

Fig. C-1 Cropping Season of Main Crops under Irrigated and Non-Irrigated Conditions (2-1)

Crops	Provinces	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Wheat	Ankara							●			▲		
	Tarsus						●					▲	
	Izmir						●					▲	
	Eskisehir							●				▲	
	(Irr)							●			▲		
	Konya							●			▲		
	(Irr)							●			▲		
	Tokat							●				▲	
	(Irr)							●			▲	▲	
		Kirklareli						●				▲	
Barley	Ankara						●				▲		
	Konya						●				▲		
	Tokat			▲			●						
Maize	Tokat(Ir)								●●●				
	Samsun			▲							●		
Rice	Ankara					▲					●		
	Kastamonu					▲					●		
	Izmir				▲						●		
	Edirne					▲				●●			
Dry Beans	Ankara			▲						●●●			
	(Irr)				▲▲▲				●●●				
	(Irr)				▲						●		
	(Irr)				▲				●●				
Chick Pea	Ankara				▲▲				●●				
	Eskisehir					▲			●●				
	(Irr)					▲			●●				
	(Irr)				▲				●				
Lentil	Ankara			▲					●				
	Tokat	▲▲▲					●●●						
Vetch	Ankara				▲			●●					
SugarBeet	(I)Ankara				▲					●●●●			
	(Irr)				▲					●●●●			
	Eskisehir			▲▲▲						●●●●			
	Konya			▲▲▲						●●●●			
	Tokat			▲▲▲					●●●●				
	Kirklareli				▲						●●		

Notes; ▲...Seeding or Planting Period, ●...Harvesting Time, (I),(Irr)...Irrigated Condition.

Source; Türkiye'de Üretilen Tarım Ürünlerinin Üretim Girdileri ve Maliyetleri Rehberi.

Fig. C-1 Cropping Season of Main Crops under Irrigated and Non-Irrigated Conditions. (2-2)

Crops	Provinces	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Sunflower	Ankara				▲					●●			
	Eskisehir				▲▲				●●●●	●●			
	Tokat			▲▲▲					●●●				
Cotton(I)	Tarsus			▲▲							●●●●		
	(Irr) Izmir				▲▲▲						●●●●		
Tobacco	Izmir				▲▲▲						●●●●●●		
	Bursa					▲			●●●●●●●●	●●●●●●●●			
	Tokat					▲				●●●●●●●●	●●●●●●●●		
Hemp(I)	Kastamonu			▲▲					●●●				
Cummin	Ankara			▲▲▲				●●					
Poppy	Isparta							●●●			▲▲		
	Isparta							●●●			▲▲		
	(Irr) Afyon							●●			▲▲		
Anise	Burdur			▲▲					●●●				
	(Irr) Burdur			▲▲					●●				
Potatoes	Ankara(I)				▲▲						●●●		
	(Irr) Ege Sea				▲▲▲			●●●					
	(Irr) Izmir				▲▲▲						●●●		
	(Irr) Bursa				▲▲▲				●●●				
	(Irr) Konya				▲▲▲					●●●			
	(irri) Tokat			▲▲▲			●●●●						
Dry Onion	Bursa			▲▲▲					●●●●				
	(Irr) Konya			▲▲▲						●●●●			
	Tokat			▲▲▲						●●●●			
Garlic(I)	Kastamonu			▲▲▲				●●●					
Alfalfa(I)	Ankara					●		●			●		
	(Irr) Konya					●		●		●		●	
	(Irr) Tokat				●		●		●		●		
	(Irr) Erzurum							●		●			
Tomatoes	Izmir(I)		Planting			▲	●	●●	●				
	(Irr) Izmir		Planting			▲▲			●●●●●●				
	(Irr) Bursa		Planting		▲				●●●●				
	(Irr) Tarsus		Planting		▲		●●●						
Egg Plant(I)	Tarsus	Planting		▲▲▲			●●●●●●						
Pepper(I)	Bursa		Planting		▲▲			●●●●					
Cucumber(I)	Eskisehir		Seeding		▲▲▲▲			●●●●					
	Ankara		Seeding		▲▲				●●●●		●●●●		
WaterMelon	Izmir		Seeding		▲▲			●●●●					
	(Irr) Izmir		Seeding		▲▲			●●●●					
	Melon	Eskisehir		Seeding		▲▲		●●●					

Notes; ▲.... Seeding or Planting Period, ●...Harvesting Time, (I),(Irr)...Irrigated Condition.

Source; Türkiye'de Üretilen Tarım Ürünlerinin Üretim Girdileri ve Maliyetleri Rehberi.

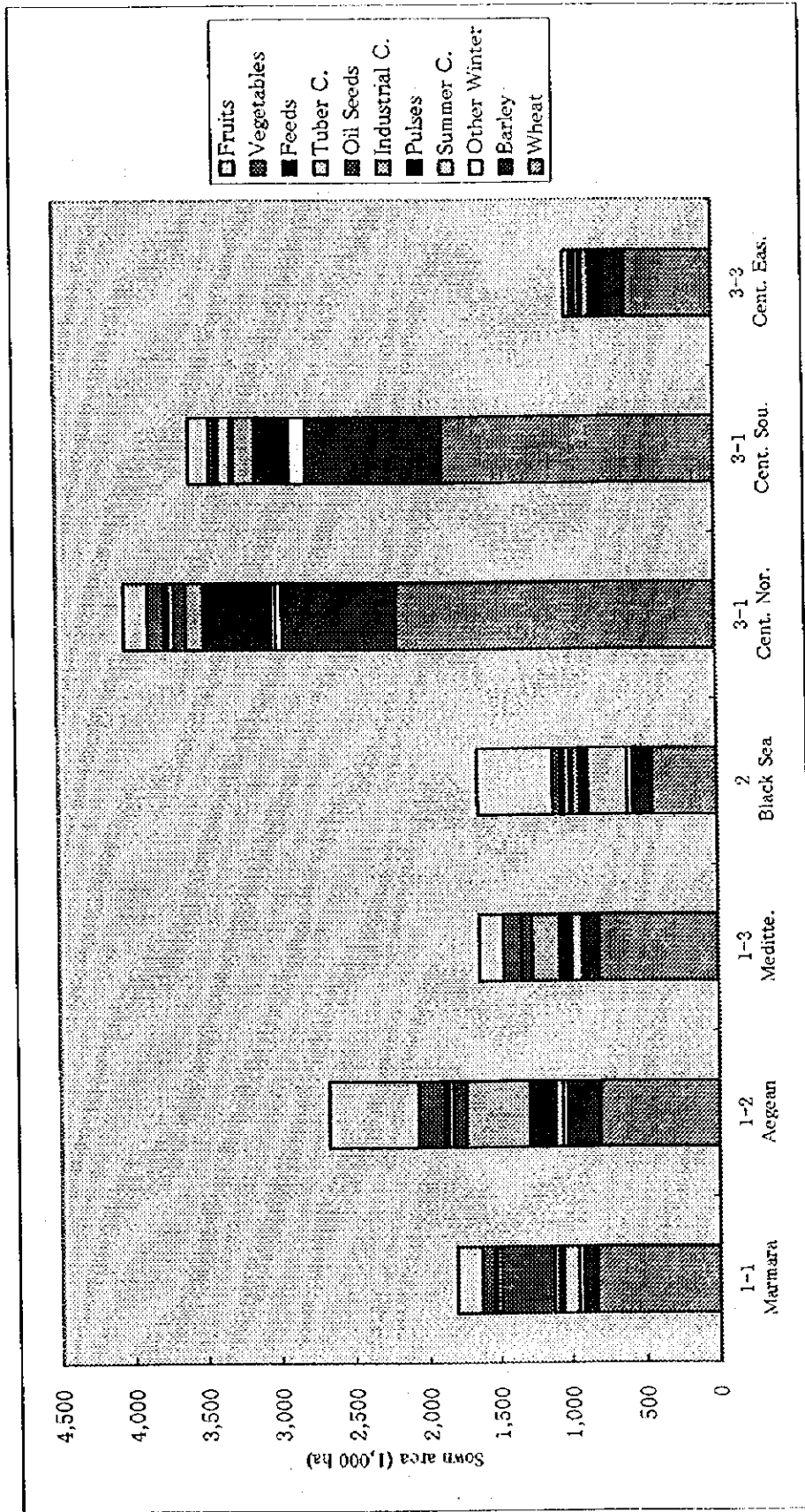


Fig. C-2 Sown Area of Field Crops, Vegetables and Fruits in Seven Regions in the Study Area.
 (Source : Agricultural Structure, 1994.)

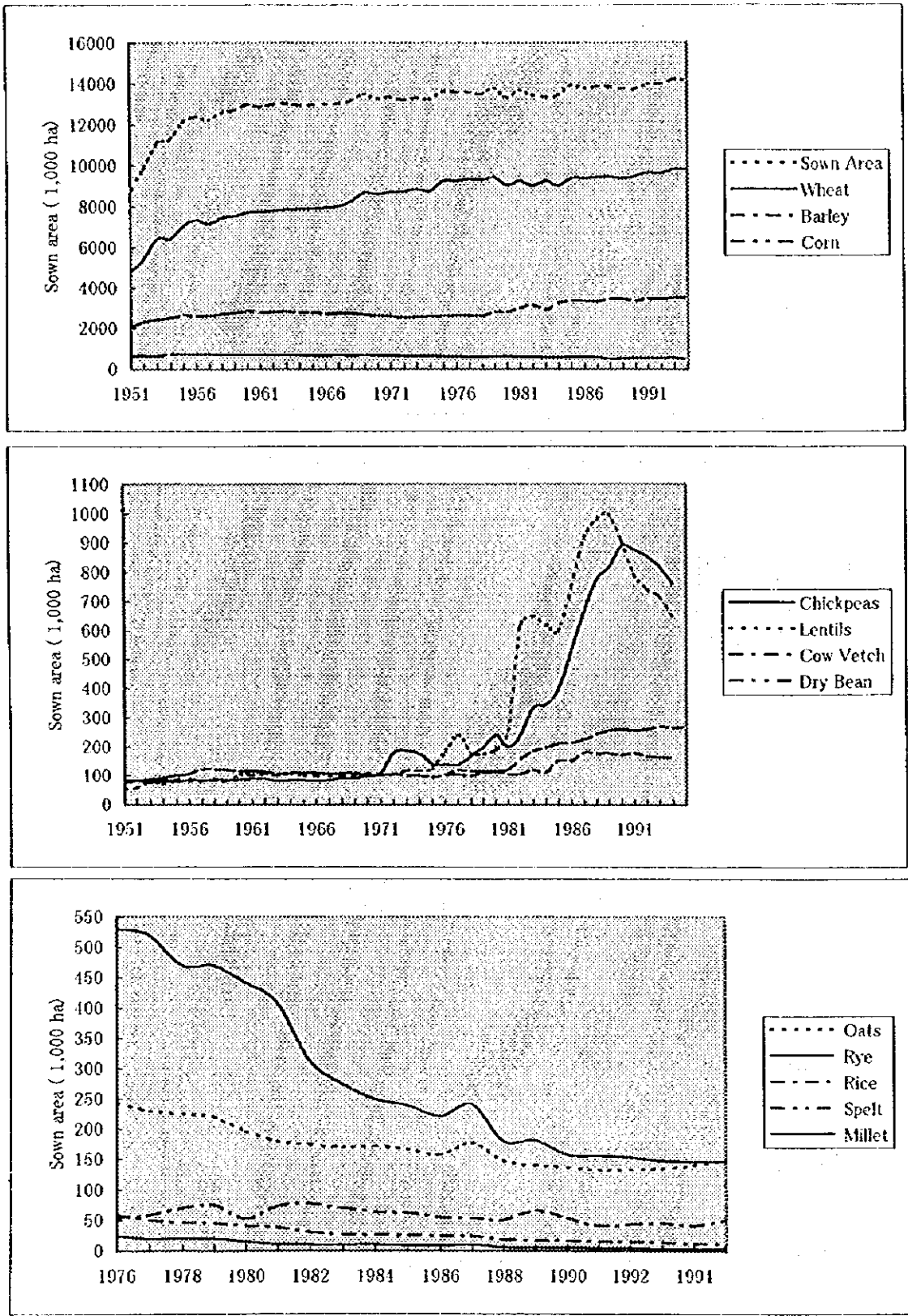


Fig. C-3 Changes in the sown areas of main crops in Turkey
 Source : Statistical Yearbook of Turkey, 1995.

(2-1)

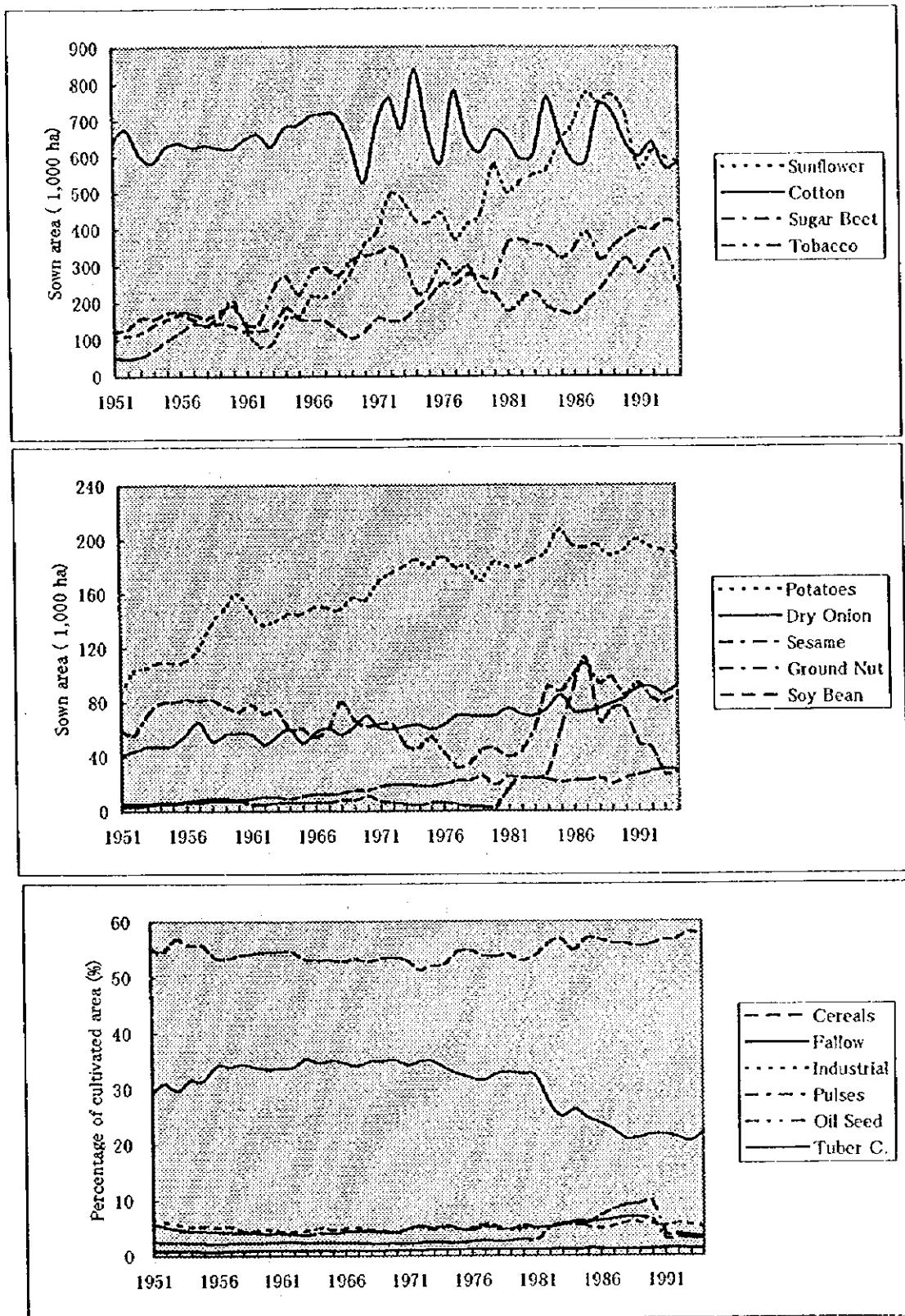


Fig.C-3 Changes in the sown area of some industrial and tuber crops (2-2)

and the changes in the rate of the cultivated area of crops.

Source : Statistical Yearbook of Turkey, 1995.

