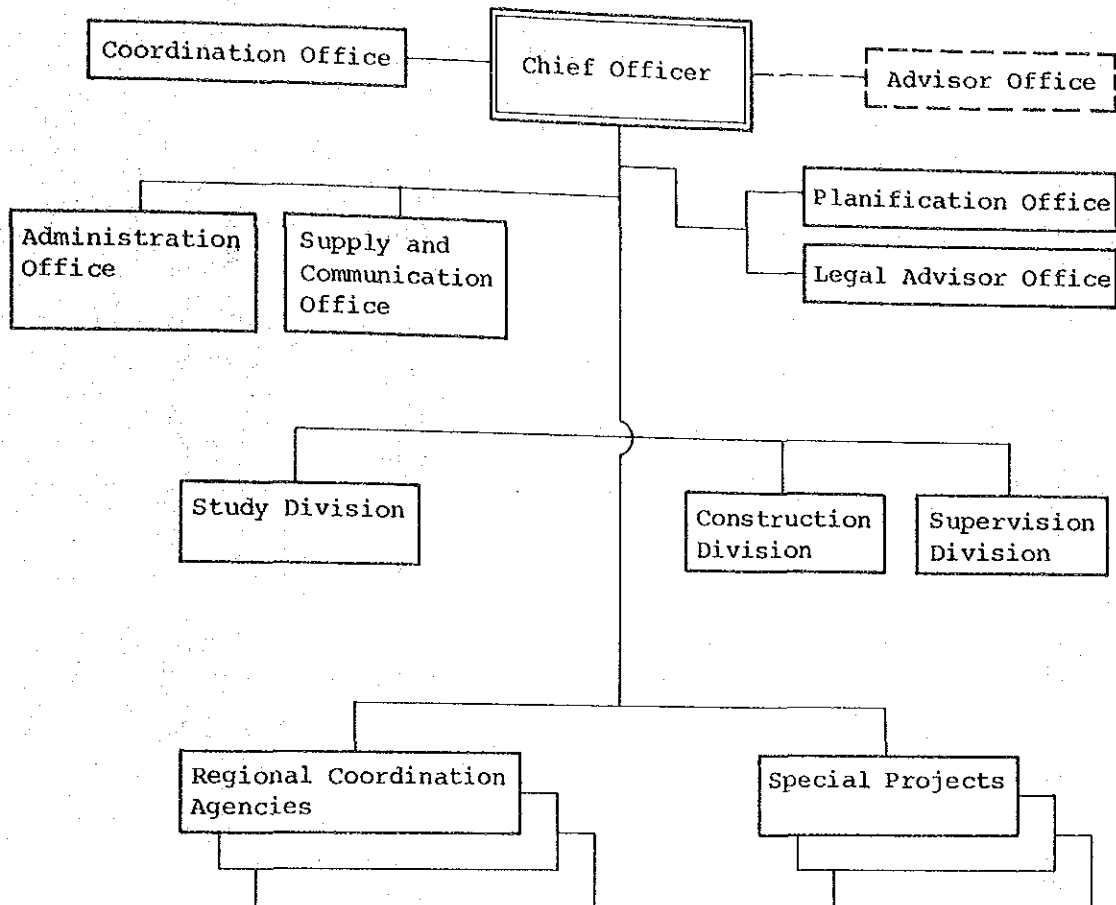


Fig. F-1-5 DEPE-REHATIC PROYECTO ESPECIAL DE REHABILITACION DE LA TIERRAS COSTERAS

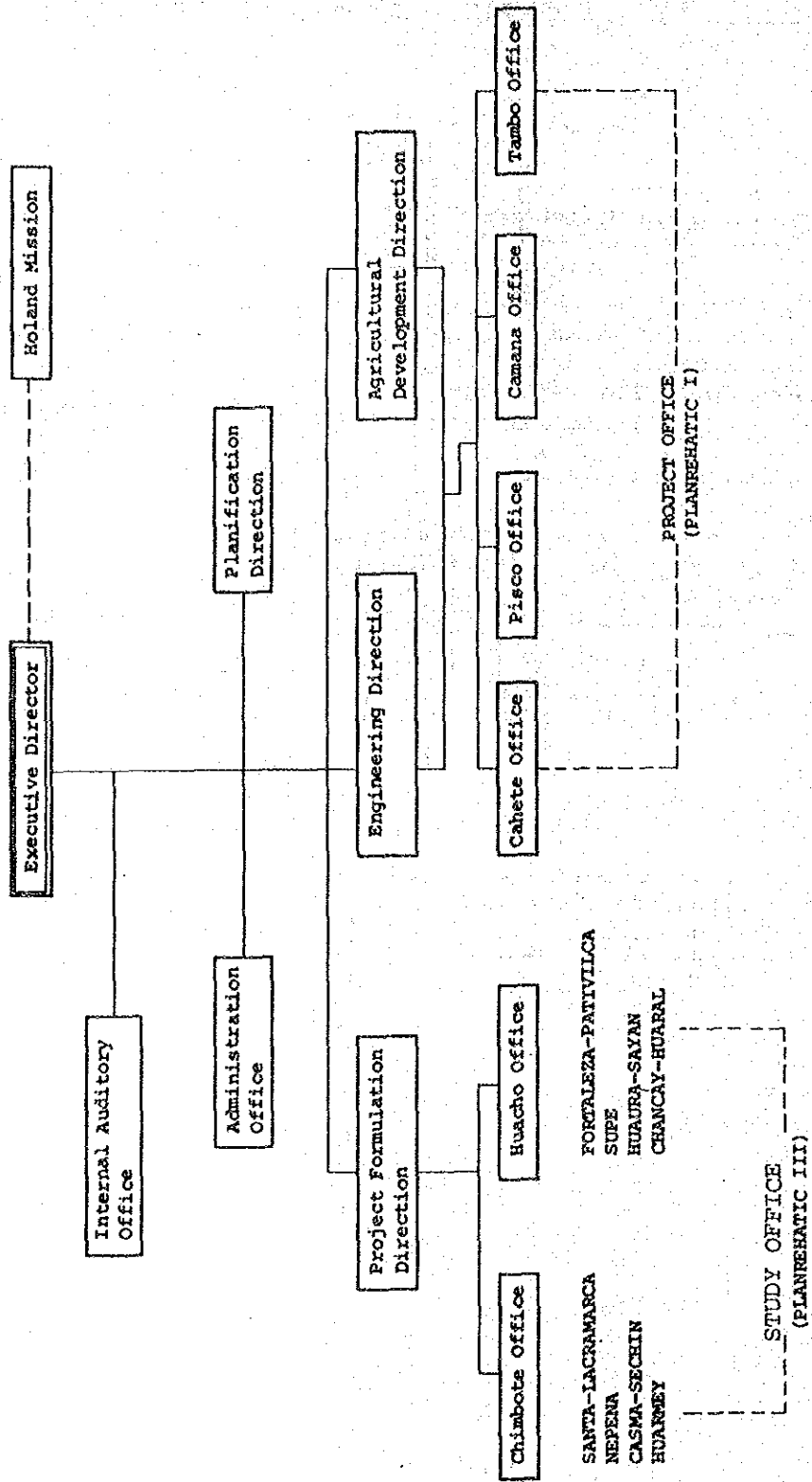


