



Presidency of the Islamic Republic of Iran
Plan and Budget Organization
Statistical Centre of Iran

Selected Results of Permanent Crops (Horticulture) Survey, the Year 1398¹

¹- It is the Iranian year which usually begins on the day of 21 March of the Gregorian calendar. To find the corresponding year of the Gregorian calendar, add 621 or 622 (depending on the time of the year) to a solar Hijri year. For example the corresponding year of the year 1398 in the Gregorian calendar is (20 March 2019-19 March 2020).

Introduction

The permanent crops related activity is one of the key sub-sectors of the agricultural sector which, alongside temporary crops activity, accounts for about 71 percent of value-added of the agricultural sector at a constant price. After the National Census of Agriculture conducted in the year 1382 and developing an appropriate statistical frame, new statistical surveys were introduced in the field of major and main activities of the agricultural sector. One of these important surveys was conducted in the year 1386 titled the Permanent Crops Survey the results of which were released. In the year 1389, based on a memorandum of understanding signed between the Statistical Centre of Iran and the Ministry of Agriculture-Jahad, the permanent crops survey was jointly conducted by the two agencies the results of which were released. By conducting the National Census of Agriculture in the year 1393 and developing a timely frame for agricultural holders, the permanent crops survey was planned and conducted in the month of Khordad¹ of the year 1394 and the month of Mordad of the year 1396 by using the mentioned frame. Besides, in the month of Mordad of the year 1398, the permanent crops survey was conducted by using the frame of the National Census of Agriculture conducted in the year 1393, the results of which are presented in the form of this report.

Statistical Centre of Iran

¹- Iranian months and their equivalent in Gregorian calendar

Farvardin (21 March-20 April)

Ordibehesht (21 April-21 May)

Khordad (22 May-21 June)

Tir (22 June-22 July)

Mordad (23 July-22 August)

Shahrivar (23 August-22 September)

Mehr (23 September-22 October)

Aban (23 October-21 November)

Azar (22 November-21 December)

Dey (22 December-20 January)

Bahman (21 January-19 February)

Esfand (20 February-20 March)

General specifications of the survey

Overall objective of the survey

The overall objective of the permanent crops survey is to estimate the statistical information needed for the permanent crops related activities at national and provincial levels for a specified statistical time.

Target population

The target population in this survey includes all the agricultural holdings in urban and rural areas (belonging to private settled households, unsettled holders, authorized companies and public institutions) in the year 1398 that exercise the permanent crops related activity¹ on the day of enumeration.

Statistical population

The statistical population of this survey corresponds to the target population.

Statistical unit

In this survey, the statistical unit is an agricultural holding with the permanent crops related activity in urban and rural areas (belonging to a private settled household, unsettled holders, authorized companies, and public institutions) in the year 1398.

Statistical date

The statistical date for some part of items is the day of enumeration and for other items, it is the calendar year 1397-98.

Survey date

The survey date was from the 30 of the month of Tir to the 22 of the month of Mordad, the year 1398 (21 July to 13 August 2019).

Survey method

The survey is conducted by sample method.

Data collection method

In this Survey, the information was collected as follows:

¹ . An agricultural holder has the permanent crop related activity if he/she has at least 200 square meters of orchard and nurseries. The following products, if the mentioned condition is not met (at least 200 square meters of orchard and nurseries), are considered part of the target population of this survey due to the number of trees.

Product	Number of trees
Dates, walnuts, oranges, almonds and figs	2 and more saplings
Poplars and eucalyptus tree	10 and more saplings

Selected Results of Permanent Crops (Horticulture) Survey, the Year 1398

- The information on the households of the settled holders was collected through face-to-face interviews with the holder or with one informed member of the household
- The information on private unsettled holders was collected via face-to-face interviews with the holder or otherwise, with the local informed people.
- The information on the authorized companies and public institutions was collected via a face-to-face interview with the manager of the company or with an informed person.