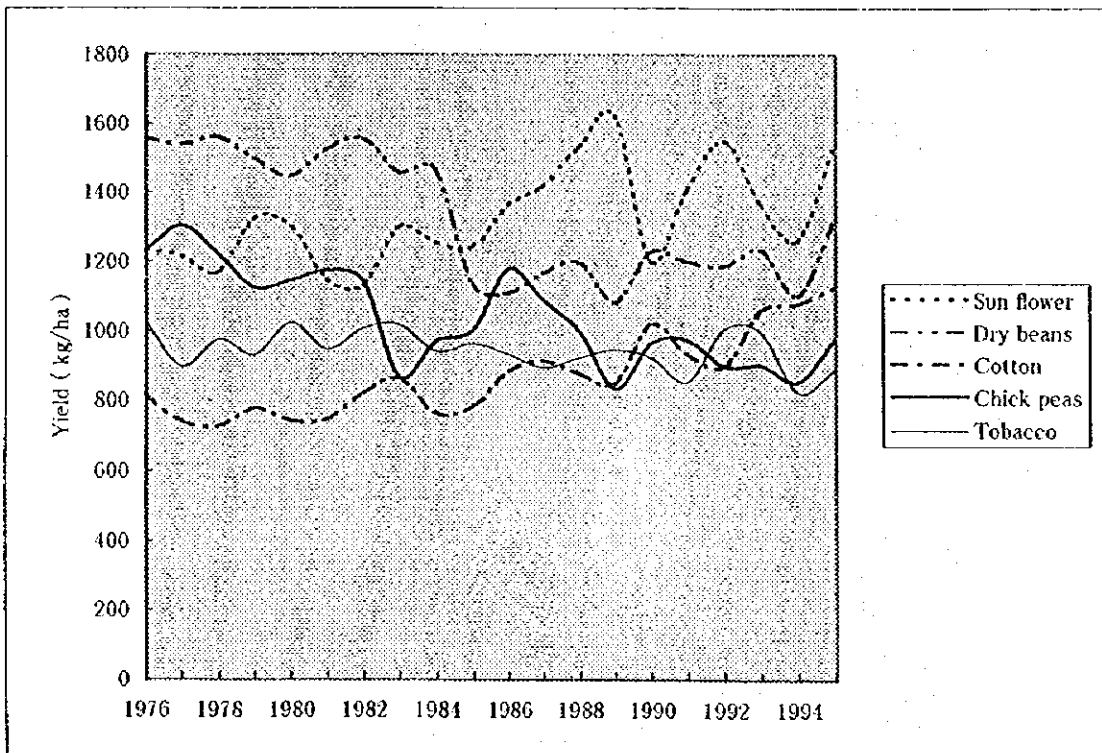
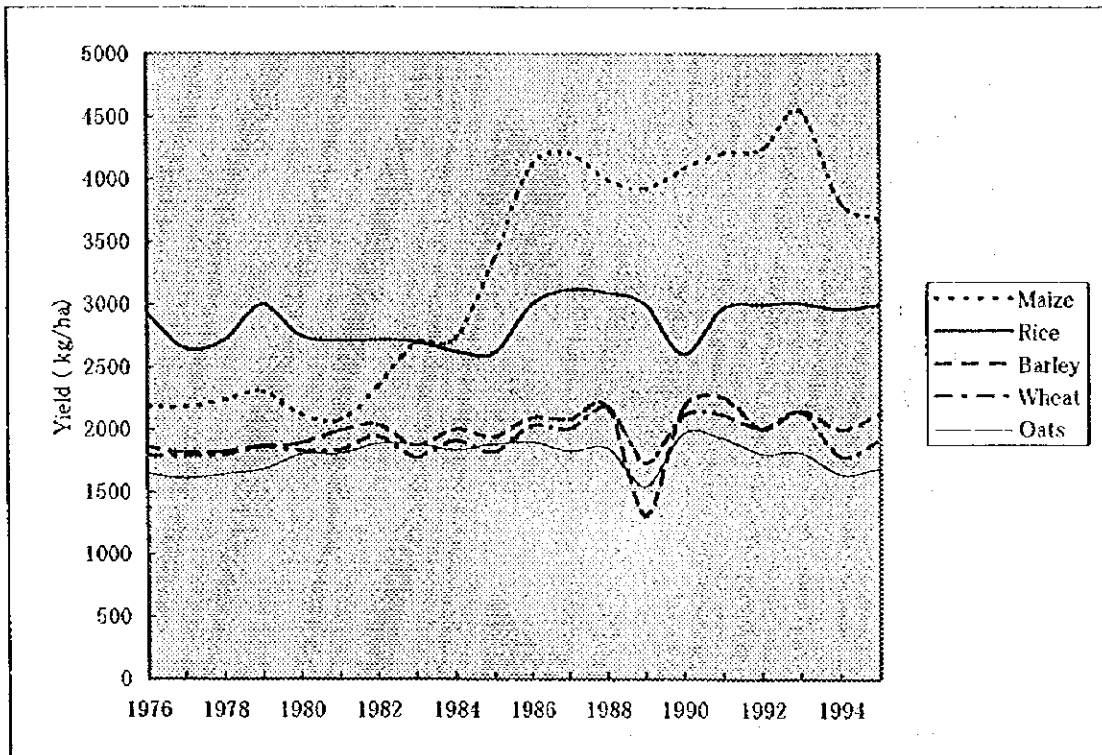


Fig.C-4 Changes in the yield of main crops in recent two decades in Turkey
 Source : Statistical Yearbook of Turkey, 1995.

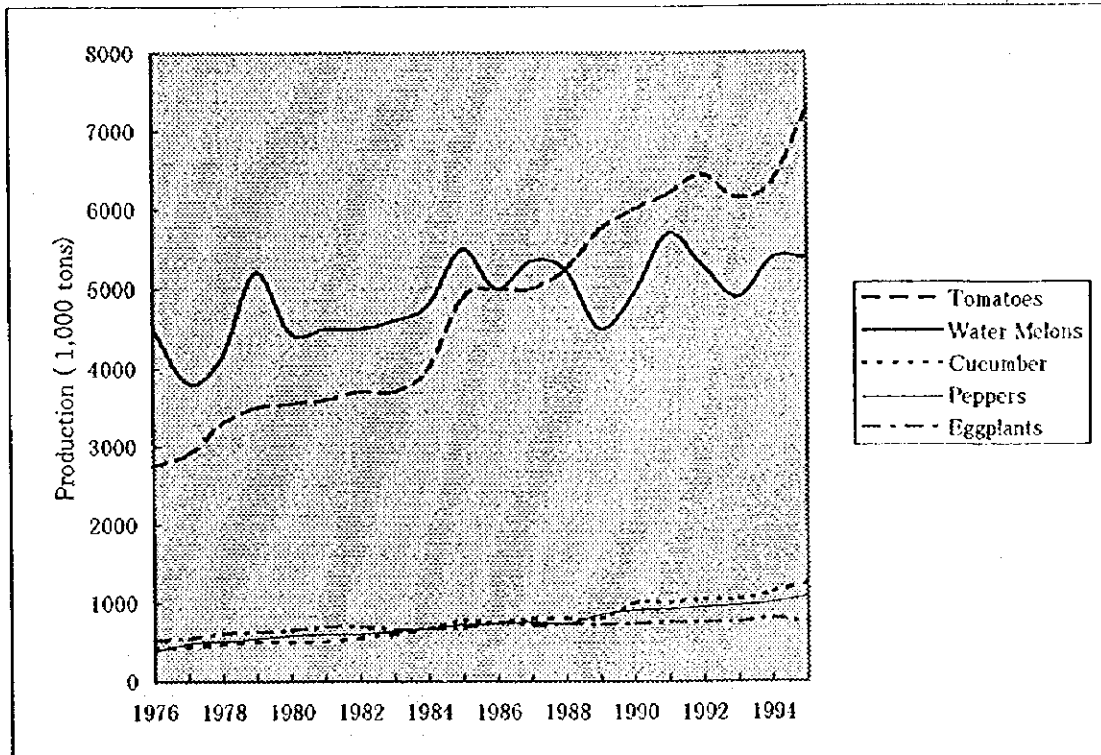
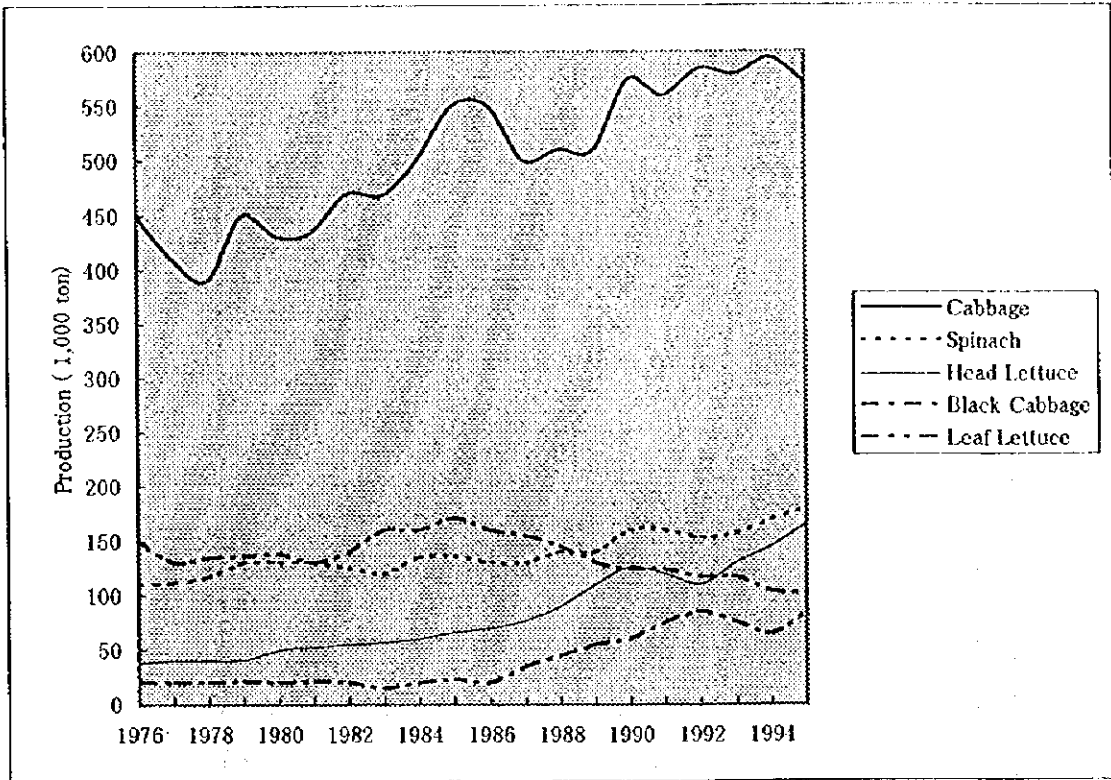


Fig.C-5 Changes in the Production of vegetables in Turkey
 Source : Statistical Yearbook of Turkey, 1995.

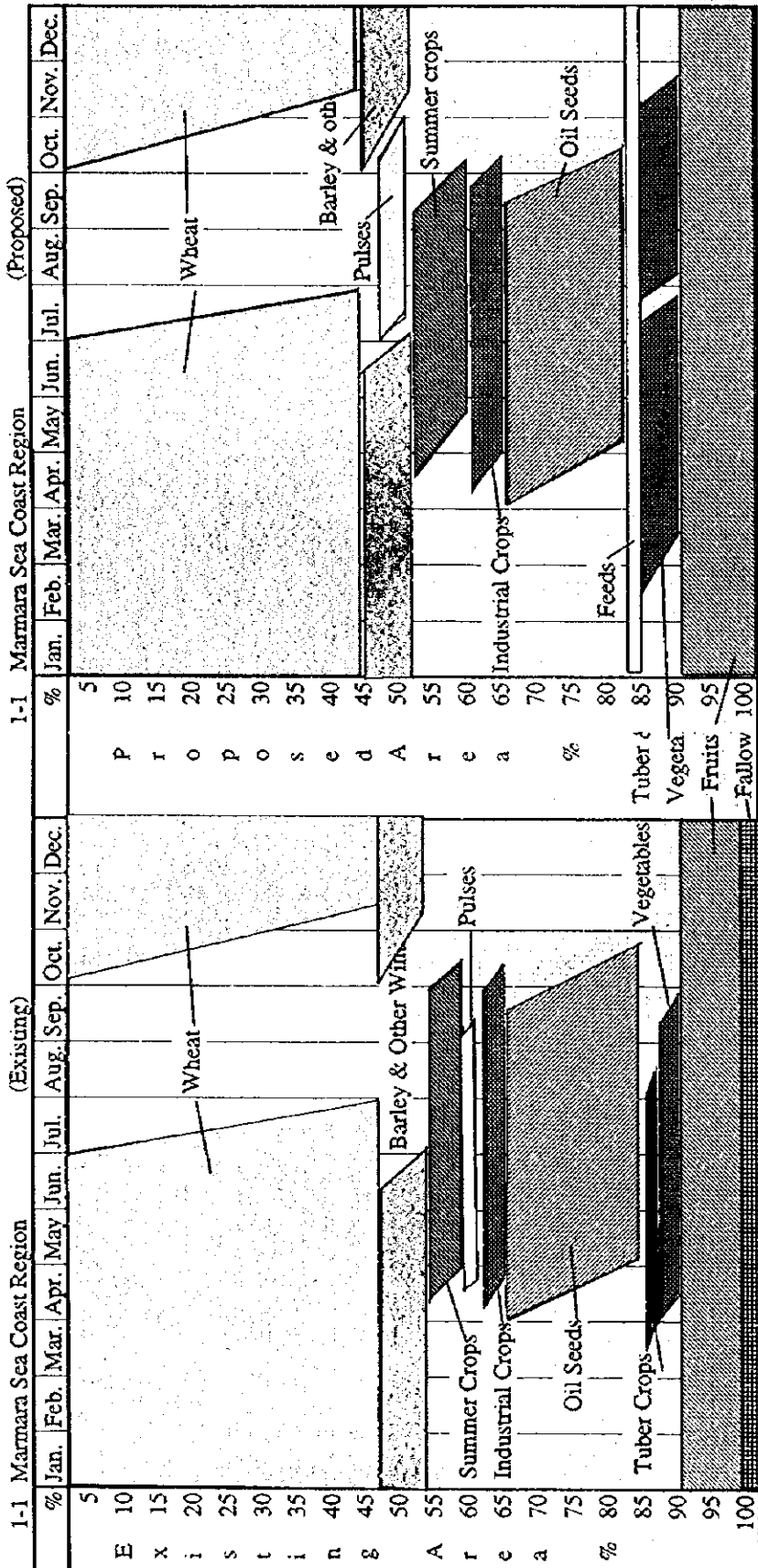


Fig. C-6 Existing Cropping Pattern and Proposed Cropping Area (%) and Pattern. (7-1)

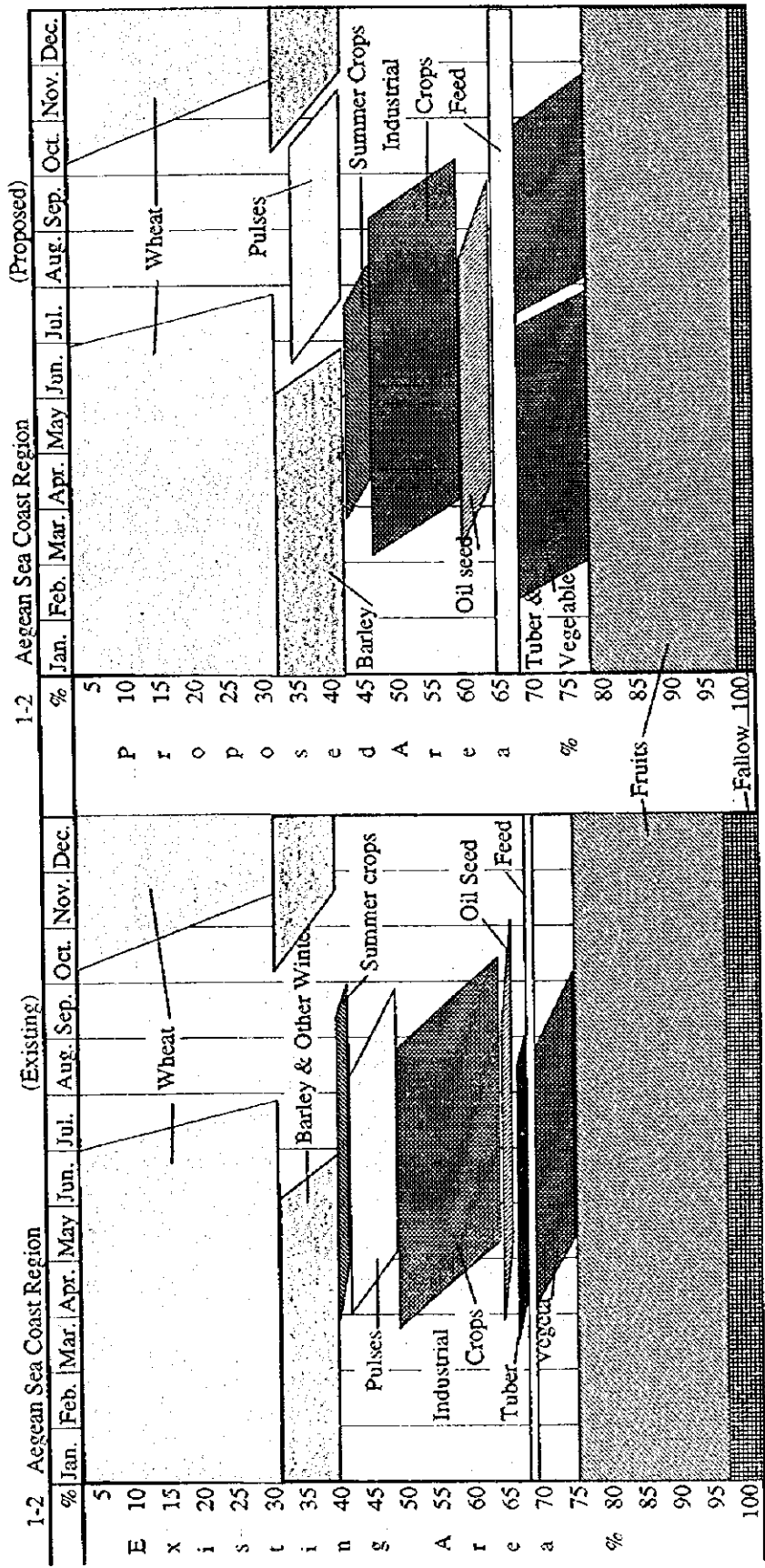


Fig. C-6 Existing Cropping Pattern and Proposed Cropping Area (%) and Pattern. (7-2)

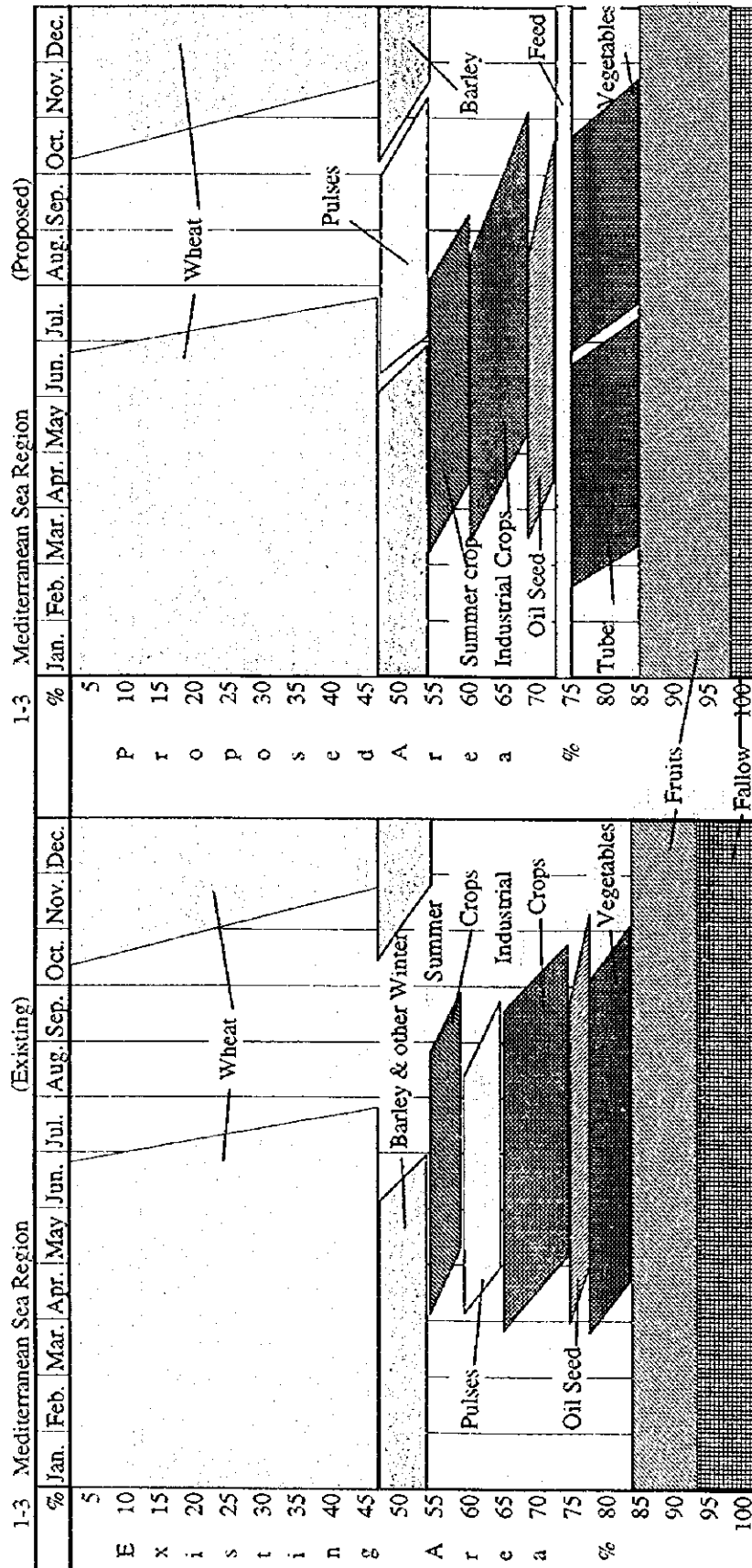


Fig. C-6 Existing Cropping Pattern and Proposed Cropping Area (%) and Pattern. (7-3)