Table F-1-6 INIPA - INSTITUTO NACIONAL DE INVESTIGACION Y PROMOCION AGROPECUARIA

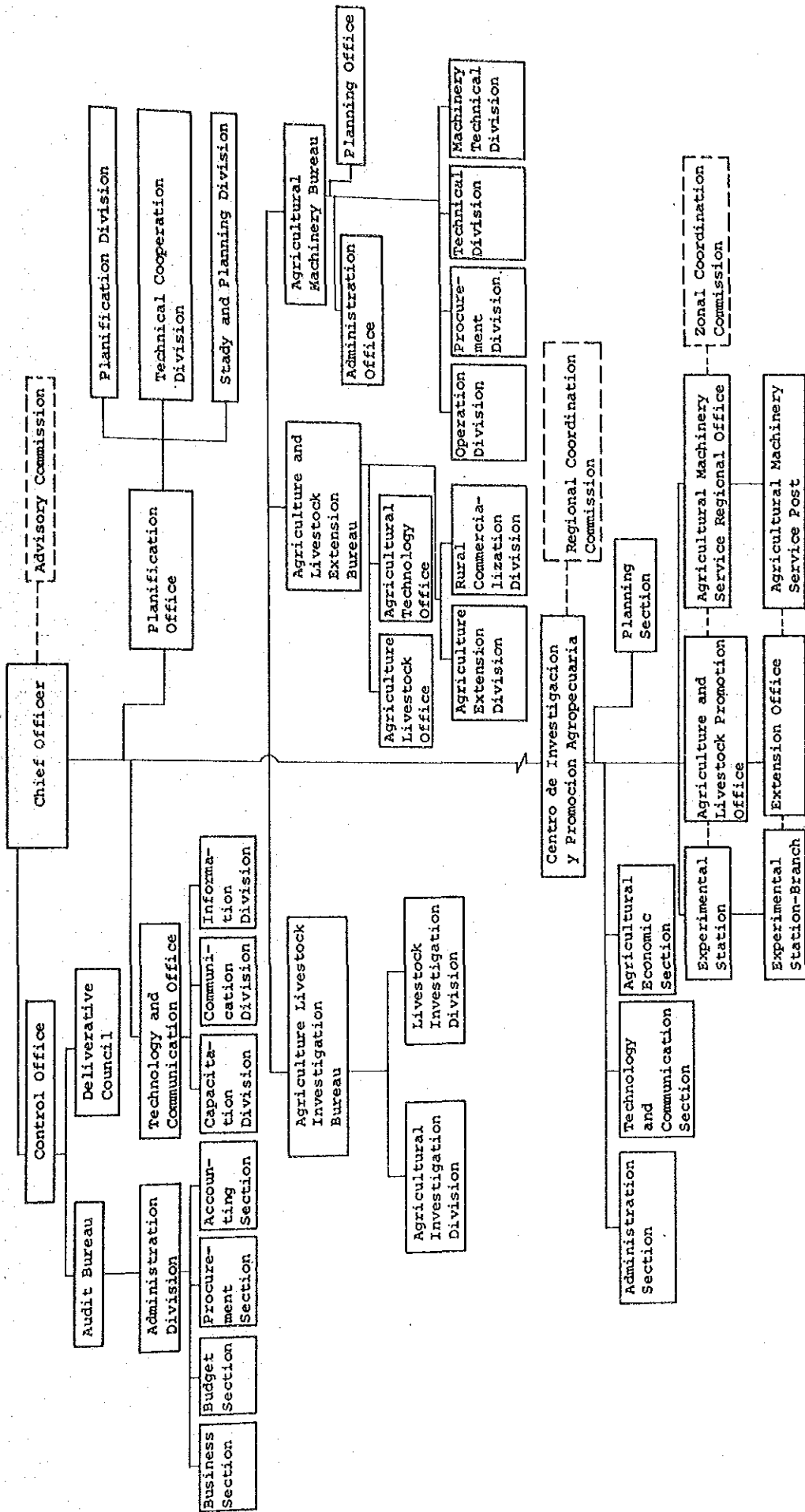


Table F-1-7 CENTRO DE INVESTIGACION Y PROMOCION AGROPECUARIA

