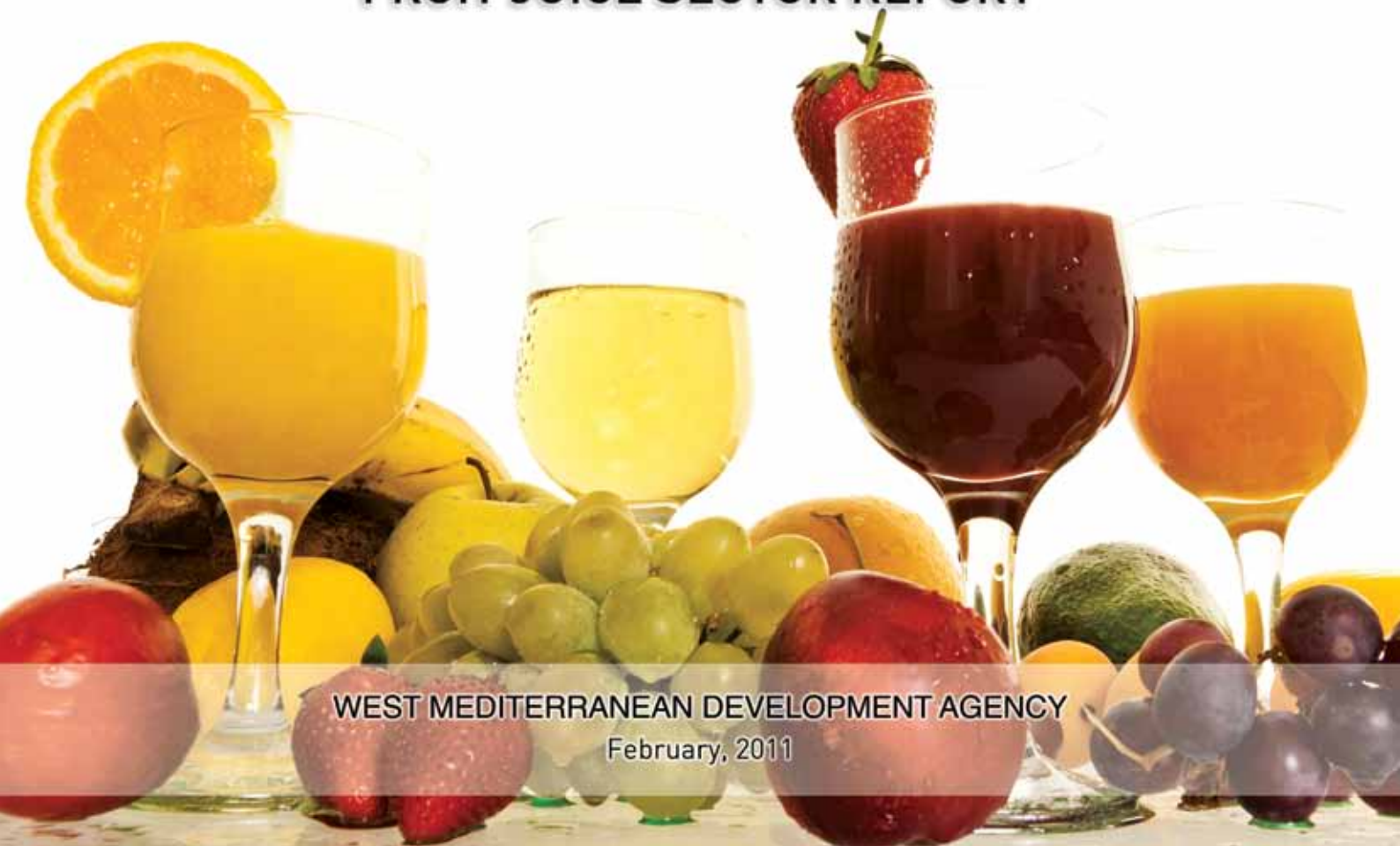


*Happy Life Region*  
*West Mediterranean*



## FRUIT JUICE SECTOR REPORT



WEST MEDITERRANEAN DEVELOPMENT AGENCY

February, 2011



## FOREWORD

Regional development agencies whose history dates back to old times in developed countries are the models newly adopted in Turkey. These agencies aim to accelerate regional development, ensure sustainability and reduce interregional development disparities in accordance with the principles and policies set in the development plans and programs, through a cooperative networking between local authorities, private sector and civil society.

One of the tasks given to agencies to achieve their aim is whether to do research on determining the resources and opportunities of the region, accelerating economic and social development and enhancing the competitiveness or to support the researches done by other individuals, organizations and institutions.