Level of estimations

Estimations are made at national and provincial levels.

Concerned parameters

The mainly intended parameters in this survey are as follows:

- The total number of holdings with the activity on the permanent crops on the day of enumeration.
- The total area of orchard and nurseries on the day of enumeration
- The total number of trees on the day of enumeration.

Sampling frame

In order to select sample units of this survey, the frame of the National Census of Agriculture conducted in the year 1393 was used. The sampling units of the first stage (city/village) and the sampling units of the second stage (holder with the permanent crops related activity) were selected separately in a two-stage process from this frame.

Sampling unit

In this survey, the sampling unit at the first stage was the city/village with at least one holder with the permanent crops related activity and the sampling unit in the second stage was a holder with the permanent crops related activity in the sample city/village.

Sampling method

In this survey, the method of “stratified two-stage sampling” was used. The sampling units at the first stage in every province were stratified on the basis of the “total area of orchard and nurseries” variable. In order to stratify the cities/villages, the cities/villages in which the number of the mentioned variables was more than one given criterion, they have been put in the census class. Other cities/villages were divided into 1 to 7 strata by using the Dalenius classification method based on the “orchard and nurseries” variables. Subsequently, the large holders with the permanent crops related activity in the sample cities/villages were enumerated and one sample was selected by systematic method from the small holders with the permanent crops related activity.

Method for determining sample size

In order to determine the sample size, with respect to the stratified two-stage sampling method, a number of 3995 cities/villages and 44914 holders with the permanent crops related activity were considered the sample size of the first and second stages of this survey, respectively after estimating the relative error for estimation of the concerned parameters resulted from samples with different sizes.

Estimates

Intended parameters at national and provincial levels were estimated after being weighted by using the appropriate formula and their coefficients of variation were calculated for each of them.

Definitions and concepts

Agricultural activities

Agricultural activities covered in the National Census of Agriculture conducted in the year 1393 are activities related to temporary crops, permanent crops, greenhouse cultivation, livestock raising, traditional raising of poultry, raising of honeybees (apiculture), raising of silkworms (sericulture) and pisciculture. In this survey, only the permanent crops related activity is considered and other agricultural activities are studied and enumerated separately.

Permanent crops activities

Permanent crop practice refers to the construction and maintenance of fruit and fruitless gardens, including nursery, and generally perennial plants are cultivated in the ground, outdoors or under temporary cover.

Perennial plants (Permanent crops)

are plants with wooden stems or trunks, all or some parts of which will remain in the ground till next years, and only the growing, harvesting operations are repeated, such as fruit trees, tea plants, damask rose and poplar.

Agricultural holding

An economic production unit including one or more agricultural activities within specific geographical limits (villages/ cities) run by a single natural or legal unit management.

Holding with the permanent crops related activity

In this survey, every holding with the permanent crops related activity on the day of enumeration based on the following limits is regarded as “holding with the permanent crops related activity”:

- Agricultural holdings with the permanent crops related activity that have at least 200 square meters of orchards and nurseries on the day of enumeration.
- If the mentioned condition (at least 200 square meters of orchards and nurseries) is not met for the following products, the number of trees available on the day of enumeration is considered permanent crops related activity in this survey:
2 and more saplings of dates, walnuts, oranges, almonds or figs and 10 and more saplings of types of poplar and eucalyptus.

Household

Persons living together in one residence, sharing their living expenses and eating together constitute a household. There is no need for kinship relationships among the members of a household. In other words, the household is not necessarily the same as the family. A person living alone also forms a household.

Private and joint holding

Private holding is a kind of holding which is run by members of a household or a holder under single management of natural persons. Joint holding is managed jointly by two or more holders who are not members of a household and lacks legal entity.

Household of the settled holder

A household with the permanent crops related activity that has a private holding within the limit of its permanent residence in the village or city. This kind of household has a private holding or cooperate with other households in the management of one or more holdings.

