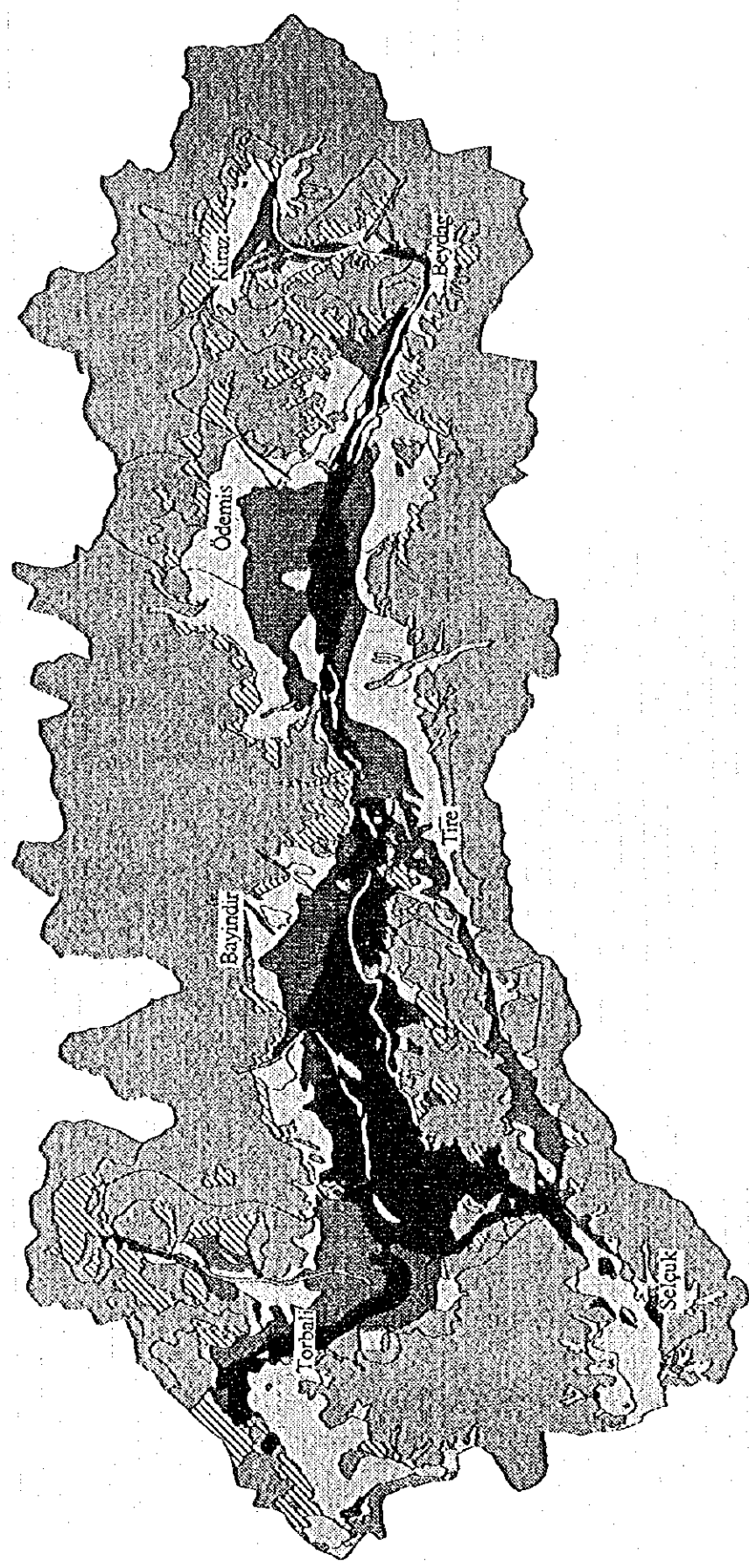


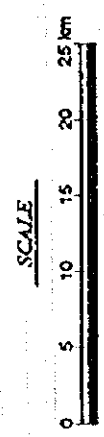
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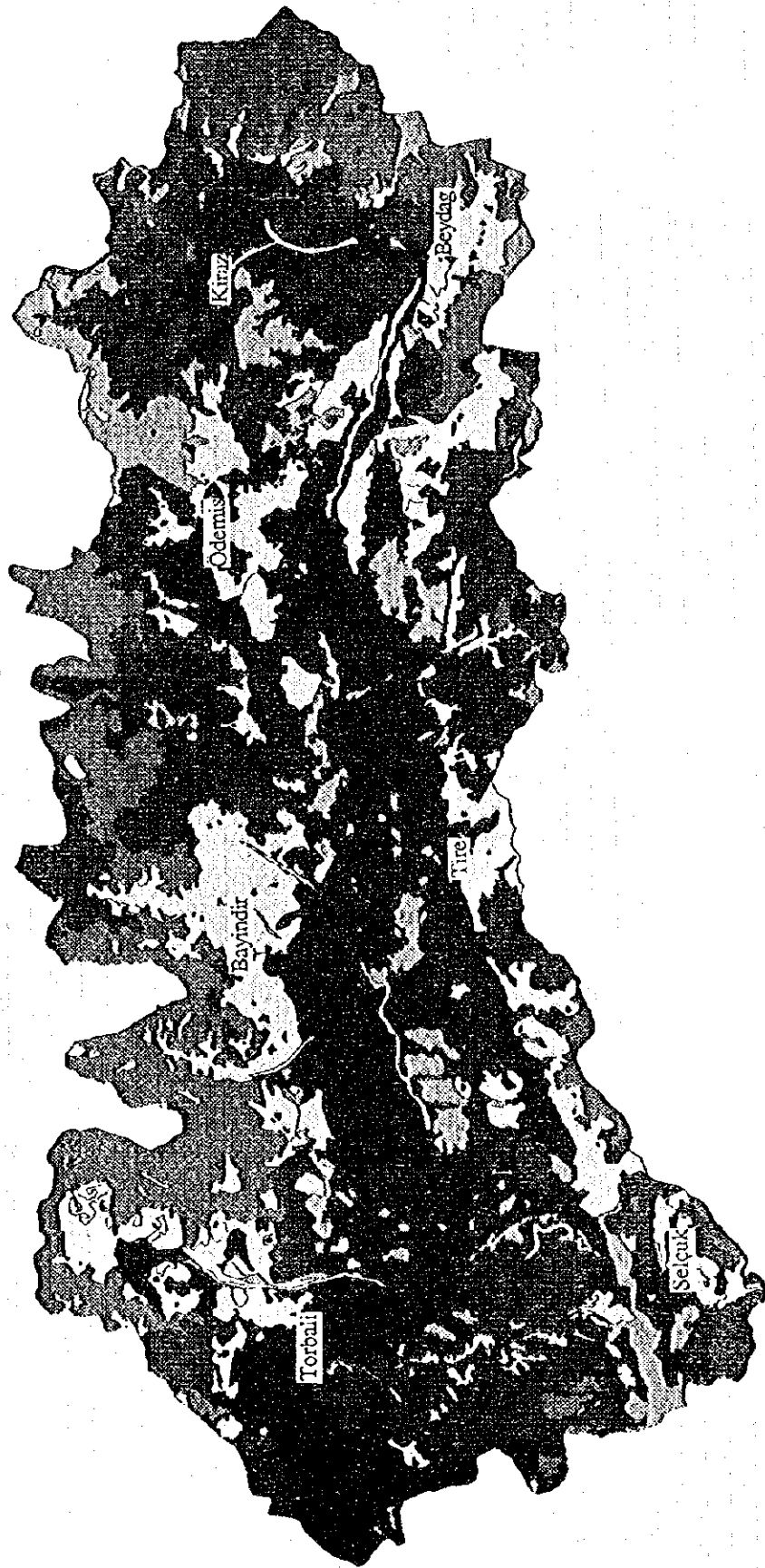








Figure - D.2 Irrigation Suitability Map



- Class I
- Class II
- Class III
- Class IV
- Class V
- Class VI





-  Built-up Area
-  Bush Area
-  Forest
-  Grass or Pasture Land
-  Others
-  Tree Crops

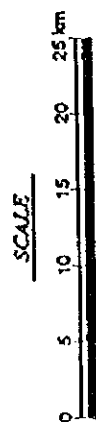


Figure - D.3 Present Land Use Map

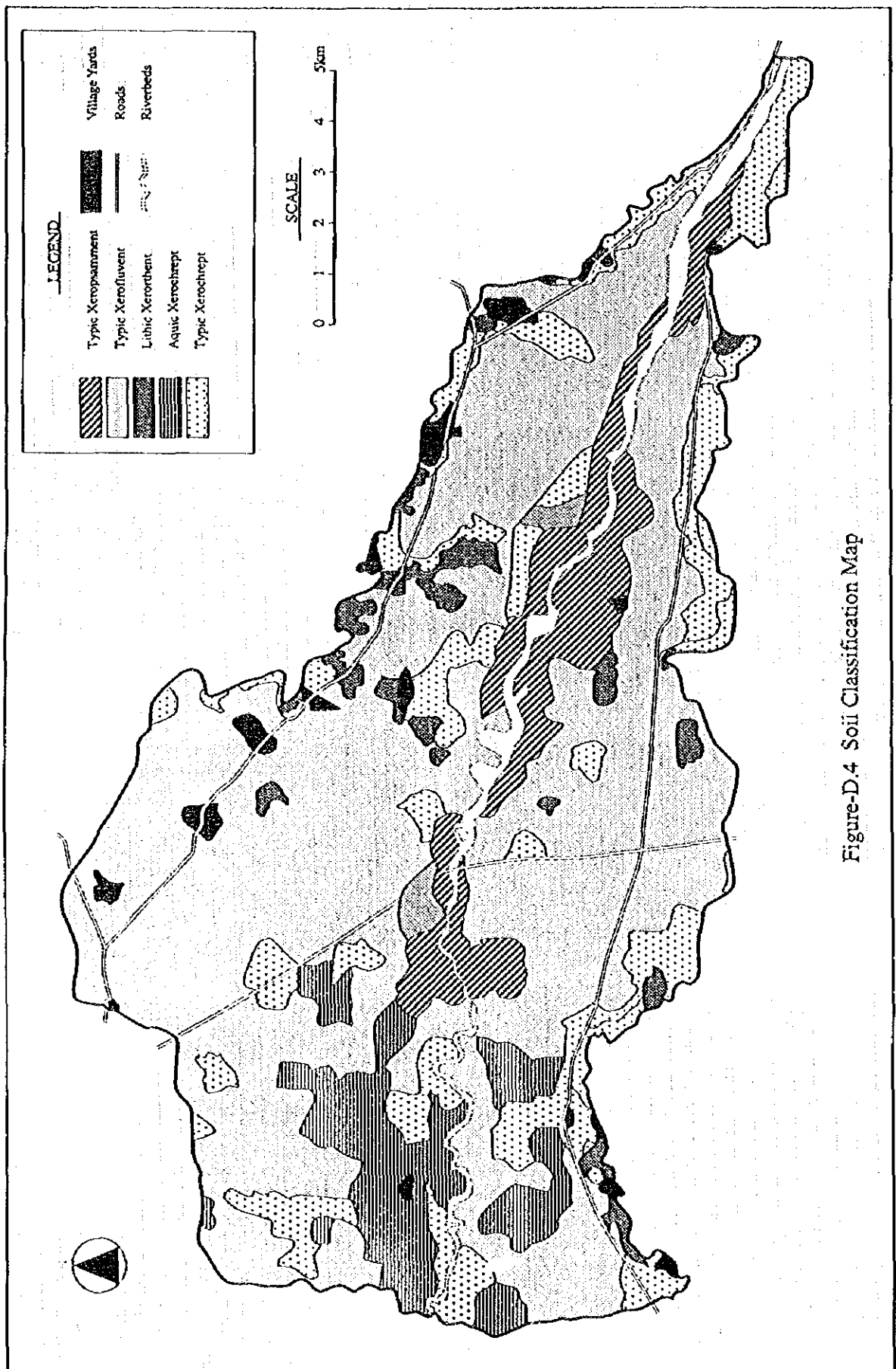


Figure-D.4 Soil Classification Map

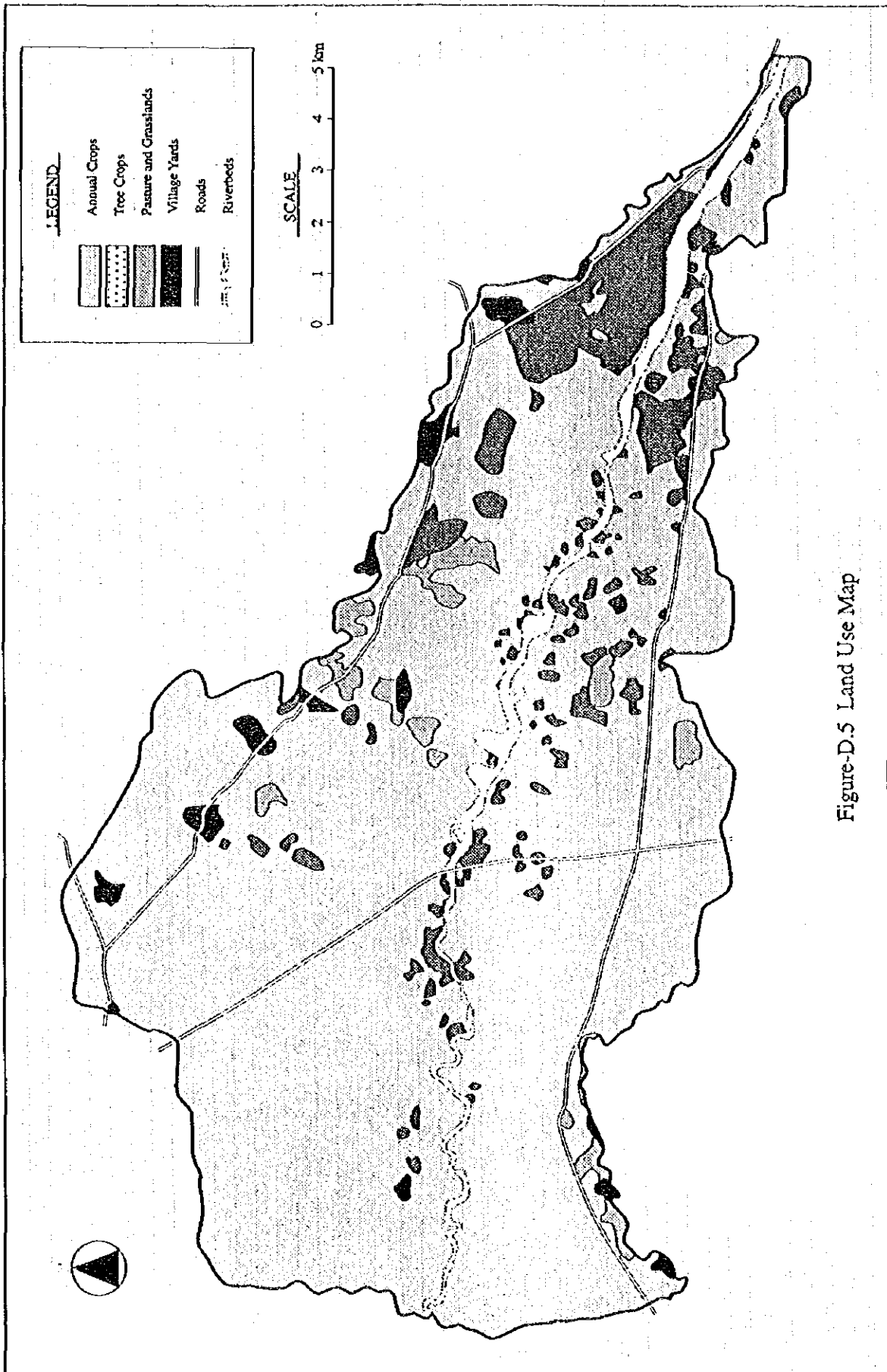
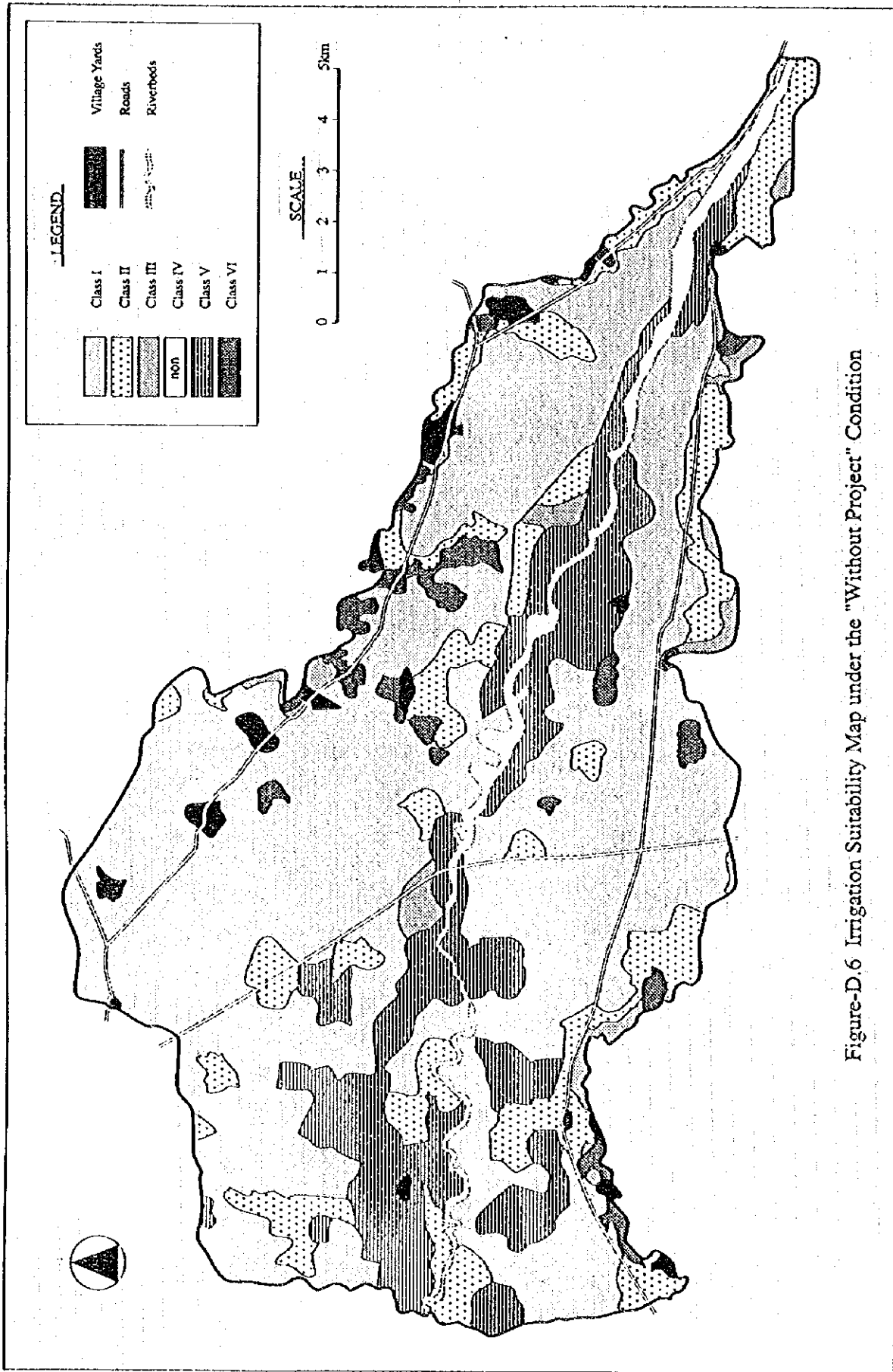