West Mediterranean Development Agency which largely completed its process of establishment and institutionalization is responsible for providing free consulting services to investors in Antalya, Isparta and Burdur. In addition, through a one-stop shop approach, the agency offers an extensive range of services including coordinating and following-up the permits, licensing procedures and other administrative works within the scope of public institutions and organizations of investors. Furthermore, the agency promotes the investment opportunities of the region both at national and international level in cooperation with relevant organizations.

In line with the mentioned task above, the sector reports were prepared to guide the investors willing to invest in the region and promote the investment opportunities of the region.

At first, Marble, Milk and Dairy Products, Solar Energy, Golf Tourism and Health Tourism Sector Reports of West Mediterranean Region, Tourism Potential of Egirdir Report and Antalya – Konya High Speed Rail-Line Report have been prepared. Over time, many sector reports related with the region will be prepared and investment opportunities of the region will continue to be promoted. Being helpful with these sector reports to investors and all other institutions operating in the region is our greatest wish.

**Tuncay ENGIN**

Secretary General of WMDA

**Dr. Ahmet ALTIPARMAK**

Governor of Antalya  
Chairman of WMDA





## 1. INTRODUCTION

One can consider Isparta, a city in the WMR of Turkey, as a privileged location because of its natural gifts. The climate and even micro-climates that it has, with the help of the huge water potential and sprinkler opportunities of Eğirdir Lake and its geographical location makes Isparta a world famous city in many aspects of investments and business.

Nevertheless, Antalya, the world-wide famous touristic destination and also, another WMR city, has also same kind of privileges with its 'yafa' kind orange, "Finike Orange", that is named by Finike, one of the districts of Antalya, and its pomegranate production which is %44 of Turkey's overall pomegranate production.

Although, having such brand fruits are a source of pride for the region, conversion of these values into economic gains to upgrade the living standards of people in the region poses a special importance.





That's exactly the point where entrepreneurs need to step in to lead the transformation of the entire potential of these region's brands to the products that reflect their real values. For example, beside the conventional consumption of the fruits, these fruits are also utilized as raw materials for many different sectors like food, pharmaceutical and perfumery sector. Moreover, these WMR's brand fruits are among the most important raw materials for fruit juice sector as explained below. The rest of the analysis examines the fruit juice sector and values WMR offer for the sector.

“Isparta is a famous city not only with rose but also fruit sector. The city is also known as the Fruit Garden of Turkey.







## 2. CURRENT SITUATION

### 2.1 Fruit Production



WMR, with its' wide range of fruit varieties, can be described as the prominent fruit garden of Turkey.

In 2009, WMR produced:

- 15.977 tons of sour cherry,
- 29.344 tons of apricot,
- 10.115 tons of walnut,
- 8.716 tons of almonds,
- 50.132 tons of pears,
- 11.791 tons of quinces,
- 27.575 tons of strawberries,
- 19.778 ton plum,
- 5.011 tons of grapefruit,
- 5.735 tons of figs,
- 5.403 tons of carobs,
- 57.190 tons of lemon,
- 17.246 tons of mandarin,
- 22.280 tons of peach,
- 7.319 tons of loquat.



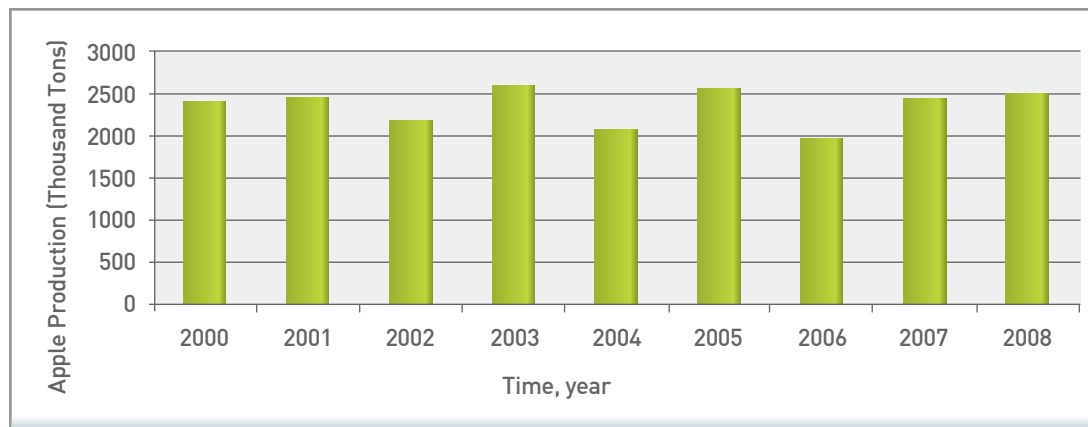


In addition to these, thanks to its climate, Antalya produces 24 kinds of tropical and subtropical fruits including bananas. Reaching this many fruit kinds within the boundaries of a region provides the entrepreneurs who choose / have chosen to invest in the region some extra shipping and competition advantages.