Unsettled holder

Natural persons whose place of residences has been different from the city or village in which they have a holding with the permanent crops related activity regardless that they have the permanent crops related activity in their village or city of residence. It is obvious that if these holders have the permanent crops related activity in their village or city of residence, they have been put in the private settled households (holder) group.

Authorized company, public institution

All authorized companies or public institutions (legal persons) with the permanent crops related activity are put in this group and if an authorized company or a public institution has been in the samples list, it has been enumerated.

Holder with the permanent crops related activity

The natural or legal person who personally or jointly manages the economic and technical affairs of the holding and is directly involved in the economic loss and profits of the holding.

Household of the holder with the permanent crops related activity

Is a household of which at least one member has the permanent crops related activity based on the determined criteria on the enumeration day.

Important findings

Holding with the permanent crops related activity

According to the results of the Permanent Crops Survey of the year 1398, there were about one million and 597 thousand holdings with the permanent crops related activity in the country, of which approximately one million and 509 thousand holdings had orchard and nurseries, and 87 thousand holdings did not have orchard and nurseries, however, had at least one of the crops of figs, dates, oranges, walnuts, almonds, various types of poplars and eucalyptus in a scattered manner and based on the determined criteria on the enumeration day.

Area of orchard and nurseries

- The area of orchards and nurseries in the country is estimated at about one million and 891 thousand hectares, of which 69.6 percent are single orchard and nursery (single cropping) and 30.4 percent are mixed orchards and nurseries (mixed cropping). The results of this survey show that 66 percent of the country's orchards and nurseries are located in 10 provinces, including Kerman, Khorasan-e-Razavi, Fars, Mazandaran, West Azarbayejan, East Azarbayejan, Yazd, Esfahan, Qazvin, and Sistan & Baluchestan, respectively.
- The results of this survey show that about 15.8 percent of the total area of orchards and nurseries in the country belongs to 65.7 percent of the total number of holdings that have an area of less than 1 hectare. About 44.7 percent of the total area of orchards and nurseries in the country is related to 30.5 percent of the total number of holdings, which have an area of 1 to less than 5 hectares. Besides, about 39.5 percent of the total area of orchards and nurseries in the country belongs to 3.8 percent of the total number of holdings, which have an area of 5 hectares or more.