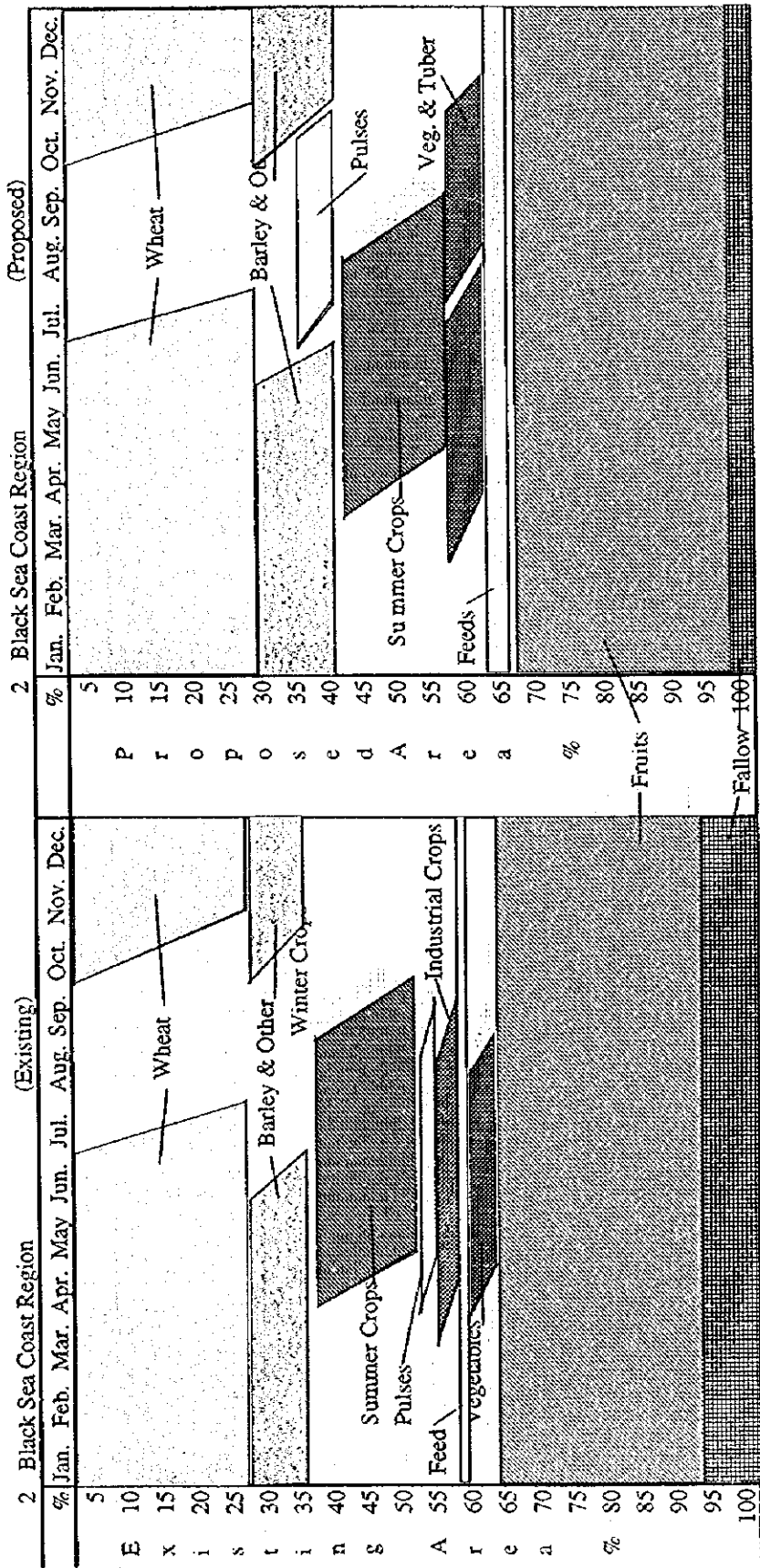


Fig. C-6 Existing Cropping Pattern and Proposed Cropping Area (%) and Pattern. (7-4)

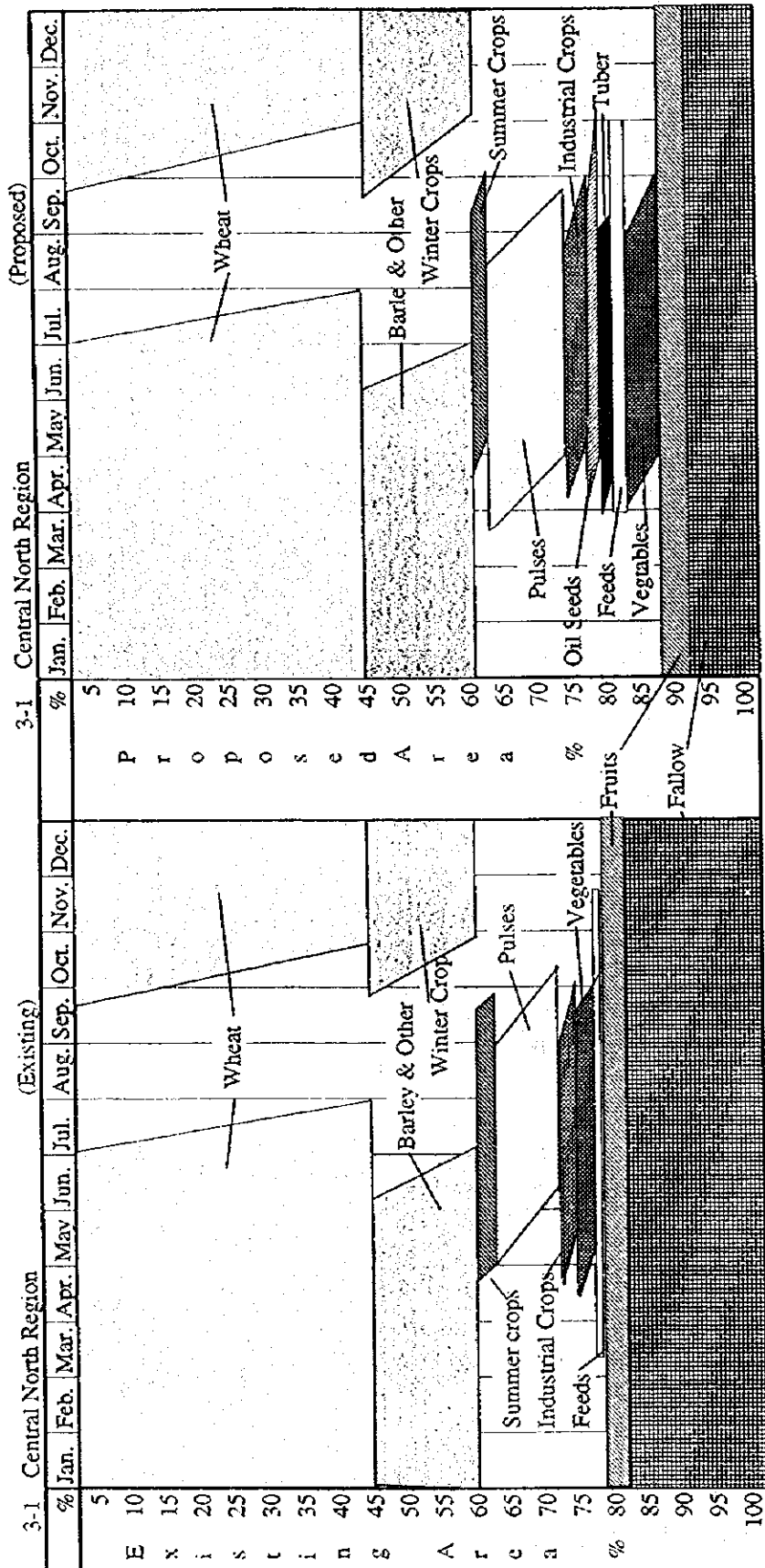


Fig. C-6 Existing Cropping Pattern and Proposed Cropping Area (%) and Pattern. (7-5)

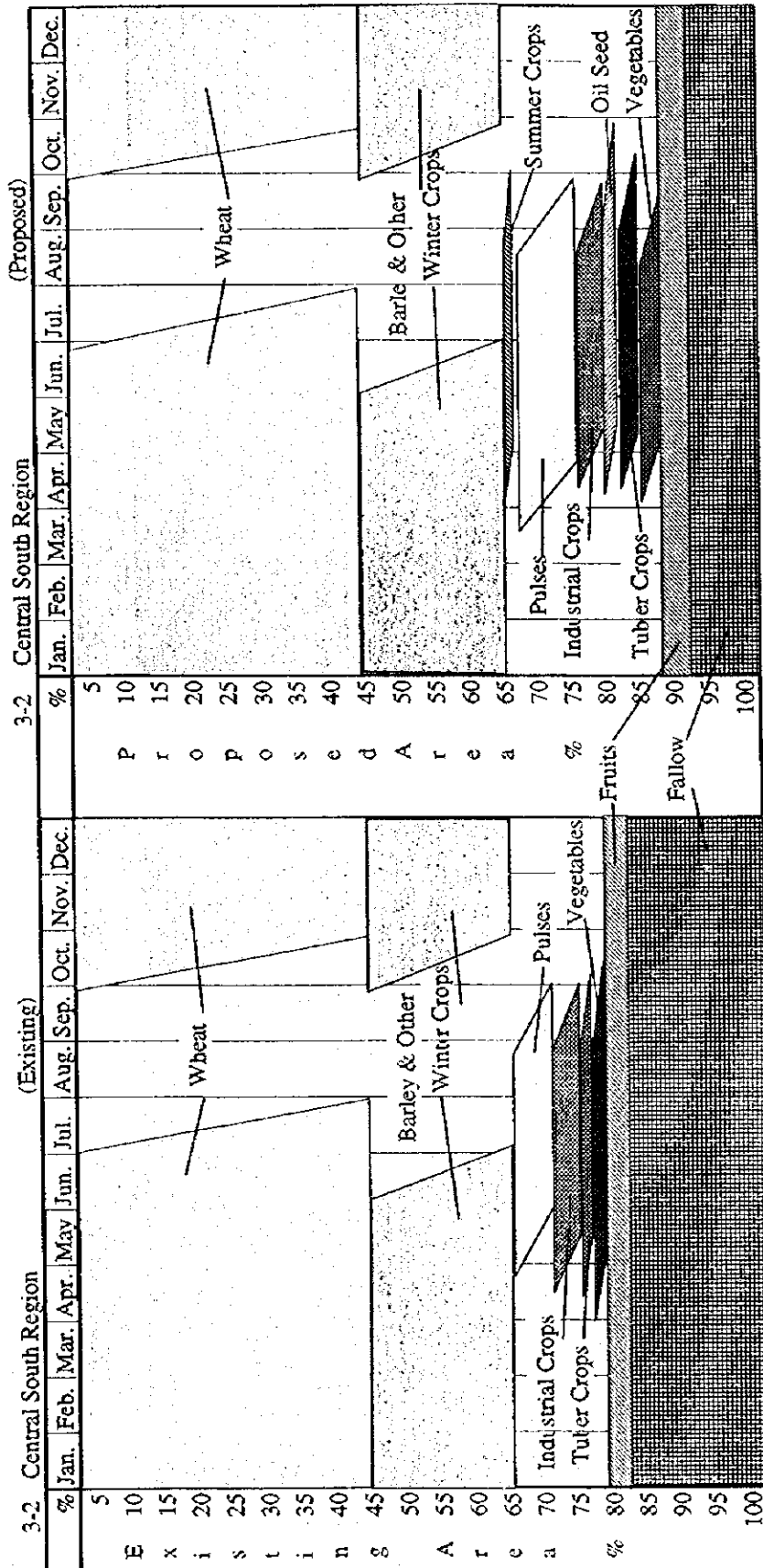


Fig. C-6 Existing Cropping Pattern and Proposed Cropping Area (%) and Pattern. (7-6)

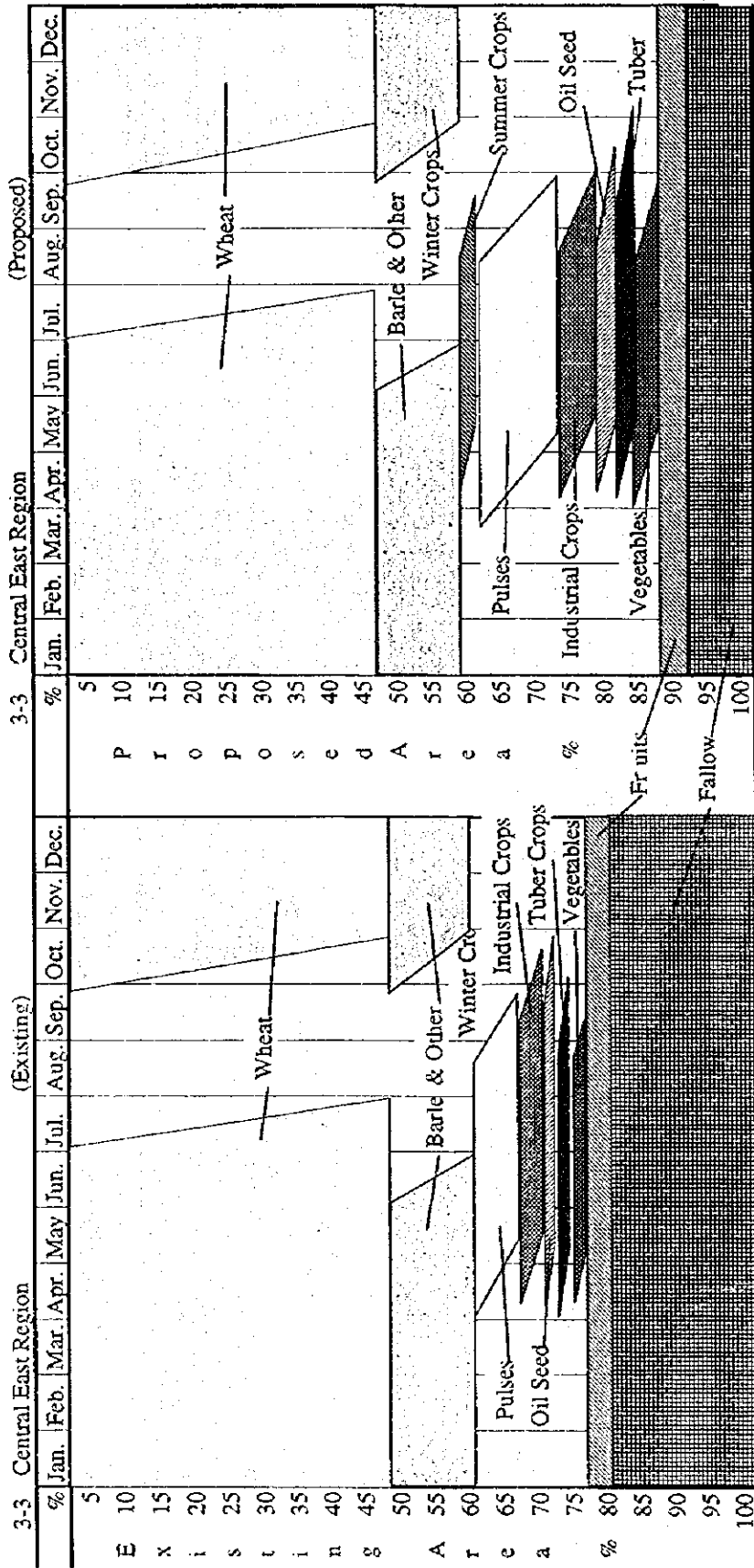


Fig. C-6 Existing Cropping Pattern and Proposed Cropping Area (%) and Pattern. (7-7)