We want to give a special area to apple, grape, orange, cherry and pomegranate because these fruits' production levels are substantial when we compare them with the Turkey's total production. WMR produces 839.650 tons of apples which is 25% of Turkey's total production. Grape production of region is 111.019 tons according to 2009 records. Our special cherry named "Uluborlu" has a special fame all around Turkey and the world. It was produced 320.000 tons in 2009, and holds 15% of Turkey's cherry production. Another regional brand is "Finike" orange. Antalya produced 401.486 tons of orange in 2009 which is 27% of Turkey's total production. In addition, 55.740 tons of pomegranates which is 44% of Turkey's total production were produced by Antalya in 2009.

“WMR produces 839.650 tons of apples which is 25% of Turkey's total production.”

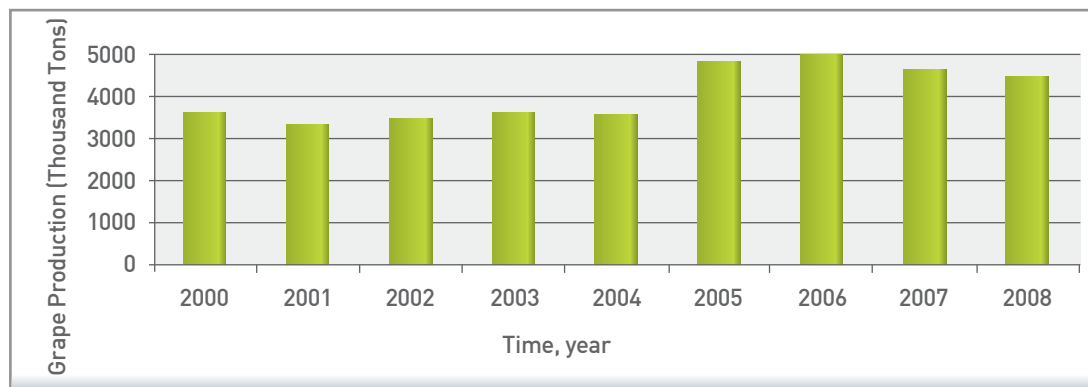
### Yearly apple production, 2000 – 2008 (thousand tons)