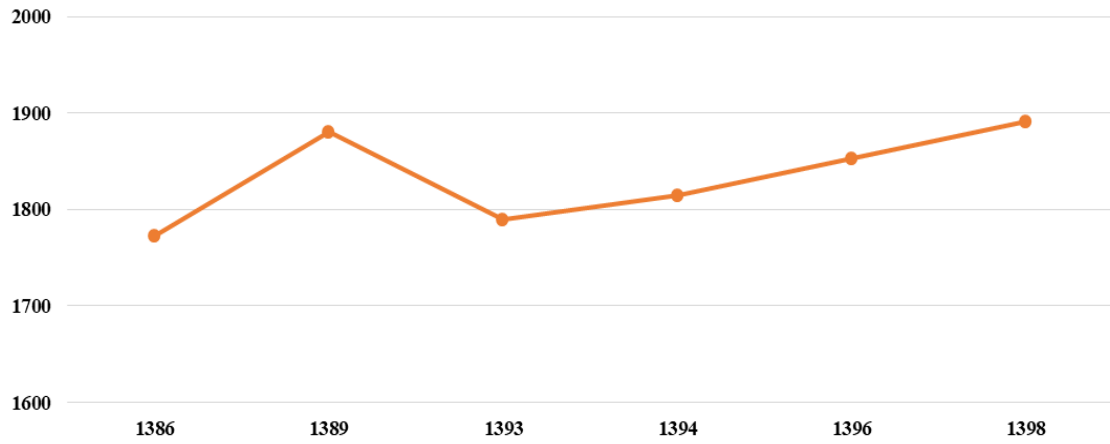
Production of permanent crops

- About 65 percent of the total production of permanent crops in the country in the years 1397 and 1398 belonged to four crops of oranges and tangerines, apples, grapes, and dates, respectively.
- In the year 1397, the production of permanent crops in the country was about 12 million tonnes. In the same year, the production of oranges and tangerines was about two million and 719 thousand tonnes, for apples was about one million and 937 thousand tonnes, for grapes was about one million and 915 thousand tonnes, and for dates was about one million and 356 thousand tonnes.
- In the year 1398, the production of permanent crops was estimated at about 13 million tonnes. In the same year, the production of oranges and tangerines was estimated at about 2 million and 895 thousand tonnes, for apples, about 2 million and 241 thousand tonnes, for grapes, about 1 million and 945 thousand tonnes, and for dates, about 1 million and 307 thousand tonnes.

Selected Results of Permanent Crops (Horticulture) Survey, the Year 1398

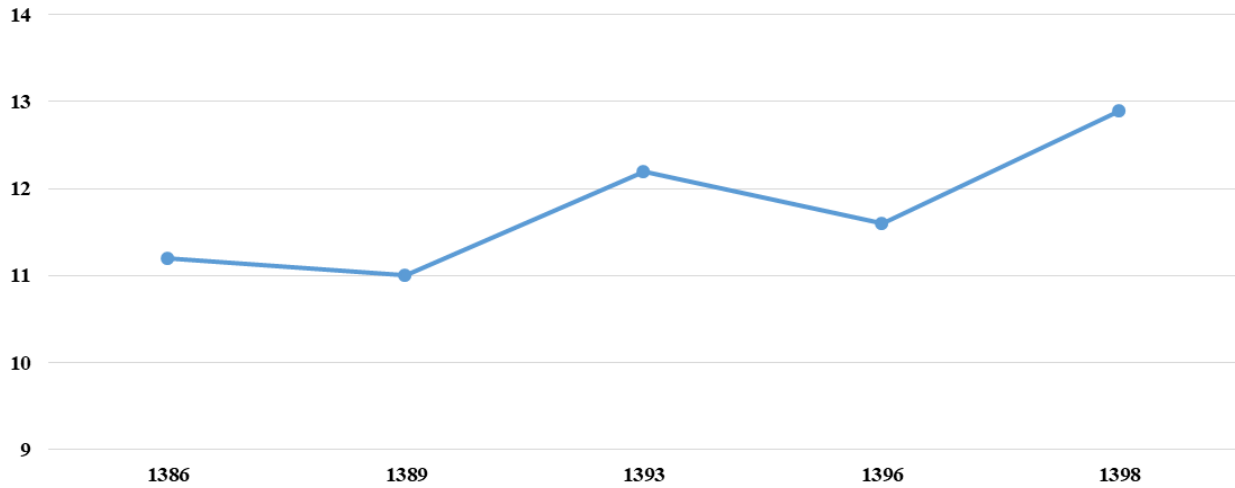
The trend of changes in the area of orchards and nurseries in the country, the Years 1386-1398