Figure-D.5 Land Use Map



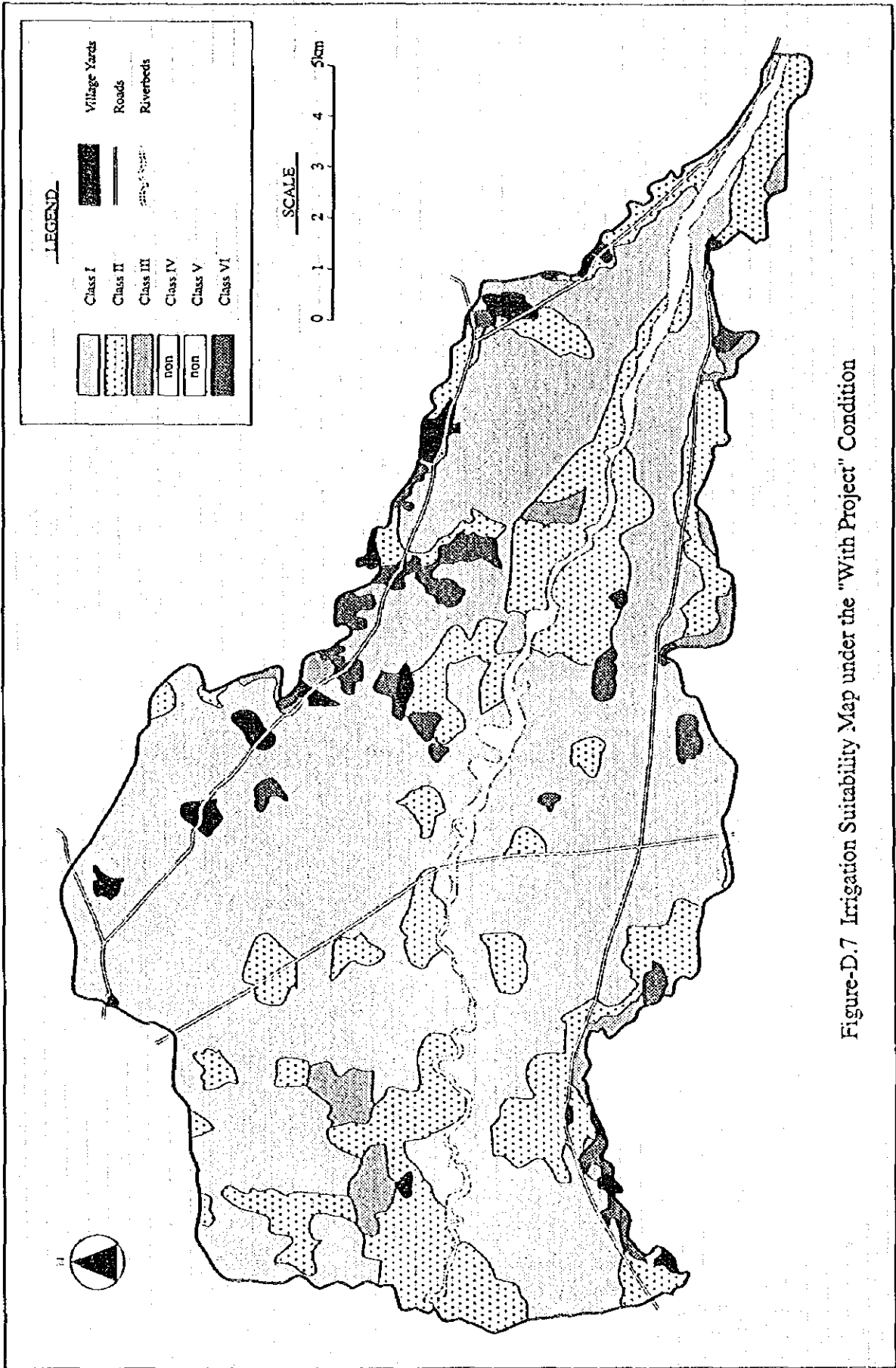


Figure-D.7 Irrigation Suitability Map under the "With Project" Condition



*ANNEX E*

*AGRICULTURE*

**ANNEX E**  
**AGRICULTURE**

List of Tables

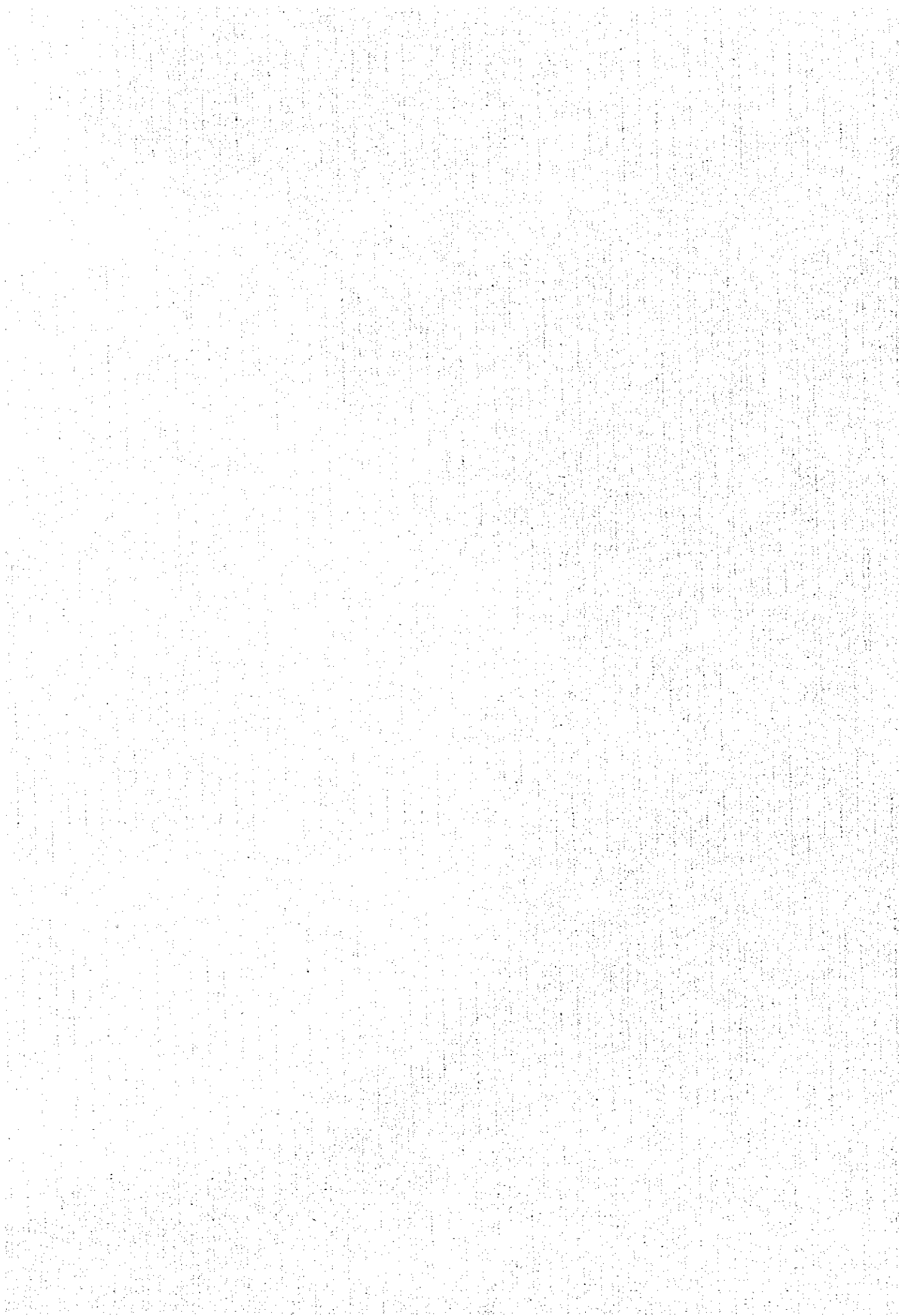
<b>1. General Agricultural Census of Izmir</b>	
Table-E.1	Number of Agricultural Holdings and Livestock and Land Operated Type and Size of Agricultural Holdings..... E-1
Table-E.2	Use of Land by Size of Agricultural Holdings..... E-2
Table-E.3	Number of Agricultural Holdings ..... E-3
Table-E.4	Number of Agricultural Holdings and the Land Operated by Size of Agricultural Holdings ..... E-4
Table-E.5	Number of Agricultural Holdings and Parcels and Size of Land by Size of Agricultural Holdings ..... E-5
Table-E.6	Number of Agricultural Machinery and Equipment Owned by Holdings Having Those by Size of Holdings..... E-6
Table-E.7	Number of Agricultural Holdings Using Tractors and Area Cultivated by Tractor by Size of Holdings and Tractors Ownership..... E-8
Table-E.8	Number of Occasional Workers in Agricultural Holdings and Number of Days Worked..... E-9
Table-E.9	Household by Farm Size in Beydağ Project Area (1993)..... E-10
Table-E.10	Households by Land Ownership Type in the Project Area (1993) ..... E-11
Table-E.11	Households by Farming Type in the Project Area (1993) ..... E-12
<b>2. Crop Production</b>	
Table-E.12	Yearly Cropped Area in Izmir Province (1990-1994)..... E-13
Table-E.13	Yearly Cropped Area in the River Basin (1990-1994) ..... E-14
Table-E.14	Crop Yield by Crops in the River Basin (Average 1990-1994) ..... E-15
Table-E.15	Fruits Yield in the River Basin..... E-16
Table-E.16	Crop Yield Data..... E-17
Table-E.17	Production by Districts in the River Basin (Ave. 1990-1994) ..... E-18
Table-E.18	Crop Production Value by District in the Basin..... E-19
Table-E.19	Present Cropping Pattern in the Project Area..... E-20
Table-E.20	Present Cropping Pattern by District in the Beydağ Project Area ..... E-21
Table-E.21	Change in Cropped Area..... E-22
<b>3. Farm Inputs</b>	
Table-E.22	Fertilizer Application in the River Basin (1992-1994) ..... E-32
Table-E.23	Present Labor Requirement by Crop ..... E-33
Table-E.24	Proposed Labor Requirement by Crop..... E-37
Table-E.25	Number of Main Agricultural Machinery in the River Basin..... E-41

<b>4. Livestock Production</b>	
Table-E.26 Livestock Production in İzmir Province .....	E-42
Table-E.27 Livestock Production Value in the River Basin .....	E-43
Table-E.28 Number of Household Rearing Livestock by Size in the Project Area (1995).....	E-44
<b>5. Summary of Farmers' Household Survey</b>	
Table-E.29 Population , Farmland and Cropped area .....	E-46
Table-E.30 Hired Labor .....	E-47
Table-E.31 Farmers' Intention for Crop Growing with Project .....	E-48
Table-E.32 Current Constraints for Crop Production.....	E-50
Table-E.33 Recommendable Project Components.....	E-50
<b>6. Agricultural Cooperative</b>	
Table-E.34 Number of Agricultural Cooperatives by District in the River Basin.....	E-51
Table-E.35 Agricultural Cooperatives in the Project Area .....	E-52
<b>7. Organization</b>	
Table-E.36 Personnel Disposition of MARA, İzmir Provincial Office (1995).....	E-53

#### List of Figures

Figure-E.1 The Trend Curve of Cattle Breeding .....	E-54
Figure-E.2 Flowchart of Agricultural Extension Activities.....	E-55

## *TABLES*



**Table-E.1 Number of Agricultural Holdings and Livestock and Land Operated Type and Size of Agricultural Holdings**

Farm size (decar)	Total householdings				Holdings engaged in crop production and animal husbandry				Holdings engaged only in crop production				Holdings engaged only in animal husbandry			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Total	124,901	4,022,042	1,014,458	277,057	74,535	2,883,292	799,889	241,448	43,825	1,133,283	6,541	5,467	214,569	35,609		
	(119046)															
Landless	5,855	0	187,419	34,875	0	0	0	0	0	0	5,855	0	187,419	34,875		
5 >	9,683	26,728	60,209	9,629	4,548	13,961	60,209	8,895	4,622	11,520	513	1,247	0	734		
5 - 9	14,973	96,460	83,540	12,935	7,853	52,768	83,540	12,935	7,120	43,692	0	0	0	0		
10 - 19	26,852	378,543	74,974	34,038	15,710	228,079	74,974	34,038	11,142	150,464	0	0	0	0		
20 - 49	43,691	1,276,112	253,360	80,115	28,647	841,146	227,710	80,115	14,873	431,546	171	3,420	25,650	0		
50 - 99	17,007	1,130,595	121,327	45,789	11,752	770,828	121,327	45,789	5,255	359,767	0	0	0	0		
100 - 199	5,212	674,877	16,168	33,607	4,532	585,503	16,168	33,607	680	89,374	0	0	0	0		
200 - 499	1,619	423,987	215,691	25,617	1,487	379,467	214,791	25,617	131	44,320	1	200	900	0		
500 - 999	3	1,685	600	171	2	1,085	0	171	0	0	1	600	600	0		
1000 - 2499	4	5,800	0	275	2	3,200	0	275	2	2,600	0	0	0	0		
2500 - 4999	2	7,255	1,170	6	2	7,255	1,170	6	0	0	0	0	0	0		
5000 <	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

A: Number of holdings

B: Area (decar)

C: Number of sheep and goats

D: Number of cattle and buffaloes

Table-E.2 Use of Land by Size of Agricultural Holdings

Farm size (decar)	Total			Cultivated Area									Unused product- ive land	Pasture and meadow	Forest and wood land	Non- Agricul- tural land			
	A	B	C	Area sown			Fallow land			Vegetable and flower gardens							Fruit orchards and other permanent crops		
				A	B	C	A	B	C	A	B	C					A	B	C
Total	3,506,773	1,252,048	2,254,725	2,040,874	916,135	1,124,739	78,871	199,220	191,351	7,869	1,187,808	144,562	1,043,246	126,584	354,901	24,226	9,558		
5>	24,387	10,857	13,530	8,747	4,379	4,368	0	3,086	3,086	0	12,554	3,392	9,162	2,341	0	0	0		
5-9	95,573	47,574	47,999	61,321	34,932	26,389	1,588	7,195	6,681	514	25,469	5,961	19,508	887	0	0	0		
10-19	370,037	102,292	267,745	198,434	52,927	145,507	3,016	28,531	27,735	796	140,056	21,630	118,426	1,264	172	0	7,070		
20-49	1,153,037	411,998	741,039	622,832	270,990	351,842	28,580	98,590	94,527	4,063	403,035	46,481	356,554	77,864	39,018	5,605	588		
50-99	999,668	237,906	761,762	512,553	187,867	324,686	33,611	26,409	23,913	2,496	427,095	26,126	400,969	34,775	77,931	18,221	0		
100-199	618,954	278,944	340,010	470,882	225,461	245,421	1,272	27,131	27,131	0	119,669	26,352	93,317	7,573	48,350	0	0		
200-499	239,942	159,332	80,610	161,820	137,004	24,816	10,804	8,033	8,033	0	59,285	14,295	44,990	1,280	182,030	0	735		
500-999	885	820	65	800	800	0	0	20	20	0	65	0	65	0	800	0	0		
1000-2499	2,735	2,250	485	2,080	1,750	330	0	200	200	0	455	300	155	600	1,400	400	665		
2500-4999	1,555	75	1,480	1,405	25	1,380	0	25	25	0	125	25	100	0	5,200	0	500		
5000<	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

A: Total Area

B: Irrigated Area

C: Not irrigated Area

Area: decar

Table-E.3 Number of Agricultural Holdings

Farm Size (ha)	Baydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	Total	Izmir	Turkey*
0-0.9	1,991	5,108	13,037	3,139	1,870	1,225	394	26,764	63,617	761,883
1.0-1.9	940	2,064	7,786	2,493	2,615	1,738	384	18,020	40,703	780,108
2.0-4.9	695	615	3,414	2,493	2,905	2,732	938	13,792	29,229	1,321,985
5.0-9.9	195	135	903	1,650	1,635	1,123	722	6,363	13,438	739,654
10.0-19.9	33	0	94	308	333	355	224	1,347	3,261	397,555
20.0-49.9	3	0	0	82	38	116	39	278	723	179,578
50.0-99.9	0	0	0	15	0	12	4	31	163	25,100
100.0-249.9	0	0	0	9	0	6	0	15	9	10,647
250.0-499.9	0	0	0	1	0	1	0	2	5	2,002
500.0<	0	0	0	0	0	0	0	0	1	457
Total	3,837	7,922	25,234	10,190	9,396	7,308	2,705	66,612	151,149	4,218,969
Farm land (ha)	5,584	9,863	38,825	36,210	30,919	32,790	14,586	168,777	379,442	27,510,000
Average size (ha)	1.4	1.2	1.5	3.6	3.3	4.5	5.4	2.5	2.5	6.5
Percentage by										
Farm Size (%)	51.6	64.5	51.7	30.8	19.9	16.8	14.6	40.2	42.1	18.1
0-0.9	24.4	26.1	30.9	24.5	27.8	23.8	14.2	27.1	26.9	18.5
1.0-1.9	18.0	7.8	13.5	24.5	30.9	37.4	34.7	20.7	19.3	31.3
2.0-4.9	5.1	1.7	3.6	16.2	17.4	15.4	26.7	9.6	8.9	17.5
5.0-9.9	0.9	0.0	0.4	3.0	3.5	4.9	8.3	2.0	2.2	9.4
10.0-19.9	0.1	0.0	0.0	0.8	0.4	1.6	1.4	0.4	0.5	4.3
20.0-49.9	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.1	0.6
50.0-99.9	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.3
100.0-249.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.0-499.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
500.0<	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Remark: \* Total farm households.....SIS data in 1991

Farm households by size.....Total farm households in 1991 delivered by the ratio in 1990 census

Total farm land.....SIS data in 1993

Source: "Agricultural structure and production" in 1994, Provincial Office of MARA, Izmir

SIS data in 1990-1993



Table-E.4 Number of Agricultural Holdings and the Land Operated by Size of Agricultural Holdings and Land Tenure Forms

Farm size (decar)	Total		Holdings operating only their own land		Holdings renting land but not letting it out on lease		Holdings operating only rented land		Holdings operating land only on share basis		Holdings operating land in other types of tenure		Holdings operating land by more than one type of tenure	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Total	119,046	4,022,042	99,578	3,104,425	13,975	802,535	5,005	99,595	317	14,632	171	855	0	0
5 >	9,683	26,728	9,058	24,310	342	1,368	283	1,050	0	0	0	0	0	0
5 - 9	14,973	96,460	13,391	86,287	481	3,367	930	5,951	0	0	171	855	0	0
10 - 19	26,852	378,543	22,902	324,013	1,239	19,861	2,443	30,817	268	3,852	0	0	0	0
20 - 49	43,691	1,276,112	36,981	1,062,486	5,777	181,415	933	32,211	0	0	0	0	0	0
50 - 99	17,007	1,130,595	13,348	910,028	3,243	191,001	416	29,566	0	0	0	0	0	0
100 - 199	5,212	674,877	2,607	334,651	2,605	340,226	0	0	0	0	0	0	0	0
200 - 499	1,619	423,987	1,282	347,910	288	65,297	0	0	49	10,780	0	0	0	0
500 - 999	3	1,685	3	1,685	0	0	0	0	0	0	0	0	0	0
1000 - 2499	4	5,800	4	5,800	0	0	0	0	0	0	0	0	0	0
2500 - 4999	2	7,255	2	7,255	0	0	0	0	0	0	0	0	0	0
5000 <	0	0	0	0	0	0	0	0	0	0	0	0	0	0

A: Number of holdings

B: Area (decar)

Table E.5 Number of Agricultural Holdings and Parcels and Size of Land by Size of Agricultural Holdings

Farm size (decar)	Number of parcels														
	1-3			4-5			6-9			10-14			15 and over		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Total	71,060	129,509	1,437,563	24,625	111,149	884,535	15,995	115,146	985,827	5,728	65,096	430,277	1,638	30,052	283,840
5 >	9,683	10,890	26,728	0	0	0	0	0	0	0	0	0	0	0	0
5-9	14,576	25,292	93,284	397	1,588	3,176	0	0	0	0	0	0	0	0	0
10-19	20,965	40,416	286,487	3,520	15,653	51,583	1,990	12,342	33,687	377	4,901	6,786	0	0	0
20-49	20,420	43,402	576,525	14,680	66,910	423,463	6,718	46,574	211,060	1,818	20,905	62,809	55	880	2,255
50-99	4,437	7,802	287,742	5,425	24,097	337,845	4,075	31,775	282,672	2,316	25,190	167,294	754	15,457	55,042
100-199	661	1,198	82,857	589	2,845	65,238	2,843	21,223	372,961	1,087	12,415	150,621	32	704	3,200
200-499	316	503	82,040	14	56	3,230	366	3,209	81,662	128	1,661	40,967	795	12,893	216,088
500-999	1	3	600	0	0	0	1	9	585	1	10	500	0	0	0
1000-2499	1	3	1,300	0	0	0	2	14	3,200	1	14	1,300	0	0	0
2500-4999	0	0	0	0	0	0	0	0	0	0	0	0	2	118	7,255
5000 <	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

A: Number of holdings  
 B: Number of parcels  
 C: Area (decar)

Table-E.6 (a) Number of Agricultural Machinery and Equipment Owned by Holdings Having Those by Size of Holdings

Farm size (decar)	Total number of holdings		Tractors		Plough		Sweep		Combine harvester		Thresher		Hoe machine	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Total	119,046	30,251	29,970	30,293	34,887	20,505	19,310	20,505	1	1	643	643	17,262	18,400
5>	9,683	1,137	1,137	1,137	1,137	62	62	62	0	0	0	0	1,075	1,075
5-9	14,973	1,662	1,662	1,662	1,662	1,251	1,251	1,251	0	0	0	0	347	347
10-19	26,852	3,444	3,444	3,273	3,379	2,417	2,417	2,417	0	0	0	0	1,424	1,424
20-49	43,691	9,973	9,973	10,053	10,347	6,735	6,735	6,735	0	0	235	235	6,140	6,404
50-99	17,007	8,378	8,378	9,054	9,948	4,865	4,865	5,226	0	0	0	0	3,899	3,987
100-199	5,212	4,168	4,168	4,195	5,969	3,332	3,332	3,815	0	0	224	224	3,507	3,507
200-499	1,619	1,200	1,200	911	2,425	642	642	752	1	1	180	180	862	1,638
500-999	3	2	2	2	3	2	2	3	0	0	1	1	2	3
1000-2499	4	5	5	4	13	2	2	4	0	0	1	1	4	13
2500-4999	2	1	1	2	4	2	2	2	0	0	2	2	2	2
5000<	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Farm size (decar)	Disc harrow		Drill		Fertilizer distributor		Holder		Knapsack sprayer		Mower		Binder	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Total	16,716	18,034	13,254	14,116	10,620	10,691	9,670	11,710	30,445	31,228	683	683	270	271
5>	904	904	0	0	0	0	0	0	622	622	0	0	0	0
5-9	1,441	1,441	519	519	1,266	1,266	1,143	1,143	2,857	2,857	0	0	0	0
10-19	688	820	865	865	640	640	502	1,954	6,509	6,509	0	0	0	0
20-49	6,824	6,824	5,152	5,152	3,301	3,301	2,094	2,094	13,393	13,636	215	215	0	0
50-99	3,352	3,875	3,057	3,057	2,491	2,534	3,054	3,199	4,608	4,777	232	232	87	87
100-199	2,712	2,990	2,882	2,882	2,054	2,079	2,083	2,108	2,140	2,509	57	57	1	1
200-499	788	1,166	773	773	861	862	788	1,204	312	313	176	176	180	181
500-999	2	3	2	2	2	2	2	2	1	1	0	0	1	1
1000-2499	3	9	4	4	4	6	3	5	1	2	2	2	0	0
2500-4999	2	2	0	0	1	1	1	1	2	2	1	1	1	1
5000<	0	0	0	0	0	0	0	0	0	0	0	0	0	0