Graph - 1

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008

### Yearly grape production, 2000-2008 (thousand tons)



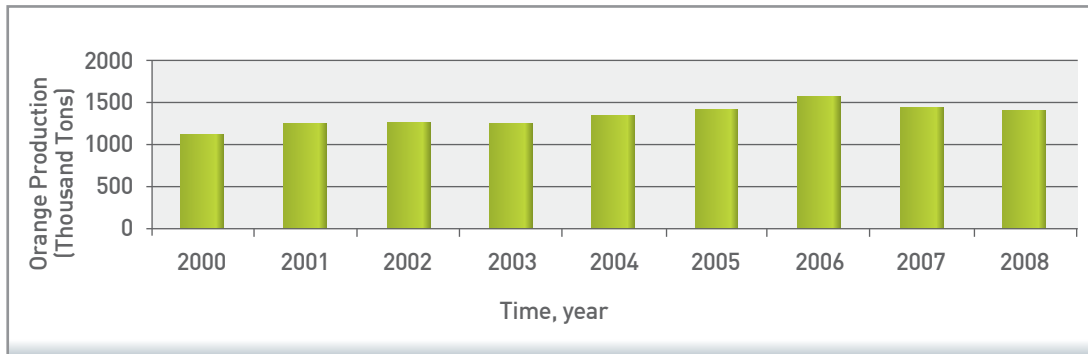
Graph - 2

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008





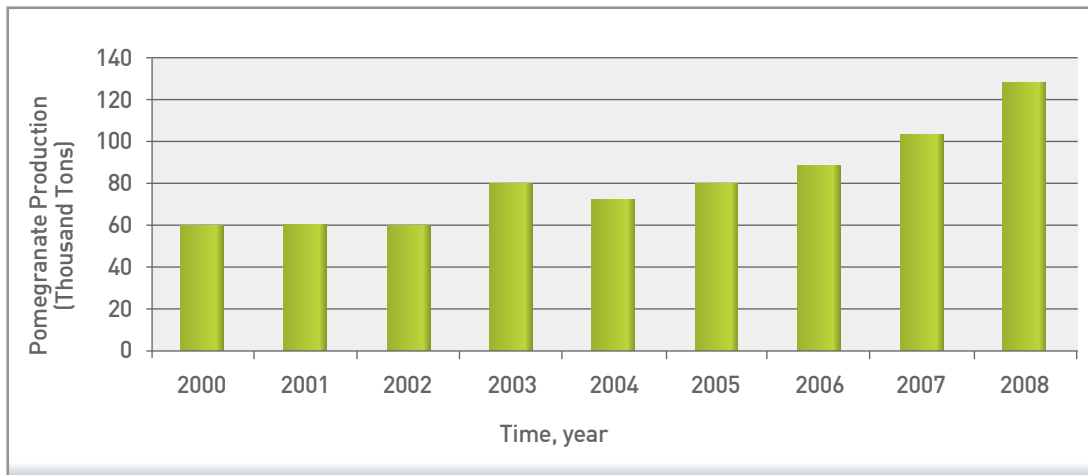
Yearly orange production, 2000-2008 (thousand tons)



Graph - 3

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008

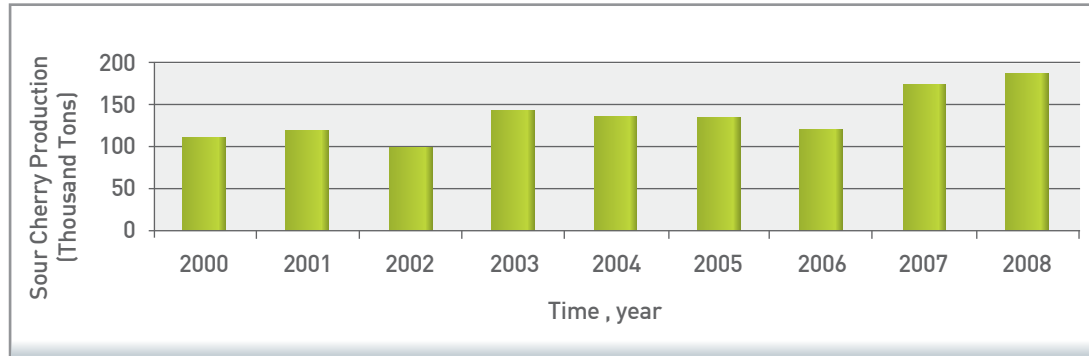
Yearly pomegranate production, 2000-2008 (thousand tons)



Graph - 4

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008

Yearly sour cherry production, 2000-2008 (thousand tons)



Graph - 5

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008

## 2.2 Processed Fruit



According to Turkish Food Codex, drinks which only include %100 percent fruit can be categorized as 'fruit juice'. Those with 99-25 percent of fruit are named 'fruit nectar', 24-10 percent of those 'fruit drink', 9-0 percent is classified as those 'aromatic drink' and for 0 percent 'powder drink' is classified as.

In fruit industry, amounts and varieties of processed fruits are increasing every day. Up till now, the main types of processed fruits are apple, peach, apricot, orange and cherry. In recent years, increasing the amount of production and processing of pomegranate, as well as for our country could become an important export item of increasing its share in the carrots and grapes.

In our country, amount of processed fruit for fruit juice is approximately 800 thousand tons in 2000 that figure was 433.000 tons, and so that, it can be said that sector is growing fast.