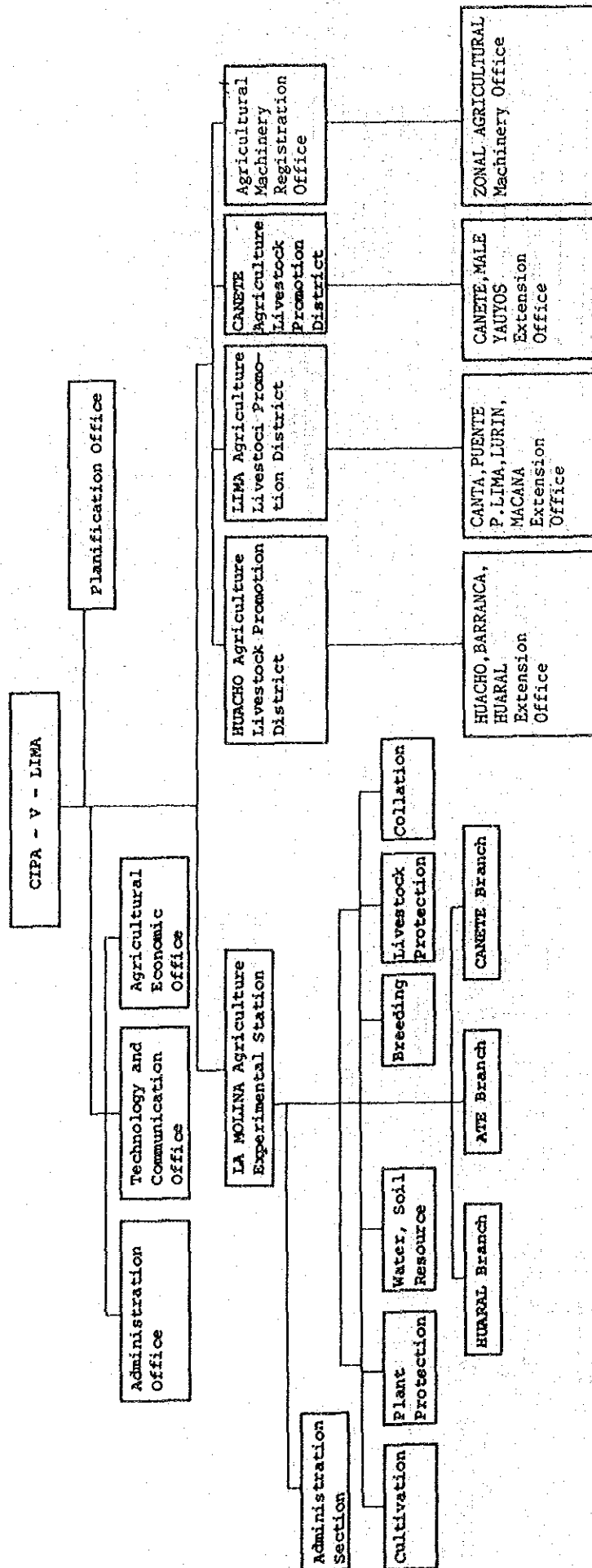


Table F-1-8 HUARAL-DONOSO AGRICULTURE EXPERIMENTAL STATION

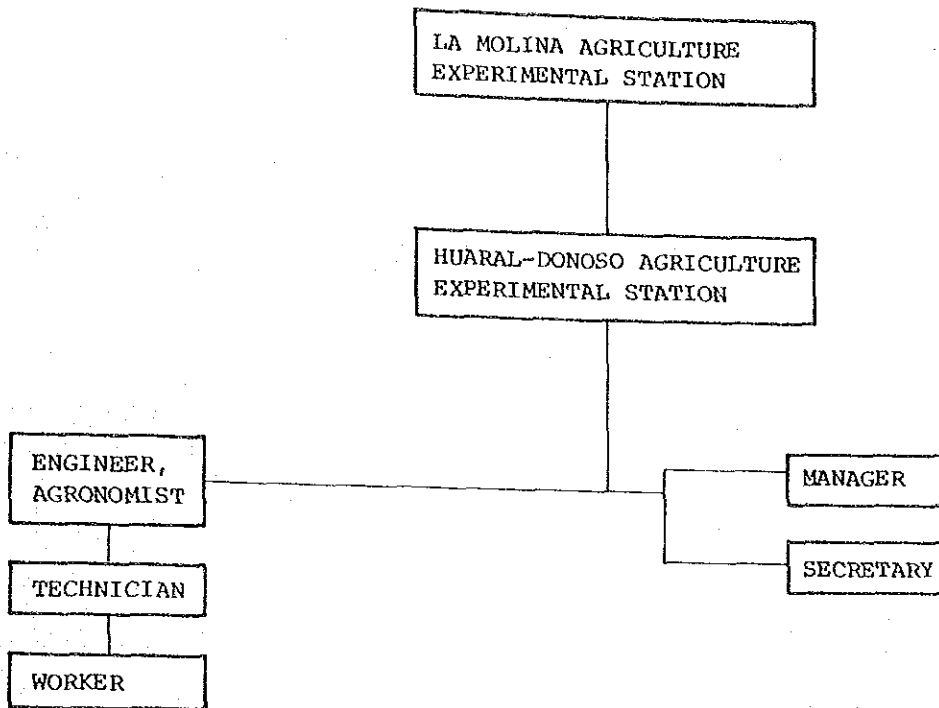
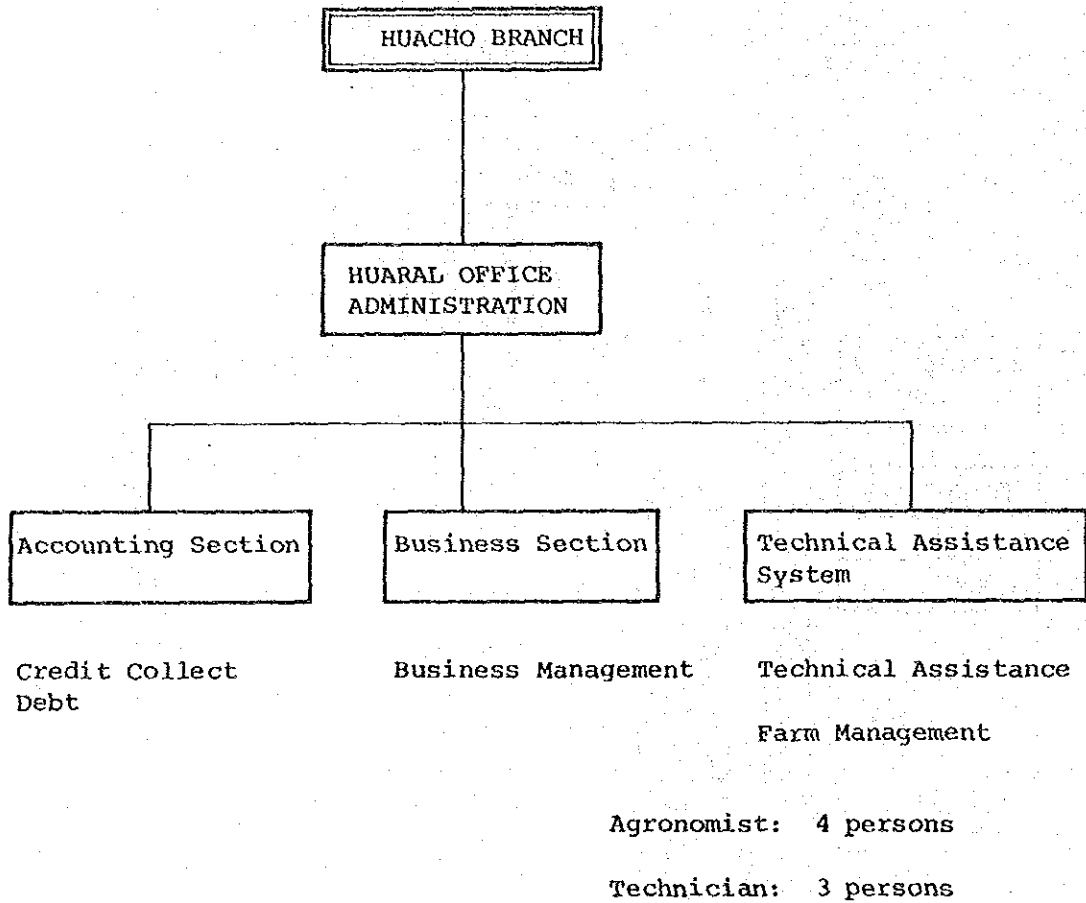


Fig. F-1-9 HUARAL OFFICE, HUACHO BRANCH, AGRARIAN BANK OF PERU



Total member of Huaral office is 39 persons including 4 agronomists and 3 technicians.

Vehicles : 3 Pick-up.