A: Number of holdings

B: Number of machinery and equipment

Table-E.6 (b) Number of Agricultural Machinery and Equipment Owned by Holdings Having Those by Size of Holdings  
(continue)

Farm size (decar)	Water engine (with electric)		Water engine (with fuel)		Wooden plow		Milking machine		Cooling tank		Seed-cleaner		Engine saw	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Total	5,137	5,942	27,520	34,649	14,357	14,359	805	982	709	709	0	0	1,142	1,142
5>	29	29	513	513	32	32	0	0	0	0	0	0	0	0
5-9	0	0	2,427	2,427	1,251	1,251	0	0	0	0	0	0	0	0
10-19	599	599	4,343	4,470	3,178	3,178	0	0	0	0	0	0	0	0
20-49	1,988	1,988	11,658	14,094	8,024	8,024	127	127	0	0	0	0	538	538
50-99	613	614	5,635	7,301	1,784	1,784	89	89	0	0	0	0	444	444
100-199	1,430	1,615	2,355	4,066	87	87	231	232	707	707	0	0	32	32
200-499	476	1,091	582	1,756	0	0	357	533	1	1	0	0	127	127
500-999	1	5	2	8	0	0	1	1	1	1	0	0	0	0
1000-2499	1	1	3	12	1	3	0	0	0	0	0	0	1	1
2500-4999	0	0	2	2	0	0	0	0	0	0	0	0	0	0
5000<	0	0	0	0	0	0	0	0	0	0	0	0	0	0

A: Number of holdings

B: Number of machinery and equipment

Table-E.7 Number of Agricultural Holdings Using Tractors and Area Cultivated by Tractor by Size of Holdings and tractors ownership

Farm size (decar)	Total number of holdings	Forms of tractors ownership									
		Total		Own property		Shared		Rented			
		A	B	A	B	A	B	A	B		
Total	119,046	75,372	2,304,050	28,060	1,388,038	1,367	63,370	45,945	852,642		
5 >	9,683	3,104	9,804	966	2,960	0	0	2,138	6,844		
5 - 9	14,973	10,168	63,221	1,662	12,280	0	0	8,506	50,941		
10 - 19	26,852	15,035	176,599	3,014	39,516	430	6,450	11,591	130,633		
20 - 49	43,691	27,259	659,807	9,350	286,040	365	6,936	17,544	366,831		
50 - 99	17,007	13,675	639,764	8,381	410,889	304	18,774	4,990	210,101		
100 - 199	5,212	5,211	551,417	3,817	442,375	219	21,900	1,175	87,142		
200 - 499	1,619	911	199,476	862	190,166	49	9,310	0	0		
500 - 999	3	3	822	3	822	0	0	0	0		
1000 - 2499	4	4	2,785	4	2,785	0	0	0	0		
2500 - 4999	2	2	355	1	205	0	0	1	150		
5000 <	0	0	0	0	0	0	0	0	0		

A : Number of holdings  
 B : Cultivated area (decar)

Table E-3 Number of Occasional Workers in Agricultural Holdings and Number of Days Worked

Farm size (decar)	Number of holdings employing occasional workers	Total		Male (12+years)		Female (12+years)		Child (9-12years)	
		A	B	A	B	A	B	A	B
Total	31,882	585,104	3,032,215	212,933	1,262,802	372,149	1,769,193	22	220
Landless	0	0	0	0	0	0	0	0	0
5 >	98	637	1,274	245	784	392	490	0	0
5 - 9	4,756	41,164	87,681	19,351	64,664	21,813	23,017	0	0
10 - 19	4,101	64,093	200,751	20,549	97,969	43,544	102,782	0	0
20 - 49	11,081	170,449	973,043	54,483	378,655	115,966	594,388	0	0
50 - 99	7,919	152,428	816,116	74,201	354,311	78,205	461,585	22	220
100 - 199	3,334	141,527	602,094	39,161	227,289	102,366	374,805	0	0
200 - 499	584	14,158	331,342	4,830	131,816	9,328	199,526	0	0
500 - 999	3	211	2,580	1	180	210	2,400	0	0
1000 - 2499	4	420	15,364	105	5,314	315	10,050	0	0
2500 - 4999	2	17	1,970	7	1,820	10	150	0	0
5000 >	0	0	0	0	0	0	0	0	0

A: Number of employees

B: Number of days worked

Table-B.9 Households by Farm Size in the Project Area (1993)

Name of Village	(Number of Farm Household)																
	0-0.9ha		1-1.9ha		2-4.9ha		5-9.9ha		10-19.9ha		20-99.9ha		Total	Total area	Farm size		
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	(ha)	(ha)	
<b>Beydağ</b>																	
Beydağı	435	59.9	179	24.7	88	12.1	18	2.5	6	0.8	0	0.0	726	100.0	704	0.97	
Alakeçili	59	45.4	45	34.6	20	15.4	5	3.8	1	0.8	0	0.0	130	100.0	140	1.08	
Halıköy	75	32.6	62	27.0	62	27.0	22	9.6	7	3.0	2	0.9	230	100.0	458	1.99	
Sankaya	80	53.3	40	26.7	30	20.0	0	0.0	0	0.0	0	0.0	150	100.0	123	0.82	
Tosunlar	89	51.1	49	28.2	25	14.4	8	4.6	3	1.7	0	0.0	174	100.0	385	2.21	
Yağcılar	95	40.8	64	27.5	66	28.3	8	3.4	0	0.0	0	0.0	233	100.0	179	0.77	
<b>Total</b>	<b>833</b>	<b>50.7</b>	<b>439</b>	<b>26.7</b>	<b>291</b>	<b>17.7</b>	<b>61</b>	<b>3.7</b>	<b>17</b>	<b>1.0</b>	<b>2</b>	<b>0.1</b>	<b>1,643</b>	<b>100.0</b>	<b>1,989</b>	<b>1.21</b>	
<b>Ödemiş</b>																	
(Merkez)																	
Bıyıklıcaşuk	59	38.6	45	29.4	31	20.3	18	11.8	0	0.0	0	0.0	153	100.0	402	2.63	
Demirci	119	38.4	99	31.9	64	20.6	28	9.0	0	0.0	0	0.0	310	100.0	719	2.32	
Gerçekli	60	26.9	100	44.8	55	24.7	8	3.6	0	0.0	0	0.0	223	100.0	395	1.77	
Gereli	184	41.6	172	38.9	72	16.3	14	3.2	0	0.0	0	0.0	442	100.0	757	1.71	
Karaköva	26	19.0	39	28.5	42	30.7	22	16.1	8	5.8	0	0.0	137	100.0	540	3.94	
Ocaklı	140	41.2	106	31.2	82	24.1	12	3.5	0	0.0	0	0.0	340	100.0	622	1.83	
Ödemiş	1967	60.2	1047	32.0	197	6.0	45	1.4	12	0.4	0	0.0	3,268	100.0	3,833	1.17	
Seyrekli	135	32.9	121	29.5	99	24.1	46	11.2	9	2.2	0	0.0	410	100.0	1,162	2.83	
Yolüstü	162	32.7	186	37.6	116	23.4	26	5.3	5	1.0	0	0.0	495	100.0	995	2.01	
(Bademli)																	
Emirdi	210	46.2	186	40.9	55	12.1	4	0.9	0	0.0	0	0.0	455	100.0	651	1.43	
Mescidi	108	23.8	240	53.0	65	14.3	40	8.8	0	0.0	0	0.0	453	100.0	862	1.90	
(Bırgı)																	
Kışlaköy	20	24.7	35	43.2	22	27.2	4	4.9	0	0.0	0	0.0	81	100.0	168	2.07	
(Kaymakçı)																	
Kaymakçı	1234	79.6	260	16.8	56	3.6	0	0.0	0	0.0	0	0.0	1,550	100.0	1,060	0.68	
Aşağı	65	37.8	51	29.7	32	18.6	24	14.0	0	0.0	0	0.0	172	100.0	324	1.88	
Çaylı	580	60.4	283	29.5	76	7.9	21	2.2	0	0.0	0	0.0	960	100.0	1,032	1.08	
İrtüğürlü	42	14.8	170	59.9	72	25.4	0	0.0	0	0.0	0	0.0	284	100.0	552	1.94	
Kızılcaavlu	84	43.3	60	30.9	34	17.5	16	8.2	0	0.0	0	0.0	194	100.0	359	1.85	
Kurucaova	134	35.5	116	30.8	86	22.8	37	9.8	4	1.1	0	0.0	377	100.0	937	2.49	
Türkönü	24	18.5	54	41.5	36	27.7	13	10.0	3	2.3	0	0.0	130	100.0	396	3.05	
Eseli	46	24.9	54	29.2	44	23.8	26	14.1	15	8.1	0	0.0	185	100.0	700	3.78	
Yeşilköy	34	34.7	40	40.8	20	20.4	4	4.1	0	0.0	0	0.0	98	100.0	200	2.04	
(Orakent)																	
Ovakent	880	59.9	395	26.9	160	10.9	29	2.0	6	0.4	0	0.0	1,470	100.0	1,818	1.24	
Balabanlı	98	35.6	77	28.0	55	20.0	39	14.2	6	2.2	0	0.0	275	100.0	720	2.62	
Bozcayaka	142	45.8	98	31.6	36	11.6	21	6.8	13	4.2	0	0.0	310	100.0	739	2.38	
Kazandı	33	15.4	65	30.4	86	40.2	30	14.0	0	0.0	0	0.0	214	100.0	539	2.52	
Konaklı	426	50.8	210	25.1	160	19.1	38	4.5	4	0.5	0	0.0	838	100.0	1,493	1.78	
<b>Total</b>	<b>7,012</b>	<b>50.7</b>	<b>4,309</b>	<b>31.2</b>	<b>1,853</b>	<b>13.4</b>	<b>565</b>	<b>4.1</b>	<b>85</b>	<b>0.6</b>	<b>0</b>	<b>0.0</b>	<b>13,824</b>	<b>100.0</b>	<b>21,975</b>	<b>1.59</b>	
<b>Tire</b>																	
Kızılcaavlu	4	1.7	45	19.6	63	27.4	87	37.8	14	6.1	17	7.4	230	100.0	1,509	6.55	
Yegenli	15	10.7	12	8.6	65	46.4	48	34.3	0	0.0	0	0.0	140	100.0	757	5.41	
<b>Total</b>	<b>19</b>	<b>5.1</b>	<b>57</b>	<b>15.4</b>	<b>128</b>	<b>34.6</b>	<b>135</b>	<b>36.5</b>	<b>14</b>	<b>3.8</b>	<b>17</b>	<b>4.6</b>	<b>370</b>	<b>100.0</b>	<b>2,266</b>	<b>6.12</b>	
<b>Grand total</b>	<b>7,864</b>	<b>49.7</b>	<b>4,805</b>	<b>30.3</b>	<b>2,272</b>	<b>14.3</b>	<b>761</b>	<b>4.8</b>	<b>116</b>	<b>0.7</b>	<b>19</b>	<b>0.1</b>	<b>15,837</b>	<b>100.0</b>	<b>26,230</b>	<b>1.66</b>	

Source: Provincial Office of MARA, İzmir

Table-B.10 Households by Land Ownership Type in the Project Area (1993)

Name of Village	Owner farmer		Tenant farmer		Share cropper		Total	
	Households	(%)	Households	(%)	Households	(%)	Households	(%)
<b>Beydağ</b>								
Beydağı	690	95.0	14	1.9	22	3.0	726	100.0
Alakeçili	124	95.4	2	1.5	4	3.1	130	100.0
Halıköy	219	95.2	4	1.7	7	3.0	230	100.0
Sarıkaya	144	96.0	2	1.3	4	2.7	150	100.0
Tosunlar	165	94.8	2	1.1	7	4.0	174	100.0
Yağcılar	222	95.3	5	2.1	6	2.6	233	100.0
Total	1,564	95.2	29	1.8	50	3.0	1,643	100.0
<b>Ödemiş</b>								
(Merkez)								
Büyükaylucak	133	86.9	14	9.2	6	3.9	153	100.0
Demircili	233	75.2	36	11.6	41	13.2	310	100.0
Gerçekli	167	74.9	33	14.8	23	10.3	223	100.0
Gereli	392	88.7	30	6.8	20	4.5	442	100.0
Karakova	122	89.1	7	5.1	8	5.8	137	100.0
Ocaklı	308	90.6	17	5.0	15	4.4	340	100.0
Ödemiş	2,883	88.2	71	2.2	314	9.6	3,268	100.0
Seyrekli	300	73.2	42	10.2	68	16.6	410	100.0
Yolüstü	464	93.7	10	2.0	21	4.2	495	100.0
(Bademli)								
Emirli	347	76.3	53	11.6	55	12.1	455	100.0
Mescitli	403	89.0	15	3.3	35	7.7	453	100.0
(Birgi)								
Kışlaköy	74	91.4	0	0.0	7	8.6	81	100.0
(Kaymakçı)								
Kaymakçı	1,332	85.9	83	5.4	135	8.7	1,550	100.0
Alaşarlı	141	82.0	16	9.3	15	8.7	172	100.0
Çaylı	830	86.5	63	6.6	67	7.0	960	100.0
Ertuğrul	218	76.8	36	12.7	30	10.6	284	100.0
Kızılcaavlu	170	87.6	12	6.2	12	6.2	194	100.0
Kurucaova	349	92.6	8	2.1	20	5.3	377	100.0
Türkönü	107	82.3	6	4.6	17	13.1	130	100.0
Eselli	138	74.6	28	15.1	19	10.3	185	100.0
Yeşilköy	77	78.6	4	4.1	17	17.3	98	100.0
(Ovakent)								
Ovakent	1,378	93.7	26	1.8	66	4.5	1,470	100.0
Balabanlı	248	90.2	12	4.4	15	5.5	275	100.0
Bozcayaka	224	72.3	25	8.1	61	19.7	310	100.0
Kazanlı	183	85.5	17	7.9	14	6.5	214	100.0
Konaklı	765	91.3	29	3.5	44	5.3	838	100.0
Total	11,986	86.7	693	5.0	1,145	8.3	13,824	100.0
<b>Tile</b>								
Kızılcaavlu	230	100.0	0	0.0	0	0.0	230	100.0
Yengeli	140	100.0	0	0.0	0	0.0	140	100.0
Total	370	100.0	0	0.0	0	0.0	370	100.0
<b>Grand total</b>	<b>13,920</b>	<b>87.9</b>	<b>722</b>	<b>4.6</b>	<b>1,195</b>	<b>7.5</b>	<b>15,837</b>	<b>100.0</b>

Source: Provincial Office of MARA, Izmir



Table-B.11 Households by Farming Type in the Project Area (1993)

Name of Village	Crops and livestock		Crops only		Livestock only		Total	
	Households	(%)	Households	(%)	Households	(%)	Households	(%)
<b>Beydağ</b>								
Beydağı	617	85.0	87	12.0	22	3.0	726	100.0
Alakeçili	112	86.2	15	11.5	3	2.3	130	100.0
Halköy	197	85.7	26	11.3	7	3.0	230	100.0
Sarıkaya	128	85.3	18	12.0	4	2.7	150	100.0
Tosunlar	148	85.1	21	12.1	5	2.9	174	100.0
Yağcılar	199	85.4	28	12.0	6	2.6	233	100.0
Total	1,401	85.3	195	11.9	47	2.9	1,643	100.0
<b>Ödemiş</b>								
(Merkez)								
Büyükavluçak	96	62.7	57	37.3	0	0.0	153	100.0
Demircili	213	68.7	97	31.3	0	0.0	310	100.0
Gerçekli	179	80.3	44	19.7	0	0.0	223	100.0
Gereli	238	53.8	204	46.2	0	0.0	442	100.0
Karakova	76	55.5	61	44.5	0	0.0	137	100.0
Ocaklı	155	45.6	185	54.4	0	0.0	340	100.0
Ödemiş	959	29.3	2,294	70.2	15	0.5	3,268	100.0
Seyrekli	210	51.2	200	48.8	0	0.0	410	100.0
Yolüstü	261	52.7	234	47.3	0	0.0	495	100.0
(Bademli)								
Emirli	210	46.2	245	53.8	0	0.0	455	100.0
Mescitli	285	62.9	168	37.1	0	0.0	453	100.0
(Birgi)								
Kışlaköy	70	86.4	11	13.6	0	0.0	81	100.0
(Kaymakçı)								
Kaymakçı	857	55.3	669	43.2	24	1.5	1,550	100.0
Alaşarlı	75	43.6	97	56.4	0	0.0	172	100.0
Çaylı	509	53.0	436	45.4	15	1.6	960	100.0
Ertuğrul	172	60.6	112	39.4	0	0.0	284	100.0
Kızılcaavlu	120	61.9	74	38.1	0	0.0	194	100.0
Kurucaova	236	62.6	141	37.4	0	0.0	377	100.0
Türkönü	71	54.6	59	45.4	0	0.0	130	100.0
Eselli	94	50.8	91	49.2	0	0.0	185	100.0
Yeşilköy	58	59.2	40	40.8	0	0.0	98	100.0
(Ovakent)								
Ovakent	872	59.3	598	40.7	0	0.0	1,470	100.0
Balabanlı	147	53.5	128	46.5	0	0.0	275	100.0
Bozcayaka	208	67.1	95	30.6	7	2.3	310	100.0
Kazanlı	162	75.7	52	24.3	0	0.0	214	100.0
Konaklı	449	53.6	389	46.4	0	0.0	838	100.0
Total	6,982	50.5	6,781	49.1	61	0.4	13,824	100.0
<b>Tire</b>								
Kızılcaavlu	117	50.9	113	49.1	0	0.0	230	100.0
Yengeli	48	34.3	92	65.7	0	0.0	140	100.0
Total	165	44.6	205	55.4	0	0.0	370	100.0
<b>Grand total</b>	<b>8,548</b>	<b>54.0</b>	<b>7,181</b>	<b>45.3</b>	<b>108</b>	<b>0.7</b>	<b>15,837</b>	<b>100.0</b>

Source: Provincial Office of MARA, İzmir

Table-E.12

## Yearly Cropped Area in İzmir Province (1990-1994)

Crops	(ha)					
	(1990)	(1991)	(1992)	(1993)	(1994)	(Average)
<b>Field crops</b>						
Wheat	58,790	57,445	53,991	59,625	60,720	58,114
Barley	14,210	13,555	13,111	12,341	11,689	12,981
Oat	3,790	3,631	3,438	3,199	4,093	3,630
Rye	435	375	485	437	361	419
Cotton	61,673	63,561	61,913	58,826	59,985	61,192
Tobacco	39,602	35,640	39,503	38,533	22,166	35,089
Maize	3,116	2,307	3,085	3,307	3,424	3,048
Legumes	2,818	2,820	2,710	2,427	2,516	2,658
Sesame	2,890	2,753	2,353	1,177	1,035	2,042
Potatoes	8,736	9,839	10,594	10,353	10,954	10,095
Onion & Garlic (Dry)	835	846	735	633	933	796
Vetches	2,845	3,148	2,658	2,383	2,789	2,765
Alfalfa	3,908	3,944	4,050	4,445	4,980	4,265
Others	2,242	1,722	2,298	3,374	4,096	2,746
Sub-total	205,890	201,586	200,924	201,060	189,741	199,840
<b>Vegetables</b>						
Tomatoes	3,797	3,861	4,203	3,919	5,694	4,295
Pepper	1,725	1,814	1,686	1,700	1,996	1,784
Egg plant	1,124	1,103	1,044	1,077	1,173	1,104
Watermelons	11,904	12,617	12,616	11,832	13,094	12,413
Melon	3,573	3,266	3,197	3,191	3,577	3,361
Cucumber	2,565	3,407	3,151	2,752	3,340	3,043
Squash	437	451	388	379	498	431
Okra	740	778	701	750	1,093	812
Cabbages	881	796	721	726	783	781
Leeks	708	682	638	662	744	687
Cauliflowers	591	559	564	570	629	583
Spinach	992	984	961	932	1,026	979
Lettuce	611	679	655	686	836	693
Celery	203	193	155	173	180	181
Onion & Garlic(Green)	563	582	537	573	820	615
Beans	1,730	1,852	1,704	1,736	2,327	1,870
Green peas	189	199	210	382	550	306
Carrots	38	25	22	23	29	27
Radish	99	94	101	118	119	106
Others	473	509	538	592	615	545
Vegetables in G. house	167	181	239	372	404	273
Sub-total	33,110	34,632	34,031	33,145	39,527	34,889
<b>Tree crops</b>						
Olive	75,772	75,803	73,879	73,887	73,959	74,660
Figs	5,472	5,465	5,403	5,431	5,093	5,373
Citrus	5,056	5,021	4,817	5,127	4,904	4,985
Apple	960	960	916	908	754	899
Pears	1,210	1,283	1,140	1,126	966	1,145
Quince	493	494	428	409	393	443
Peaches	2,932	2,889	2,622	2,947	2,420	2,762
Cherries	1,510	1,565	1,763	1,792	1,600	1,646
Plums	864	866	845	845	774	839
Pomegranates	487	489	430	426	403	447
Chestnuts	1,091	1,139	1,345	1,394	1,127	1,219
Other nuts	1,788	1,893	1,976	2,121	1,407	1,837
Vine yard	27,788	27,590	26,618	26,611	26,608	27,043
Others	751	747	710	712	680	720
Strawberries	102	102	102	111	112	106
Sub-total	126,277	126,306	122,993	123,847	121,200	124,125