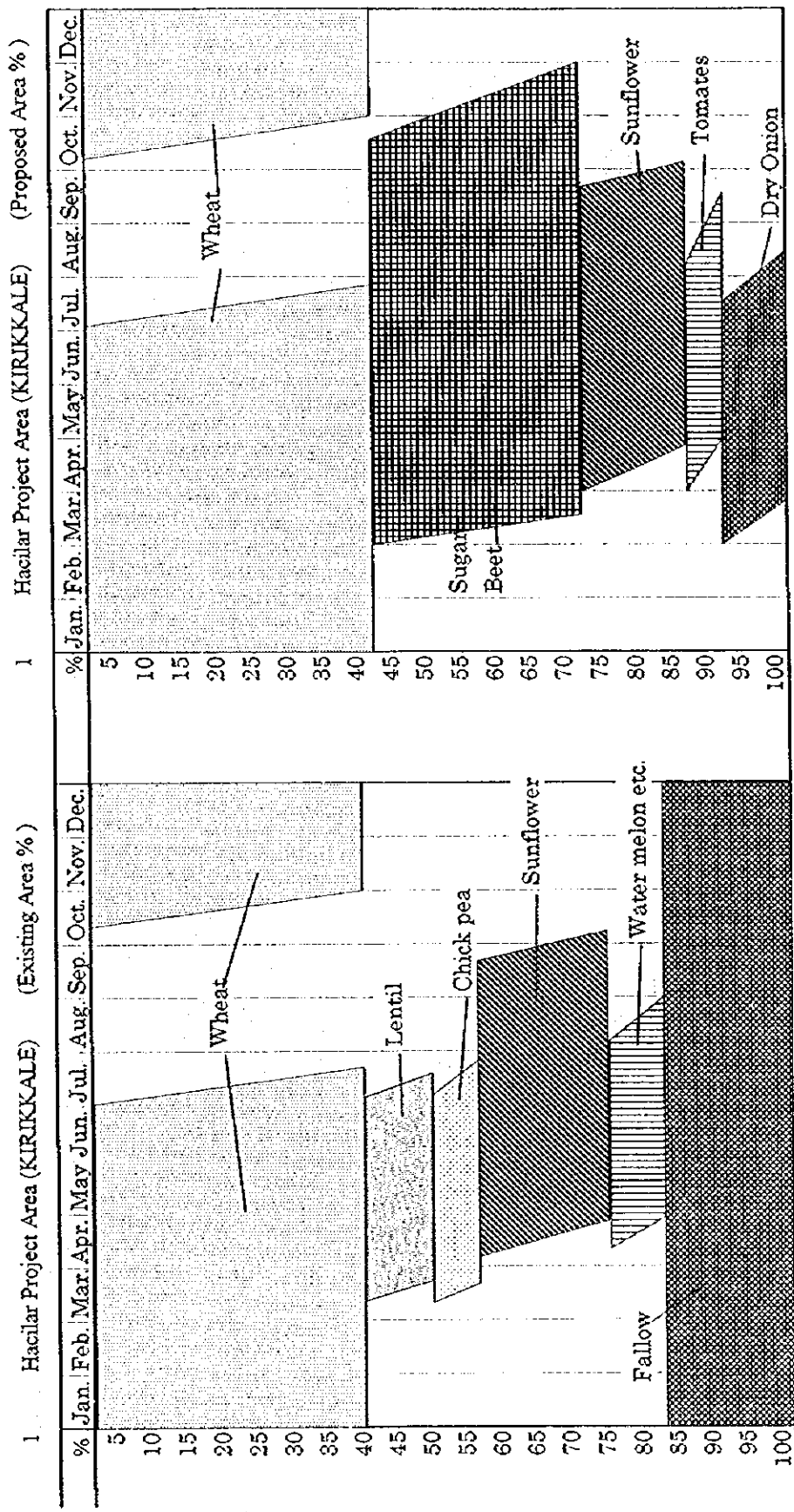
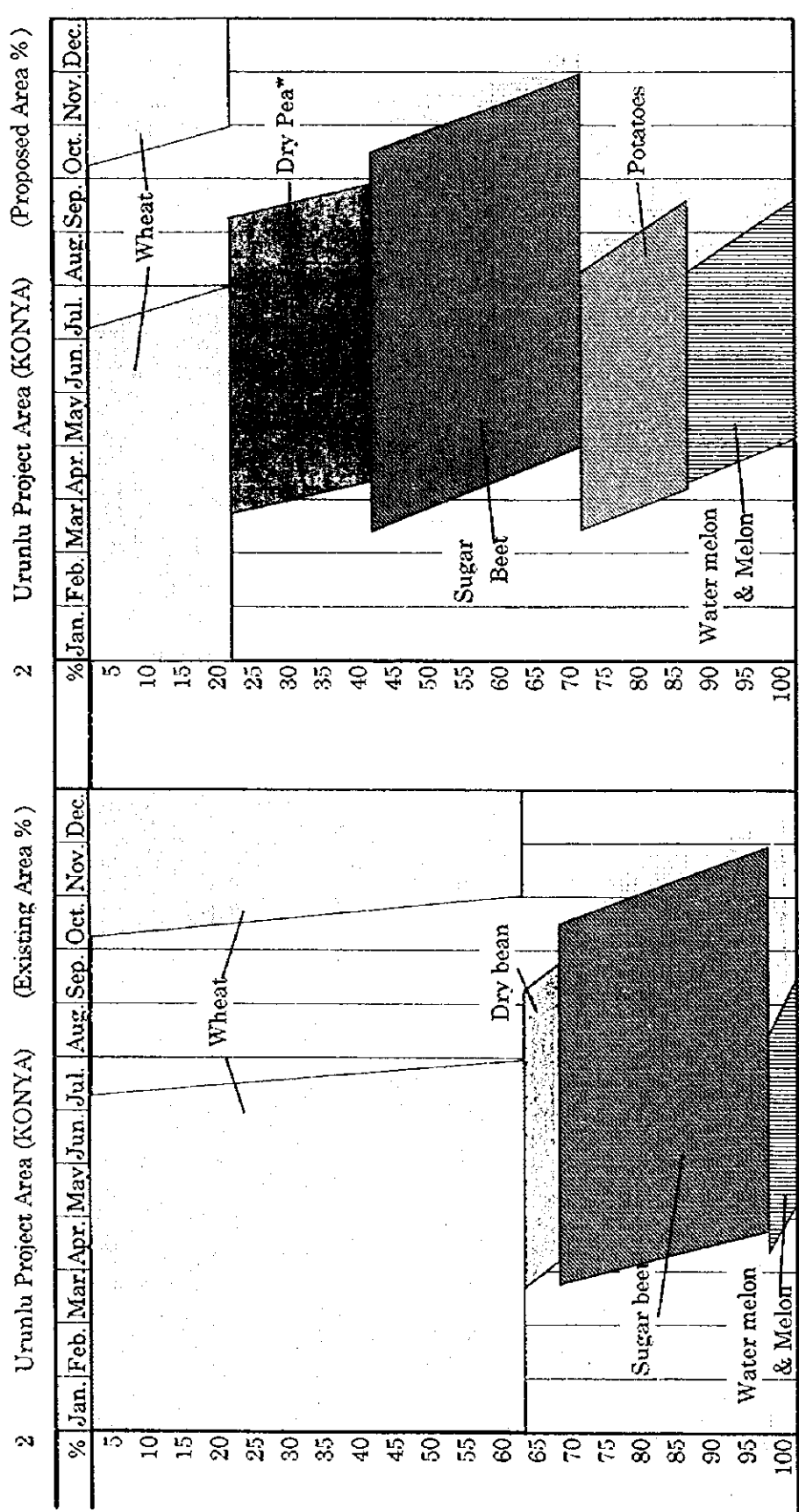


Fig. C-7-1 Existing and proposed cropping pattern (Area percentage) in Hacilar Project Area



* Tolerant variety to alkalic water

Fig. C-7-2 Existing and proposed cropping pattern (Area percentage in Urunlu Project Area)

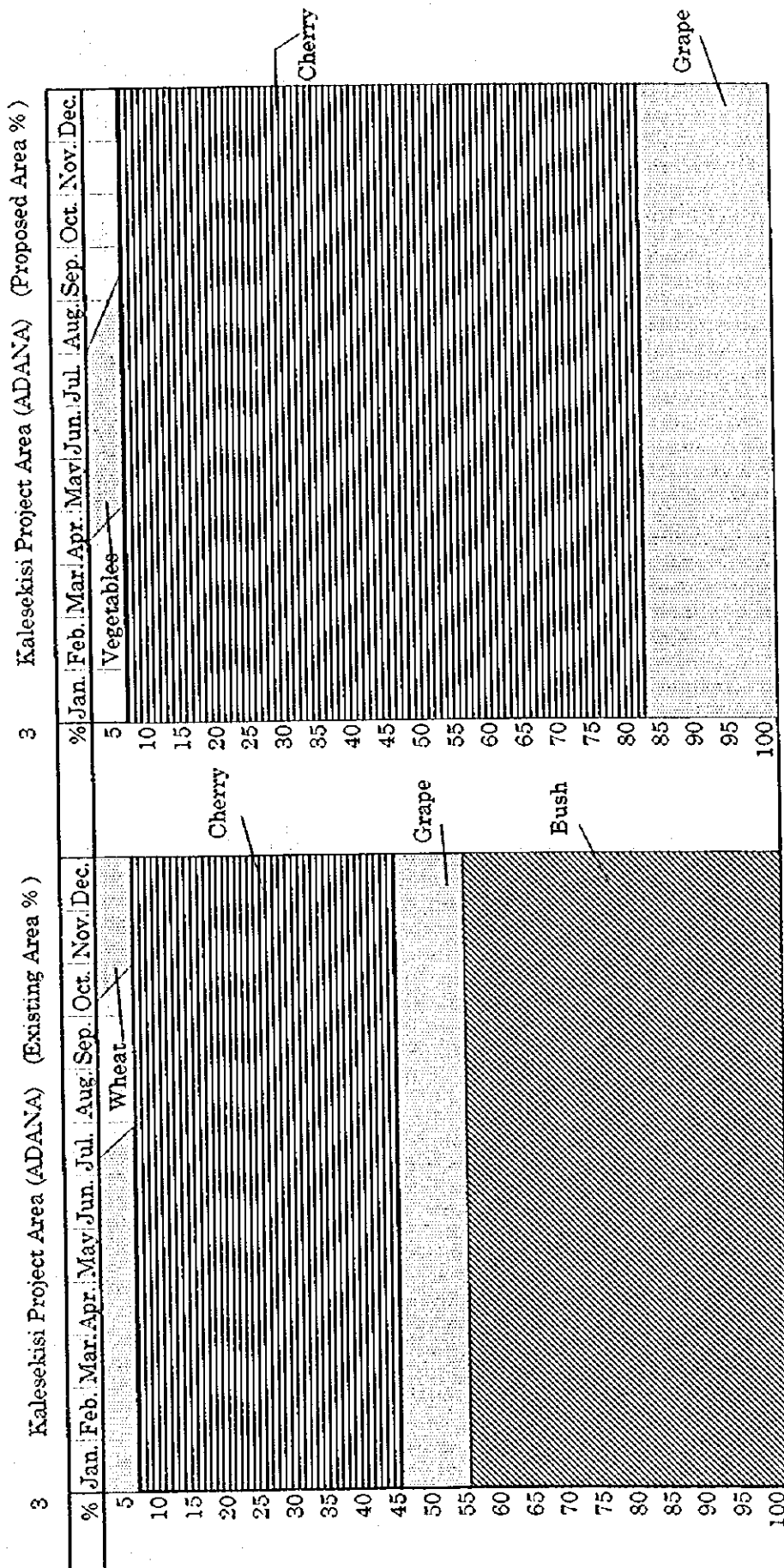


Fig. C-7-3 Existing and proposed cropping pattern (Area percentage) in Kalesekisi Project Area

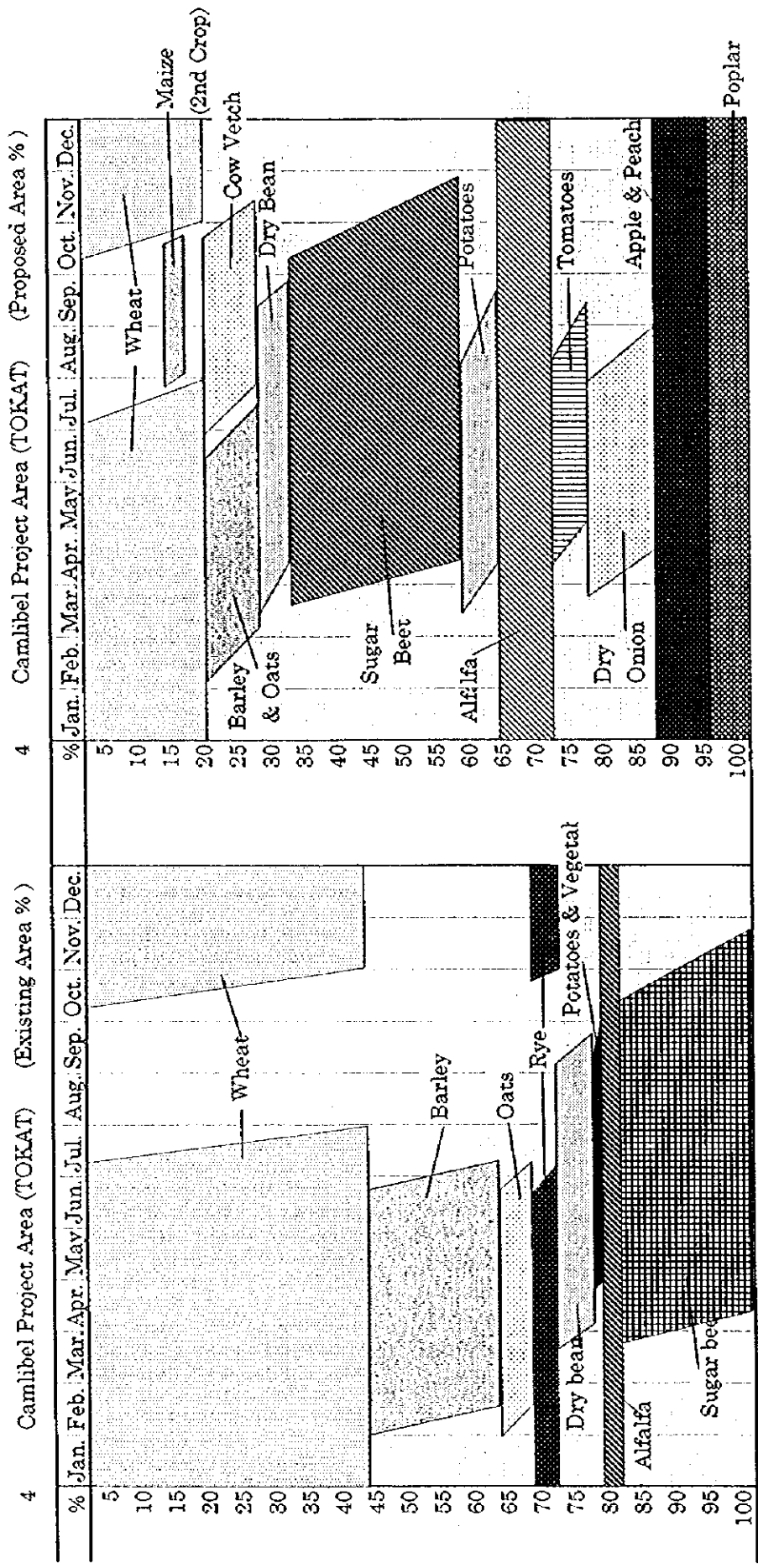


Fig. C-7-4 Existing and proposed cropping pattern (Area percentage) in Camlibel Project Area

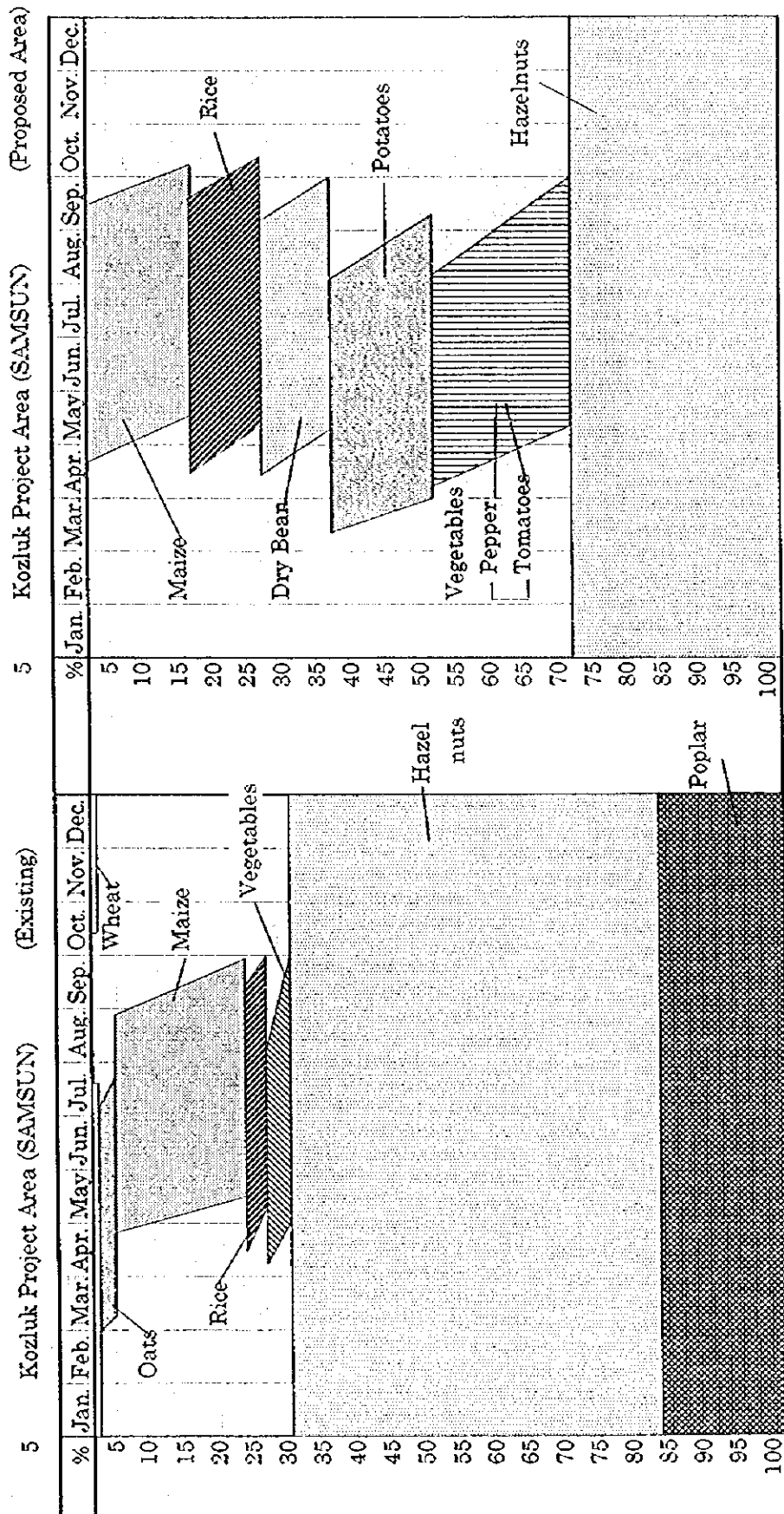


Fig. C-7-5 Existing and proposed cropping pattern (Area percentage) in Kozluk Project Area