## Amount of processed fruit for fruit juice 2000-2008 (thousand tons)

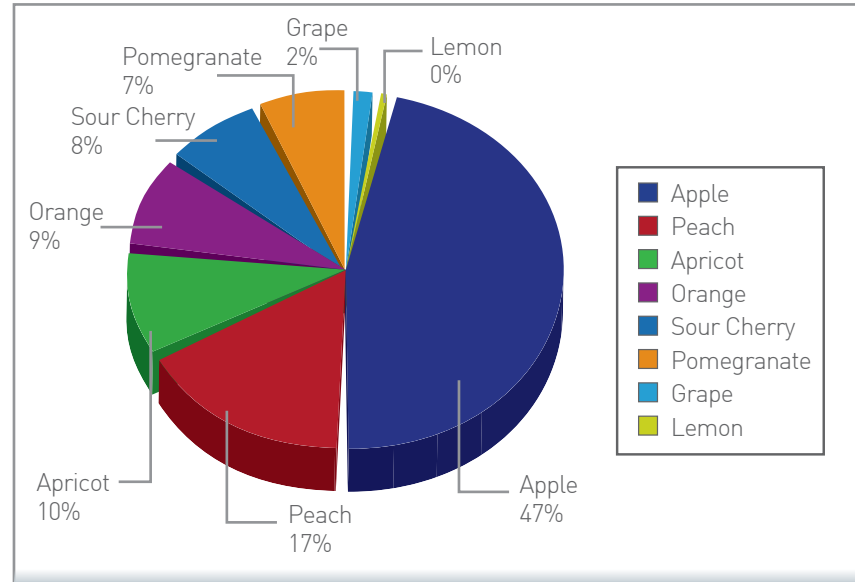
FRUIT	2000	2001	2002	2003	2004	2005	2006	2007	2008
Cherry	20.4	28.2	9.9	54.7	35.7	37.1	52.2	72.6	54.6
Apricot	26.7	37.2	13.9	34.8	24.8	30.8	36.1	38.2	74.9
Peach	44.8	31.5	26.2	51.5	30.2	75.9	65.3	90.1	118.8
Apple	311.5	272.9	244.5	341.5	338.0	409.2	282.9	356.9	333.8
Orange	22.9	12.6	31.7	28.3	46.2	33.1	37.8	53.3	63.9
Pomegranate	-	-	-	-	-	17.6	46.6	57.5	49.5
Carrots								30.6	30.7
Grapes	-	-	-	-	-	10.9	8.4	18.3	16.9
Strawberry								4.1	7.7
Grapefruit									5.5
Quince	-	-	-	-	-	-	-	7.5	4.5
Tomatoes	-	-	-	-	-	4.6	4.9	3.9	4.4
Lemon									2.7
Other	6.8	6.0	19.3	10.5	16.9	10.2	47.9	4.3	3.2
<b>Total</b>	<b>433.1</b>	<b>388.4</b>	<b>345.5</b>	<b>521.3</b>	<b>510.3</b>	<b>629.4</b>	<b>582.1</b>	<b>737.2</b>	<b>771.1</b>
Index	100	89.7	79.8	120.4	117.8	145.3	134.4	170.2	178.0
"According to the previous year change %"	0.0	-10.3	-11.1	+50.9	-2.1	+23.3	-7.5	+26.6	+4.6

Table - 1

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008



### The distribution of processed fruits for fruit juice



Graph - 6

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008

As indicated in Table 1, though apple constitutes more than 300 thousand tons of the processed fruit, not only as a result of other product variety incensements but also as a consequence of remaining of processed apple tonnage at the same level while total processed fruit level increases; the share of the apple among the total portion decreases from 70% to 45-50% from 2000 to today. Yet, the share of the apple still remains in the first ranking, and precede the share of the peach and apricot which are 15% and 10% respectively.

In 2005 grapes began to be processed around 11 thousand tons per a year, and today this number reaches 17 thousand tons by the efforts of a few producers, and holds 2% of total production.





## 2.3 Production-Supply



Before the production of fruit juice, fruit firstly processed to concentrates and/or puree. These are the intermediate products. According to market conditions, some of them are exported, and an important part of the drink is transformed for domestic consumption.