Source: "Agricultural Structure and Production" from 1990 to 1994, Provincial Office of MARA, İzmir

**Table-E.13 Yearly Cropped Area in the River Basin (1990-1994)**

Crops	(ha)					
	(1990)	(1991)	(1992)	(1993)	(1994)	(Average)
<b>Field crops</b>						
Wheat	21,890	21,970	20,821	24,850	24,490	22,804
Barley	8,270	7,780	8,081	7,913	6,999	7,809
Oat	1,351	330	838	630	1,223	874
Rye	385	355	405	347	351	369
Cotton	30,523	32,305	33,085	30,050	29,535	31,100
Tobacco	10,251	7,195	9,215	9,761	6,992	8,683
Maize	1,872	1,300	1,404	1,370	1,427	1,475
Legumes	339	334	401	456	507	407
Sesami	2,300	1,713	1,553	614	530	1,342
Potatoes	8,348	9,338	9,615	9,699	10,276	9,455
Onions	182	117	184	324	397	241
Vetches	1,472	1,422	810	775	1,016	1,099
Clover	2,680	2,792	2,796	3,171	3,649	3,018
Others	730	652	687	900	1,358	865
<b>Subtotal</b>	<b>90,593</b>	<b>87,603</b>	<b>89,895</b>	<b>90,860</b>	<b>88,750</b>	<b>89,540</b>
<b>Vegetables</b>						
Tomatoes	1,064	1,059	1,100	1,151	1,283	1,131
Pepper	1,108	1,167	1,094	1,059	1,207	1,127
Egg plant	571	606	471	611	633	578
Watermelons	9,750	10,099	10,023	8,959	9,421	9,650
Melon	400	390	456	500	533	456
Cucumber	2,038	2,890	2,606	2,201	2,577	2,462
Squash	142	147	137	164	160	150
Okra	450	479	435	506	517	477
Cabbages	509	491	411	483	551	489
Leeks	435	450	395	415	462	431
Cauliflowers	335	325	350	345	405	352
Spinach	456	451	436	420	442	441
Leaf Lettuce	311	323	438	332	375	356
Celery	27	32	23	71	86	48
Garlic green	171	146	156	371	418	252
Beans	784	881	895	1,278	1,660	1,100
Carrots	20	20	16	22	27	21
Red radish	36	33	34	86	99	58
Others	133	127	70	17	15	72
<b>Subtotal</b>	<b>18,740</b>	<b>20,116</b>	<b>19,546</b>	<b>18,991</b>	<b>20,871</b>	<b>19,653</b>
<b>Tree crops</b>						
Olive	36,604	36,574	37,420	37,425	37,440	37,093
Figs	7,959	7,948	7,687	7,625	7,284	7,701
Citrus	189	191	196	239	245	212
Apple	1,904	1,906	1,861	1,811	1,024	1,701
Pears	822	822	682	651	514	698
Quince	298	301	258	257	201	263
Peaches	1,984	1,974	1,775	2,184	2,289	2,041
Cherries	575	619	741	782	798	703
Plums	475	481	467	462	434	464
Pomegranates	173	176	153	152	136	158
Chestnuts	1,575	1,653	1,943	2,023	1,908	1,820
Other nuts	1,600	1,625	1,697	1,720	1,414	1,611
Grape	4,498	4,502	3,557	3,540	3,537	3,927
Others	300	303	284	323	274	297
<b>Subtotal</b>	<b>58,956</b>	<b>59,072</b>	<b>58,723</b>	<b>59,194</b>	<b>57,498</b>	<b>58,689</b>
<b>Total</b>	<b>168,289</b>	<b>166,791</b>	<b>168,164</b>	<b>169,045</b>	<b>167,119</b>	<b>167,882</b>

Source : "Agricultural Structure and Production" from 1990 to 1994, Provincial Office of MARA, Izmir.

Table-E.14

## Crop Yield by Crops in the Basin (Average 1990-1994)

	(tons/ha)							
	Beydag	Kiraz	Ödemis	Tire	Bayındır	Torbali	Selçuk	Total
<b>Field crops</b>								
Wheat	2.6	3.3	3.0	3.6	3.6	4.2	3.5	3.8
Barley	2.1	2.9	2.5	3.0	2.6	2.8	2.2	2.8
Oat	2.3			1.5	2.3	2.8		2.6
Rye	1.7	2.1	2.0		2.4			2.1
Cotton	2.6	3.7	2.8	2.7	2.8	2.4	2.8	2.7
Tobacco	1.0	0.5	0.8	1.0	0.7	0.8	0.8	0.8
Maize	3.0	3.8	4.8	7.3	4.6	13.6	4.4	7.3
Legumes	2.2	2.6	1.5			2.3		2.3
Sesami	0.7	0.6	1.3	0.8	0.8	0.7	0.7	0.9
Potatoes	35.6	19.4	26.2	23.9	28.3		20.0	26.2
Onion, Garlic	14.1	8.3	16.3	16.9		16.7	20.0	16.0
Vetches	4.7	3.6	1.3	6.0	3.5	1.0	3.1	3.1
Alfalfa	3.9	10.6	14.3	11.3	18.9	17.8	10.0	13.4
Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Vegetables</b>								
Tomatoes	41.1	24.9	35.2	20.0	48.8	30.8	34.0	30.3
Pepper	16.8	17.6	20.7	16.3	27.0	18.0	10.0	20.3
Egg plant	28.1	20.3	31.6	20.0	28.2	28.7	18.0	27.1
Watermelons	30.1	30.4	34.6	30.0	29.4	30.5	20.0	31.0
Melon	21.0		11.8	26.0	16.5	20.7	9.3	18.1
Cucumber	22.0	10.6	11.8	20.0	17.5	21.5	11.1	14.2
Squash	4.0	10.6	12.9	25.5	22.9	22.2	17.0	21.1
Okra	3.8	4.7	3.5	3.4	4.1	5.0	5.0	3.6
Cabbages	42.3	31.6	40.2	24.5	31.3	48.1	17.0	40.0
Leeks	23.0	25.0	31.1	25.0	29.6	28.6	20.0	28.5
Cauliflowers	22.8	8.7	25.4	15.0	26.9	20.6	10.0	22.1
Spinach	10.0	10.1	10.0	10.0	6.0	10.2	8.0	9.3
Lettuce	16.7	18.0	11.1	13.5	23.1	28.1	16.0	20.4
Celery	20.0	8.0	9.5	14.4	17.4	17.1		15.5
Green onions	14.8	9.0	7.3	11.7	38.0	14.3	17.0	12.0
Green legumes	8.0	8.2	8.9	6.8	7.6	7.4	9.4	7.5
Carrots	13.3		11.5	20.0				17.2
Red radish	21.6		8.4	11.2	10.3	11.4	15.0	11.6
Others	60.8		8.9		9.4	10.6		12.2

Remark: Each unit yield per hectare was given from by crop production divided by each cropped area  
Source: "Agricultural Structure and Production" from 1990 to 1994, Provincial Office of MARA, Izmir.

**Table E.15** Fruits Yield in the River Basin  
(a) Fruits Yield per tree (Average 1990-1994)

Fruits trees	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	Average
Olive	13.47	4.50	9.31	9.49	6.49	18.84	5.19	9.38
Figs	28.40	39.00	36.00	38.20	38.00	47.00	30.80	36.77
Mandarins			21.20	30.40	36.60	33.40	55.60	35.44
Apple	28.60	39.00	27.00	36.20	52.00		40.00	37.13
Pears	20.20	16.20	10.00	20.80	19.60	15.00	31.00	18.97
Quince	20.40	28.00	17.00	37.20	27.60	18.00	15.00	23.31
Peaches	25.00	36.00	27.00	29.60	45.00	32.20	31.00	32.26
Cherries	20.00	31.00	21.00	23.60	23.00		39.40	26.33
Plums	25.00	38.00	25.60	18.60	25.00	22.00	50.00	29.17
Pomegranates	20.00	25.00	23.40	40.80	25.00	24.60	20.00	25.54
Chestnuts	50.00	45.00	26.40	51.40	44.00			43.36
Walnuts	34.20	30.00	22.40	42.20	43.75	21.40	31.00	31.74

Source: "Agricultural Structure and Production" Provincial Office, MARA, İzmir

(b) Fruits Yield per hectare (Average 1990-1994)

Fruits trees	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	Average
Olive	2.6	0.9	1.8	1.9	1.3	3.7	1.0	1.8
Figs	4.7	6.5	5.4	6.4	6.3	7.8	5.1	6.1
Mandarins	0.0	0.0	7.6	10.9	13.1	11.9	19.9	12.7
Apple	9.5	13.0	9.0	12.1	17.3	0.0	13.3	12.4
Pears	10.1	8.1	5.0	10.4	9.8	7.5	15.5	9.5
Quince	6.8	9.3	5.7	12.4	9.2	6.0	5.0	7.8
Peaches	8.3	12.0	9.0	9.9	15.0	10.7	10.3	10.8
Cherries	6.7	10.3	7.0	7.9	7.7	0.0	13.1	8.8
Plums	8.3	12.7	8.5	6.2	8.3	7.3	16.7	9.7
Pomegranates	6.7	8.3	7.8	13.6	8.3	8.2	6.7	8.5
Chestnuts	10.0	9.0	5.3	10.3	8.8	0.0	0.0	8.7
Walnuts	7.6	6.7	5.0	9.4	9.7	4.8	6.9	7.1
Grape	10.5	6.9	12.1	9.1	7.1	11.2	6.7	9.4

Remark: Except grape, each fruits yield per hectare is estimated from the yield per tree.

Yield per hectare of grape is given dividing the production by the cropped area as same as those in Table E.10.

Table-E.16 Crop Yield Data

Crops	Present crop yield		F/S Reports in the Basin		Irrigation Masterplan*		Farmers Household Survey		Handbook	Japan
	Odemis	Bayındır	Ave. of Basin	Without	With	Non-irrigated	Irrigated	low**		
Wheat	3.0	3.6	3.8	2.8	5.5		5.5	2.0-2.5	7.0-8.0	Average 3.6
Cotton	2.7	2.8	2.7	2.5	3.5	1.5	3.5	2.0-2.5	5.0-6.0	
Tobacco	0.8	0.8	0.8	0.80	1.0	0.7	1.3, 1.5	0.7-0.8	2.5-3.0	2.5
Maize	4.8	4.6	7.3				8.0, 10.0	3.0-3.5	7.0-9.0	
Potatoes****	26.2	28.3	26.2	28.0	35.0	10.0	22.0, 33.0	20.0-25.0	40.0-50.0	27-32
Potatoes II				20.0	28.0					
Sesame	1.3	0.8	0.9	0.7	1.2			(wet) 20	1.2	
Alfalfa (dry)	14.3	18.9	13.4	12.0	18.0	5.0	13.0		(wet) 100	
Watermelon	34.6	29.4	31.0	30.0	35.0	15.0	35.0	20.0-25.0	60.0-70.0	31.3
Tomatoes	35.2	48.8	30.3			12.0	40.0	25.0-30.0	40.0-50.0	44.5
Peppers	20.7	27.0	20.3					10.0-20.0	30.0-40.0	37.7
Eggplant	31.6	28.2	27.1					15.0-20.0	25.0-30.0	31.4
Cucumber	11.8	16.5	14.2					10.0-15.0	30.0-40.0	44.0
Vegetables				32.0	45.0					
Vegetables II				25.0	35.0					
Cabbages	40.2	31.3	40.0			10.0	30.0	20.0		39.5
Cauliflower	25.4	26.9	28.5					20.0		14.4
Lettuce	11.1	23.1	20.4					15.0		23.5
Leeks	31.1	29.6	28.5					20.0	40.0	20-30
Spinach	10.0	6.0	9.3							14.7
Green legumes	8.9	7.6	7.5							
Olive	1.3	1.4	1.8	0.8	1.0	3.5	7.0	1.5	6.0	
Figs	6.0	6.3	6.1	(oil) 4.5	(oil)					
Grapes	12.1	7.1	9.4		6.0	2.5	15.0	2.0	8.0	11.6
Oranges	8.2	12.6	13.0		32.0	8.0	30.0	5.0	10.0	21.0
Peaches	9.1	13.6	8.5			5.0	20.0	20.0	40.0	16.2
Other fruits					20.0					
Chestnuts	5.5	7.9	8.4					1.5		1.4
Other nuts	3.9	5.4	2.9							

\* From IRRIGATION MASTER PLAN PART I' prepared by Ministry of public works and settlement in 1991

\*\* Too much or too low samples were excluded

\*\*\* From 'Sebzecilik' written by Dr. Tamer Turkes

\*\*\*\* Present crop yield are the average yield of several cropping types.

**Table E.17 Crop Production by District in the River Basin (Ave.1990-1994)**

Crop	(tons)							Total
	Beydag	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	
<b>Field crops</b>								
Wheat	631	1,732	4,288	20,780	12,743	43,050	3,414	86,639
Barley	651	1,232	2,735	8,042	1,614	7,146	198	21,617
Oat	53	0	0	150	229	1,849	0	2,281
Rye	36	644	32	0	51	0	0	764
Cotton	677	1,527	16,329	21,959	14,629	19,553	7,868	82,542
Tobacco	520	429	2,162	2,563	244	1,102	52	7,072
Maize	186	849	633	2,602	1,214	4,988	319	10,791
Legumes	184	546	119	0	0	74	0	923
Sesami	5	21	448	427	51	129	136	1,217
Potatoes	6,013	3,880	225,498	6,550	6,081	0	64	248,086
Onion, Garlic	488	61	1,840	980	0	377	104	3,851
Vetches	168	118	40	1,632	807	444	220	3,429
Alfalfa	676	3,414	17,682	7,810	9,151	1,654	116	40,503
Others								
<b>Vegetables</b>								
Tomatoes	1,355	856	8,133	8,260	6,789	6,444	2,484	34,321
Pepper	892	468	9,052	3,230	5,870	3,141	190	22,843
Egg plant	730	316	6,074	2,574	3,451	2,240	270	15,658
Watermelons	7,939	1,216	95,916	104,670	35,815	46,355	6,884	298,795
Melon	168	0	200	3,016	419	3,192	1,254	8,249
Cucumber	793	1,388	16,422	1,184	10,744	3,988	532	35,052
Squash	12	21	160	1,070	696	780	425	3,164
Okra	120	33	1,336	125	28	67	15	1,725
Cabbages	1,439	316	6,836	1,041	2,237	7,637	41	19,546
Leeks	529	500	4,225	1,700	2,518	2,716	88	12,276
Cauliflowers	205	70	3,051	663	1,667	2,023	106	7,785
Spinach	150	129	690	390	248	1,750	738	4,095
Lettuce	194	18	981	458	1,525	3,759	336	7,271
Celery	20	13	63	101	248	298	0	742
Green onions	327	113	163	1,791	30	495	119	3,038
Green legumes	815	297	1,650	3,102	2,020	358	24	8,266
Carrots	69	0	32	260	0	0	0	362
Red radish	121	0	157	112	25	189	66	670
Others	243	0	300	0	243	93	0	880
<b>Tree crops</b>								
Olive	2,618	604	5,926	9,077	20,535	22,687	4,469	65,915
Figs	4,165	2,361	13,590	18,136	570	1,130	1,419	41,371
Citrus	0	0	122	149	581	234	1,664	2,750
Apple	223	7,165	612	437	308	0	136	8,880
Pears	42	484	218	672	537	426	228	2,606
Quince	22	345	173	156	128	166	19	1,009
Peaches	203	238	928	2,761	1,076	4,292	4,210	13,708
Cherries	139	682	869	125	144	0	76	2,034
Plums	344	234	1,161	186	122	125	168	2,340
Pomegranates	86	113	177	211	141	141	6	878
Chestnuts	4,086	851	1,757	893	336	0	0	7,923
Other nuts	319	862	330	666	197	84	32	2,491
Grapes	839	680	5,632	4,621	7,560	15,059	2,412	36,801
Others	52	412	269	147	32	146	108	1,167

Source: "Agricultural Structure and Production" from 1990 to 1994, Provincial Office of MARA, Izmir.

Table-E.18

## Crop Production Value by District in the Basin \*

(Million TL)

Crop	Beydag	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	Total
<b>Field crops</b>								
Wheat	2,525	6,929	17,154	83,120	50,972	172,200	13,656	346,555
Barley	1,952	3,695	8,204	24,125	4,843	21,438	594	64,851
Oat	184	0	0	525	801	6,473	0	7,983
Rye	109	1,932	96	0	154	0	0	2,291
Cotton	16,925	38,175	408,235	548,975	365,720	488,820	196,700	2,063,550
Tobacco	51,960	42,900	216,240	256,300	24,420	110,180	5,240	707,240
Maize	744	3,396	2,532	10,408	4,858	19,952	1,276	43,166
Legumes	5,514	16,368	3,582	0	0	2,220	0	27,684
Sesami	175	721	15,694	14,931	1,792	4,529	4,753	42,595
Potatoes	30,065	19,400	1,127,490	32,750	30,407	0	320	1,240,432
Onion, Garlic	10,980	1,382	41,409	22,050	0	8,483	2,340	86,643
Vetches	379	266	90	3,672	1,815	998	495	7,714
Alfalfa	1,690	8,535	44,205	19,525	22,878	4,135	290	101,258
Others	171	0	0	1,602	14,544	2,763	0	19,080
Sub-total	123,373	143,698	1,884,930	1,017,983	523,203	842,191	225,664	4,761,042
<b>Vegetables</b>								
Tomatoes	5,420	3,424	32,532	33,040	27,158	25,776	9,936	137,286
Pepper	4,906	2,572	49,788	17,765	32,284	17,276	1,045	125,635
Egg plant	3,650	1,580	30,372	12,870	17,268	11,200	1,350	78,290
Watermelons	23,817	3,648	287,748	314,010	107,444	139,066	20,653	896,386
Melon	840	0	1,000	15,080	2,097	15,960	6,270	41,247
Cucumber	4,758	8,330	98,532	7,104	64,465	23,928	3,192	210,310
Squash	72	127	960	6,420	4,177	4,679	2,550	18,985
Okra	1,803	498	20,040	1,875	426	1,005	225	25,872
Cabbages	14,390	3,160	68,360	10,408	22,366	76,370	408	195,462
Leeks	5,290	5,000	42,250	17,000	25,180	27,160	880	122,760
Cauliflowers	2,050	698	30,510	6,630	16,670	20,230	1,060	77,848
Spinach	600	516	2,760	1,560	994	7,002	2,950	16,382
Lettuce	1,455	135	7,358	3,435	11,438	28,193	2,520	54,533
Celery	300	192	945	1,515	3,714	4,467	0	11,133
Green onions	2,939	1,015	1,467	16,119	274	4,455	1,071	27,340
Green legumes	8,148	2,968	16,500	31,020	20,200	3,584	244	82,664
Carrots	347	0	161	1,300	0	0	0	1,808
Red radish	545	0	707	504	112	850	297	3,013
Others	2,430	0	3,004	0	2,434	934	0	8,802
Sub-total	83,760	33,864	694,993	497,655	358,700	412,133	54,652	2,135,756
<b>Tree crops</b>								
Olive	26,180	6,036	59,260	90,770	205,348	226,868	44,688	659,150
Figs	62,481	35,415	203,850	272,046	8,547	16,944	21,288	620,571
Citrus	0	0	1,218	1,492	5,808	2,342	16,640	27,500
Apple	1,784	57,320	4,893	3,494	2,462	0	1,088	71,042
Pears	422	4,840	2,180	6,716	5,374	4,256	2,276	26,064
Quince	224	3,446	1,732	1,560	1,276	1,662	192	10,092
Peaches	2,026	2,380	9,282	27,610	10,760	42,918	42,100	137,076
Cherries	2,495	12,276	15,642	2,246	2,592	0	1,368	36,619
Plums	3,096	2,104	10,453	1,672	1,100	1,125	1,512	21,062
Pomegranates	858	1,134	1,766	2,114	1,406	1,442	56	8,776
Chestnuts	102,150	21,275	43,925	22,335	8,390	0	0	198,075
Other nuts	11,172	30,170	11,564	23,324	6,895	2,940	1,113	87,178
Grapes	8,386	6,796	56,316	46,208	75,598	150,586	24,120	368,010
Others	520	4,122	2,694	1,468	320	1,462	1,080	11,666
Sub-total	221,794	187,314	424,774	503,056	335,876	452,545	157,521	2,282,881
<b>Total</b>	<b>428,927</b>	<b>364,875</b>	<b>3,004,698</b>	<b>2,018,694</b>	<b>1,217,779</b>	<b>1,706,868</b>	<b>437,837</b>	<b>9,179,678</b>

Remark: Production Value are given as the average production (1990-1994) multiplied by the average unit price in Izmir in 1994.