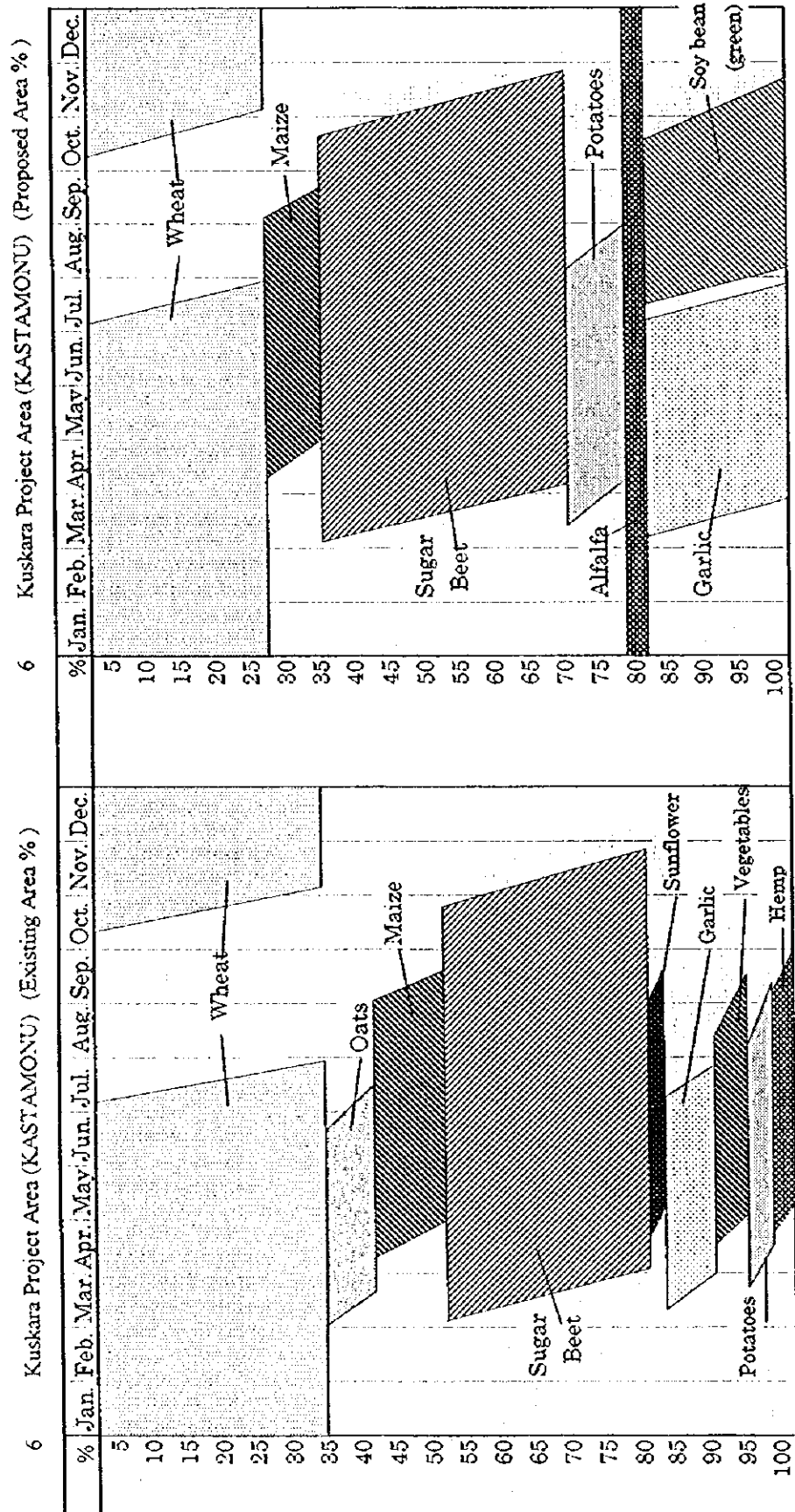


Fig. C-7-6 Existing and proposed cropping pattern (Area percentage) in Kuskara Project Area

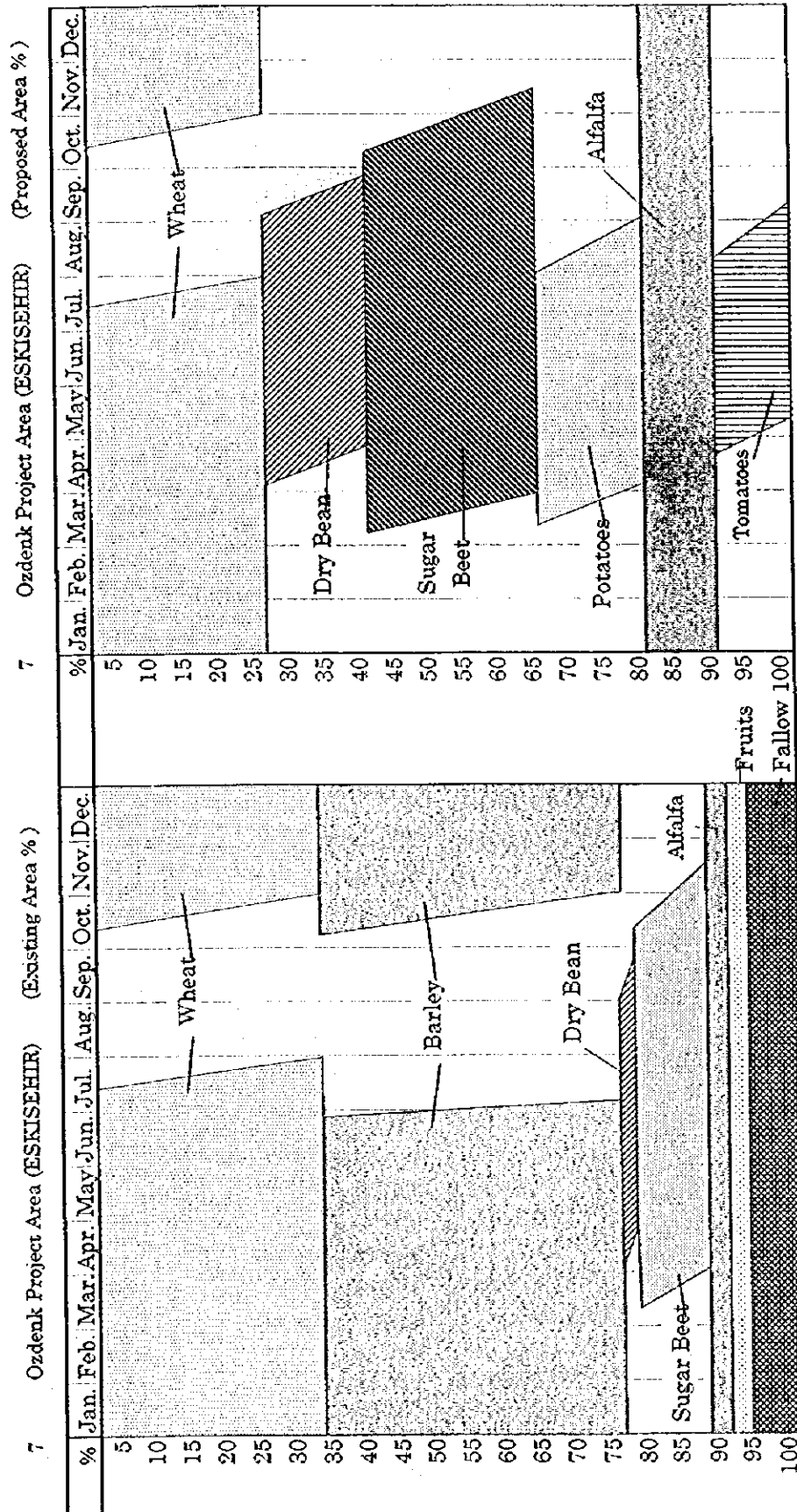


Fig. C-7-7 Existing and proposed cropping pattern (Area percentage) in Ozdenk Project Area

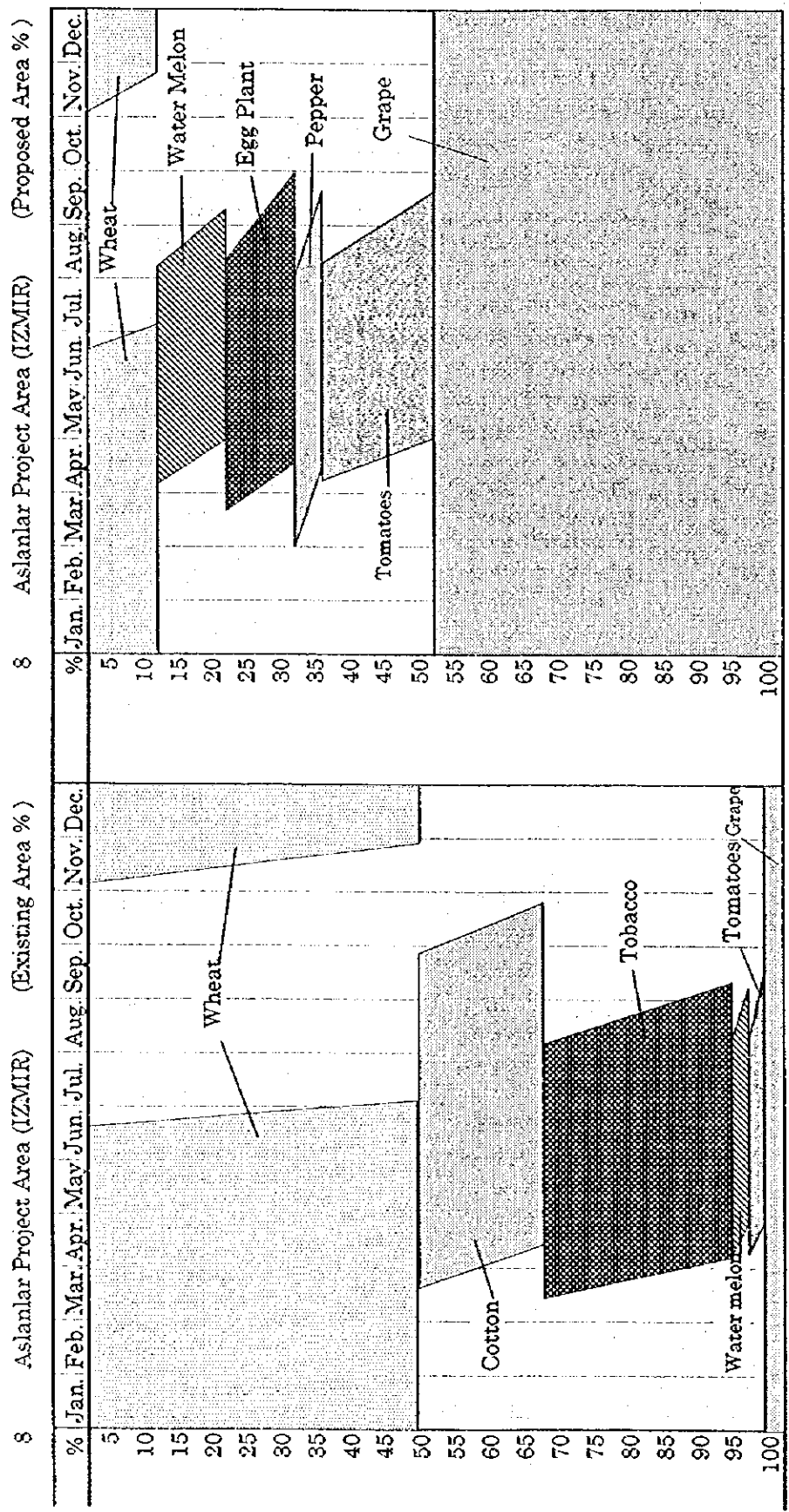


Fig. C-7-8 Existing and proposed cropping pattern (Area percentage) in Aslanlar Project Area

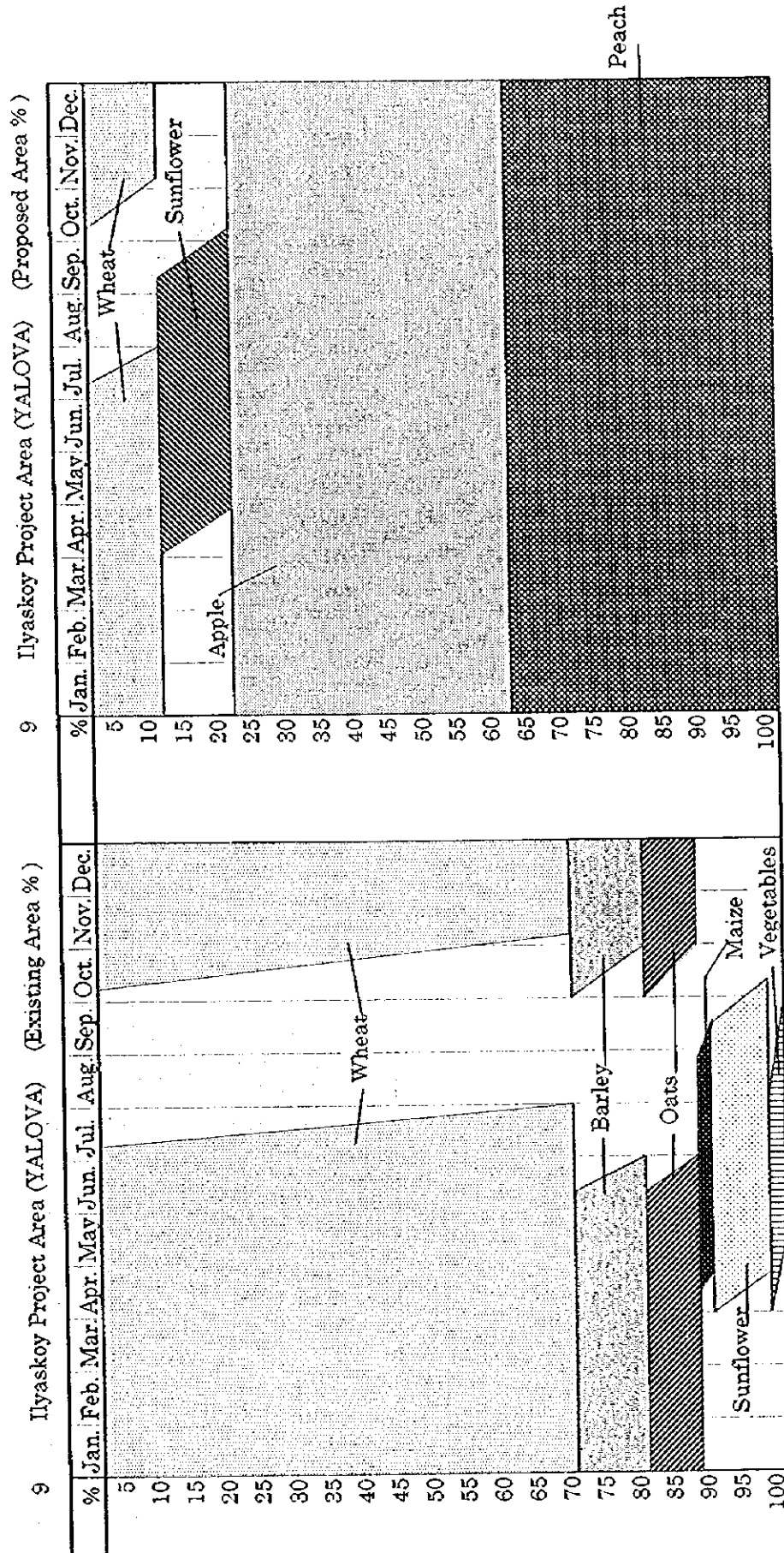


Fig. C-7-9 Existing and proposed cropping pattern (Area percentage) in Ilyaskoy Project Area

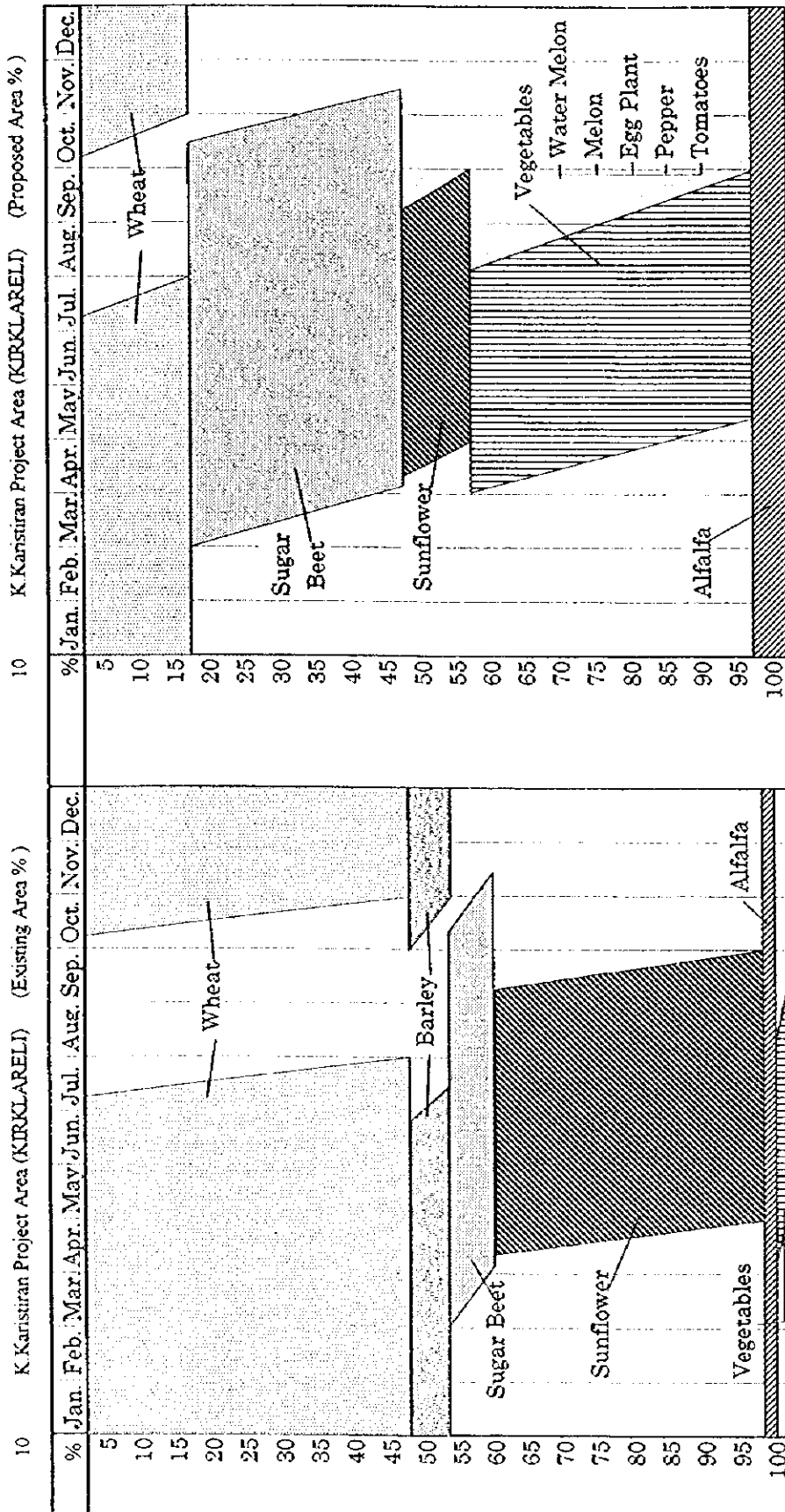


Fig. C-7-10 Existing and proposed cropping pattern (Area percentage) in K. Karistiran project area