thousand hectares



Production Trend of Permanent Crops During the Years 1386-1398

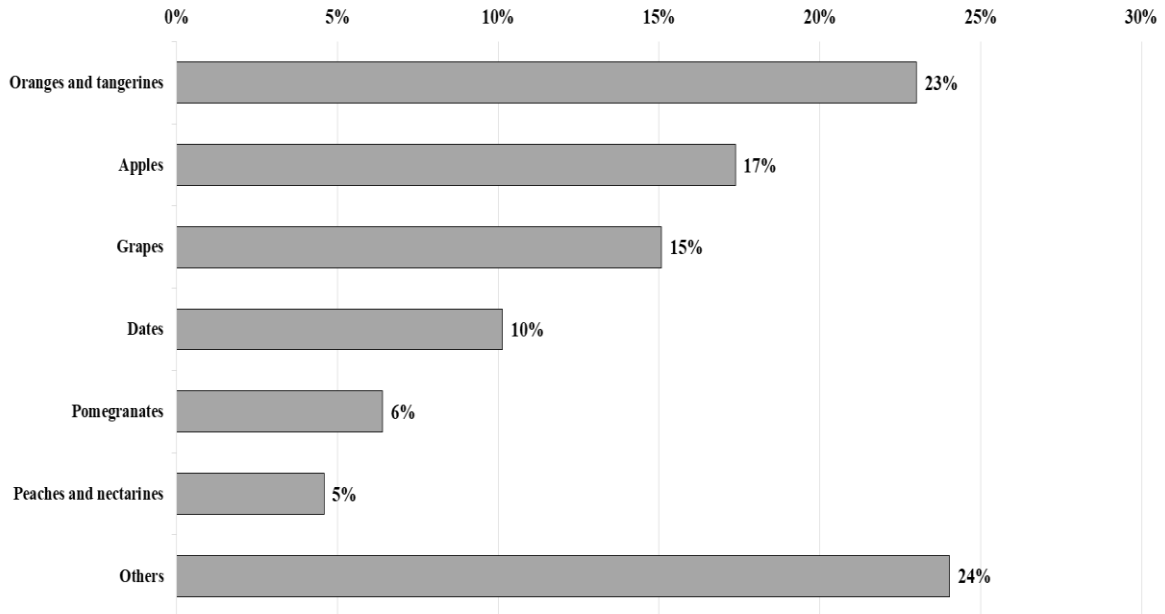
Million tonnes



Selected Results of Permanent Crops (Horticulture) Survey, the Year 1398

The Share of Permanent Crops out of the Estimated Total Production, the Year 1398

(Production amount: 12.9 million tonnes)



Statistical Tables

Selected Results of Permanent Crops (Horticulture) Survey, the Year 1398

1. HOLDINGS WITH ACTIVITIES ON PERMANENT CROPS AND THEIR PRODUCTION BY PROVINCE, THE YEAR 1398 (holding –ton)

Province	Number of holdings with the permanent crops related activity, the year 1398	Production of permanent crops, the year 1397	Production of permanent crops, the year 1398
Total country.....	1597297	12000136	12902069
East Azerbaijan.....	97401	1258531	1134424
West Azerbaijan	86720	979018	1235660
Ardebil	24023	122897	188930
Esfahan	80184	323922	336251
Alborz	24294	171054	180497
Ilam.....	4105	7280	7403
Bushehr.....	16059	109116	117197
Tehran.....	25927	168703	245098
Chaharmahal&Bakhtiari	24820	120524	87520
South Khorasan.....	43199	82487	105541
Khorasan-e-Razavi	124908	366368	398202
North Khorasan.....	29714	129964	89847
Khuzestan	23528	335181	300703
Zanjan	41951	171426	297463
Semnan	35106	62315	114742
Sistan&Baluchestan.....	57764	378679	382171
Fars	76090	1147857	1135893
Qazvin.....	47756	280918	382034
Qom	6854	10946	12059
Kordestan.....	43834	66826	87733
Kerman	145660	1735549	1998159
Kermanshah	23606	74769	73647
Kohgiluyeh&Boyerahmad.....	17332	81270	69387
Golestan.....	14801	120104	129331
Gilan	106278	279538	289759
Lorestan	23364	82226	89776
Mazandaran	173786	2445623	2505866
Markazi.....	42717	343860	362210
Hormozgan	27020	199950	197876
Hamedan.....	55898	237958	208793
Yazd	52596	105277	137897