Fig. F-1-10 Central de Cooperativas del Valle Chancay-Huaral-Aucallama

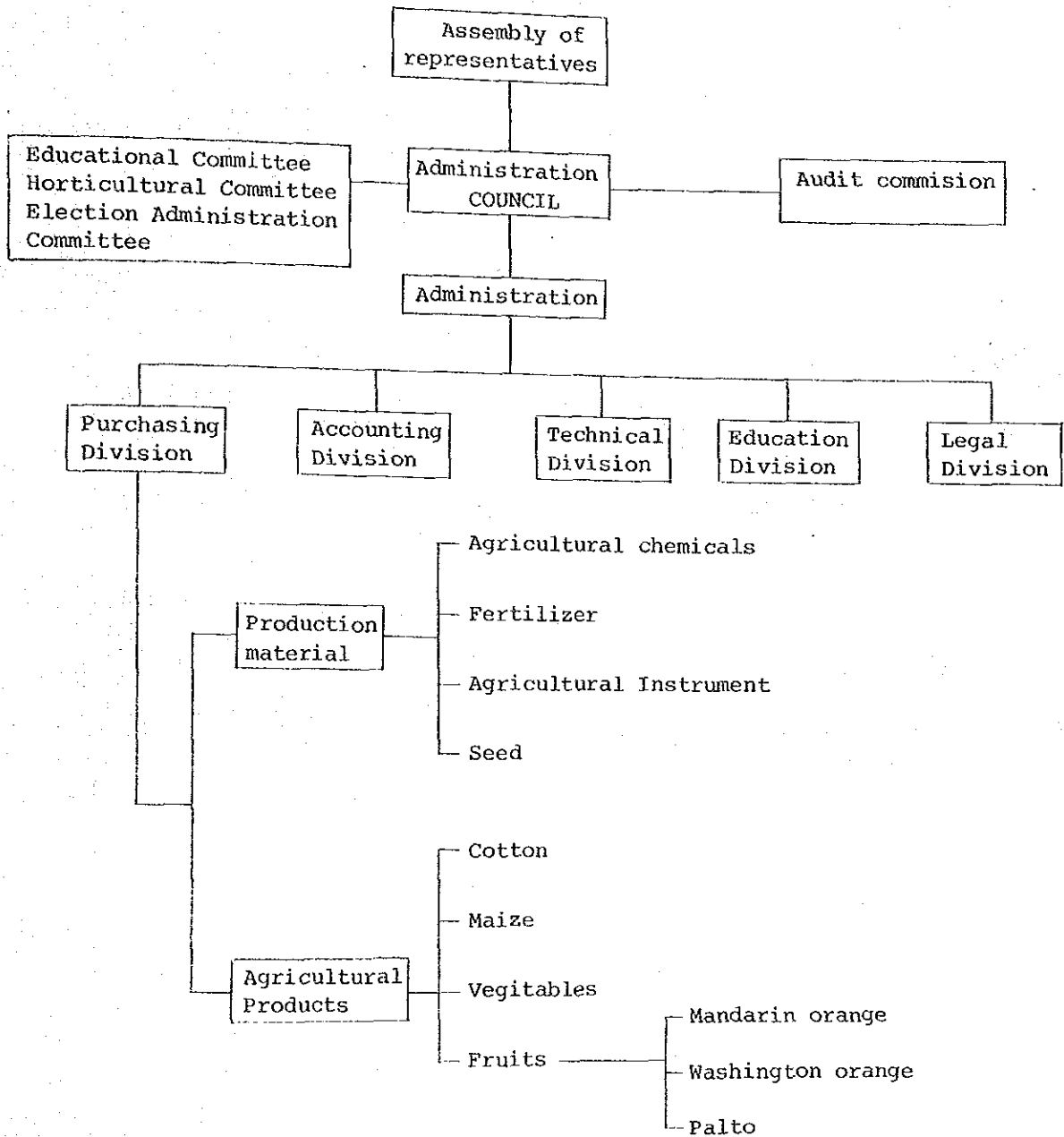
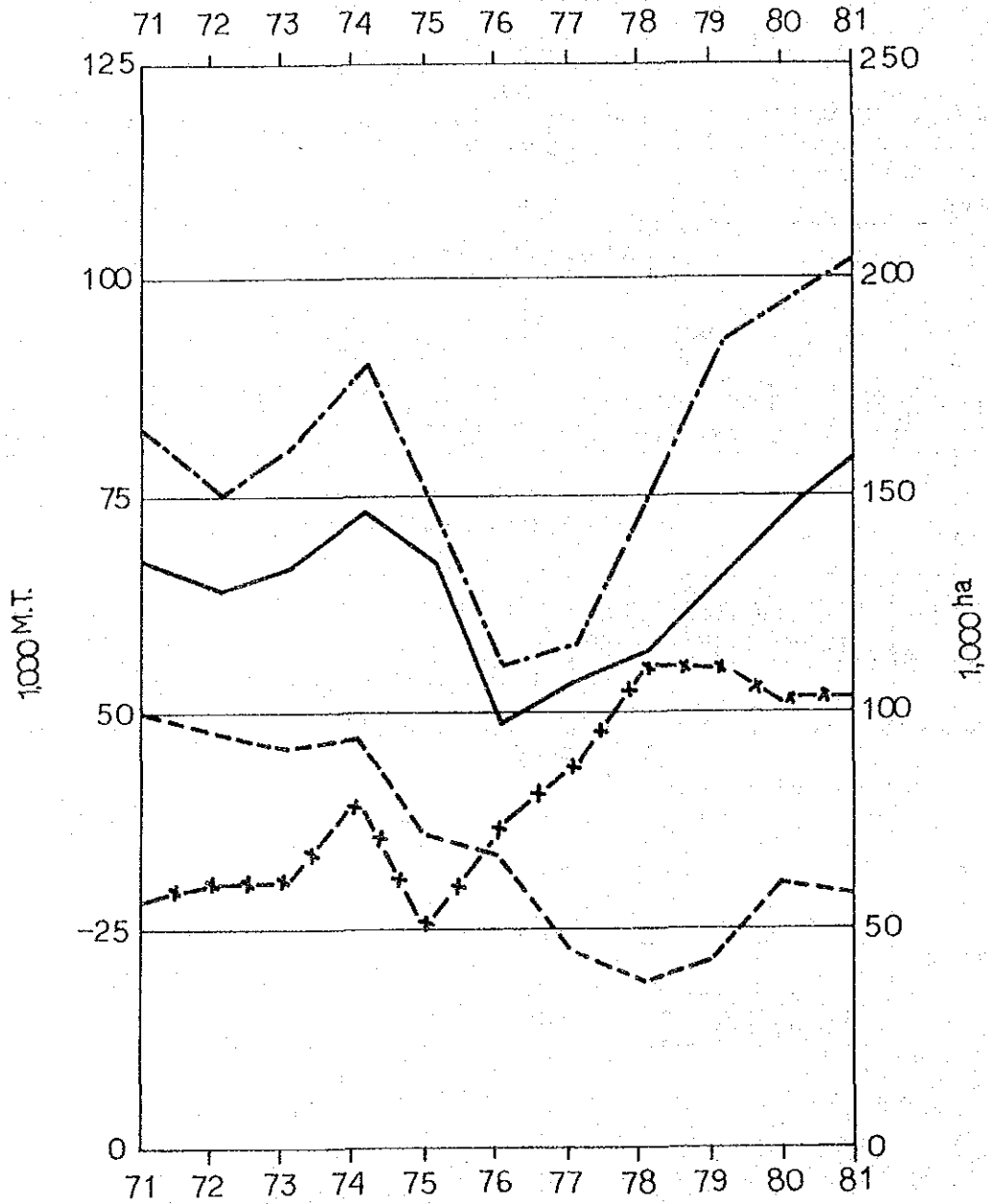