ANNEX D

AGROECONOMY/PROJECT EVALUATION

ANNEX D

AGRO-ECONOMY AND PROJECT EVALUATION

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Table 1 - 1 Major Economic Indicators

month / period	Jan-96	Jul-96	Jan-97	Jul-97	Jan-97	Jul-97	
Inflation %	8.3	2.1	5.9	6.3			
Monthly Consumer Price Indices	9.8	2.4	5.6	5.3			
Wholesale Price Indices	79.8	81.2	75.7	85.2			
annual sur. Consumer Price Indices	84.9	76.3	78.0	80.7			
Wholesale Price Indices	1994	1995	1996				
Foreign Trade (monthly)	18,106	21,633	23,042	22,994	21,138.1	3,951.0	
Exports	23,270	33,709	42,464	3,323	2,993.4	2,736.0	
Imports	5,164	-14,074	-19,342	-1,922	-744.7	-1,215.0	
Balance							
Billion US\$							
1994	1995	1996					
Jan-96	Jul-96	Jan-97	Jul-97	Jan-97	Jul-97		
Investment Goods null\$	3,517	16.3	311	16.1			
Consumables null\$	12,574	58.1	1,179	60.8			
Raw Materials null\$	5,543	25.6	449	23.1			
Investment Goods null\$	10,448	29.4	1,041	30.3			
Consumables null\$	4,414	12.4	542	15.8			
Raw Materials null\$	20,406	59.3	1,853	54.0			
1993	1994	1996	1996	01-97			
Balance of Payment	Million US\$	-6,433	2,631	2,339	-4,393	-1,323	
end of:	Dec-95	Dec-96	1-Jul-97	1-Aug-97			
Retail Bankers' Credits	1,374	2,949	4,816	5,074			
TL credits	1,297	2,776	4,549	4,903			
Foreign Currency	443	1,247	1,972	2,094			
State Bankers' Credits	576	944	1,602	1,703			
Private Bankers' Credits	644	1,716	2,800	2,940			
Foreign Bankers' Credits	37	75	146	160			
Investment Bankers' Credits	77	174	255	271			
Total Deposits	Trillion TL	1,120	2,606	3,664	3,847		
State Retail Banks	682	1,555	2,237	2,338			
Private Banks	457	1,029	1,399	1,478			
Foreign Banks	10	21	28	31			
1994	1995	1996	96-Q3	96-Q3	97-Q1	97-Q2	
GNP growth%	-6.0	8.0	7.9	8.9	5.4	8.8	5.7
GDP growth%	-5.4	7.2	7.2	8.2	5.5	8.0	6.7
agr. GDP %	10.8	2.0	5.2	3.2	1.4	14.4	-2.5
indus. GDP %	2.7	12.1	7.1	7.4	5.5	7.1	9.5

NOTE: * These growth rates are based on 1987 price

State Statistical Bureau;

TURKISH ECONOMY STATISTICS AND ANALYSIS
1996 and 1997, but the estimations were made by the study team

month / period	1995	1996	Dec-96	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97
Industrial Production	8.6	5.9	-0.2	0.3	5.2	11.1	7.6	11.2	9.8	11.4
Growth Rates	Dec-95	Dec-96	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	
Capacity Utilization	%	82.2	79.8	77.2	80.8	77.6	82.4	80.2		
Cumulative State Budget	1994	1995	Oct-96	Sep-96	Oct-96	Nov-96	Dec-96			
Trillion TL	Expenditures	902.5	1,720.6	2,798.7	3,138.1	3,951.0			2,816.8	3,307.9
Revenues	751.6	1,404.0	2,105.3	2,593.4	2,736.0				2,135.1	2,663.7
Budget Balance	-150.9	-316.6	-683.3	-744.7	-1,215.0				-681.7	-674.2
Budget Cash Balance Sheet	1994	1995	Oct-96	Sep-96	Oct-96	Nov-96	Dec-96			
Cash Balance	-150.4	-294.3	-1,217.7	-807.1	-913.4	-987.2			-772.5	-978.5
Financing	150.4	294.3	1,247.3	807.1	913.4	987.2			772.5	978.6
** ND borrowing	-70.3	85.7	274.0	-209.6	-53.4	24.0			1,480.4	1,440.0
*** NF borrowing	-68.5	-81.2	-124.4	-89.4	-98.4	-128.2			-186.4	-218.5
**** ST borrowing	289.5	291.9	1,021.1	1,140.8	1,141.0	1,027.3			-606.0	-280.6
Other sources	0.4	-2.1	86.6	-43.8	-75.8	14.0			94.5	37.7
1992	1993	1994a	1995a	1996a						
Foreign Debt Stock	55,592	67,356	65,601	73,728	79,767					
Billion US\$	Total Debt	42,952	48,823	54,291	57,577	59,231				
out of which	Long-Medium	12,660	18,533	11,310	15,701	20,536				
Short Term										
Domestic Debt Stock	1994	1995	Sep-96	Oct-96	Nov-96	Dec-96	May-97	Jun-97	Jul-97	
Trillion TL	Total	799.3	1,361	2,734.7	2,890.9	2,963	3,148.9	4,026	4,198	4,556
International Currency Reserves	End-95	End-96	End-96	11-Jul-97			1-Aug-97			
Billion US\$	Total Reserves	23,942	25,008	26,359	25,915					
Cross Cur.B.	13,774	17,656	18,215	17,974						
of which: gold	1,383	1,343	1,383	1,384						
of w. currency	12,391	16,273	16,832	16,590						
Commodity/Bills	10,169	7,332	8,144	7,941						
Money Supply	End-95	End-96	1977	30-May	1977	1-Jul	1977	1-Aug	1977	1-Aug
Trillion TL	M1, M2 note	3,960	831.4	1,058.5	1,198.2					
M2, M3 note	1,270.4	2,801.7	3,579.7	3,941.6						
M2Y, 0.5m	2,625.5	5,504.6	7,116.8	7,746.1						
M3, others	1,331.1	3,017.3	3,811.0	4,272.7						
Population	1990 census	1990	1991	1992	1993	1994	1995	1996	1997	2000
in million	56,574	56,574	57,834	58,935	60,242	61,146	61,941	62,622	63,186	64,908
Per Capita GNP	1990	1991	1992	1993	1994	1995	1996	1997	estimated	
US\$/population	2,680	2,621	2,708	3,004	2,184	2,759	2,916	3,069		

Table 1 - 2 (1) Position of Agricultural Trade

Unit : million US\$

	Total Export	Agr. Export	rateA/T	Total Import	Agr. Imports	rateA/T	Agr. Exp/Imp
1985	7,958	1,719	21.6%	11,343	562	5.0%	3.06
1986	7,457	1,886	25.3%	11,105	601	5.4%	3.14
1987	10,190	1,853	18.2%	14,158	700	4.9%	2.65
1988	11,662	2,341	20.1%	14,336	596	4.2%	3.93
1989	11,625	2,126	18.3%	15,792	1,149	7.3%	1.85
1990	12,959	2,388	18.4%	22,302	1,823	8.2%	1.31
1991	13,593	2,732	20.1%	21,047	1,241	5.9%	2.20
1992	14,715	2,260	15.4%	22,871	1,299	5.7%	1.74
1993	15,345	2,381	15.5%	29,428	1,578	5.4%	1.51
1994	18,106	2,470	13.6%	23,270	1,067	4.6%	2.31
1995	21,636	2,314	10.7%	35,709	2,286	6.4%	1.01
1996	21,643	2,170	10.0%	40,172	2,542	6.3%	0.85

note : 1996 data is estimate from the first half of the year, provisional

source : monthly bulletin of statistics of Turkey

Table 1 - 2 (2) Breakdown of Agricultural Trade into Major Commodity Groups

Unit: thousand US\$

year	Agricultural Commodity Exports						Agricultural Commodity Imports							
	live animals	meats	dairy products	cereals	fruits vegetables	animal others feeds	year	live animals	meats	dairy products	cereals	fruits vegetables	sugar	animal others feeds
1992	128	26	9	592	1,570	3	1992	109	34	31	159	67	9	80
1993	284	27	12	272	1,670	3	1993	103	32	31	347	101	10	104
1994	223	43	19	375	2,002	8	1994	23	10	20	159	48	4	111
1995	132	23	26	441	2,178	10	1995	343	78	36	462	88	203	171
1996	94	28	28	428	1,726	19	1996	280	32	36	1,064	102	151	350

year	Agricultural Commodity Net Exports (+), Imports (-)						Agricultural Commodity Composition of Exports							
	live animals	meats	dairy products	cereals	fruits vegetables	animal others feeds	year	live animals	meats	dairy products	cereals	fruits vegetables	sugar	animal others feeds
1992	19	-8	-22	433	1,503	-102	1992	3%	1%	0%	13%	34%	4%	6%
1993	181	-5	-19	-75	1,569	-108	1993	6%	1%	0%	6%	37%	5%	7%
1994	200	33	-1	216	1,954	-77	1994	4%	1%	0%	7%	39%	6%	6%
1995	-211	-55	-10	-21	2,090	-91	1995	2%	0%	0%	8%	41%	4%	8%
1996	-186	-4	-8	-636	1,624	-156	1996	2%	1%	1%	9%	36%	5%	9%

Table 1 - 2 (3) Recent Export Prices, Freight Charge and U.S. Farm-Gate Prices

country origin year / month	International Market Prices										U.S. Black Sea ship-freight***
	U.S. wheat*	U.S. maize	U.S. sorghum	Argentina wheat	Thailand rice	I.S.A. sugar**	Middle East # Urea	D.A.P.	T.S.P.	U.S. cotton	
1996 MAY	244	208	194	216	199	254	195	236	175	30	
1997 March	180	128	126	175	118	238	157	215	173	15.5	
1997 MAY	162	116	115	183	112	241	163	221	169	175	

note: * # April instead of March
 ** hard, red winter No.2
 *** International Sugar Agreement price

crop year	U.S. Farmers' Farm-Gate Prices					sunflower seed
	fresh apple	fresh grape	hazel-nut	sweet cherry	potatoes	
1994	283	353	1,040	1,140	123.4	480
1995	373	379	913	1,382	111.6	488
1996	355	465	859	1,612	102.2	511

Table 1 - 2 - (4-1) World Farm Commodity Trading by FAO Trade Year-Book

traded commodity	World Area or Country		I M P O R T S						E X P O R T S					
			1991	1992	1993	1994	1995	average	1991	1992	1993	1994	1995	average
wheat	World	Quantity	117.3	121.5	116.0	109.5	113.7	115.6	120.2	122.9	119.3	113.9	115.1	118.3
		Value	17,601	21,038	18,677	17,430	21,860	19,321	15,915	19,013	17,062	15,058	19,360	17,282
		unit price	150	173	161	159	193	167	132	155	143	132	168	146
	Europe	Quantity	17.98	19.89	31.07	22.51	24.77	23.24	39.77	41.29	39.10	35.85	40.76	39.35
		Value	4,287	4,760	5,903	4,130	4,990	4,814	6,391	7,540	6,561	5,636	7,201	6,666
		unit price	238	239	190	183	201	207	161	183	168	157	177	169
	Turkey	Quantity	1.98	60	1,221	496	1,253	646	3,171	4,089	1,175	1,765	1,119	2,364
		Value	22.2	9.0	178.9	76.0	245.7	106	320.3	446.9	157.5	196.1	168.1	258
		unit price	112	150	147	153	196	165	101	109	134	111	150	114
	France	Quantity							19.73	19.76	20.99	15.02	18.70	18.8
		Value							3,144	3,699	3,470	2,369	3,418	3,220
		unit price							159	187	165	158	183	171
rice	World	Quantity	12,933	14,737	15,925	17,644	21,289	16,506	13,140	15,836	16,785	17,944	23,430	17,427
		Value	5178.3	5833.6	5608.0	7124.7	7600.1	6268.9	4476.1	5269.3	5109.9	6197.9	7292.0	5669.0
		unit price	400	396	352	404	357	380	341	333	304	345	311	325
	India	Quantity							678.3	580.4	757.7	890.6	551.2	691.6
		Value							309.8	370.7	266.2	533.1	564.3	408.8
		unit price							457	639	351	599	1,004	591
	Turkey	Quantity	132.8	264.6	289.4	195.7	300.1	236.5						
		Value	41.5	92.7	85.8	56.3	109.4	77.1						
		unit price	313	350	296	288	365	326						
barley	World	Quantity	21,406	22,672	17,163	22,600	21,023	20,973	22,850	23,570	17,198	22,360	19,941	21,384
		Value	3,082	3,466	2,522	2,746	3,163	1,996	2,982	3,299	2,320	2,444	2,724	2,754
		unit price	144	153	147	122	150	143	131	140	135	109	137	130
	Europe	Quantity	6,019	5,028	7,208	6,108	7,470	6,367	14,020	16,130	10,300	11,540	11,776	12,753
		Value	1,298	1,170	1,191	912	1,318	1,178	2,066	2,500	1,503	1,448	1,822	1,867
		unit price	216	233	165	149	176	185	147	155	146	125	155	146
	Turkey	Quantity							780.7	827.2	255.9	793.0	674.3	666.2
		Value							69.0	67.9	23.4	48.6	46.3	51
		unit price							88	82	91	61	69	77
	Italy	Quantity	699.7	470.0	597.3	484.3	704.3	591.1						
		Value	164	113	113	91	144	125						
		unit price	234	240	189	188	205	212						
France	Quantity							4,509	5,378	5,182	2,342	2,921	4,066	
	Value							708	927	768	534	571	702	
	unit price							157	172	148	228	195	173	
maize	World	Quantity	66,185	72,504	68,954	63,298	76,476	69,483	66,134	72,673	67,811	65,024	78,118	69,952
		Value	10,053	11,137	10,121	9,875	12,468	10,731	8,750	9,747	8,710	8,636	10,870	9,343
		unit price	152	154	147	156	163	154	132	134	128	133	139	134
	France	Quantity							4,777	7,042	7,758	8,009	6,474	6,817
		Value							1,420	1,911	1,756	1,655	1,640	1,676
		unit price							297	271	226	207	253	246
	Turkey	Quantity	76.5	135.7	101.9	14.9	62.4	78.3						
		Value	11.36	18.54	16.01	3.75	9.25	11.78						
		unit price	148	137	157	252	148	151						
potato	World	Quantity	7,779	7,676	7,063	7,603	7,393	7,503	7,882	7,604	7,342	7,932	7,275	7,611
		Value	2,046	1,849	1,377	1,880	2,584	1,947	1,862	1,578	1,286	1,770	2,310	1,761
		unit price	263	241	195	247	350	260	236	208	175	223	318	231
	Saudi Arab	Quantity	130.0	127.1	116.4	99.5	80.0	110.6						
		Value	33.50	31.74	27.89	23.34	24.00	28.09						
		unit price	258	250	240	235	300	254						
	Turkey	Quantity							219.3	374.0	244.1	229.1	103.5	234.0
		Value							42.90	51.05	43.03	36.87	23.87	40.54
		unit price							195	136	197	161	231	173
sunflower	World	Quantity	1942.4	2490.8	2109.3	2797.5	3281.1	2524.2	1960.4	2502.4	2151.6	2912.3	3330.6	2571.5
		Value	993	941	659	1,014	1,164	942	847	902	616	923	1,044	866
		unit price	480	378	312	363	355	373	432	360	286	317	313	337
	China	Quantity							25.2	15.1	64.6	35.3	19.5	30.1
		Value							8.40	2.81	15.35	16.93	5.12	9.73
		unit price							333	186	238	480	488	323
	Turkey	Quantity	49.00	97.77	66.07	94.66	357.04	132.91						
		Value	11.93	21.70	19.10	30.14	120.41	40.66						
		unit price	243	222	289	318	337	306						

source: FAO Trade Year Book 1993 - 1995

remarks: fertilisers and meats are also available in another sheet

Table 1 - 2 - (4-2) World Farm Commodity Trading by FAO Trade Year-Book

traded commodity	World Area or Country	I M P O R T S							E X P O R T S						
		1991	1992	1993	1994	1995	average	1991	1992	1993	1994	1995	average		
tomato	World	Quantity	24354	24098	28268	29493	31839	27610	24370	23350	28923	32272	33995	28570	
		Value	22908	21753	24637	25398	27098	24159	20021	19596	21633	28663	27969	23020	
		unit price	941	903	836	861	851	875	822	839	749	801	824	806	
	Jordan	Quantity							133.5	166.4	126.7	100.9	135.7	132.6	
		Value							32.2	31.4	23.4	26.7	24.8	27.7	
		unit price							241	189	184	265	182	209	
	Turke	Quantity							106.6	45.1	77.3	116.0	98.5	88.7	
		Value							29.3	12.4	33.9	41.9	37.6	31.0	
		unit price							275	275	439	361	382	350	
	Saudi Ar	Quantity	136.5	169.3	172.5	151.9	160.0	158.0							
		Value	60.3	62.3	41.5	36.5	36.0	47.3							
		unit price	442	368	240	240	225	299							
onion	World	Quantity	2410.7	2572.9	2602.3	3396.4	3391.4	2874.7	2693.2	2562.7	2667.8	3613.3	3464.0	3000.2	
		Value	883.2	1028.3	784.5	1167.6	1305.3	1034.8	748.5	717.2	746.6	1087.6	1205.9	901.2	
		unit price	368	400	301	344	385	360	278	280	280	301	348	300	
	Saudi Ar	Quantity	131.1	122.8	218.3	179.1	200.0	170.3							
		Value	30.4	21.1	40.2	33.7	36.0	32.3							
		unit price	232	172	184	188	180	190							
	Turke	Quantity							163.4	194.2	113.3	62.7	111.5	129.1	
		Value							49.3	58.6	17.8	13.5	20.8	32	
		unit price							302	302	157	199	187	246	
	apple	World	Quantity	3951.4	3943.4	4406.3	4373.3	4841.9	4309.3	3859.9	3887.0	4640.5	4731.7	5160.1	4456.0
			Value	2810	3060	2219	2733	3255	2815	2452	2460	2091	2463	3008	2495
			unit price	711	776	504	625	672	654	635	633	451	520	583	560
Saudi Ar		Quantity	134.6	117.6	142.0	120.5	130.0	128.9							
		Value	51.8	36.0	50.2	40.4	52.0	46.1							
		unit price	385	306	354	335	400	357							
Iran		Quantity							60.0	94.0	215.8	190.2	150.0	142.0	
		Value							7.2	13.2	22.7	19.1	30.0	18.4	
		unit price							120	140	105	100	200	130	
grape		World	Quantity	1672.8	1764.3	1781.7	1995.4	1838.8	1810.6	1603.9	1770.7	1952.3	2067.8	1883.9	1855.7
			Value	1975	2016	1869	2156	2252	2054	1598	1609	1663	1882	1928	1736
			unit price	1181	1143	1049	1080	1225	1134	996	909	852	910	1028	935
	Germany	Quantity	378.1	401.2	336.6	380.7	319.6	363.2							
		Value	429.2	434.7	329.7	386.8	376.6	391.4							
		unit price	1135	1083	980	1016	1178	1078							
	Spain	Quantity							114.4	124.1	127.0	92.2	91.1	109.8	
		Value							105.4	114.9	107.0	91.8	109.9	105.8	
		unit price							921	926	843	996	1206	963.9	
	raw sugar	World	Quantity	28,202	30,315	28,327	29,081	32,034	29,592	29,741	10,665	29,755	30,029	35,576	27,153
			Value	11,843	11,386	9,669	10,473	13,430	11,360	10,554	10,665	8,854	9,713	12,864	10,530
			unit price	420	376	341	360	419	384	355	1000	298	323	362	388
Turke		Quantity							2986.4	3868.8	2265.8	2672.5	3842.6	3127.2	
		Value							599.3	744.9	481.2	684.0	1154.7	732.8	
		unit price							201	193	212	256	300	234	
Saudi Ar		Quantity	47.1	50.5	48.9	56.5	51.4	50.9							
		Value	16.5	15.2	13.2	17.8	18.5	16.2							
		unit price	350	301	270	315	360	319							
cotton lint		World	Quantity	4977.4	5052.4	5540.7	5960.4	5892.8	5485	4801.3	6747.3	5850	5905.6	5691.2	5799
			Value	8807.1	7457.6	7094.1	8965.2	11542	8775	7752	6747.3	6579.5	8301.8	10211	7918
			unit price	1769.4	1476.1	1280.4	1509.2	1958.7	1600.7	1614.6	1000.0	1124.7	1405.8	1754.1	1365.4
	Turke	Quantity	46.3	134.9	200.9	147.1	182.6	142.4							
		Value	101.4	34.0	207.3	239.0	381.0	192.5							
		unit price	2190	252	1082	1625	2087	1352							
	Cote div	Quantity							65.8	66.5	95.1	100.3	88.1	81.9	
		Value							139.1	110.1	135	137.9	138.3	132	
		unit price							2114	1656	1420	1375	1570	1612	
	cotton grain	World	Quantity	422.6	682	758.4	803.1	701.1	673.4	455.1	613.3	712.5	825.2	725.1	666.2
			Value	84.2	135.5	143.9	152.1	152.9	133.7	79.3	103.8	108.0	131.5	132.4	111.0
			unit price	199	199	190	189	218	199	174	169	152	159	183	167
Turke		Quantity	0	0	126.1	85.7	54.0	53.2							
		Value			16.2	11.7	7.3	11.7							
		unit price	0	0	128	137	135	221							