Selected Results of Permanent Crops (Horticulture) Survey, the Year 1398

2. NUMBER AND AREA OF HOLDINGS WITH ORCHARDS AND NURSERIES BY PROVINCE, THE YEAR 1398 **(holding-ha)**

Province	Total orchards and nurseries		Single cropping		Mixed cropping	
	Number of holdings	Area	Number of holdings	Area	Number of holdings	Area
<i>Total country.....</i>	<i>1509831</i>	<i>1891025</i>	<i>932919</i>	<i>1315354</i>	<i>736181</i>	<i>575671</i>
East Azarbayejan	96650	95787	38234	40841	68203	54947
West Azarbayejan.....	85152	104803	60192	69422	37523	35381
Ardebil.....	22072	31147	13018	23326	12605	7820
Esfahan.....	80142	71033	44489	55912	49046	15121
Alborz.....	24291	20873	4930	8735	21410	12138
Ilam.....	4093	4607	1363	2504	2891	2103
Bushehr.....	14588	21385	13214	20085	1519	1300
Tehran.....	25796	33232	6059	18056	20814	15176
Chaharmahal&Bakhtiyari	24650	25921	18418	20412	9600	5509
South Khorasan.....	43199	42053	26924	32981	21843	9072
Khorasan-e-Razavi	124097	172623	76363	130663	60203	41959
North Khorasan.....	29459	32024	16832	18540	16236	13484
Khuzestan	23247	46426	18906	39490	4551	6937
Zanjan	40714	46462	31749	30406	18399	16056
Semnan	32839	39748	8994	21231	25053	18517
Sistan&Baluchestan.....	44006	58184	30927	50097	14362	8087
Fars	75433	154315	54978	116565	26363	37750
Qazvin.....	47194	65022	34221	42729	20982	22293
Qom	6649	9893	2544	8288	4712	1605
Kordestan.....	43216	28419	28676	15864	30479	12555
Kerman	137816	341361	96335	246541	45889	94819
Kermanshah	23447	24918	6780	5559	18586	19359
Kohgiluyeh&Boyerahmad	16627	20141	9927	12062	8871	8079
Golestan.....	12200	19610	5516	15037	7512	4572
Gilan	85699	58057	60060	46974	32586	11083
Lorestan	22987	22632	11129	11352	12694	11281
Mazandaran	153897	111269	96192	70216	68565	41054
Markazi.....	42013	54223	29422	35974	22880	18249
Hormozgan	20794	33924	17356	25070	4669	8854
Hamedan.....	54935	27793	36415	14134	26380	13659
Yazd	51928	73140	32757	66287	20755	6853

Selected Results of Permanent Crops (Horticulture) Survey, the Year 1398

3. NUMBER OF HOLDINGS, CULTIVATION AREA OF SINGLE CROPPING, NUMBER OF TREES, AND PRODUCTION OF PERMANENT CROPS BY TYPE OF CROP, THE YEAR 1398³
(holding-ha-1000 saplings, ton)

Crops	Total			Single cropping (mono cropping)					
	Number of holdings	Production (1397)	Production (1398)	Number of holdings	Cultivation area	Number of trees		Production (1397)	Production (1398)
						Fertile Trees	Sapling		
Sour cherries	317057	124807	162917	5173	2636	1249	234	15998	19810
Pomegranates.....	376568	749322	826725	63377	53154	28403	2082	488461	543341
Irrigated figs	238372	98613	116055	9221	11169	840	1140	15287	17484
Rainfed figs	83360	12498	14273	4528	7486	787	96	6062	7174
Irrigated grapes	529597	1862235	1891827	220346	133338	138054	8340	1598356	1604637
Rainfed grapes	78061	52815	54104	36936	21865	16454	2135	44489	45903
Plums and greengages..	469455	305617	359176	19007	14204	4205	647	93967	109970
Poplars and eucalyptus (1,2)	213654	14839	7660	26880	19388	21459	11761	5228	4156
Irrigated almonds.....	290482	185426	162353	37442	32181	16399	1953	119980	99558
Rainfed almonds.....	37753	15456	14662	22972	47415	7673	1659	12671	12258
Orangess	254932	2184676	2308730	81567	62138	32590	5898	1388727	1445135
Pistachios.....	172636	143695	337815	135593	411432	296105	70336	139576	331679
Teas.....	25199	99245	90832	25199	16229	0	0	99245	90832
Dates	163396	1356684	1307908	104732	160117	21375	3580	956496	909789
Apricots	478666	314012	329638	18954	12629	3862	672	61921	71801
Olives.....	31276	85913	101355	11666	33922	10537	1546	74005	86792
Apples.....	564338	1936697	2241124	87964	100759	28353	3287	1090872	1297474
Walnuts.....	707337	304040	321074	79622	44780	6285	1244	74648	73379
Pears	253669	92281	106785	4316	4544	1783	535	27679	30139
Cherries.....	271798	88906	128354	6283	2833	831	221	9414	13017
Tangerines	118873	534751	586568	12571	13468	4139	829	244452	284677
Peaches and nectarines	321314	611384	591412	24585	32155	13801	1831	334647	273398
Others	576007	841062	848383	85355	77512	19349	4752	503019	518060