Fig. F-2-1 PLANTED AREA, PRODUCTION, EXPORTATION AND DOMESTIC CONSUMPTION OF COTTON FIBER



Legend:

Planted area _____
 Production T.M. - · - · -
 Exportation T.M. - - - -
 Domestic Consumption -x-x-x-x-x-x-

Fig. F-2-2 COMMERCIAL CHANNEL : COTTON

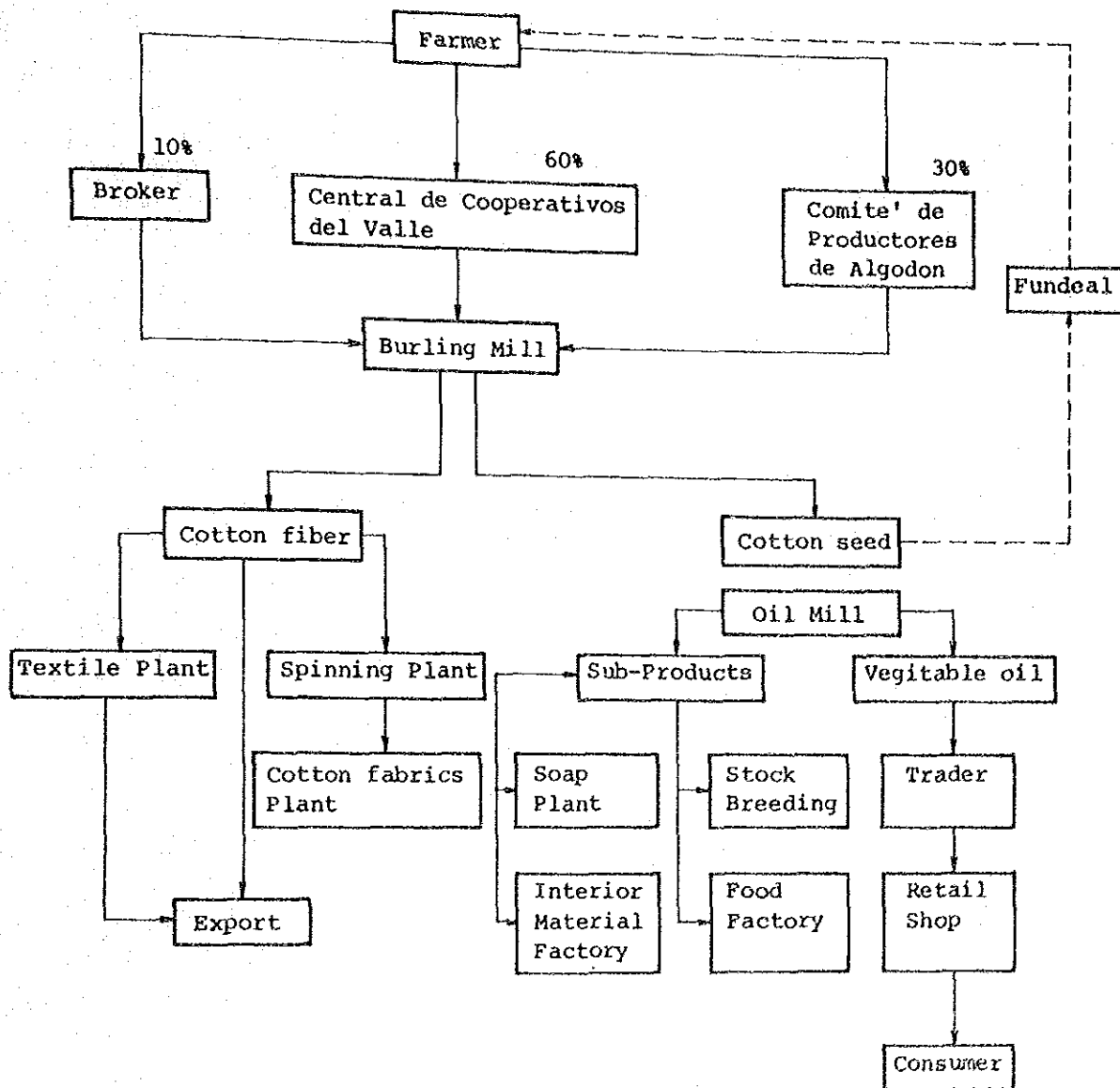
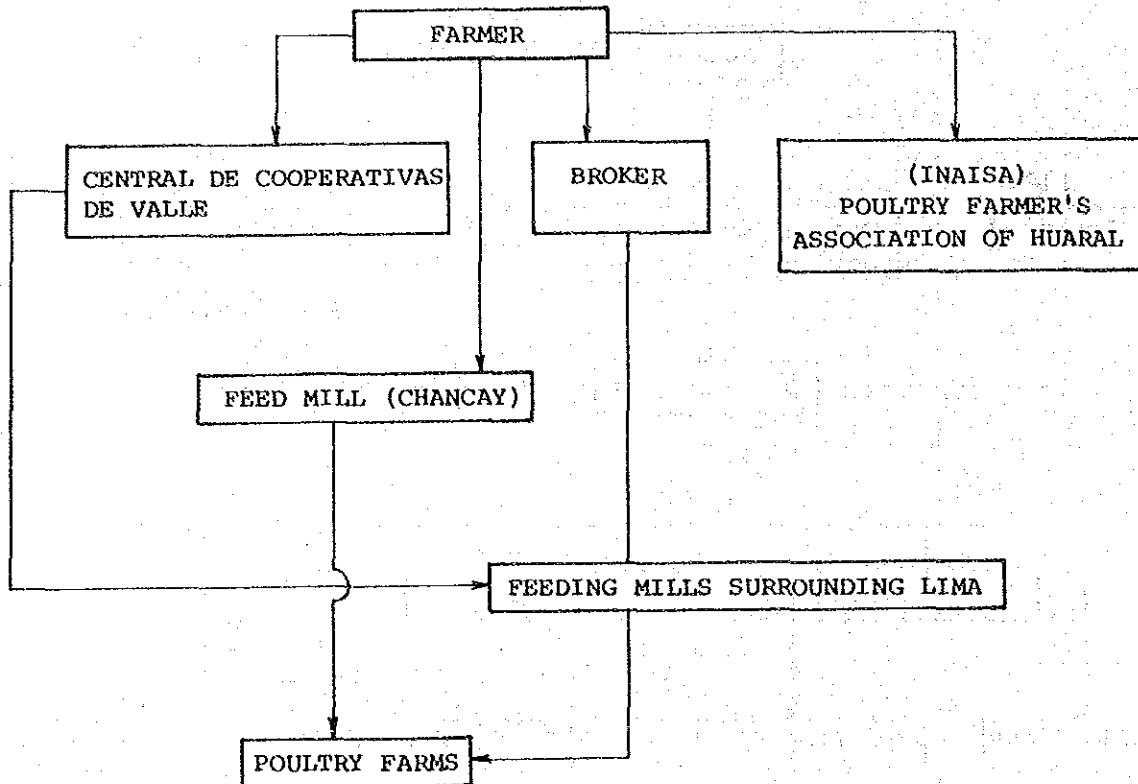