Table 1 - 3

Regional Disparity in Turkey

unit : 1,000 household, million TL/month

Region	Loca- tion	1994				
		number of households	consumption expenditure	d.o. per household	% for cultural A.	
Marmara	Western	3,536	42,869	12.12	36.1	
Ege	South Western	2,111	18,301	8.67	32.8	
Akdeniz	Southern	1,676	14,166	8.45	34.3	
Ic Anadolu	Central	2,389	21,289	8.91	31.7	
Dogu Anadolu	Central East	943	6,833	7.25	22.1	
Karadeniz	North Eastern	1,704	14,134	8.29	31.5	
Guney Dogu Anadolu	South Eastern	983	5,872	5.97	19.7	
Total of Turkey		13,342	123,464	9.25	32.6	
	Per Capita Five Year Mean	Gross Domestic Product by Region				
		1992	1993	1994	1995	
Western	3,659	3,760	4,057	2,996	3,782	
South Western	2,966	3,059	3,301	2,466	3,054	
Southern	2,530	2,544	2,866	2,153	2,656	
Central	2,521	2,502	2,892	2,133	2,670	
Central East	1,910	1,944	2,179	1,548	1,918	
North Eastern	1,768	1,679	2,089	1,433	1,909	
South Eastern	1,117	1,166	1,285	887	1,143	
Total of Turkey		2,644	2,724	3,033	2,145	2,682

note : five year mean includes 1991 value, expense for cultural A(activities)

include education, furniture, entertainment, habitual consumption etc.

source : statistical yearbook of Turkey ,1996

Table 2 - 1 Format for Farm Economy Survey in Turkey

1. Location	Province	Village	Project
2. Acreage Holding	Total Holding	Rainfed	Irigated
	Fallow	on Lease	on Rent
	owned Land Area	No. of Parcel	Fertility
3. Labor	Family Member	Farm Labor	Hired or not
	Men / Women	Young (15-49)	Old (50 -)
4. Livestock	Cow	Buffalo	Sheep
	CrossBread Cow	Improved European Cow	Goat
5. Machinery and Facility	Harvester	Tractor	Pump
	Manure Spreader	Thresher	Sprayer
	Bullock (Draught Animal)	Oxen	Horse
6. Implements	Pick-up/Trailer	Green/Pipe House	Stable/Cage House
7. Annual Production	Winter Cereal	Summer Cereal	Industrial
			Feed Crop
	acreaage		Vegetable
	tonnage / unit price TL per kg		Fruit
value/farm-ate price Mil. TL			
8. Annual Inputs	Seed / Stock	Fertilizers	Chemicals
	quantity		
	value/ unit price Thousand TL		
Annual Inputs	Energy/Fuel	Hired Labor	Materials/Feeds
	quantity		
	value/ unit price Thousand TL		
9. Product Disposal	Cereal	Industrial Crops	Cash Crops
	Quantity home consumed		
10. Annual Expenditure	Rent	Loan Interest	Tax %
	TL or in kind (grain kg)		
	Annual Expenditure	Input Purchasing	Feed Purchasing
	Million TL	Household Expense	Labor Payment
11. Annual Household Income	Product Sale	Labor Service	Others
	Million TL		
12. To whom do you sell	TMA/Mills	Middlemen	Self-Vending
13. Financing Sources for Farm Management/Investment TL/year	Self-Savings	Loans from Z.Bank	Credit from Brokers

Table 2 - 1 (2) Format for Farm Economy Survey in Turkey (contd.)

14. How much TL is required to sustain standard living in your village?	per household
15. Can you borrow money if it is needed due to poor harvest / sick etc.?	from
16. Why is it difficult to borrow funds from Z. Bank or Cooperative Union ? (lack of mortgage, low ability for repayment,	due to
17. Have you ever borrowed money from merchant, cooperative etc. ?	yes, no, from whom
18. Can you expect to increase your income by an irrigation project ?	yes, no or unknown
19. Do you think it necessary/desirable to establish a sales cooperative ?	yes, no or unknown
20. Do you satisfy with the price level offered by middlemen, TMA or mills ?	yes, no
21. What crop or livestock husbandry is profitable now in your village ?	
22. What difficulty or constraints are you facing to employ profitable farming?	
23. Do you think your present owned land is not enough to sustain family ?	No, yes
24. How much dekar do you want to own for cultivation (current holding ha)	
25. Do you want to buy farm machinery or draught animal to save labor ?	yes, no, what kind
26. In your farmland can family labor meet the whole labor requirement ?	yes, no
27. If you have surplus labor force in your family, how do you utilize it ?	off-farm labor etc.
28. Are you engaged in food processing, handicraft or other cottage industries ?	yes, no, what kind
29. What kind of off-farm income opportunity is available in your village ?	
30. Have any of your family member left home/village for job/working ?	yes, no, what kind
31. Are you dependent on any remittance from your family members ?	yes, no, how much
32. Have you any experience in the following activities in or out of village ? (a) itinerary / roadside vending of your farm/ forest products (b) apiary (c) fish culture (d) shepherd (e) sericulture (f) business transporters for farm produce (g) wine/raki brewing/distillation (h) slaughtering of livestock (l) cottage cheese production (j) broiler / cage battery for egg production	no, yes what kind ()
33. If you are engaged in the above listed job, how do you participate in it ? (a) as your own enterprise (b) hired by your neighbor (c) as a member of group/ firm/ cooperative	(a) (b) (c)
34. How do you keep your livestock in winter ? (a) feeding straws/beetroots (b) feeding cereal grain you produced (c) buying foodstuff (d) sending to feeders	(a) %, (b) %, (c) %, (d) %
35. Where do you sell or buy livestock and feeds ? (a) weekly animal fair, (b) merchants/middlemen, (c) through cooperative, (d) through public service	(a), (b), (c), (d) or others ()

Table 2 - 2 Format for Additional Farm Economy Survey

This format is used for additional interview to the village chief where an irrigation project has already been implemented in the vicinity of the site of a priority project under survey.

1) When was the project completed and how many dekar are irrigated now ?		
2) What are the main crop rotation patterns employed in the irrigated fields ? (s) sugarbeet, (v) vegetables, (c) cotton, (a) sunflower, (f) clover, (o) fruit trees etc.		
3) What crop species do you grow in rainfed (unirrigated) fields ? grain, pasture etc.		
4) How are the differences between crop yields under irrigation and those on rainfed condition? (a) crop name; irrigated kg/dekar : r.f kg/dekar, (b) crop name; irrigated kg/dekar : r.f kg/dekar (c) crop name; irrigated kg/dekar : r.f kg/dekar, (d) crop name; irrigated kg/dekar : r.f kg/dekar		
5) How could you reduce drought damage after irrigation ? (a) before project, times per decade, % of drought damage against normal year, (b) after the project; times or no damage, or reduced by %		
6) What new crop species have been introduced since the initiation of irrigation ?		ha
7) Out of the total crop acreage in your village how much % came under irrigation ?		%
8) Can you receive enough water for irrigating all the planned acreage ? planned/actual	ha	ha
9) From what month to what month do you irrigate for your crop ? from		to
10) What kind of energy sources are used for lifting/distributing water to the fields ?	kerosene	electricity
11) How much do you now pay for electricity or fuel supply in thousand TL per unit ?	/litre	/kwh
12) How much does it cost for irrigating a dekar for month or for the total season ?		
13) How and when do you collect irrigation fee from the beneficiary farmers ? before the season	monthly	
by water users' association manager / accountant, by village chief (muftar), or by other means		
14) How do you charge irrigation fee to the users ? (a) by area(dekar) irrigated, (b) according to number of days (period) of water supply to the field, (c) according to harvested crop yields, (d) by other methods		
15) Can you collect water fee from all the users, or some cannot pay or fail to collect ?		%
16) What kinds of regular maintenance work are necessary to keep the facilities in proper condition ? (a) overhauling pumps, (b) greasing, (c) cleaning water channels, (d) mud-flushing in night reservoirs etc.		
17) Who are responsible for maintenance of irrigation facilities ? (a) water users' association, (b) village chief (muftar), (c) representative of farming groups, (d) DSI officials, (e) others		
18) Should every user participate in regular maintenance work, or can he entrust others to do work ?		
19) How is the cost for repair / renewal met ? (a) by user's payment, (b) by official budget, (c) by payment of water users' associations (d) by the saving for this purpose among users, (e) by other means		
20) How was the water users' association organized and how many members constitute it ?		
21) Is there any problem arisen from water utilization or fee collection ?	yes	no

Table 2 - 2 (2-1) Questionnaire Results to the Village Chiefs near the Priority Project Sites

PROJECT	Q1 Year of Completion	Q1 Irrigated Acreage Decare	Q1 Total Cropped Acreage Decare	Q2
1 KIRIKKALE	1980s	90	90	Veg.-Sunf.-Wheat
2 KIRIKKALE (rainfed area)	1980s	600	10,000	1y.vegetables -1y.wheat
3 ADANA	1994	2,000	3,000	Cherry
4 KONYA	1996	65,000	15,000	sugar beet - wheat
5 TOKAT	1980s	80	8,000	cer-sugarbeet-bean-alfalfa
6 SAMSUN (rainfed village)	1980s	0	140	Hazelnut
7 KASTAMONU	1993	34	1,200	sugarbeet - garlic - wheat
8 KASTAMONU(rainfed vil)	1980s	10	1,200	sugarbeet-garlic-hemp-potato
9 ESKISEHIR	1983	900	8,000	Suga beet - Animal feed
10 IZMIR	1994	90	2,500	cereal-vegetables
11 YALOVA	1978	1,000	300	Fruit (apple and others)
12 KUCUK - KARISTIRAN	1978	41	2,500	sugarbeet-sunflower-alfafa

Q3 Crop Speciew Rainfed Cropped	Q4		Comparison of Crop Yield by Irrigation or not					
	Major Crop I Name	Acreeage	Major Crop II Name	Yield	Major Crop I Irrigated y.	rain-fed	Major Crop II Irrigated y.	rain-fed y.
1 Barley-wheat-sugb-chpe.	Cereals				400kg/da	250kg/d	minimum yield	10-15 kg/da
2 Cereals	Cherry fruit		grape		50-200kg/tree	10kg/tre	3-4tons/da	2tons/da
3 No yield on dry condition	sugar beet		wheat		7t/d	1t/d	500kg/da	100kg/da
4 cereals	Sugarbeet		cereal		6t/da	1-2 t/da	300kg/da	75kg/da
5 Cereals	Hazelnut				400 kg/da	70kg/da		
6 Hazelnut but not yielded	Sugarbeet				5-10 t/da	1-2t/da		
7 Cereals	Sugarbeet		garlic		8 t/da	1-2t/da	1.5t/da	0.5y/da
8 Wheat	Barley-Wheat				400-500kg	200-300k	600 kg	300 kg
9 Barley-wheat	Cotton-Vegetables*	400kg - 150kg			8t /da	1.5 t/da	2t / 100kg	0.3t - 0t/da
10 Cereals	Wheat				600kg/da	200kg/da		
11 Wheat-Yulaf-ofive	Wheat		Dry Onion		600kg/da	350kg/d	3.5t/da	1.5t/da
12 Wheat-Sunfl-Popular								

*; tomato, pepper, brinjal

Q4 production	irrigated yield rate in kg	rain-fed yield rate in kg	Q5 Drought
1 Wheat	280	160	2-3times
2 Watermelon	4,000	850	chronically drought
3 Wheat	400	250	
4 -			1984 to 1994 they do not know the no. of drought. After 1994 till 1997 no drought season. 1986 to 1996 no dry season
5 -			
6 -			
7 Garlic **	10,500	2,500	3 times
8 Hemp	200	100	-
9 sugarbeet	7,800	4,000	5 times
10 Pepper	2,000	100	1 times
11 Brinjal	3,000	0	-
12 Sugar beet	7,500	600	only 1942 1 time

** ; 7 - 15, 2 - 3

Q6 What new crop species were brought by the irrigation projects?	Q7 irrigation coverage in % of the total farmland	Q8 enough water or only partly cover by the scheme due to shortage
1 -	A few area is irrigated	-
2 sugarbeet - water melon- vegetables- wheat- barley - fruit	% 100	-
3 only grape and cherry is available	% 66	3000d planned -2000d irrigated
4 sugar beet	%100=%50 by the proje	35000d planned-35000d irrigated
5 Fruit- vegetables	% 100	-
6 -	own land	%100
7 maize 100 ha	% 10	Yes
8 maize 100 ha and some crop	% 50	-
9 Sugarbeet 7000 kg/da	% 60 - 66	%100
10 no	% 40	2400 da now irrigate
11 fruit-apple-peace- cherry	% 80	-
12 sugarbeet-alfalfa- bean	% 16	-

Table 2 - 2 (2-2) Questionnaire Results to the Village Chiefs near the Pori

Q9	Period of Irrigation	Q10	Energy Source	Q11	Cost Price / unit	Q12	Annual Irrigation Cost
1	April - October		tractor or diesel pump		87-90 ths TL diese		4 - 5 million TL / da
2	April - August						
3	Mid May-End Sept.		gravity flow only		no power charge		max. 3mil. - min 2mil./season
4	April to mid Sept		electricity		300,000TL/hour***		could not calculate
5	April 15 - September 15		3 well - 100 da				
6	June 12 - July 20		Electric pump		9000 TL/KWh		2,300 TL/da
7	May - September		Electric pump		6500 TL/Kwh		3,200 TL/da
8	May - September		electric		6500 TL/Kwh		250,000 TL/da
9	June - September		100-150 LITRE fuel		100000 TL/Kwh		7,000 TL / hr
10	May - October		Electric		5220 TL/kwh		2 hrs = 10.4 thousand TL / da
11	June - October		gravity -40000 TL/h		90000 TL/Diesel		
12	April - September				9000 TL/Kwh		Gravity Sprinkler Cost 2 million TL/da

*** : (1996 price)

Q13	Time of Collecting Irrigation Fee from Farmers	Q14	Criterion of fee collection	Q15	Failure of collecting fee happens or not	Q16	Regular Maintenance Work ****
1	-						
2	No Irrigation		No irrigation				
3	after irrigation season		by area		no problem		c,d
4	after the irrigating season		per hour		no problems faced		a,c
5	-						
6	End of the harvest		Counter				a,c
7	To times by tek 2 by coop.		only for irrigation		yes, simetimes happen		
8	Collect by muhtar at the level of season		by period				a,b,c,d,e
9	Before irrigation		by area				
10	—october for 2 inig.				sometimes yes or not		a,b,c,d,e
11	Self inig.Coop		by period		little problem arises		c,d,e
12	irrigation cooperatives collecting.		by both area & time				a,b from DS)

**** : a) pump overhauling, b) greasing, c) cleaning water channels, d) mud-flushing in reservoirs

Q17	Responsible Body for Maintenance	Q18	Who participate to maintenance work ?	Q19	Who pays repair costs ?	Q20	Who pays repair costs ?
1	-						
2	a		After Irrigation everybody will be member				
3	koop.		they hire repairman		a		87 members
4	koop.		hired repairman		a		170-180 members
5	-						
6	self						
7	e		old villagers		no		GDRS suggest
8	-						
9	a		Sometimes employing				5 maneger
10	-						300 member
11	b,d,e		Sometimes employing		b		
12	e		no		a		

***** : a) by users, b) official budget c), by water users association d), special saving and e) by other means

Q21	Problems encountered or irrigation water use	The reason why the village was selected for collecting information
1	-	
2	-	
3	no	in order to compare to already irrigated site of Kuskara
4	no	
5	-	
6	-	in order to compare to already irrigated site
7	no	
8	-	
9	-	
10	yes	
11	no	
12	no	

source : Farm Economy Survey conducted by the Survey Team

Table 2-3 (1) Crop Yield per Decare

unit : ton / 0.1 ha

Village Name	No. of Sample	Annual Crop Yield (ton/da)																
		Cereal Crops		Pulses		Industrial/Oilseed/Fiber Crops		Feed Crop (dry yield)		Cash Crop		Vegetables		Fruits				
		Wheat	Rice	Barley	Peas	Beans	Mustard	Soyabean	Cotton	Kemp	Chickpea	Maize	Oats	Hazel	Onion	Tomato	Apple	Guava
HACILAR	16	0.14	0.09	-	0.01	0.00	0.06	0.00	0.00	0.00	0.01	0.00	-	-	0.77	0.06	4.67	-
URUNLU	7	0.18	0.26	-	0.10	6.24	0.01	0.00	0.00	0.00	0.00	0.00	-	-	2.30	1.43	-	-
KALEBECISI	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Karavansaray	10	0.25	0.08	-	0.00	4.73	0.00	0.00	0.00	0.00	0.53	0.55	-	-	-	-	-	-
KOZLUK	19	-	-	0.40	-	-	-	-	-	-	0.06	-	0.14	0.13	-	-	-	0.14
KUSKARA	7	0.26	-	-	-	3.90	-	0.00	0.05	0.00	0.00	0.00	-	-	-	-	-	-
OZDENK	9	0.28	0.50	-	0.03	2.33	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	-
ASLANLAR	15	0.29	0.10	-	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	-	-	2.45	0.82	-	0.34
ILYANKOY	11	0.22	0.15	-	-	-	0.06	-	-	-	0.05	-	-	-	-	-	-	0.45
KARASTIRAN	10	0.40	0.20	-	0.00	4.65	0.14	0.00	0.00	0.00	0.26	0.00	-	-	-	-	-	-
Aggregate	116	1.91	0.15	0.00	0.01	1.60	0.03	0.03	0.00	0.00	0.08	0.00	0.00	0.02	0.23	0.08	0.20	0.31
mean per household		2.61	0.21	0.40	0.03	4.32	0.07	0.27	0.03	0.15	0.55	0.14	0.13	2.30	0.31	0.61	0.79	0.52