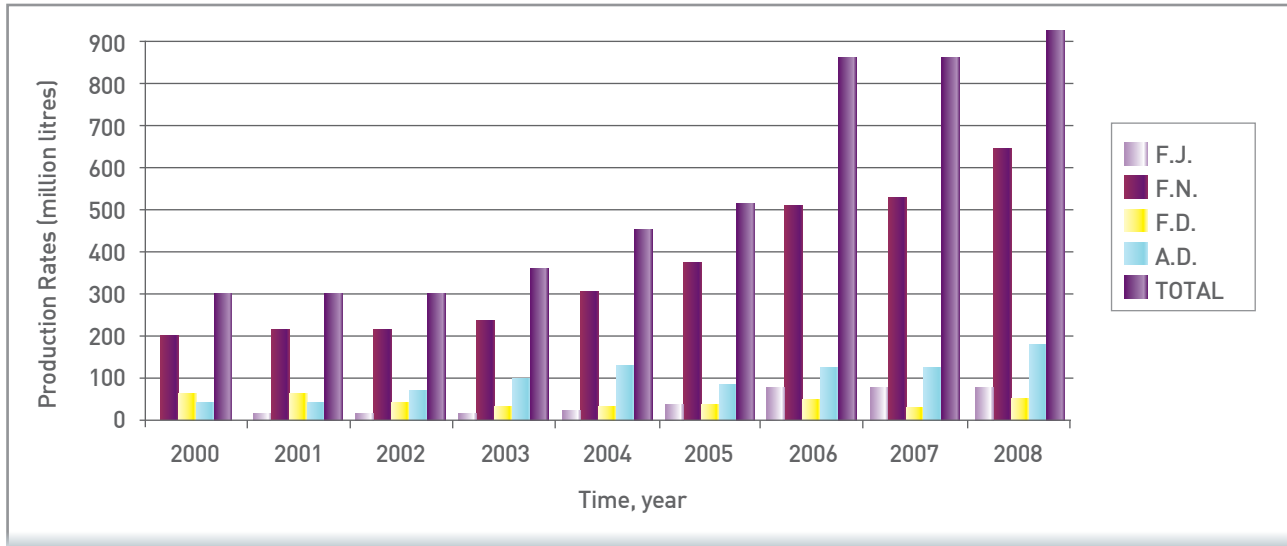
There is another method of production of fruits is processed in fruit juice directly, which is not spread in the world and our country. This kind of production is increasing in Europe rapidly. In this regard, same kind of increase is expected in our country as well.

According to 2008 records, for domestic and overseas markets, the production of ready consumption beverages was 821.6 million liters. It consists of %64 of fruit nectar, %22 of aromatic drinks. %100 fruit juice had %9 share, and fruit drink had %5 share.

“Direct method of processing fruit juice is not yet widespread.”



## Annual change in production of fruit juice and other similar beverages.



Graph - 7

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008

As indicated in Graph 7, total production and nectar production has been growing steadily since 2000. When we compare with the total amount, fruit juice production is low. However, the production of fruit juice increased by approximately 40 times since 2000.

“According to 2008 records, for domestic and overseas markets, the production of ready consumption beverages was 821.6 million liters.”





## 2.4 Consumption



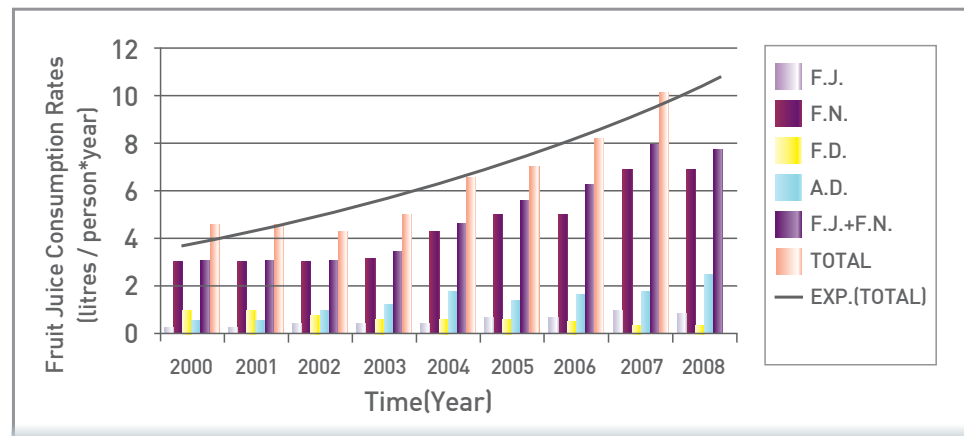
Fruit juice consumption in our country is increasing rapidly as indicated in the Graph 8. The amount of per capita fruit juice consumption increased 3 times, since 2000. Today the amount of per capita fruit juice consumption is more than 11 liters, but this amount is below the EU and USA. EU's consumption is around 23 liters, and USA's is around 30. There is a huge potential in Turkey when compared with developed countries' fruit juice businesses.

According to 2008 records domestic consumption of prepared fruit juice and similar products is 776 million liters. This amount indicates 164% increase according to 2000 records, 9,4% increase according to 2007 records.

The biggest share of consumption is taken by fruit nectar with the 66,2% in followings are aromatic drink with the 22,3%, fruit juice with the 6,8% and fruit drink with the 4,7%. Consumption preferences can be changed according to tastes as well as categories. In the

100% fruit juices category, apple was in the first place by the percentage of 30.05%, mixed fruit juice was in the second ranking by 24.76%, and orange was in the third ranking by 16.45% percentages (Graph 9). The main difference from the previous years is the fact that mixed fruit juices fall behind apple juices.