Source: "Agricultural Structure and Production" from 1990 to 1994, Provincial Office of MARA, Izmir.



**Table E.19 Present Cropping Pattern in the Project Area**

Crops	(ha)					
	Beydağ	Ödemiş	Tire	Total	% (1)	% (2)*
Cereals	54	796	138	990	6	8
Cotton	55	3,878	313	4,250	28	33
Potatoes	20	2,700	5	2,730	18	21
Potatoes II	10	1,330	3	1,340	9	11
Tobacco	32	994	54	1,080	7	9
Watermelon	41	1,304	115	1,460	9	11
Summer vegetables	33	1,385	25	1,440	9	11
Vegetables II	49	539	31	620	4	5
Fodders	46	355	15	420	3	3
Other f.crops	31	194	18	240	2	2
Olive	44	310	60	410	3	0
Figs	97	574	50	720	5	0
Fruits	38	376	23	440	3	0
Poplars	48	1,080	2	1,130	7	0
Others	4	134	8	150	1	1
<b>Total</b>	<b>602</b>	<b>15,951</b>	<b>858</b>	<b>17,410</b>	<b>113</b>	
<b>Excluding Tree Crops</b>	<b>375</b>	<b>13,611</b>	<b>723</b>	<b>14,710</b>		<b>116</b>
<b>Net Farm Land</b>	<b>460</b>	<b>14,170</b>	<b>770</b>	<b>15,400</b>	<b>100</b>	
<b>Excluding Tree Crops</b>	<b>232</b>	<b>11,830</b>	<b>635</b>	<b>12,700</b>		<b>100</b>

\*% (2): Percentage excluded tree crops

Source : JICA Study Team

Table-E.20

Present Cropping Pattern by District  
in the Beydağ Project Area

Crops	(ha, %)					
	Beydağ	Ödemiş	Tire	Total	% (1)	% (2)*
Cereals	90	708	172	970	6	7
Cotton	70	3,878	313	4,260	28	32
Potatoes	27	2,821	5	2,850	18	21
Potatoes II	13	1,390	3	1,410	9	10
Tobacco	64	994	54	1,110	7	8
Watermelon	65	1,557	115	1,740	11	13
Summer vegetables	44	1,478	28	1,550	10	12
Vegetables II	56	479	28	560	4	4
Fodders	77	444	19	540	4	4
Other f.crops	52	242	22	320	2	2
Olive	44	266	60	370	2	0
Figs	61	328	30	420	3	0
Fruits	29	276	17	320	2	0
Poplars	40	804	2	850	6	0
Others	4	134	8	150	1	1
<b>Total</b>	<b>740</b>	<b>15,800</b>	<b>880</b>	<b>17,420</b>	<b>113</b>	
<b>Excluding Tree Crops</b>	<b>570</b>	<b>14,130</b>	<b>770</b>	<b>15,470</b>		<b>115</b>
<b>Net Farm Land</b>	<b>460</b>	<b>14,170</b>	<b>770</b>	<b>15,400</b>	<b>100</b>	
<b>Excluding Tree Crops</b>	<b>290</b>	<b>12,500</b>	<b>660</b>	<b>13,450</b>		<b>100</b>

\*% (2): Percentage excluded tree crops

Source : JICA Study Team

Table-E.21 Change in Cropped Area (1/10)  
Beydag Area 1/2

	Present Condition			"Future without Project" Condition*			"Future with Project" Condition		
	Rainfed (ha)	Irrigated (%)	Total (ha)	Rainfed (ha)	Irrigated (%)	Total (ha)	Rainfed (ha)	Irrigated (%)	Total (ha)
<b>Field crops</b>									
Cereals	970	16%	970	1,230	13%	1,230	-	5%	770
Cotton	1,480	24%	4,260	1,880	20%	3,570	-	30%	4,620
Tobacco	1,110	18%	1,110	1,410	15%	1,410	-	-	0
Potatoes	990	16%	2,850	1,260	13%	2,390	-	20%	3,080
2nd Potatoes	0	0%	1,410	-	-	850	-	10%	1,540
Other field crops	320	5%	320	410	4%	410	-	-	0
Fodders	540	9%	540	690	7%	690	-	5%	770
<b>Vegetables</b>									
Watermelon	0	0%	1,740	-	-	1,050	-	10%	1,540
Summer vegetables	0	0%	1,550	-	-	940	-	20%	3,080
2nd vegetables	0	0%	560	-	-	340	-	20%	3,080
Green legumes	0	0%	0	-	-	0	-	10%	1,540
<b>Tree crops</b>									
Olive	370	6%	370	470	5%	470	-	-	0
Figs	420	7%	420	530	6%	530	-	-	0
Other fruits	0	0%	320	-	-	190	-	10%	1,540
Poplars	0	0%	1,000	-	-	1,000	-	-	0
<b>Total</b>	6,200	100%	11,220	7,880	83%	15,070	0	0%	21,560
<b>Net agricultural land</b>	6,200	40%	9,200	9,510	62%	15,400	0	0%	15,400

\*: Cropped area under rainfed condition is an average of the lowest and highest cases in Table-E.15 Change in Cropped Area (2/10).

Table-E.21 Change in Cropped Area (2/10)  
Beydag Area 2/2

	Present Condition			Lowest Case in "Future without Project"			Highest Case in "Future without Project"		
	Rainfed (ha) (%)	Irrigated (ha) (%)	Total (ha) (%)	Rainfed (ha) (%)	Irrigated (ha) (%)	Total (ha) (%)	Rainfed (ha) (%)	Irrigated (ha) (%)	Total (ha) (%)
<b>Field crops</b>									
Cereals	970 16%	0 0%	970 6%	970 10%	0 0%	970 6%	1,490 16%	0 0%	1,490 10%
Cotton	1,480 24%	2,780 30%	4,260 28%	1,480 16%	1,690 29%	3,170 21%	2,270 24%	1,690 29%	3,960 26%
Tobacco	1,110 18%	0 0%	1,110 7%	1,110 12%	0 0%	1,110 7%	1,700 18%	0 0%	1,700 11%
Potatoes	990 16%	1,860 20%	2,850 19%	990 10%	1,130 19%	2,120 14%	1,520 16%	1,130 19%	2,650 17%
2nd Potatoes	0 0%	1,410 15%	1,410 9%	0 0%	850 14%	850 6%	0 0%	850 14%	850 6%
Other field crops	320 5%	0 0%	320 2%	320 3%	0 0%	320 2%	490 5%	0 0%	490 3%
Fodders	540 9%	0 0%	540 4%	540 6%	0 0%	540 4%	830 9%	0 0%	830 5%
<b>Vegetables</b>									
Watermelon	0 0%	1,740 19%	1,740 11%	0 0%	1,050 18%	1,050 7%	0 0%	1,050 18%	1,050 7%
Summer vegetables	0 0%	1,550 17%	1,550 10%	0 0%	940 16%	940 6%	0 0%	940 16%	940 6%
2nd vegetables	0 0%	560 6%	560 4%	0 0%	340 6%	340 2%	0 0%	340 6%	340 2%
Green legumes	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
<b>Tree crops</b>									
Olive	370 6%	0 0%	370 2%	370 4%	0 0%	370 2%	570 6%	0 0%	570 4%
Figs	420 7%	0 0%	420 3%	420 4%	0 0%	420 3%	640 7%	0 0%	640 4%
Other fruits	0 0%	320 3%	320 2%	0 0%	190 3%	190 1%	0 0%	190 3%	190 1%
Poplars	0 0%	1,000 11%	1,000 6%	0 0%	1,000 17%	1,000 6%	0 0%	1,000 17%	1,000 6%
<b>Total</b>	6,200 100%	11,220 122%	17,420 113%	6,200 65%	7,190 122%	13,390 87%	9,510 100%	7,190 122%	16,700 108%
<b>Net agricultural land</b>	6,200 40%	9,200 60%	15,400 100%	9,510 62%	5,890 38%	15,400 100%	9,510 62%	5,890 38%	15,400 100%

\*: In the lowest case, the area of rainfed crops is assumed to be the same area in the present condition.

\*\*\*: In the highest case, the area reduced from the present irrigated crops is assumed to be converted to the rainfed cropped area. However, the maximum cropping intensity of rainfed crops is limited to 100%.

Table-E.21 Change in Cropped Area (3/10)  
Aktaş Area 1/2

	Present Condition			"Future without Project" Condition			"Future with Project" Condition		
	Rainfed (ha)	Irrigated (ha)	Total (ha)	Rainfed (%)	Irrigated (%)	Total (%)	Rainfed (ha)	Irrigated (ha)	Total (ha)
Field crops	470	0	470	57%	0%	36%	520	0	520
Cereals	160	220	380	20%	46%	29%	180	140	320
Cotton	130	0	130	16%	0%	10%	150	0	150
Tobacco	20	30	50	2%	6%	4%	20	20	40
Potatoes	0	100	100	0%	21%	8%	0	60	60
2nd Potatoes	0	0	0	0%	0%	0%	0	0	0
Other field crops	0	0	0	0%	0%	0%	0	0	0
Fodders	0	0	0	0%	0%	0%	0	0	0
Vegetables	0	160	160	0%	33%	12%	0	100	100
Watermelon	0	70	70	0%	15%	5%	0	40	40
Summer vegetables	0	70	70	0%	15%	5%	0	40	40
2nd vegetables	0	0	0	0%	0%	0%	0	0	0
Green legumes	0	0	0	0%	0%	0%	0	0	0
Tree crops	40	0	40	5%	0%	3%	50	0	50
Olive	0	0	0	0%	0%	0%	0	0	0
Figs	0	0	0	0%	0%	0%	0	0	0
Other fruits	0	0	0	0%	0%	0%	0	0	0
Poplars	0	0	0	0%	0%	0%	0	0	0
Total	820	650	1,470	100%	135%	113%	920	400	1,320
Net agricultural land	820	480	1,300	63%	37%	100%	990	310	1,300

\*: Cropped area under rainfed condition is an average of the lowest and highest cases in Table-E.15 Change in Cropped Area (4/10).

Table-E.21 Change in Cropped Area (4/10)  
Aktaş Area 2/2

	Present Condition			Lowest Case in "Future without Project"*			Highest Case in "Future without Project"***					
	Rainfed	Irrigated	Total	Rainfed	Irrigated	Total	Rainfed	Irrigated	Total			
	(ha)	(%)	(ha) (%)	(ha)	(%)	(ha) (%)	(ha)	(%)	(ha) (%)			
<b>Field crops</b>												
Cereals	470	57%	0	0%	470	36%	560	57%	0	0%	560	43%
Cotton	160	20%	220	46%	380	29%	190	19%	140	45%	330	25%
Tobacco	130	16%	0	0%	130	10%	160	16%	0	0%	160	12%
Potatoes	20	2%	30	6%	50	4%	20	2%	20	6%	40	3%
2nd Potatoes	0	0%	100	21%	100	8%	0	0%	60	19%	60	5%
Other field crops	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Fodders	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Vegetables</b>												
Watermelon	0	0%	160	33%	160	12%	0	0%	100	32%	100	8%
Summer vegetables	0	0%	70	15%	70	5%	0	0%	40	13%	40	3%
2nd vegetables	0	0%	70	15%	70	5%	0	0%	40	13%	40	3%
Green legumes	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Tree crops</b>												
Olive	40	5%	0	0%	40	3%	40	4%	0	0%	40	3%
Figs	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other fruits	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Poplars	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	820	100%	650	135%	1,470	113%	820	83%	400	129%	1,220	94%
<b>Net agricultural land</b>	820	63%	480	37%	1,300	100%	990	76%	310	24%	1,300	100%

\*. in the lowest case, the area of rainfed crops is assumed to be the same area in the present condition.

\*\*. In the highest case, the area reduced from the present irrigated crops is assumed to be converted to the rainfed cropped area. However, the maximum cropping intensity of rainfed crops is limited to 100%.

Table-E.21 Change in Cropped Area (5/10)  
Burgaz Area 1/2

	Present Condition			"Future without Project" Condition			"Future with Project" Condition					
	Rainfed	Irrigated	Total	Rainfed	Irrigated	Total	Rainfed	Irrigated	Total			
	(ha)	(%)	(ha)	(ha)	(%)	(%)	(ha)	(%)	(ha)	(%)		
<b>Field crops</b>												
Cereals	990	32%	990	29%	0	0%	0	0%	730	15%	730	15%
Cotton	610	20%	1,460	18%	540	47%	1,220	25%	1,230	25%	1,230	25%
Tobacco	100	3%	100	3%	0	0%	110	2%	0	0%	0	0%
Potatoes	0	0%	50	1%	30	3%	30	1%	250	5%	250	5%
2nd Potatoes	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other field crops	100	3%	100	3%	110	3%	110	2%	0	0%	0	0%
Fodders	190	6%	190	6%	210	6%	210	4%	190	4%	190	4%
<b>Vegetables</b>												
Watermelon	0	0%	340	19%	340	7%	220	19%	220	4%	490	10%
Summer vegetables	0	0%	250	14%	250	5%	160	14%	160	3%	730	15%
2nd vegetables	0	0%	150	8%	150	3%	100	9%	100	2%	1,120	23%
Green legumes	0	0%	0	0%	0	0%	0	0%	0	0%	390	8%
<b>Tree crops</b>												
Olive	1,080	35%	1,080	22%	1,200	32%	1,200	24%	590	12%	590	12%
Figs	20	1%	20	0%	20	1%	20	0%	0	0%	0	0%
Other fruits	0	0%	290	6%	290	6%	190	16%	640	13%	640	13%
Poplars	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	3,090	100%	1,930	107%	5,020	102%	3,430	92%	1,240	107%	4,670	95%
<b>Net agricultural land</b>	3,090	63%	1,810	37%	4,900	100%	3,740	76%	1,160	24%	4,900	100%

\*: Cropped area under rainfed condition is an average of the lowest and highest cases in Table-E.15 Change in Cropped Area (6/10).

Table-E.21 Change in Cropped Area (6/10)  
Burgaz Area 2/2

	Present Condition			Lowest Case in "Future without Project"			Highest Case in "Future without Project"		
	Rainfed (ha)	Irrigated (%)	Total (ha)	Rainfed (ha)	Irrigated (%)	Total (ha)	Rainfed (ha)	Irrigated (%)	Total (ha)
<b>Field crops</b>									
Cereals	990	32%	990	990	26%	990	1,200	32%	1,200
Cotton	610	20%	1,460	610	16%	1,150	740	20%	1,280
Tobacco	100	3%	100	100	3%	100	120	3%	120
Potatoes	0	0%	50	0	0%	30	0	0%	30
2nd Potatoes	0	0%	0	0	0%	0	0	0%	0
Other field crops	100	3%	100	100	3%	100	120	3%	120
Fodders	190	6%	190	190	5%	190	230	6%	230
<b>Vegetables</b>									
Watermelon	0	0%	340	0	0%	220	0	0%	220
Summer vegetables	0	0%	250	0	0%	160	0	0%	160
2nd vegetables	0	0%	150	0	0%	100	0	0%	100
Green legumes	0	0%	0	0	0%	0	0	0%	0
<b>Tree crops</b>									
Olive	1,080	35%	1,080	1,080	29%	1,080	1,310	35%	1,310
Figs	20	1%	20	20	1%	20	20	1%	20
Other fruits	0	0%	290	0	0%	190	0	0%	190
Poplars	0	0%	0	0	0%	0	0	0%	0
<b>Total</b>	3,090	100%	1,930	107%	5,020	102%	3,090	83%	4,330
<b>Net agricultural land</b>	3,090	63%	1,810	37%	4,900	100%	3,740	76%	4,900

\*. In the lowest case, the area of rainfed crops is assumed to be the same area in the present condition.

\*\*. In the highest case, the area reduced from the present irrigated crops is assumed to be converted to the rainfed cropped area. However, the maximum cropping intensity of rainfed crops is limited to 100%.



Table-E.21 Change in Cropped Area (7/10)  
Ergenli Area 1/2

	Present Condition			"Future without Project" Condition			"Future with Project" Condition		
	Rainfed (ha)	Irrigated (%)	Total (ha)	Rainfed (ha)	Irrigated (%)	Total (ha)	Rainfed (ha)	Irrigated (%)	Total (ha)
<b>Field crops</b>									
Cereals	920	31%	920	1,020	29%	1,020	0	0%	700
Cotton	600	20%	1,400	560	19%	1,170	0	0%	1,160
Tobacco	90	3%	90	100	3%	100	0	0%	0
Potatoes	0	0%	50	0	0%	30	0	0%	230
2nd Potatoes	0	0%	0	0	0%	0	0	0%	0
Other field crops	90	3%	90	100	3%	100	0	0%	0
Fodders	190	6%	190	210	6%	210	0	0%	190
<b>Vegetables</b>									
Watermelon	0	0%	330	0	0%	210	0	0%	470
Summer vegetables	0	0%	230	0	0%	150	0	0%	700
2nd vegetables	0	0%	140	0	0%	90	0	0%	1,080
Green legumes	0	0%	0	0	0%	0	0	0%	370
<b>Tree crops</b>									
Olive	1,020	35%	1,020	1,130	32%	1,130	0	0%	560
Figs	20	1%	20	20	1%	20	0	0%	0
Other fruits	0	0%	280	0	0%	180	0	0%	600
Poplars	0	0%	0	0	0%	0	0	0%	0
<b>Total</b>	2,930	100%	1,830	3,240	91%	4,410	0	0%	6,060
<b>Net agricultural land</b>	2,930	63%	1,720	3,550	76%	4,650	0	0%	4,650

\*: Cropped area under rainfed condition is an average of the lowest and highest cases in Table-E.15 Change in Cropped Area (8/10).

Table-E.21 Change in Cropped Area (8/10)  
Ergenli Area 2/2

	Present Condition			Lowest Case in "Future without Project"*			Highest Case in "Future without Project"***			
	Rainfed	Irrigated	Total	Rainfed	Irrigated	Total	Rainfed	Irrigated	Total	
	(ha)	(%)	(ha)	(%)	(ha)	(%)	(ha)	(%)	(ha)	(%)
<b>Field crops</b>										
Cereals	920	31%	0	0%	920	20%	0	0%	920	20%
Cotton	600	20%	800	47%	1,400	30%	510	46%	1,110	24%
Tobacco	90	3%	0	0%	90	2%	0	0%	90	2%
Potatoes	0	0%	50	3%	50	1%	30	3%	30	1%
2nd Potatoes	0	0%	0	0%	0	0%	0	0%	0	0%
Other field crops	90	3%	0	0%	90	2%	0	0%	90	2%
Fodders	190	6%	0	0%	190	4%	0	0%	190	4%
<b>Vegetables</b>										
Watermelon	0	0%	330	19%	330	7%	210	19%	210	5%
Summer vegetables	0	0%	230	13%	230	5%	150	14%	150	3%
2nd vegetables	0	0%	140	8%	140	3%	90	8%	90	2%
Green legumes	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Tree crops</b>										
Olive	1,020	35%	0	0%	1,020	22%	0	0%	1,020	22%
Figs	20	1%	0	0%	20	0%	0	0%	20	0%
Other fruits	0	0%	280	16%	280	6%	180	16%	180	4%
Poplars	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	2,930	100%	1,830	106%	4,760	102%	2,930	83%	4,100	88%
<b>Net agricultural land</b>	2,930	63%	1,720	37%	4,650	100%	3,550	76%	4,650	100%

\*: In the lowest case, the area of rainfed crops is assumed to be the same area in the present condition.

\*\*\*: In the highest case, the area reduced from the present irrigated crops is assumed to be converted to the rainfed cropped area. However, the maximum cropping intensity of rainfed crops is limited to 100%.