Table 2-3 (2) Crop Production Patterns

unit : number of households, decare (equivalent to 0.1 ha) for strata columns

Annually Cropped Acreage under Foodgrains

Total Holding	Total Land Holding per Farm Household										Annually Cropped Acreage under Foodgrains									
	Kale- Cam.		Kale- Cam.		Kale- Cam.		Kale- Cam.		Kale- Cam.		Kale- Cam.		Kale- Cam.		Kale- Cam.		Kale- Cam.		Kale- Cam.	
	Heclar	Unulu	Heclar	Unulu	Heclar	Unulu	Heclar	Unulu	Heclar	Unulu	Heclar	Unulu	Heclar	Unulu	Heclar	Unulu	Heclar	Unulu	Heclar	Unulu
0-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-35	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35-50	2	1	1	1	0	4	0	1	11	20-30	2	0	0	2	0	3	0	1	1	10
50-75	1	0	0	3	4	2	1	2	15	30-40	0	1	0	1	0	2	2	3	1	11
75-100	1	0	0	2	0	3	0	1	8	40-50	2	0	0	1	0	0	0	1	2	8
100-150	3	2	0	1	0	4	2	1	16	50-70	1	0	0	1	1	1	1	0	1	8
150-200	3	2	0	2	0	0	1	0	10	70-100	3	3	0	2	0	0	3	0	1	13
200-250	3	0	0	1	0	3	0	1	8	100-150	2	0	0	0	0	0	2	0	2	8
over 250	0	2	0	0	1	0	0	0	6	150-200	5	1	0	0	0	0	0	0	0	6
										over 200	0	1	0	1	0	0	0	0	0	4
Total	16	7	11	10	19	7	9	15	115	Total	16	7	11	10	19	7	9	15	11	115
Average	106	189	14	92	59	81	108	64	74	Average	90	109	0	65	3	32	64	20	50	107

Average indicates acreage in decare per household

Table 2 - 3 (3) Irrigated Field Area and Cash Crop Production

Total Holding	Irrigated Households and Acreage										Cropped Acreage under Cash / Industrial Crops*											
	Haclar	Uruulu	Kale- sekiri	Cam- libel	Kozluk	Kuskam	Ozdenk	Aslan- Ilyas- lar	Koy	K.Kan- stran	Total	Crop for Sale Area	Haclar	Uruulu	Kale- sekisi	Cam- libel	Kozluk	Kuskam	Ozdenk	Aslan- Ilyas- lar	Koy	
0-5	0	0	0	0	0	0	0	0	1	1	2	0-5	2	0	0	0	0	0	6	1	0	
5-10	1	0	4	0	0	0	2	0	0	0	7	5-10	1	0	3	0	2	1	0	1	2	
10-15	0	0	1	0	0	2	0	3	2	0	8	10-15	1	1	3	0	2	1	2	4	4	
15-20	0	0	0	0	0	0	0	1	0	0	1	15-20	0	1	3	2	4	1	0	0	2	
20-25	1	0	0	0	0	1	2	2	0	0	6	20-30	0	0	0	4	5	4	0	0	1	
25-30	0	0	0	1	0	0	0	1	0	0	2	30-40	1	1	2	3	3	0	1	1	1	
30-40	1	0	0	0	1	1	1	2	0	1	7	40-50	0	0	0	0	1	0	0	1	0	
40-50	1	0	0	2	0	0	0	2	0	1	6	50-70	2	1	0	1	1	0	0	5	0	
50-60	0	0	0	1	1	1	1	1	0	0	4	70-100	0	2	0	0	0	0	0	0	1	
60-70	0	0	0	0	0	1	0	0	0	1	2	100-150	7	1	0	0	0	0	0	1	0	
over 70	1	2	0	3	1	1	0	1	0	5	14	over 150	2	0	0	0	1	0	0	1	0	
Total	5	2	0	7	3	7	5	13	3	9	59	Total	16	7	0	10	19	7	9	15	11	
% of irr. HH	31%	29%	0%	70%	16%	88%	56%	87%	27%	90%	51%	Average**	86	51	16	29	31	19	6	49	22	
i. a. /HH	0	28	3	47	9	40	9	26	2	13.5	28	Note:	* vegetables/ tree-fruits for sale, sugarbeet, sunflower, cotton, hemp. Most farmers in Kaleskisi and Kozluk do not grow cereals but are in orchard fruit production. ** Average shows cropped decaire per									
Irrigated area	5%	15%	21%	51%	15%	56%	8%	41%	4%	5%	29%	Total cropped acreage may exceed total holding by winter / summer										

Abbreviations: irr. HH: irrigated households i. a. /HH: irrigated acreage (in decaire) per household

Remarks: Only a few farmers drill wells or use surface water at his own expense.

Table 2 - 4 (1) Land Holding Size and Land Tenure

Village Name	No. of Sample	LAND HOLDING						Holding Size Distribution														
		Total Holding	owned land	rent land	lease land	ungranted land	follow land	No. of parcels	less than 40 da	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	above 150	
HACILAR	16	105.8	105.8	0.0	0.0	10.3	0.0	6.6	4	2	1	1	1	1	2	0	2	0	0	0	2	4
URUNLU	7	170.0	132.1	37.9	0.0	118.2	0.0	6.0	0	1	0	1	1	1	1	1	1	1	1	1	1	2
KALENDEKSI	12	15.0	15.2	0.0	0.0	3.3	0.0	1.3	11	0	0	0	0	0	0	0	0	0	0	0	0	0
Karavansara	10	91.9	91.9	0.0	0.0	46.9	5.5	11.9	2	2	1	2	1	2	1	2	1	1	1	1	1	1
KOZLUK	19	57.5	54.3	0.6	0.0	8.9	0.5	3.1	9	5	3	0	0	0	0	0	0	0	0	0	2	2
KUSKARA	7	73.6	73.6	0.0	0.0	38.4	10.6	7.3	1	1	1	3	1	1	1	1	0	0	0	0	0	0
OZDENK	9	113.3	102.2	11.1	0.0	15.6	41.1	7.9	2	2	0	0	0	0	0	2	0	0	0	0	0	3
ASLANLAR	15	66.5	58.1	8.4	1.0	40.1	1.7	7.6	6	3	0	2	1	2	2	1	1	0	0	0	1	1
ILYASKOY	11	73.9	60.3	13.6	0.0	2.5	2.3	5.4	2	5	0	2	1	2	1	0	0	0	0	0	0	1
KARINIRAN	10	177.0	163.0	9.0	5.0	38.9	0.0	8.1	1	1	1	2	0	0	0	1	1	1	1	1	1	4
10 Pt Village	116	87.7	80.5	6.4	0.6	26.7	7.9	6.1	32.8%	19.0%	3.6%	7.8%	6.0%	5.2%	5.2%	5.2%	14.7%					

Table 2 - 4 (3) Desirable Land Size

unit : replied number, decare

Village Name	No. of Sample	Q23. LAND			Q24 Desirable holding size	
		Suffi- cient	Too Narrow	Pre- sent	Pre- sent	Desirable
HACILAR	16	7	5	11	105	300
URUNLU	7	1	4	4	168	300
KALENDEKSI	12	4	4	4	16	300
Karavansara	10	4	6	89	290	280
KOZLUK	19	18	1	29	67	300
KUSKARA	7	6	1	108	330	320
OZDENK	9	3	6	37	56	290
ASLANLAR	15	8	7	162	81	280
ILYASKOY	11	5	6	54	81	300
KARINIRAN	10	1	8	47%	47%	37.2%
aggrigate composition	116	55	54			

Table 2 - 4 (2) Cropping Acreage by Crop

Village Name	No. of Sample	Q7 Annual Crop Acreage										(da)									
		Cereals	Wheat	Barley	Paddy	Others	Indus./Oilseed/Fiber	Cash Crop	Vegetables	Total	Wheat	Barley	Cotton	Others	Indus./Oilseed/Fiber	Cash Crop	Vegetables	Total			
HACILAR	16	46.5	32.8	0.0	0.0	0.0	61.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	148.3		
URUNLU	7	54.3	63.7	0.0	10.3	50.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	179.4		
KALENDEKSI	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5		
Karavansara	10	34.9	5.5	0.0	0.4	27.7	0.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	83.7		
KOZLUK	19	0.3	0.0	2.6	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.2	8.2		
KUSKARA	7	31.0	0.0	0.4	0.1	14.3	0.0	1.4	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	53.0		
OZDENK	9	24.2	49.9	0.0	0.2	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.1		
ASLANLAR	15	14.5	4.6	0.0	0.0	0.0	36.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	58.4		
ILYASKOY	11	36.5	13.6	0.0	0.0	0.0	10.0	0.0	0.0	2.7	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.9	66.9		
KARINIRAN	10	99.5	7.6	0.0	0.3	18.1	57.4	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	183.8		
10 Pt Village	116	30.4	14.7	0.5	0.8	8.3	14.4	4.8	0.0	2.5	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.5	86.2		
Real Average		33.9	19.9	2.0	1.6	22.4	42.3	25.1	0.0	4.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.9	74.3		

Source : all tables are derived from Farm Economic Survey results.

Table 2 - 5 (1) Compiled Farm Budget Balance Sheet

unit : million T.L. per household, and rate for indicators

PROJECT NAME	sample number	ANNUAL EXPENDITURE										ANNUAL INCOME			Indicators	
		Rent	Wage	Input Cost	Feeds	House-Hold Ex.	Others	Total Expense	Crop stock	Live-stock	Off-farm	Total Income	C/T/E	T/I/T/E		
HACILAR	16	17	65	277	738	52	1,149	0	997	181	158	1,336	0.87	1.16		
URUNLU	7	313	208	273	846	0	1,640	0	3,187	29	86	3,302	1.94	2.01		
KALESEKISI	12	62	111	112	742	52	1,079	0	620	55	459	1,134	0.57	1.05		
Karavansarai	10	19	48	179	822	119	1,250	63	1,810	1,198	220	3,228	1.45	2.58		
KOZLUK	19	8	104	96	828	11	1,059	12	1,077	0	312	1,389	1.02	1.31		
KUSKARA	7	2	26	236	801	0	1,065	18	1,094	0	75	1,169	1.03	1.10		
OZDENK	9	33	96	282	675	36	1,140	87	974	122	203	1,299	0.85	1.14		
ASLANLAR	15	96	270	653	989	0	2,095	94	1,197	38	130	1,365	0.57	0.65		
ILYASKOY	11	88	153	556	1,008	5	1,904	94	1,217	0	690	1,905	0.64	1.00		
KKARISTRAN	10	76	174	640	850	9	2,060	311	2,921	0	189	3,110	1.42	1.51		
Project Villages	116	62	120	314	808	30	1,389	55	1,538	152	259	1,769	0.98	1.27		

C/T/E : rate of total expense to crop income
T/I/T/E : rate of total income to total expense

Table 2 - 5 (2) Composition of Annual Income and Expenditure per Farm Household

PROJECT NAME	sample number	Q10. ANNUAL EXPENDITURES										Q11. ANNUAL INCOME				
		rent machine	rent land	rent	credit interest	taxes	hired wage	input purchase	animal feeds	h.hold expense	other Exp.	product sales	live stock	labor wage	off-farm income	others pension
HACILAR	16	56	0.0	0.0	11.3	61.2	311.7	52.2	278.4	14.8	1,048.6	159.4	163.8	0.0	12.5	
URUNLU	7	210.7	0.0	0.0	76.9	207.9	272.9	0.0	391.4	0.0	2,848.9	0.0	0.0	74.4	0.0	
KALESEKISI	12	0.0	0.0	0.0	0.2	111.1	35.2	40.5	398.2	5.0	620.3	55.0	249.3	309.1	78.6	
Karavansarai	10	0.0	0.0	0.0	19.1	46.6	391.8	12.5	426.0	32.7	1,825.4	1,198.0	0.0	220.0	0.0	
KOZLUK	19	3.9	0.0	0.0	4.3	103.7	99.8	4.4	472.8	38.4	1,076.8	0.0	0.0	312.2	0.0	
KUSKARA	7	0.0	0.0	0.0	3.0	26.3	236.0	0.0	275.3	126.7	1,093.8	0.0	0.0	75.0	0.0	
OZDENK	9	0.0	16.7	0.0	15.8	95.6	298.3	2.4	383.3	53.8	950.8	122.2	0.0	319.9	0.0	
ASLANLAR	15	0.0	58.3	0.0	28.8	309.8	513.8	0.0	539.3	22.0	1,196.5	37.5	59.2	65.0	5.4	
ILYASKOY	11	0.0	32.0	0.0	56.3	150.5	456.5	4.5	479.1	34.4	1,146.3	0.0	18.5	773.9	0.0	
KKARISTRAN	10	0.0	36.0	0.0	40.3	105.7	595.3	9.0	530.0	38.7	2,920.9	0.0	77.6	160.0	0.0	
Project Villages	116	12.0	23.0	96.1	6.2	121.8	321.1	12.6	417.4	36.6	0.0	0.3	20.0	0.0	0.0	
mean per household		32.9	58.9	96.1	6.2	96.1	0.3	0.0	0.1	27.2	0.0	0.5	36.5	0.0	0.0	

Source : all tables are derived from Farm Economic Survey results.

Table 2 - 5 (3) Resort of Procuring Farm Operation Fund and Envisaged Annual Standard Earning

PROJECT NAME	sample number	Q13. FARM FINANCING SOURCES			Q14. STANDARD LIVING EXPENSE							Total	
		own saving TKK	Agricultural Bank	relatives or neighbor	300 or less	400	500	600	800	above			
HACILAR	16	997	0	25	13	0	3	2	1	5	0	3	674.4
URUNLU	7	4,694	21	263	0	0	1	0	1	1	0	4	884.3
KALESEKISI	12	1,371	4	0	0	0	0	0	3	3	1	4	741.8
Naravansari	10	788	20	18	0	0	0	1	2	1	0	6	822.0
KOZLUK	19	854	9	17	0	0	3	2	1	2	1	10	854.2
KUSKARA	7	76	0	38	0	0	2	0	0	3	0	2	715.7
OZDENK	9	1,126	13	11	0	0	2	3	0	2	0	9	657.8
ASLANLAR	15	1,053	152	29	69	41	1	0	1	3	1	9	921.3
ILYASKOY	11	1,980	11	95	0	0	1	0	2	2	1	5	972.7
KKARISTRAN	10	2,145	5	186	0	0	0	0	2	2	2	2	846.0
Project Villages	116	1,508	23	32	0	24	13	8	13	24	5	54	804.0
mean per household		1,508	29	37	0	41	11%	7%	11%	21%	4%	47%	100%

unit : million T.L. per household, household

Table 2 - 5 (4) Borrowing Experience and Reasons of Borrowing Difficulty

PROJECT NAME	sample number	Q16 Why difficult to borrow				Q17 Borrowing Experience from					Neighbors
		lack of mortgage	Interest too high	not repayable	Buro-crazy	No reliable person to borrow	TKK	Broker	Relatives		
HACILAR	16	5	2	0	3	2	14	0	0	0	
URUNLU	7	5	5	0	0	6	1	0	0	0	
KALESEKISI	12	6	0	0	0	8	0	0	0	0	
Naravansari	10	5	7	0	0	2	9	0	0	0	
KOZLUK	19	14	8	0	3	4	13	1	1	0	
KUSKARA	7	6	0	2	0	5	1	1	0	0	
OZDENK	9	1	0	0	6	8	0	0	0	0	
ASLANLAR	15	7	0	0	2	2	12	2	0	0	
ILYASKOY	11	6	0	0	0	7	4	1	0	0	
KKARISTRAN	10	6	4	1	2	3	5	0	0	0	
Project Villages	116	61	26	3	16	47	59	5	1	0	
composition	100%	53%	23%	3%	14%	41%	51%	4%	1%	0%	

unit : number of households replied

Source : all tables are derived from Farm Economic Survey results.

Table 2 - 6 (1) Farm Product Disposal and Marketing

Project Site	Q35. PRODUCT DISPOSAL (% of total farm product)										Fed to Livestock			
	Home			Consumption		Sale/Marketing					Fruit	Others	grains	fodder*
	Cereals	Vegetable	Fruit	Others	Cereals	Industrial	Oilseed	Tuber	Vegetable					
HACILAR	23.9	18.9	0.0	0.0	72.0	100.0	62.4	0.0	8.3	-	0.0	1.0	0.0	
URUNLU	48.6	0.0	0.0	0.0	47.9	100.0	14.3	0.0	28.6	-	0.0	3.6	0.0	
KALESEKISI	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	80.0	97.3	0.0	0.0	
Karavansarai	40.2	30.0	0.0	5.0	45.4	100.0	0.0	5.0	3.0	-	0.0	41.4	19.0	
KOZLUK	5.6	28.0	0.0	0.0	2.8	100.0	0.0	0.0	0.0	100.0	0.0	47.2	0.0	
KUSKARA	76.8	100.0	0.0	0.0	11.5	100.0	0.0	56.3	0.0	-	0.0	39.3	10.5	
OZDENK	49.8	11.1	0.0	0.0	36.1	100.0	11.1	11.1	0.0	-	0.0	26.3	0.0	
ASLANLAR	34.3	0.8	0.0	0.0	33.1	100.0	0.0	0.0	49.2	90.0	0.0	15.6	0.0	
ILYASKOY	23.9	0.0	0.0	0.0	40.2	100.0	27.3	0.0	15.9	-	0.0	20.3	0.0	
K.Karistran	11.8	4.0	0.0	0.0	81.5	100.0	99.8	0.0	6.0	-	0.0	0.7	0.0	
10 Pr.Village	678.8	105.2	0.0	7.0	2.8	100.0	1.4	0.4	12.6	95.0	1.0	8.3	2.0	
AVERAGE	750.6	140.6	0.0	5.0	3.1	100.0	3.1	2.9	21.0	-	97.3	9.2	13.3	

Project Site	number of Samples	Q35. Villagers' usual Habit of Product Sale ?				Q35. Usual Habit of Input Purchase ?						
		Broker	Self-Coop. vending	T.M.O. Processing Mills	Others	Broker	T.K.K. Stores	Animal Fair	Others			
HACILAR	16	16	0	1	0	0	0	0	0			
URUNLU	7	5	0	0	0	1	0	0	0			
KALESEKISI	12	5	0	0	0	0	0	0	0			
Karavansarai	10	7	7	0	1	6	0	0	0			
KOZLUK	19	15	3	0	0	7	0	0	0			
KUSKARA	7	5	0	1	2	3	0	0	0			
OZDENK	9	5	8	3	2	0	0	0	0			
ASLANLAR	15	10	0	0	0	0	0	0	0			
ILYASKOY	11	5	1	0	1	0	0	0	0			
K.KARISTIRAN	10	2	2	2	0	0	0	0	0			
aggregate	116	75	21	7	6	17	1	39	37			
composition	100%	65%	18%	6%	5%	15%	1%	43%	41%	16%	0%	0%

Source : all tables are derived from Farm Economic Survey results.