Selected Results of Permanent Crops (Horticulture) Survey, the Year 1398

**3. NUMBER OF HOLDINGS, CULTIVATION AREA OF SINGLE CROPPING, NUMBER OF TREES, AND PRODUCTION OF PERMANENT CROPS BY TYPE OF CROP, THE YEAR 1398³ (continued)
(holding-ha-1000 saplings, ton)**

Crops	Mixed cropping (Multi cropping)					Scattered cropping				
	Number of holdings	Number of trees		Production (1397)	Production (1398)	Number of holding	Number of trees		Production (1397)	Production (1398)
		Fertile Trees	Sapling				Fertile Trees	Sapling		
Sour cherries.....	229351	13476	3041	100745	130262	91916	1836	822	8065	12845
Pomegranates	189925	13777	1844	243376	263380	132928	819	168	17484	20004
Irrigated figs	136698	3339	420	76343	89651	96927	333	48	6983	8920
Rainfed figs	23997	132	60	2897	3253	55415	102	22	3539	3846
Irrigated grapes ...	225019	23423	1514	253872	276190	112097	643	87	10007	11001
Rainfed grapes	18064	1554	157	6933	6628	23146	54	6	1393	1573
Plums and greengages.....	304135	11941	1878	194808	229091	157627	1091	303	16842	20115
Poplars and eucalyptus ^(1,2)	62366	7876	1743	3185	3221	130212	13240	4123	6426	283
Irrigated almonds..	191071	8619	1559	61530	60175	70141	814	94	3916	2620
Rainfed almonds..	9053	994	158	2245	1629	6182	192	37	540	775
Orangess.....	104851	12915	978	765473	832957	79789	651	163	30475	30638
Pistachios.....	29860	2778	1993	4080	6065	9527	30	102	39	71
Teas	0	0	0	0	0	0	0	0	0	0
Dates.....	29664	6660	1139	335754	338152	48638	1145	165	64434	59968
Apricots	342257	12843	1757	241805	246417	130813	653	132	10286	11419
Olives	14208	1113	1057	11339	13916	6301	51	46	569	647
Apples	366235	24667	3684	834160	928319	130312	565	123	11665	15330
Walnuts	423137	12424	2462	203482	219215	235553	1660	373	25910	28480
Pears	174586	4273	1415	59261	70262	79061	218	198	5341	6384
Cherries	207675	11544	1780	76564	110783	63474	226	115	2929	4554
Tangerines	60774	4455	558	274407	285171	49817	302	40	15892	16720
Peaches and nectarines.....	217169	16332	4218	265447	306361	86269	556	230	11291	11653
Others	266533	11291	6498	289241	277533	291784	2738	480	48802	52791

1. *Poplars, eucalyptus, white poplar, black poplars, Euphrates poplar, Ash, etc. ...*

2. *Production of various types of poplars and eucalyptus in one thousand saplings*

3. *Number of holdings, area of orchards and nurseries, number of Fertile Trees and sapling the day of enumeration.*