Table-E.21 Change in Cropped Area (9/10)  
Uladi Area 1/2

	Present Condition			"Future without Project" Condition			"Future with Project" Condition									
	Rainfed (ha)	Irrigated (%)	Total (ha)	Rainfed (ha)	Irrigated (%)	Total (ha)	Rainfed (ha)	Irrigated (%)	Total (ha)							
<b>Field crops</b>																
Cereals	640	32%	0	0%	640	20%	710	29%	0	0%	480	15%	480	15%		
Cotton	430	21%	530	45%	960	30%	470	19%	340	45%	810	25%	0	0%	800	25%
Tobacco	60	3%	0	0%	60	2%	70	3%	0	0%	70	2%	0	0%	0	0%
Potatoes	0	0%	30	3%	30	1%	0	0%	20	3%	20	1%	0	0%	160	5%
2nd Potatoes	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other field crops	60	3%	0	0%	60	2%	70	3%	0	0%	70	2%	0	0%	0	0%
Fodders	130	6%	0	0%	130	4%	150	6%	0	0%	150	5%	0	0%	130	4%
<b>Vegetables</b>																
Watermelon	0	0%	220	19%	220	7%	0	0%	140	18%	140	4%	0	0%	320	10%
Summer vegetables	0	0%	160	14%	160	5%	0	0%	100	13%	100	3%	0	0%	480	15%
2nd vegetables	0	0%	100	8%	100	3%	0	0%	60	8%	60	2%	0	0%	740	23%
Green legumes	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	260	8%
<b>Tree crops</b>																
Olive	700	35%	0	0%	700	22%	780	32%	0	0%	780	24%	0	0%	380	12%
Figs	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other fruits	0	0%	190	16%	190	6%	0	0%	120	16%	120	4%	0	0%	420	13%
Poplars	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	2,020	100%	1,230	104%	3,250	102%	2,250	92%	780	103%	3,030	95%	0	0%	4,170	130%
<b>Net agricultural land</b>	2,020	63%	1,180	37%	3,200	100%	2,440	76%	760	24%	3,200	100%	0	0%	3,200	100%

\*: Cropped area under rainfed condition is an average of the lowest and highest cases in Table-E.15 Change in Cropped Area (10/10).

Table-E.21 Change in Cropped Area (10/10)  
Uladi Area 2/2

	Present Condition			Lowest Case in "Future without Project"*			Highest Case in "Future without Project"***					
	Rainfed (ha)	Irrigated (ha)	Total (ha)	Rainfed (%)	Irrigated (%)	Total (%)	Rainfed (ha)	Irrigated (ha)	Total (ha)			
<b>Field crops</b>												
Cereals	640	32%	0	0%	640	20%	780	32%	0	0%	780	24%
Cotton	430	21%	530	45%	960	30%	430	18%	340	45%	770	24%
Tobacco	60	3%	0	0%	60	2%	60	2%	0	0%	60	2%
Potatoes	0	0%	30	3%	30	1%	0	0%	20	3%	20	1%
2nd Potatoes	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other field crops	60	3%	0	0%	60	2%	60	2%	0	0%	60	2%
Fodders	130	6%	0	0%	130	4%	130	5%	0	0%	130	4%
<b>Vegetables</b>												
Watermelon	0	0%	220	19%	220	7%	0	0%	140	18%	140	4%
Summer vegetables	0	0%	160	14%	160	5%	0	0%	100	13%	100	3%
2nd vegetables	0	0%	100	8%	100	3%	0	0%	60	8%	60	2%
Green legumes	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Tree crops</b>												
Olive	700	35%	0	0%	700	22%	700	29%	0	0%	700	22%
Figs	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other fruits	0	0%	190	16%	190	6%	0	0%	120	16%	120	4%
Poplars	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	2,020	100%	1,230	104%	3,250	102%	2,020	83%	780	103%	2,800	88%
<b>Net agricultural land</b>	2,020	63%	1,180	37%	3,200	100%	2,440	76%	760	24%	3,200	100%
							2,440	76%	2,440	76%	2,440	76%
							780	103%	780	103%	780	103%
							760	24%	760	24%	760	24%
							3,200	100%	3,200	100%	3,200	100%

\*: In the lowest case, the area of rainfed crops is assumed to be the same area in the present condition.

\*\*\*: In the highest case, the area reduced from the present irrigated crops is assumed to be converted to the rainfed cropped area. However, the maximum cropping intensity of rainfed crops is limited to 100%.

Table-E.22 Fertilizer application in the Basin (1992-1994)

Items	(tons)							TOTAL
	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	
1992								
N 21%	965	3,467	20,929	7,943	6,196	9,063	2,171	50,734
P 17%	682	1,869	7,480	3,431	1,613	3,070	1,321	19,466
K 50%	88	19	1,333	813	402	519	242	3,416
Total	1,735	5,511	29,742	12,187	8,211	12,652	3,734	73,772
1993								
N 21%	1,915	3,178	23,434	9,648	6,597	9,776	2,429	56,977
P 17%	815	1,491	7,037	3,607	2,255	2,951	1,552	19,708
K 50%	85	78	1,633	1,000	577	669	384	4,426
Total	2,815	4,747	32,104	14,255	9,429	13,396	4,365	81,111
1994								
N 21%	1,485	3,245	17,927	5,165	7,812	9,610	2,611	47,855
P 17%	718	1,503	7,023	1,793	3,352	3,505	2,071	19,965
K 50%	108	104	1,428	300	968	821	430	4,159
Total	2,311	4,852	26,378	7,258	12,132	13,936	5,112	71,979
Average								
N 21%	1,455	3,297	20,763	7,585	6,868	9,483	2,404	51,855
P 17%	738	1,621	7,180	2,944	2,407	3,175	1,648	19,713
K 50%	94	67	1,465	704	649	670	352	4,000
Total	2,287	5,037	29,408	11,233	9,924	13,328	4,404	75,621
kg/ha								
N21%	261	334	535	209	222	290	165	307
P17%	132	164	185	81	78	97	113	117
K50%	17	7	38	19	21	20	24	24

Source : Provincial Office of MARA, Izmir

Table E-23 Present Labor Requirement per hectare by Crop (1/4)

Farm Practices	Cereals (Wheat, Barley, etc.)				Castor				Tobacco			
	Yield: 2,800 kg/ha		Yield: 2,500 kg/ha		Yield: 800 kg/ha		Yield: 800 kg/ha		Yield: 2,500 kg/ha		Yield: 800 kg/ha	
	Name of inputs	Times	Season (month)	Family (mandays)	Hired (mandays)	Machinery (hours)	Name of inputs	Times	Season (month)	Family (mandays)	Hired (mandays)	Machinery (hours)
Plowing - 1	Oct.	1	0.4	0.4								
Plowing - 2	Nov.	1	0.4	0.4								
Harrowing	Nov.	1	0.2	0.2								
Land adjustment	Nov.	2	0.2	0.2								
Land leveling												
Drainage												
Redging	Nov.	1	0.2	0.2								
Seeding												
Seed covering												
Furrow leveling												
Cultivating - 1												
Cultivating - 2												
Cultivating - 3												
Weeding												
Pruning												
Canal cleaning												
Irrigating												
Chemicals												
Manure												
Fertilizer	20,20,20 Urea	1	0.4	0.4								
		1	0.4	0.4								
Harvesting	Jun.		0.5	0.5								
Sorting, Cradling			0.5	0.5								
Bagging, Packing			0.5	0.5								
Transporting			1.0	1.0								
<b>Total</b>			<b>1.8</b>	<b>3.9</b>	<b>3.4</b>							

\* Manday means that a man of 15-40 years old works 10 hours a day.

Table E-23 Present Labor Requirement per hectare by Crop (2/4)

Farm Practices	Potatoes I				Potatoes II				Maize									
	Yield:		Yield:		Yield:		Yield:		Yield:		Yield:							
	28,000 kg/ha	20,000 kg/ha	28,000 kg/ha	20,000 kg/ha	28,000 kg/ha	20,000 kg/ha	28,000 kg/ha	20,000 kg/ha										
Name of inputs	Season (month)	Times	Family (mandays)	Hired (mandays)	Machinery (mandays)	Name of inputs	Season (month)	Times	Family (mandays)	Hired (mandays)	Machinery (mandays)	Name of inputs	Season (month)	Times	Family (mandays)	Hired (mandays)	Machinery (mandays)	
Plowing - 1	Jan.	1	0.5	0.5	0.5		Jul.	1					Jul.	1				
Plowing - 2	Feb.	1	0.5	0.5	0.5		Aug.	1					Jul.	1				
Harrowing	Feb.	1	0.3	0.3	0.3		Aug.	1					Jul.	1				
Land adjustment	Feb.	2	0.6	0.6	0.6		Aug.	1					Jul.	1				
Land leveling													Jul.	1				
Drainage																		
Rodging	Feb.	1	5.0	5.0			Aug.	1	5.0	5.0			Jul.	1	0.4	0.4		0.4
Seeding	Feb.	1	10.0	1.0	1.0		Aug.	1	8.0	1.0	1		Jul.	1				
Seed covering	Feb.	1		0.5	0.5		Aug.	1		0.5	0.5		Jul.	1				
First watering													Jul.	1	1.0			
Cultivating - 1													Aug.	2				
Cultivating - 2	Apr.	1	10.0	0.3	0.3		Sep.	1	10.0	0.3	0.3		Aug.	2				
Cultivating - 3	Apr.	1					Sep.	1										
Weeding																		
Pruning																		
Canal cleaning	May	1	10.0				Aug.	1	10.0				Jul.	1	3.0			
Irrigating	Apr.	5	15.0				Aug/Sep.	3	9.0				Aug.	3	1.0			3.0
Chemicals	M-22	Apr.	1	1.0			Aug.	1	5.0				Aug.	1	1.0			
	Careta-5	Feb.	1	5.0														
Manure																		
Fertilizer	15,15,15	Feb.	1	2.0			Aug.	1	2.0				Jul.	1	0.5			
	Urea	Apr.	1	2.0			Sep.	1	2.0				Aug.	1	0.1			
	P.Sulfate	May	1	2.0														
Harvesting	May/June		2.0	2.0	2.0		Nov.		2.0	1.0	1.0		Sep.	1	10.0			
Sorting, Grading																		
Bagging, Packing																		
Transporting																		
Total				69.0	15.7	5.7			57.0	13.4	4.4				28.00	17.50	3.20	

\* "Manday" means that a man of 15-49 years old works 10 hours a day.

Table E.23 Present Labor Requirement per hectare by Crop (3/4)

		Watermelon, melon				Summer vegetables				Vegetables II					
		Yield:		Yield:		Yield:		Yield:		Yield:		Yield:			
		30,000 kg/ha		32,000 kg/ha		32,000 kg/ha		25,000 kg/ha							
Farm Practices	Name of inputs	Season (month)	Times	Labor requirement (mandays)	Machinery (mandays)	Name of inputs	Season (month)	Times	Labor requirement (mandays)	Machinery (mandays)	Name of inputs	Season (month)	Times	Labor requirement (mandays)	Machinery (mandays)
				Family	Hired				Family	Hired				Family	Hired
Plowing - 1		Jan.	1	0.3	0.3		Nov.	1	1	0.5		Jul.	1	0.5	0.5
Plowing - 2		Feb.	1	0.3	0.3		Jan-Mar.	2	2	0.8		Jul.	1	0.3	0.3
Harrowing		Mar.	1	0.1	0.1		Apr.	1	1	0.3					
Land adjustment		Mar.	2	0.2	0.2										
Drainage															
Redging															
Seeding		Mar.	1	5.0			Apr.	1	1	5.0		Jul.	1	5.0	5.0
Seed covering		Apr.	2	4.0			Apr.	1	1	10.0		Jul.	1	5.0	5.0
First watering	Nylon								1	0.5		Jul.	1	4.0	
Cultivating - 1		May/June	2	20.0			May/June	2	2	20.0		Sep.	1	10.0	10.0
Cultivating - 2		Apr.	2	0.4	0.4										
Cultivating - 3															
Weeding	(Weeding 2)	June/July	1	0.2	0.2		May	1	1	0.3		Aug.	1	0.3	0.3
Pruning		Apr/May/June	6	10.0	8.0		May/Aug.	10	10	15.0		Aug/Sep.	4	8.0	
Canal cleaning															
Ingening															
Chemicals							Insecticide	May/June	2	5.0					
	Basudin	May/June	2	0.2											
	Melathion	June	1	0.1											
		Mar.	1	2.5	2.5										
Mature Fertilizer															
	15:15:15	Feb.	1	0.3			20:20:20	Mar.	1	2.0		Urea	Aug.	1	1.0
	Urea	Apr.	1	0.1			A.Nitrate	June	2	4.0		P.Sulfate	Sep.	1	1.0
	A. Nitrate	May	1	0.2			T.S.P	June	1	2.0					
		June/July		20.0	10.0			July/Aug.		40.0					
Harvesting				2.0	2.0					5.0					
Sorting, Grading				2.0	2.0					1.0					
Bagging, Packing				2.0	2.0					1.0					
Transporting															
Total				66.6	26.0	3.5			109.5	64.5				70.0	44.5

\* "Manday" means that a man of 15-49 years old works 10 hours a day.









Table E-24 Proposed Labor Requirement per hectare by Crop (3/4)

Items	Vegetables II				Green legume				Alfalfa						
	Name of inputs	Season (month)	Times	Yield:		Name of inputs	Season (month)	Times	Yield:		Name of inputs	Season (month)	Times	Yield:	
				Family (mandays)	Hired (mandays)				Family (mandays)	Hired (mandays)				Family (mandays)	Hired (mandays)
Plowing - 1		Jul.	1	0.5	0.5		Jul.	1		0.5		Oct.	1		0.4
Plowing - 2		Jul.	2	0.6	0.6		Jul.	2		0.6		Nov.	1		0.4
Harrowing		Jul.	2	0.4	0.4		Jul.	2		0.4		Nov.	2		0.2
Land adjustment		Jul.	1	5.0	5.0		Jul.	1		5.0		Nov.	1		0.2
Land leveling		Jul.	1	10.0	5.0		Jul.	1		5.0		Nov.	2		0.2
Drainage		Jul.	1	8.0			Jul.	1		8.0					
Seeding		Aug-Sep.	2	20.0	20.0		Aug-Sep.	2		10.0					
Seed covering		Aug-Sep.	2	5.0	5.0		Aug-Sep.	2		5.0					
First watering		Aug-Sep.	6	6.0	6.0		Aug-Sep.	6		6.0					
Cultivating - 1		Aug.	1	2.0			Aug.	1		1.0					
Cultivating - 2		Aug.	1	2.0			Aug.	1		1.0					
Cultivating - 3		Jul.	1	3.0			Jul.	1		3.0					
Weeding		Aug.	1	1.0			Aug.	1		1.0					
Pruning		Aug.	1	2.0			Aug.	1		1.0					
Canal cleaning		Aug.	1	2.0			Aug.	1		1.0					
Irrigating		Aug.	1	2.0			Aug.	1		1.0					
Chemicals		Aug.	1	3.0			Aug.	1		3.0					
Manure		Aug.	1	1.0			Aug.	1		1.0					
Fertilizer		Aug.	1	1.0			Aug.	1		1.0					
		Aug.	1	0.5			Aug.	1		1.0					
Harvesting		Nov.		40.0	30.0		Nov.			50.0		Mar-Jun.		40.0	40.0
Sorting, Grading				5.0	2.0					8.0				2.0	2.0
Bagging, Packing				1.0	1.0					1.0				1.0	1.0
Transporting				111.5	65.5					86.0				39.5	39.5
Total														93.0	93.0

\* 'Manday' means that a man of 15-49 years old works 10 hours a day.

Table E-24 Proposed Labor Requirement per hectare by Crop(4/4)

Items	Grape				Tree Fruits				Yield: 25,000 kg/ha			
	Name of inputs	Season (month)	Times	Labor requirement		Name of inputs	Season (month)	Times	Labor requirement		Machinery	Yield: 25,000 kg/ha
				Family (mandays)	Hired (mandays)				Family (mandays)	Hired (mandays)		
Ploving - 1		Feb.	1	0.5	0.5		Feb.	1	1.0	1.0	1.0	1.0
Ploving - 2		Apr.	2	1.0	1.0		Apr.	1	1.0	1.0	1.0	1.0
Harrowing		Apr.	2	0.4	0.4		Apr.	2	1.0	1.0	1.0	1.0
Land adjustment												
Land leveling												
Drainage												
Redging												
Seeding												
Seed covering												
First watering												
Cultivating - 1		Mar.	2	10.0	10.0		May/June	2	20.0	20.0		
Cultivating - 2		Mar/Apr.	2	10.0	10.0							
Cultivating - 3		Mar.	1	5.0	2.1							
Weeding		Feb-Mar/Apr	2	25.0		(Custawag)	May/June	3	2.1	2.1		2.1
Pruning		Feb.	1	15.0			Feb.	1	5.0	15.0		
Canal cleaning							May/June	2	10.0			
Canal cleaning		Jan-Jul/Aug	4	8.0			May/Aug.	6	9.0			
Chemicals												
Obzags		Mar.	2	0.4			May	1	2.0			
KDKurt		Apr.	2	0.4		Basudin	May	1	2.0			
Kitoc		Apr.	2	0.5		Melathion	June	2	4.0			
Others		Mar/Apr.	3	0.9		Captan 20	June	2	4.0			
Manure		Feb.	1	4.0			Feb.	1	4.0			
Fertilizer												
TSP		Feb.	1	1.0		A.Sulfate	May	2	1.0			
A.Sulfate		Feb.	1	1.0		15.15.15.	June	1	1.0			
A.Nitrate		Apr.	1	1.0		Urea	June	1	1.0			
						T.S.P	May	1	1.0			
Harvesting		Aug.	1	20.0	20.0		June/July	1	50.0	50.0		
Sorting, Grading			1	6.0	6.0							
Bagging, Packing			1	6.0	6.0							
Transporting				1.0	1.0							
Total				100.0	66.0				121.0	99.1		6.1

\* Mandays means 1 man of 15-49 years old works 10 hours a day.

Table E.25 Number of Main Agricultural Machinery in the River Basin

Machinery	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	Total
Tractor								
10HP>	0	49	0	0	0	0	0	49
11-24HP	2	48	30	210	56	355	8	709
25-34HP	25	140	450	530	28	300	164	1,637
35-49HP	151	175	2,050	1,275	966	340	459	5,416
50HP<	35	0	540	1,200	215	1,345	185	3,520
Total	213	412	3,070	3,215	1,265	2,340	816	11,331
<b>(Attachments)</b>								
Plow	0	530	3,500	2,100	1,150	2,450	1,290	11,020
Ridger	302	0	700	2,250	430	150	45	3,877
Disk plow	0	0	0	2,750	0	5	0	2,755
Hoe	305	0	1,300	4,530	1,020	1,650	810	9,615
Broadcaster	0	0	1,600	4,739	725	0	540	7,604
Potato planting machine	18	35	700	19	7	0	0	779
Fertilizer spreader	30	75	450	1,835	595	860	750	4,595
<b>(Other main machinery)</b>								
Shoulder sprayer	396	570	2,500	2,150	2,060	3,075	610	11,361
Sprayer	23	20	350	1,613	640	6,650	290	9,586
Atomizer	35	265	600	1,878	520	430	630	4,358
Centrifugal Motorpump	50	420	220	1,510	875	3,000	72	6,147
Motorpump (Electric)	1,407	900	5,100	620	2,300	1,100	280	11,707
Motorpump (Non-electric)	610	0	900	3,170	2,100	1,000	375	8,155
Trailer	186	335	2,800	3,000	1,200	2,050	800	10,371

Source: Agricultural Structure and Production (1994), Provincial Office of MARA, Izmir

**Table-E.26 Livestock Production in İzmir Province**  
**(a) Number of Livestock in İzmir Province**

Livestock	1990	1991	1992	1993	1994	Average
Cattle	172,569	231,838	232,744	221,570	242,563	220,257
Pure-blooded				72,249	78,395	75,322
Hybrid				99,452	115,828	107,640
Indigenous				49,869	48,340	49,105
Buffalo	261	236	204	214	178	219
Sheep	503,451	512,285	515,767	488,161	468,922	497,717
Goats	205,080	208,889	208,609	209,377	182,382	202,867
Horse	16,195	16,118	16,399	15,111	15,627	15,890
Mule	999	978	940	807	888	922
Donkey	19,422	20,078	20,205	20,988	19,866	20,112
Camel				147	122	135
Swine	6,050	3,940	5,670	3,497	1,330	4,097
Hen	4,226,745	4,602,230	4,491,970	5,974,840	6,497,330	5,158,623
Other poultry	44,730	13,735	33,727	31,765	30,536	30,899

Remark: Figures of Poultry in Beydağ, Kiraz and Torbalı don't include ' for Broiler'

Source: Agricultural Structure and Production, Provincial Office of MARA, İzmir

**(b) Livestock Production in İzmir Province**

Livestock products	1990	1991	1992	1993	1994	Average
Milk	294,340	325,518	337,151	351,781	360,520	333,862
Meats	33,617	32,354	27,709	49,593	48,670	38,389
Fats	2,021	2,182	1,621	1,688	1,762	1,855
Cheese	26,275	20,845	19,751	15,603	20,850	20,665
Wool	858	708	800	757	685	762
Honey	992	1,296	1,203	1,580	1,416	1,297
Eggs (1,000eggs)	862,341	630,503	647,748	789,408	719,448	729,890

Source: Agricultural Structure and Production, Provincial Office of MARA, İzmir

Table-E.27

## Livestock Production Value in the River Basin

## (a) Livestock Production Value by District in the Basin\*

Livestock prod	(Inmillion TL)							Total
	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	
Milk	70,139	243,277	323,808	126,715	216,666	202,174	13,891	1,196,670
Meats	9,143	68,860	236,488	66,543	52,398	74,989	30,812	539,232
Fats	3,168	13,664	12,752	3,696	16,701	848	1,296	52,128
Cheese	11,298	178,080	305,480	50,540	54,712	102,060	5,110	707,280
Wool	350	1,653	2,916	1,343	340	1,366	512	8,478
Honey	472	1,224	6,213	14,480	10,019	8,416	1,534	42,358
Egg(1000eggs)	3,167	5,652	10,226	3,690	8,473	156,000	746	187,954
<b>Total</b>	<b>97,737</b>	<b>512,409</b>	<b>897,883</b>	<b>267,007</b>	<b>359,312</b>	<b>545,853</b>	<b>53,901</b>	<b>2,734,101</b>

Remark: Production Value are given as the average production (1990-1994) multiplied by the average unit price in İzmir in 1994.