**Yearly consumption of fruit juice and similar beverage per person**



Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008

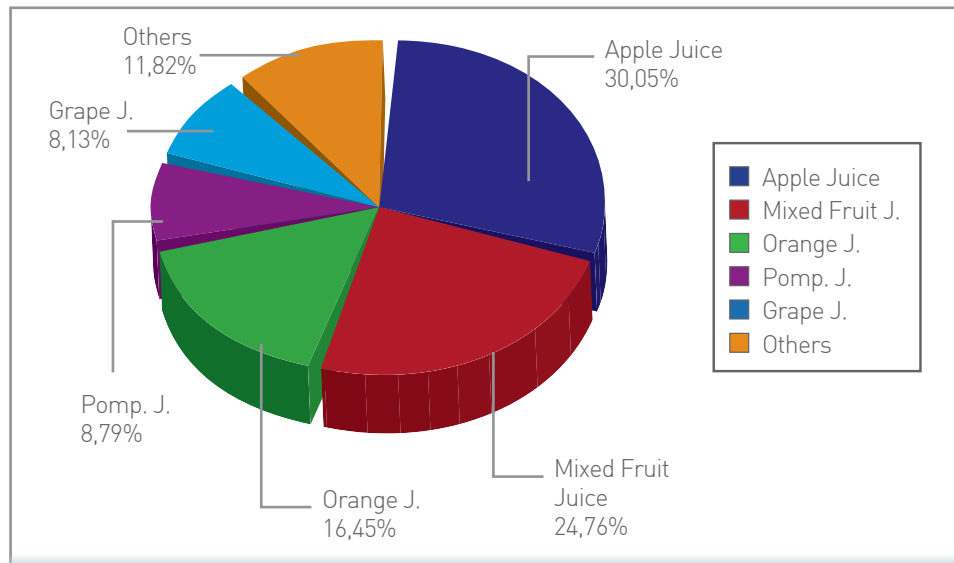
Graph - 8



With the percentages of Grape - %8,13 and Pomegranate - % 8,79, these ratios form other important parts of category.

The European countries are consuming fruit juice more than fruit nectar, and the dominant flavors are orange and apple in those countries. However, in Turkey, on the contrary, because of the fruit nectars that consist 66% of total consumption, most preferred tastes are peach, sour cherry and apricot. This situation, while pointing out the growth potential of the domestic sector, it also indicates the present advantage of the apple and orange juice demand in terms of exportation.

#### Dsitribution of Fruit juice consumption according to tastes



Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008

Graph - 9

“The European countries are consuming fruit juice more than fruit nectar, and the dominant flavors are orange and apple in those countries.”



## 2.5. Imports



From 2000 to 2008 Turkey's fruit juice imports increased from 3.3 thousand tons to 16.6 thousand tons as quantity. In terms of value, imports increased to 36.7 million dollars from 4.2 million dollars. Turkey's fruit juice/concentrates imports in 2000-2008 periods are shown in Table 2.

Examining the 2008 values in table 2, orange juice is in the first ranking with 5,8 thousand tons, other fruit/vegetable juices is in following with 3 thousand tons and citrus juices also comes with 2.1 tons. As in previous years, orange juice/concentrate which is the most important item of the exports constitutes the 35% of the total exports in terms of quantity and 43% in terms of value.

**Turkey's fruit juice and concentrates imports, 2006 – 2008**

PRODUCT	2006		2007		2008	
	A	V	A	V	A	V
Orange Juicee (Freezed)	4.970	8.644	5.951	15.188	5.833	15.316
Other Fruit / Veg. Juices	3.852	5.054	2.850	5.166	3.033	6.767
Other Citrus Juices	888	1.029	1.492	1.953	2.142	4.175
Other Orange Juices	1.826	3.064	2.146	4.214	1.774	3.399
Apple Juice	1.204	1.369	4.088	2.377	1.514	2.672
Mixed Fruit / Veg. Juices	588	2.023	804	3.278	542	1.960
Pineapple Juic	319	524	752	1.333	477	763
Grape Juice	689	1.363	298	607	1.146	421
Grapefruit Juice	158	371	238	394	111	171
Tomatoe Juice	40	106	4	12	3	4
<b>TOTAL</b>	<b>14.533</b>	<b>23.547</b>	<b>18.621</b>	<b>34.522</b>	<b>16.576</b>	<b>35.650</b>
<b>A: Amout V: Value</b>						

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008

Table - 2

## 2.6 Exports



Turkey's fruit juice exports had an increase of 26%, which was 52.3 thousand tons to 66 thousand tons from 2000 to 2008. As a value this means an increase from 42,1 million dollars to 131,1 dollars. Yet, as both value and quantity there was a decline of 18%, in 2008, compared to 2007. This was the natural result of the economic recession, which is recognized globally.