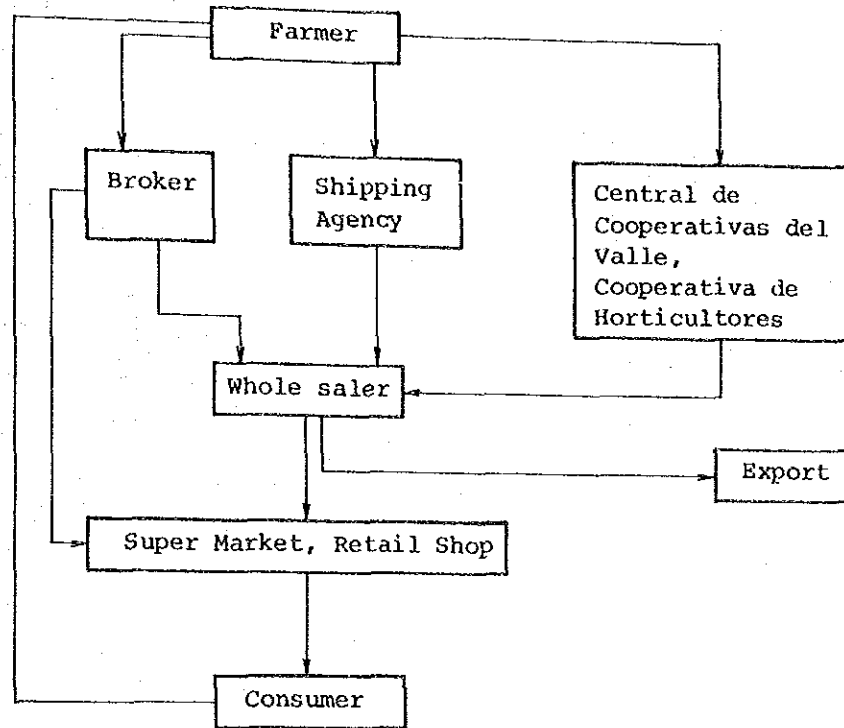
Fig. F-2-3 COMMERCIAL CHANNEL: MAIZE



List of feeding mills purchasing of maize in the project area.

(Place)	(Company)	(Place)	(Company)
LIMA	TAKAGAKI	LURIN	MOLINO MAYO
"	COGORNO	VITARTE	DERIVADO DE MAIZ
"	PURINA		
"	NICOLINI		
CHANCAY	NUTRINAL		
HUARAL	INAISA		

Table F-2-4 COMMERCIAL CHANNEL: VEGITABLES



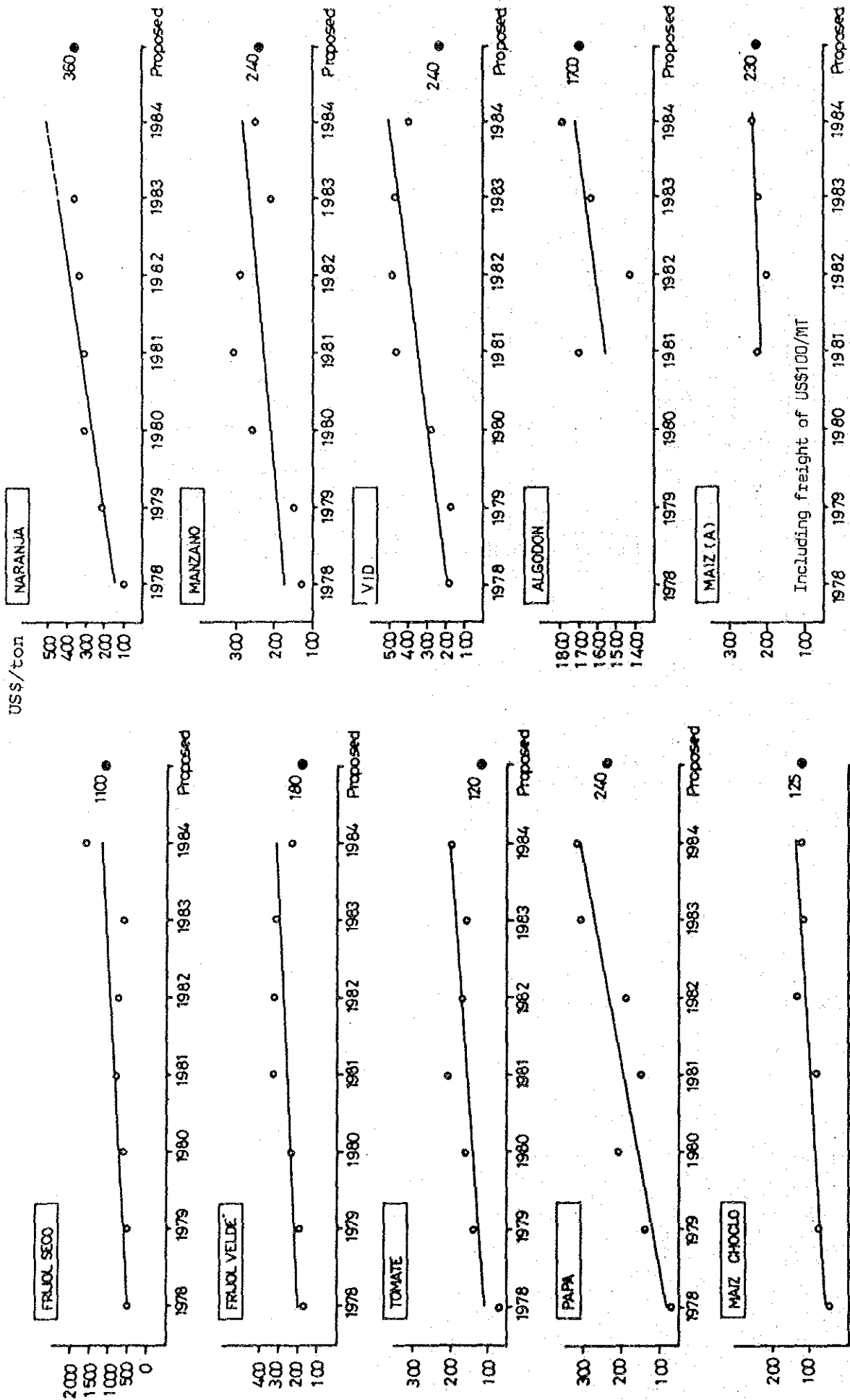


Fig. F-2-5 Price Tendency Of Agricultural Products