Source: "Agricultural Structure and Production" from 1990 to 1994, Provincial Office of MARA, İzmir.

## (b) Crop &amp; Livestock Production Value by District in the Basin\*

Products	(Inmillion TL)							Total
	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	
<b>Crop</b>	<b>428,927</b>	<b>364,875</b>	<b>3,004,698</b>	<b>2,018,694</b>	<b>1,217,779</b>	<b>1,706,868</b>	<b>437,837</b>	<b>9,179,678</b> (77%)
Field crops	123,373	143,698	1,884,930	1,017,983	523,203	842,191	225,664	4,761,042 (40%)
Vegetables	83,760	33,864	694,993	497,655	358,700	412,133	54,652	2,135,756 (18%)
Tree crops	221,794	187,314	424,774	503,056	335,876	452,545	157,521	2,282,881 (19%)
<b>Livestock</b>	<b>97,737</b>	<b>512,409</b>	<b>897,883</b>	<b>267,007</b>	<b>359,312</b>	<b>545,853</b>	<b>53,901</b>	<b>2,734,101</b> (23%)
<b>Total</b>	<b>526,663</b>	<b>877,284</b>	<b>3,902,581</b>	<b>2,285,701</b>	<b>1,577,090</b>	<b>2,252,721</b>	<b>491,738</b>	<b>11,913,779</b> (100%)

Remark: (i) Production Value are given as the average production (1990-1994) multiplied by the average unit price in İzmir in 1994.

(ii) Crop production value is derived from Table -E.13

Source: "Agricultural Structure and Production" from 1990 to 1994, Provincial Office of MARA, İzmir.



Table-E.28 Number of Households Rearing Livestock by Size in the Project Area (1995) (1/2)

Name of Village 1-	(Number of Households Rearing Livestock)																
	Cattle (Rearing Size (heads))					Sheep (Rearing Size (heads))					Goats (Rearing Size (heads))						
	5-	11-	51-	101<	Total	1-	11-	51-	101-	501<	Total	1-	11-	51-	101-	501<	Total
4	10	50	100			10	50	100	500		10	50	100	500			
<b>Beydağ</b>																	
Beydağı	25	90	15	0	0	130	0	0	2	0	0	2	0	0	0	0	0
Alakeçili	6	5	3	0	0	14	1	1	0	0	0	2	0	0	0	0	0
Halköy	20	26	4	0	0	50	6	3	4	0	0	13	0	0	0	0	0
Sankaya	18	6	2	0	0	26	0	0	5	0	0	5	0	0	0	0	0
Tosunlar	20	15	15	0	0	50	2	0	7	1	0	10	0	0	0	0	0
Yağcılar	24	23	0	0	0	47	10	2	4	2	0	18	0	1	0	0	1
<b>Total</b>	<b>113</b>	<b>165</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>317</b>	<b>19</b>	<b>6</b>	<b>22</b>	<b>3</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>Ödemiş</b>																	
<b>(Merkez)</b>																	
Büyükavluçak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Demircili	82	30	18	1	0	131	0	2	0	0	0	2	0	0	0	0	0
Gerçekli	30	30	8	0	0	68	0	20	2	0	0	22	0	0	0	0	0
Gereli	190	55	31	0	0	276	0	3	1	0	0	4	0	0	0	0	0
Karakova	21	4	4	3	0	32	0	0	2	0	0	2	0	0	0	0	0
Ocah	49	22	2	0	0	73	0	0	0	0	0	0	0	0	0	0	0
Ödemiş	653	416	164	14	2	1249	0	1	9	1	0	11	0	0	0	0	0
Seyrekli	100	50	14	3	0	167	0	1	2	1	0	4	0	0	0	0	0
Yolüstü	123	82	54	0	0	259	25	10	3	0	0	38	0	0	0	0	0
<b>(Bademli)</b>																	
Emirli	144	28	2	0	0	174	0	0	9	0	0	9	0	0	1	0	1
Mescitli	164	39	9	0	0	212	0	0	4	0	0	4	0	0	0	0	0
<b>(Birgi)</b>																	
Kırlaköy	9	3	0	0	0	12	0	8	0	0	0	8	0	0	0	0	0
<b>(Kaymakçı)</b>																	
Kaymakçı	453	115	30	0	0	598	0	11	6	3	0	20	0	0	0	0	0
Alağarlı	100	10	2	0	0	112	0	6	3	1	0	10	0	0	0	0	0
Çaylı	160	30	8	0	0	198	0	8	4	3	0	15	0	0	0	0	0
Ertuğrul	74	31	10	0	0	115	0	5	3	2	0	10	0	0	0	0	0
Kızılcaavlu	90	3	0	0	0	93	0	9	0	0	0	9	0	0	0	0	0
Kuruçaova	284	160	21	0	0	465	0	26	4	0	0	30	0	0	0	0	0
Türkönü	65	18	1	0	0	84	0	5	1	0	0	6	0	0	0	0	0
Eselli	33	7	0	0	0	40	0	5	2	0	0	7	0	0	0	0	0
Yeşilköy	60	10	0	0	0	70	0	8	5	0	0	13	0	2	2	0	4
<b>(Ovakent)</b>																	
Ovakent	96	61	19	0	0	176	0	0	5	2	0	7	0	0	0	2	2
Balabanlı	60	18	4	0	0	82	0	2	7	3	0	12	0	1	1	0	2
Bozeyayaka	28	20	5	0	0	53	0	0	5	0	0	5	0	0	4	1	5
Kazanlı	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Konaklı	60	30	10	0	0	100	0	0	5	0	0	5	0	0	0	0	0
<b>Total</b>	<b>3,128</b>	<b>1,272</b>	<b>416</b>	<b>21</b>	<b>2</b>	<b>4,839</b>	<b>25</b>	<b>130</b>	<b>82</b>	<b>16</b>	<b>0</b>	<b>253</b>	<b>0</b>	<b>3</b>	<b>8</b>	<b>3</b>	<b>14</b>
<b>Tire</b>																	
Kızılcaavulu	41	30	10	0	0	81	0	2	5	1	0	8	0	0	0	0	0
Yeğenli	43	9	2	0	0	54	0	4	3	0	0	7	0	0	1	0	1
<b>Total</b>	<b>84</b>	<b>39</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>135</b>	<b>0</b>	<b>6</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>
<b>Grand total</b>	<b>3,325</b>	<b>1,476</b>	<b>467</b>	<b>21</b>	<b>2</b>	<b>5,291</b>	<b>44</b>	<b>142</b>	<b>112</b>	<b>20</b>	<b>0</b>	<b>318</b>	<b>0</b>	<b>4</b>	<b>9</b>	<b>3</b>	<b>16</b>
<b>(%)</b>	<b>63</b>	<b>28</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>14</b>	<b>45</b>	<b>35</b>	<b>6</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>25</b>	<b>56</b>	<b>19</b>	<b>0</b>

Source: Provincial Office of MARA, İzmir.

**Table E.28 Number of Main Livestock and Rearing Households in the Project Area (1995) (2/2)**

Name of Village	Cattle			Sheep			Goats		
	Number of Heads	Rearing Households	Heads per Household	Number of Heads	Rearing Households	Heads per Household	Number of Heads	Rearing Households	Heads per Household
<b>Beydağ</b>									
Beydağ	1,410	130	11	150	2	75	0	0	
Alakeşili	185	14	13	125	2	63	0	0	
Halıköy	311	50	6	324	13	25	0	0	
Sankaya	130	26	5	430	5	86	0	0	
Tosunlar	305	50	6	725	10	73	0	0	
Yağcılar	304	47	6	965	18	54	45	1	45
<b>Total</b>	<b>2,645</b>	<b>317</b>	<b>8</b>	<b>2,719</b>	<b>50</b>	<b>54</b>	<b>45</b>	<b>1</b>	<b>45</b>
<b>Ödemiş</b>									
<b>(Merkez)</b>									
Büyükavlucak	0	0		0	0		0	0	
Demircili	1,000	131	8	224	2	112	0	0	
Gerçekli	260	68	4	1,100	22	50	0	0	
Gereli	1,500	276	5	240	4	60	0	0	
Karakova	280	32	9	387	2	194	0	0	
Ocaklı	180	73	2	0	0		0	0	
Ödemiş	10,162	1,249	8	1,400	11	127	0	0	
Seyrekli	1,200	167	7	440	4	110	0	0	
Yolüstü	1,480	259	6	550	38	14	0	0	
<b>(Bademli)</b>									
Emirli	386	174	2	990	9	110	102	1	102
Mescitli	600	212	3	375	4	94	0	0	
<b>(Birgi)</b>									
Kırlaköy	45	12	4	328	8	41	0	0	
<b>(Kaymakçı)</b>									
Kaymakçı	1,930	598	3	1,630	20	82	0	0	
Alaşarlı	405	112	4	990	10	99	0	0	
Çaylı	824	198	4	1,230	15	82	0	0	
Ertuğrul	270	115	2	930	10	93	0	0	
Kızılcaavlu	270	93	3	551	9	61	0	0	
Kurucaova	1,360	465	3	3,310	30	110	0	0	
Türkönü	160	84	2	400	6	67	0	0	
Eselli	97	40	2	500	7	71	0	0	
Yeşilköy	150	70	2	1,020	13	78	290	4	73
<b>(Ovakent)</b>									
Ovakent	1,000	176	6	1,034	7	148	401	2	201
Balabanlı	310	82	4	890	12	74	147	2	74
Bozcayaka	330	53	6	525	5	105	722	5	144
Kazanlı	0	0	0	0	0	0	0	0	
Konaklı	652	100	7	657	5	131	0	0	
<b>Total</b>	<b>24,851</b>	<b>4,839</b>	<b>5</b>	<b>19,701</b>	<b>253</b>	<b>78</b>	<b>1,662</b>	<b>14</b>	<b>119</b>
<b>Tire</b>									
Kızılcaavulu	445	81	5	690	8	86	0	0	
Yegenli	350	54	6	500	7	71	100	1	100
<b>Total</b>	<b>795</b>	<b>135</b>	<b>6</b>	<b>1,190</b>	<b>15</b>	<b>79</b>	<b>100</b>	<b>1</b>	<b>100</b>
<b>Grand total</b>	<b>28,291</b>	<b>5,291</b>	<b>5</b>	<b>23,610</b>	<b>318</b>	<b>74</b>	<b>1,807</b>	<b>16</b>	<b>113</b>

Source: Provincial Office of MARA, İzmir

Table-E.29

## Population, Farmland and Cropped area in Farmers' Household Survey (1995)

	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbah	Seçuk	Total	Per farm
<b>Population</b>									
Male	54.0	41.0	126.0	96.0	79.0	130.0	43.0	569.0	2.8
Female	50.0	43.0	118.0	92.0	81.0	119.0	38.0	541.0	2.6
Farm worker	60.0	57.0	141.0	105.0	88.0	140.0	43.0	634.0	3.1
<b>Farm land (decar)</b>									
Total	543.0	456.5	2,031.5	3,895.0	2,774.0	6,307.2	1,203.0	17,210.2	84.0
Annual crops	280.5	414.0	1,863.0	3,641.0	2,192.0	5,503.2	811.0	14,704.7	71.7
Trees	207.5	34.0	168.5	248.0	583.0	807.0	392.0	2,440.0	11.9
Others	55.0	9.5	0.0	6.0	0.0	0.0	0.0	70.5	0.3
<b>Cropped area (decar)</b>									
Wheat	30.0	68.5	145.0	382.0	513.0	1,287.0	204.0	2,629.5	12.8
Barley	32.0	14.0	68.0	23.0	151.0	109.0	21.0	418.0	2.0
Oats	10.0	0.0	0.0	0.0	11.0	35.0	0.0	56.0	0.3
Maise	10.0	10.0	81.0	16.0	120.0	50.0	0.0	287.0	1.4
Cotton	27.0	101.0	766.0	2,721.0	848.0	3,174.0	526.0	8,163.0	39.8
Tobacco	5.0	46.5	17.0	47.0	0.0	63.0	0.0	178.5	0.9
Sesame	0.0	0.0	0.0	0.0	0.0	35.0	0.0	35.0	0.2
Potatoes	111.0	14.0	189.5	40.0	84.0	0.0	0.0	438.5	2.1
Others	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0	0.1
Alfalfa	6.0	0.0	16.0	46.0	108.0	4.0	0.0	180.0	0.9
Vetches	0.0	3.0	0.0	0.0	0.0	50.0	20.0	73.0	0.4
Others	20.0	0.0	10.0	0.0	0.0	5.0	0.0	35.0	0.2
Watermelon	52.5	44.0	253.0	353.5	176.0	235.0	27.0	1,141.0	5.6
Melon	0.0	1.0	0.0	8.0	0.0	0.0	0.0	9.0	0.0
Cucumber	0.0	47.5	81.5	12.0	29.0	75.0	13.0	258.0	1.3
Tomatoes	0.0	12.5	69.0	0.0	13.0	12.0	0.0	106.5	0.5
Peppers	18.0	0.0	72.0	31.0	21.0	18.0	0.0	160.0	0.8
Eggplant	0.0	0.0	19.0	0.0	5.0	0.0	0.0	24.0	0.1
Okra	0.0	0.0	9.0	0.0	0.0	0.0	0.0	9.0	0.0
Cabbages	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Cauliflower	0.0	3.0	0.0	0.0	0.0	1.0	0.0	4.0	0.0
Lettuce	0.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Celery	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Leek	0.0	0.0	0.0	0.0	0.0	13.0	0.0	13.0	0.1
Legumes	16.0	2.0	75.5	15.0	11.0	4.0	0.0	123.5	0.6
Others	3.0	13.0	8.5	32.0	103.0	98.0	0.0	257.5	1.3
Olive	10.5	5.0	51.5	140.0	381.0	674.0	283.0	1,545.0	7.5
Figs	93.5	8.0	29.0	15.0	0.0	24.0	0.0	169.5	0.8
Peaches	0.0	0.0	8.0	17.0	24.0	22.0	29.0	100.0	0.5
Plums	0.0	0.0	2.0	0.0	2.0	0.0	0.0	4.0	0.0
Apples	8.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0
Mandarin	0.0	0.0	21.0	0.0	36.0	0.0	68.0	125.0	0.6
Chestnuts	45.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.2
Walnuts	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Grapes	6.0	0.0	5.0	10.0	17.0	79.0	0.0	117.0	0.6
Others	17.5	0.0	14.0	18.0	40.0	0.0	2.0	91.5	0.4
Populas	0.0	9.5	9.0	0.0	19.0	0.0	0.0	37.5	0.2
<b>Total</b>	<b>531.0</b>	<b>412.5</b>	<b>2,019.5</b>	<b>3,926.5</b>	<b>2,712.0</b>	<b>6,295.0</b>	<b>1,193.0</b>	<b>17,089.5</b>	<b>83.4</b>
<b>(Total trees)</b>	<b>207.5</b>	<b>41.5</b>	<b>159.5</b>	<b>248.0</b>	<b>638.0</b>	<b>997.0</b>	<b>372.0</b>	<b>2,663.5</b>	<b>13.0</b>
<b>Irrigated Crops</b>	<b>264.5</b>	<b>276.0</b>	<b>1,818.0</b>	<b>3,472.5</b>	<b>1,677.0</b>	<b>4,336.0</b>	<b>578.0</b>	<b>12,422.0</b>	<b>60.6</b>
<b>Irrigated Trees</b>	<b>118.0</b>	<b>9.5</b>	<b>98.0</b>	<b>45.0</b>	<b>120.0</b>	<b>270.0</b>	<b>100.0</b>	<b>760.5</b>	<b>3.7</b>

Source: Farmers' Household Survey conducted by JICA Study Team in 1995

**Table-E.30 Hired Labor**

(a) Hired Labor per farm (unit: manday)

Crop	Wheat	Cotton	Tobacco	Potatoes	Watermelon	Cucumber	Pepper	Green beans	Olive	Grapes	Mandarins
Number of farm	6	119	11	17	41	15	16	3	15	3	2
Cropped area (ha)	3.0	6.8	0.7	1.6	1.6	1.3	0.7	2.6	4.0	1.3	1.2
Land preparation	8.6	9.8	0.0	5.0	11.7	1.0	3.5	10.0	6.3	0.0	4.0
Planting	5.5	4.7	24.6	5.7	12.3	10.7	9.2	1.0	17.3	15.0	0.0
Cultivating	10.0	47.4	5.3	9.7	17.9	11.7	9.4	8.0	1.0	15.0	3.0
Fertilizer application	1.5	2.0	0.0	1.0	1.5	2.0	1.0	0.0	1.0	2.0	2.0
Chemical application	1.5	1.8	0.0	1.0	1.6	1.3	2.0	0.0	2.0	2.0	3.0
Irrigation	1.5	21.4	1.0	1.0	2.1	3.2	1.3	0.0	0.0	2.0	2.5
Weeding	1.0	16.0	0.0	5.4	4.6	7.0	2.0	6.0	3.0	0.0	0.0
Harvesting	11.7	94.9	35.9	29.7	23.6	69.1	22.7	25.0	37.4	15.0	13.0
Sorting-Packing	5.7	10.1	3.0	14.2	3.7	5.0	26.0	1.0	57.5	6.0	0.0
Post-harvest	0.0	5.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0
Transporting	1.5	1.4	1.0	1.4	1.3	1.0	1.3	1.0	1.3	0.0	0.0
Others	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	48.5	215.5	72.8	74.1	82.3	112.0	78.4	52.0	128.8	57.0	27.5

(b) Hired Labour per hectare (unit: manday)

Crop	Wheat	Cotton	Tobacco	Potatoes	Watermelon	Cucumber	Pepper	Green beans	Olive	Grapes	Mandarins
Number of farm	6	119	11	17	41	15	16	3	15	3	2
Cropped area (ha)	3.0	6.8	0.7	1.6	1.6	1.3	0.7	2.6	4.0	1.3	1.2
Land preparation	2.9	1.4	0.0	3.1	7.3	0.8	5.0	3.8	1.6	0.0	3.3
Planting	1.8	0.7	35.1	3.6	7.7	8.2	13.1	0.4	4.3	11.5	0.0
Cultivating	3.3	7.0	7.6	6.1	11.2	9.0	13.4	3.1	0.3	11.5	2.5
Fertilizer application	0.5	0.3	0.0	0.6	0.9	1.5	1.4	0.0	0.3	1.5	1.7
Chemical application	0.5	0.3	0.0	0.6	1.0	1.0	2.9	0.0	0.5	1.5	2.5
Irrigation	0.5	3.1	1.4	0.6	1.3	2.5	1.9	0.0	0.0	1.5	2.1
Weeding	0.3	2.4	0.0	3.4	2.9	5.4	2.9	2.3	0.8	0.0	0.0
Harvesting	3.9	14.0	51.3	18.6	14.8	53.2	32.4	9.6	9.4	11.5	10.8
Sorting-Packing	1.9	1.5	4.3	8.9	2.3	3.8	37.1	0.4	14.4	4.6	0.0
Post-harvest	0.0	0.7	2.9	0.0	1.3	0.0	0.0	0.0	0.5	0.0	0.0
Transporting	0.5	0.2	1.4	0.9	0.8	0.8	1.9	0.4	0.3	0.0	0.0
Others	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	16.2	31.7	104.0	46.3	51.4	86.2	112.0	20.0	32.2	43.8	22.9

Remarks

1) Number of farms hired labour : 136 (66% to total 205 farms)

2) Average farm size of 1) : 11.7 ha

Table-E.31 (a) Farmers' Intention for crop growing with project

Summer Crops	Districts							Total
	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	
<b>Priority 1</b>								
Cotton	5	2	21	17	19	25	9	98
Potatoes	2	3	6	1	0	0	0	12
Watermelon	3	3	2	1	1	0	0	10
Cucumbers	0	2	0	1	1	2	1	7
Peaches	0	0	0	4	1	1	1	7
Tomatoes	0	1	0	1	1	3	0	6
Maise	0	0	2	2	1	1	0	6
Citrus	1	0	0	0	2	1	2	6
Peppers	0	0	0	0	2	2	0	4
Green beans	2	0	0	0	0	1	0	3
Fruit trees	0	0	3	6	1	1	1	12
Vegetables	1	0	1	2	1	1	0	6
Green house	0	0	9	0	0	0	0	9
Others	1	3	2	0	0	3	0	9
<b>Total</b>	<b>15</b>	<b>14</b>	<b>46</b>	<b>35</b>	<b>30</b>	<b>41</b>	<b>14</b>	<b>195</b>
<b>Priority 2</b>								
Watermelon	4	3	9	8	6	4	4	38
Cotton	2	2	2	5	3	2	1	17
Potatoes	0	1	7	3	2	0	0	13
Maise	1	0	1	5	1	3	3	14
Tomatoes	0	1	2	0	1	4	1	9
Cucumbers	0	3	3	0	2	1	0	9
Peppers	0	0	3	1	1	1	0	6
Citrus	1	0	2	0	0	1	1	5
Figs	1	0	1	0	0	0	0	2
Vegetables	0	1	10	6	3	11	3	34
Fruits trees	3	1	2	2	2	5	0	15
Others	1	2	1	1	5	7	0	17
<b>Total</b>	<b>13</b>	<b>14</b>	<b>43</b>	<b>31</b>	<b>26</b>	<b>39</b>	<b>13</b>	<b>179</b>
<b>Priority 3</b>								
Watermelon	2	3	4	3	4	5	0	21
Potatoes	3	0	3	3	5	0	0	14
Cotton	0	1	3	1	1	6	0	12
Cucumbers	0	3	1	1	2	1	1	9
Maise	0	1	2	2	1	2	1	9
Tomatoes	1	3	0	0	2	0	0	6
Peppers	0	0	2	0	1	0	0	3
Vegetables	1	0	5	6	2	6	4	24
Fruits trees	0	0	7	3	1	4	0	15
Others	1	0	5	0	2	3	2	13
<b>Total</b>	<b>8</b>	<b>11</b>	<b>32</b>	<b>19</b>	<b>21</b>	<b>27</b>	<b>8</b>	<b>126</b>

Source: Farmers' Household Survey in 1995

Table-E.31 (b) Farmers' Intention for crop growing with project

Winter Crops	Districts							Total
	Beydağ	Kiraz	Odeniş	Tire	Bayındır	Torbali	Selçuk	
<b>Priority 1</b>								
Cabbages	2	9	8	5	3	10	1	38
Potatoes	6	1	6	3	0	0	0	16
Celery	0	0	4	5	3	3	0	15
Cauliflower	2	1	2	1	4	4	0	14
Leek	0	1	0	1	0	6	0	8
Lettuce	0	0	0	0	2	3	1	6
Wheat	0	0	1	0	1	2	0	4
Barley	2	0	1	1	0	0	0	4
Vegetables	1	1	8	10	4	6	6	36
Others	1	0	2	3	5	4	1	16
<b>Total</b>	<b>14</b>	<b>13</b>	<b>32</b>	<b>29</b>	<b>22</b>	<b>38</b>	<b>9</b>	<b>157</b>
<b>Priority 2</b>								
Leek	1	5	4	8	4	3	1	26
Cabbages	1	2	6	3	4	4	0	20
Cauliflower	0	1	3	1	1	13	0	19
Lettuce	3	1	0	1	1	3	0	9
Celery	0	1	1	0	2	2	1	7
Spinach	0	1	2	0	1	2	0	6
Potatoes	1	2	3	0	0	0	0	6
Vegetables	3	0	3	1	2	1	0	10
Others	2	0	1	4	0	1	2	10
<b>Total</b>	<b>11</b>	<b>13</b>	<b>23</b>	<b>18</b>	<b>15</b>	<b>29</b>	<b>4</b>	<b>113</b>
<b>Priority 3</b>								
Leek	0	2	5	2	3	1	0	13
Spinach	0	0	2	2	1	6	1	12
Cauliflower	1	2	2	0	3	3	0	11
Cabbages	0	0	1	2	0	2	1	6
Lettuce	0	0	1	0	2	3	0	6
Celery	0	0	1	0	0	4	0	5
Wheat	1	1	0	1	0	1	0	4
Others	3	3	3	4	0	2	0	15
<b>Total</b>	<b>5</b>	<b>8</b>	<b>15</b>	<b>11</b>	<b>9</b>	<b>22</b>	<b>2</b>	<b>72</b>

Source: Farmers' Household Survey in 1995

**Table-E.32 Current constraints for crop production with Project**

Constraints	(unit: number of answers)								Total	(%)
	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk			
1 Lack of irrigation	11	12	42	33	28	32	9	167	37.1	
2 Lack of farm machinery	2	2	5	3	4	4	0	20	4.4	
3 Small size of farm land	1	2	10	8	4	6	2	33	7.3	
4 Inadequate farm inputs	7	6	17	7	3	15	5	60	13.3	
5 Shortage of labour force	1	1	7	6	5	8	2	30	6.7	
6 Lack of post harvest facilities	1	1	1	0	0	0	0	3	0.7	
7 Lack of transportation means	3	0	0	0	1	2	0	6	1.3	
8 Lack of market information	5	7	16	14	7	14	2	65	14.4	
9 Lack of technical information	6	6	15	10	5	15	3	60	13.3	
10 Others	0	0	1	2	2	0	1	6	1.3	
<b>Total</b>	<b>37</b>	<b>37</b>	<b>114</b>	<b>83</b>	<b>59</b>	<b>96</b>	<b>24</b>	<b>450</b>	<b>100.0</b>	

**Table-E.33 Recommendable Project components**

Component	(unit: weighted point *)								Total	(%)
	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk			
1 Irrigation development	39	42	123	102	85	98	30	519	45.1	
2 Drainage improvement	0	1	0	0	0	0	2	3	0.3	
3 Flood control	0	0	3	0	0	0	1	4	0.3	
4 Farm-to-market road	10	2	0	3	8	3	0	26	2.3	
5 Improvement of farm input suğ	13	13	55	16	14	49	14	174	15.1	
6 Pest and diseases control	11	8	14	12	10	16	6	77	6.7	
7 Introduction of new crops	0	2	14	7	3	11	1	38	3.3	
8 Post harvest facilities	0	0	1	1	0	0	0	2	0.2	
9 Marketing facilities	8	12	26	25	16	35	6	128	11.1	
10 Agricultural extension services	16	4	28	30	20	37	14	149	13.0	
11 Farm mechanization	0	1	4	0	0	5	0	10	0.9	
12 Others	0	0	2	8	3	2	5	20	1.7	
<b>Total</b>	<b>97</b>	<b>85</b>	<b>270</b>	<b>204</b>	<b>159</b>	<b>256</b>	<b>79</b>	<b>1150</b>	<b>100.0</b>	

\* Figures are weighted as 3point for first desire, 2point for second one, and 1point for third one.

Table E.34 Number of Agricultural Cooperatives by District in the Basin

Items	Beydağ	Kiraz	Ödemiş	Tire	Bayındır	Torbali	Selçuk	Total
Agricultural Development Cooperatives	2	6	19	17	20	24	3	91
(1) Irrigation		2	9	6	12	11	1	41
(2) Village Development	2	4	10	11	8	13		48
General	1	1	6	3	2	6		13
Olive oil						2		17
Olive pickles					2			2
Milk production	1	1	2	1	2			7
Forestry		2						2
Chestnut selling			1					1
Water melon selling				1				1
Canning				1				1
Honey selling						1		0
Firewood		1						0
Flour mill						1		1
Storage						1		1
(3) Aqua foods							2	2
Agricultural credit cooperatives	2	4	12	11	6	13	2	
Agricultural sales cooperatives			3	3	3	3	3	15
Figs marketing coop.			1	1	1	1	1	5
Cotton marketing coop.			1	1	1	1	1	5
Olive marketing coop.			1	1	1	1	1	5



**Table-E.35 Agricultural Cooperatives in the Project Area**

Cooperatives	No. of members	R e m a r k s		
<b>1. Village Development Coop.</b>		<u>Activities</u>		
Beydağ				
Beydağ Merkez V.D.C.	289			Olive oil processing
Ödemiş				
Demircili V.D.C.	278			Olive oil processing
Konaklı V.D.C.	923			Olive oil and Milk processing
<b>2. Irrigation Coop.</b>		<u>Activities</u>		
Ödemiş				
Büyükkaylıcuk I.C.	213			Irrigation by groundwater
Demircili I.C.	137			Irrigation by groundwater
Kaymakçı I.C.	77			Irrigation by groundwater
Yolüstü I.C.	325			Irrigation by groundwater
Küçükaylıcuk	228			
Total	980			
<b>3. Agricultural Credit Coop.</b>		<u>Amount of loan (million TL)</u>		
		<u>1992</u>	<u>1993</u>	<u>1994</u>
Beydağ				
Beydağ Merkez Cred.C.	650	3,606	5,538	11,321
Yağcılar Cred. C.	301	2,980	4,340	9,773
Sub total	951	6,586	9,878	21,094
Ödemiş				
Ödemiş Merkez Cred. C.	450	2,753	4,354	8,090
Adagüne Cred. C.	537	1,151	2,393	4,989
Ovakent Cred. C.	534	1,758	3,489	8,557
Kaymakçı Cred. C.	625	2,054	3,628	8,501
Çaylı Cred. C.	558	3,347	6,116	12,479
Yolüstü Cred. C.	575	3,227	4,856	5,909
Sub total	3,279	14,290	24,836	48,525
Total	4,230	20,876	34,714	69,619
<b>4. Agricultural Sales Coop.</b>		<u>Storage capacity</u>	<u>Ginning amounts</u>	
		(tons)	(t/year)	
Ödemiş District				
Cotton agri. marketing c.	1,918	6,000	8,000	
Fig agri. marketing c.	430	2,000		
Olive agri. marketing c.	210	50 (oil)		
Total	2,558	8,050	8,000	
Tire District				
Cotton agri. marketing c.	2,281	2,250	10,000	
Fig agri. marketing c.	747	250		
Olive agri. marketing c.	178	50 (oil)		
Total	3,206	2,550	10,000	

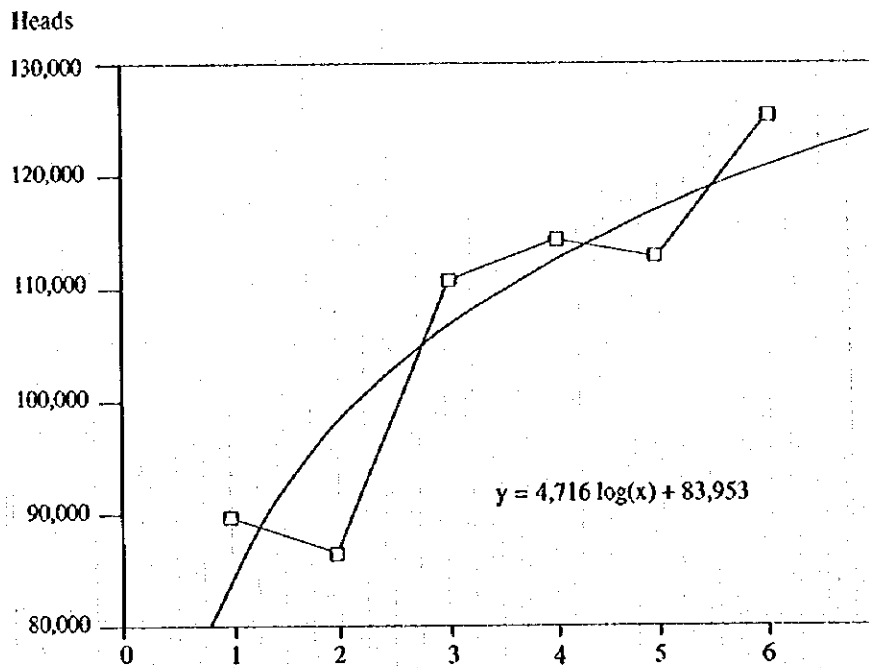
Source: DSI, Aegean area Credit Cooperative Office

Table-E.36 Personnel Disposition of MARA, İZMİR Provincial Office (1995)

Speciality	S t a f f														Total								
	Management Staff	Engineer	Veterinarian	Economist	Senior agricultural engineer	Forest engineer	Food engineer	Chemical engineer	Machinery engineer	Electric engineer	Biologist	Veterinarian	Agricultural technician	Veterinary technician		Home economic technician	Laboratory staff	Technician	Assistant technician	Economist	Other staff	Laborer	
<b>Provincial Office</b>																							
Provincial Director	1																						1
Provincial Deputy Director		1																					1
Project & Statistic Division	1				43						1	10	10	5		2							87
Crop Protection Division	1		1		28						14	3	3	7			1	1					35
Livestock Division	1				42						1	34			18		1	1					27
Farmers' training Division	1				16						1	2	2	1	1		1	2					101
Supporting Division	1				37						2	3	3		1		1		3				33
Inspection Division	1				1		1	3	2	1	2	3	3		1		1						64
Administrative Division	6	2	1	1	167		1	3	2	1	3	28	79	14	20	2	20	8	3	70	45		151
Sub total																							500
<b>District Office</b>																							0
Beydağ District	1				3						1	3	2	2			1						16
Kiraz District		1			2						2	2	2	2									14
Ödemiş District			1		8						2	11	6	6	2				1				42
Tire District	1				5						3	11	7	7	1								35
Bayındır District	1				2						2	4	3	3	1								18
Torbali District	1				9						3	14	4	4	6		1						45
Selçuk District	1				6						1	6	2	2	1								22
Subtotal	5	2			35						14	51	26	11		3		1		29	16		193
Other 11 Districts	9	3			55						19	85	29	22		4	5			41	21		294
District Total	14	5			90						33	136	55	33		6	5			70	37		486
Custom & Quarantine Office		1									4									5			10
Grand total	20	8	1		257		2	3	2	1	3	65	215	69	53	2	26	13	4	145	107		996

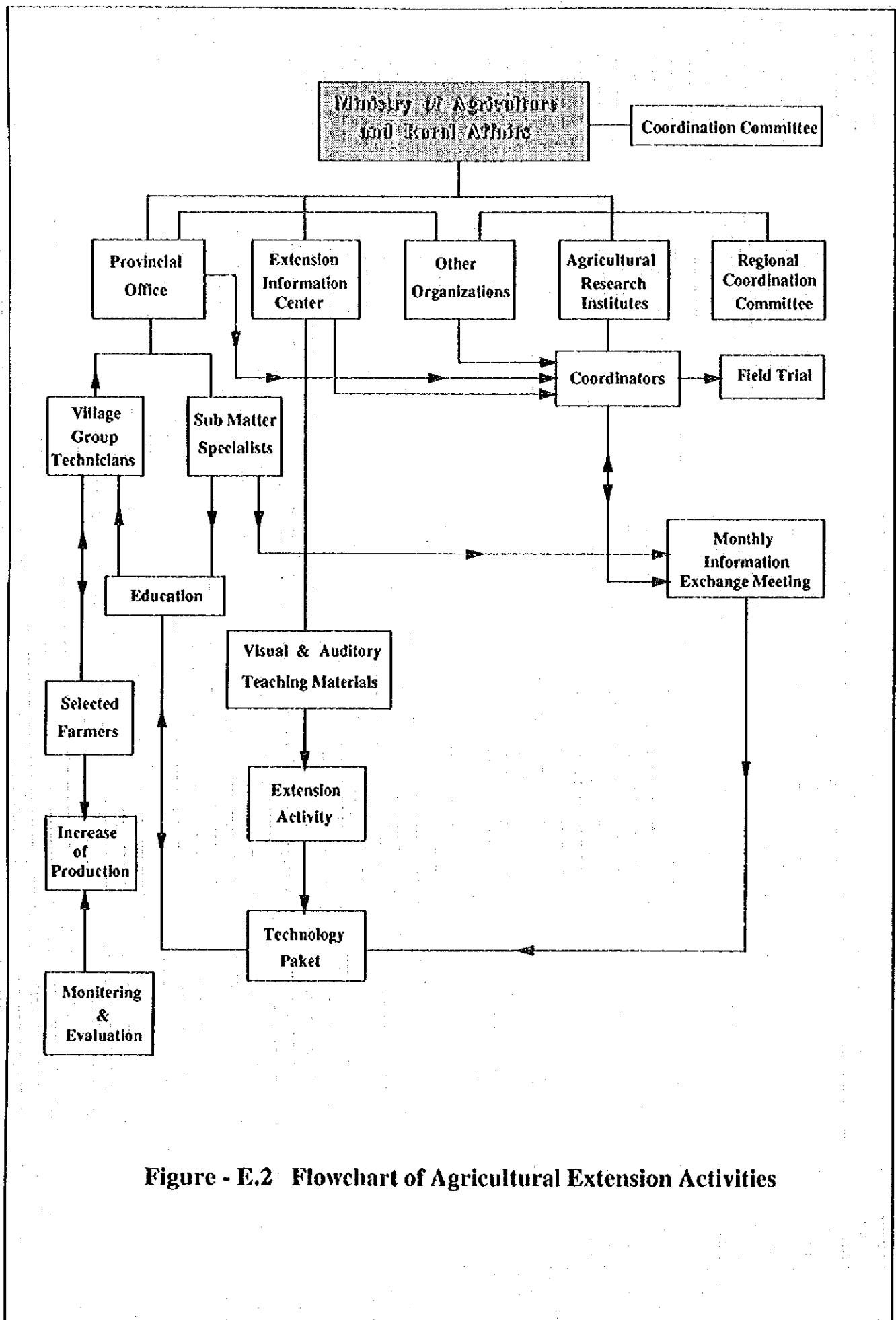
Source: Provincial Office of MARA, İzmir.

## *FIGURES*



	Year	Cattle Heads
1	1989	89,530
2	1990	86,319
3	1991	110,823
4	1992	114,198
5	1993	112,675
6	1994	124,928

**Figure-E.1 The Trend Curve of Cattle Breeding in the Study Area**



**Figure - E.2 Flowchart of Agricultural Extension Activities**

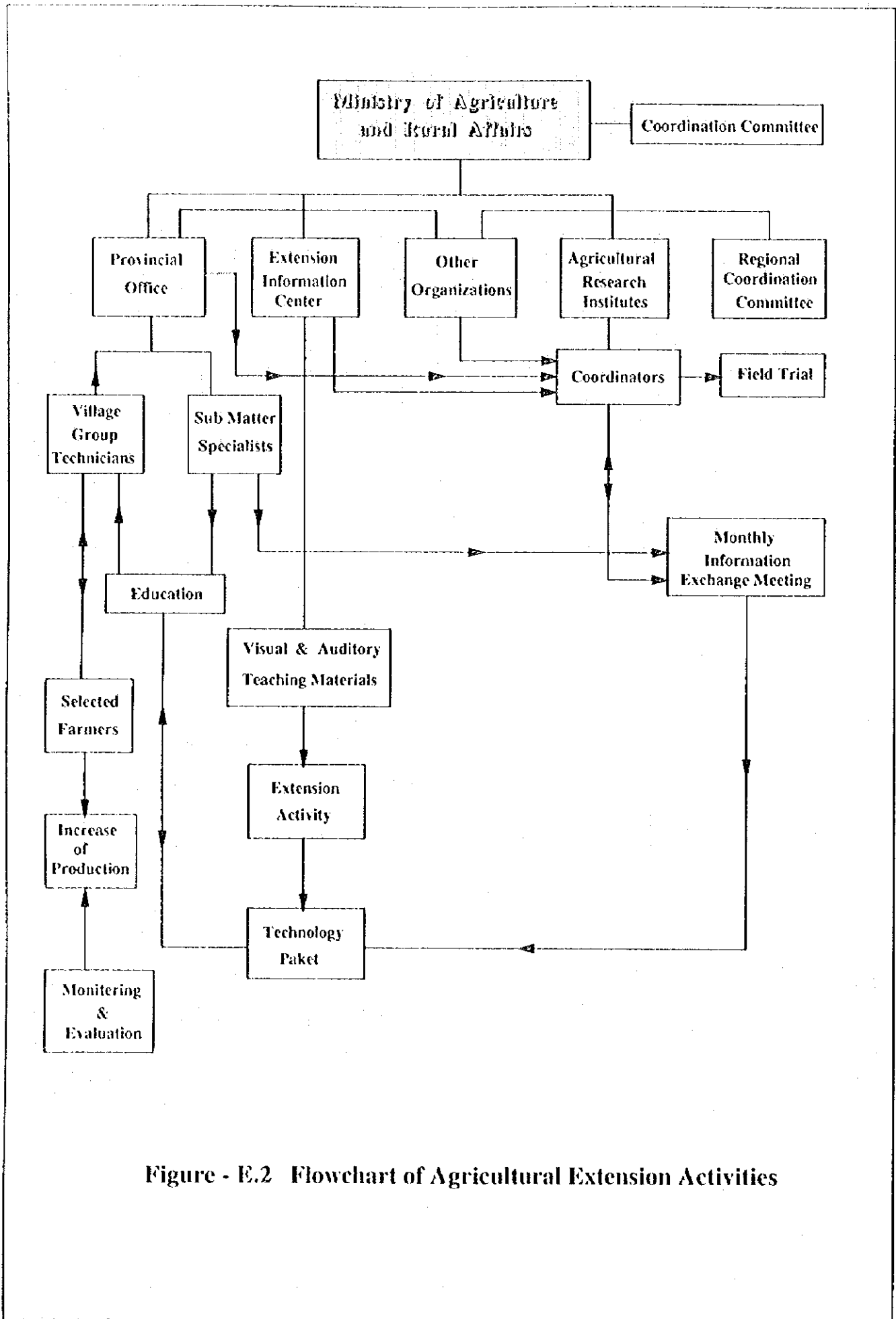


Figure - E.2 Flowchart of Agricultural Extension Activities