Turkey's 2006, 2007 and 2008 export quantities and values of the fruit juice and concentrates are shown in Table 3. It is remarkable that, apple which was the leading export goods of Turkey's fruit juice / concentrates exports declined to 34%. While the share of the apple juice/concentrates has been decreasing, the share of the mic recession.

**Türkiye'nin meyve suyu ve konsantresi ihracatı, 2006 – 2008**

ÜRÜN	2006		2007		2008	
	A	V	A	V	A	V
Orange Juice (Freezed)	553	272	57	37	70	38
Other Orange Juices	4.051	2.355	4.199	3.127	5.693	4.634
Grape Fruit Juice	785	1.507	19	54	8	8
Other Citrus Juices	1.965	1.631	2.147	1.766	3.458	3.233
Pineapple Juice	291	169	689	435	994	674
Tomatoe Juice	949	654	1.116	995	1.120	965
Grape Juice	920	635	993	815	1.783	1.613
Apple Juice	43.318	44.079	42.619	83.620	23.566	44.701
Other Fruit / Veg. Juices	21.433	49.275	23.677	61.291	23.652	70.239
Mixed Fruit / Veg. Juices	3.526	3.030	5.546	8.130	5.645	5.040
<b>TOTAL</b>	<b>77.790</b>	<b>10.607</b>	<b>81.063</b>	<b>160.269</b>	<b>65.988</b>	<b>131.144</b>
A: Amount V: Value						

Table - 3

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008





### 3. FRUIT JUICE SECTOR and WMR

Our country, with its fruit sector representatives which are around 40 companies, and with its fruit potential, has an important place in the world, which is demonstrated once more by hosting the World Fruit Juice Congress in Istanbul in 2010 which is organized by International Union of Fruit Juice Producers (IFU).

The leading representatives of the sector showed a clustering in Bursa - Balıkesir axis and around Cukurova. Moreover Adapazari, Manisa and Kayseri are among the other major centers.

Isparta, with its important sector players, Asya Fruit Juice Factory and Elmasu Factory, is another significant center of the sector.

The primary problem of the sector is the fruit shortage. WMR has an essential place in the sector with its potential of solving fruit shortage issue as indicated in table 4. Total fruit production in our region has the potential of providing the essential fruit that is processed for the fruit juice even more than 100% percentage in imported goods.





### The potential of WMR to provide raw material demand of Turkey's fruit juice production

FRUIT KIND	TOTAL AMOUNT OF PROCESSED FRUIT (tons)	AMOUNT OF PRODUCED FRUIT IN WMR (ton)	SUPPLY PERCENTAGE IF ALL FRUIT ARE PROCESSED (%)
Apple	334.000	839.650	%252
Grape	17.000	111.019	%653
Orange	64.000	401.486	%627
Apricot	75.000	29.344	%39
Sour Cherry	55.000	15.977	%29
Peach	119.000	22.280	%19
Lemon	3.000	57.190	%1906
Pomegranate	49.000	55.740	%114

Table - 4

Source: MEYED - Turkey Fruit Juice Industry-Statistical Review 2000-2008



“Total fruit production in our region has the potential of providing the essential fruit that is processed for the fruit juice even more than 100% percentage in imported goods.”







## 4. SUCCESS STORIES

Asya Fruit Juice Factory established in 1972, carried its factory to Isparta-Eğirdir-Bozova in 1993, because of region's potential about fruit juice. Today they are operating in a 14.000m<sup>2</sup> area with an advanced indoor facility. They are processing concentrate and puree. Their export revenue is 10 million USD per year by exporting their goods to 25 countries. They empowered their export capability by getting organic food production certificate in 2006.

Food Analysis Performance Assessment Scheme (FAPAS) arranges test of patulin which analyzes proficiency of the firm and its products. 65 firms joined this test and Asya Fruit Juice Factory shared first place with the other two firms.

Asya Fruit Juice Factory has the biggest capacity of Turkey which produces concentrate and puree product with daily capacity of 1400 tons of apple. Asya Factory





has the capacity to produce approximately 24.500 tons of concentrate fruit juice and puree per year. They supplies concentrate and puree to the many domestic and foreign firms. Besides their main product apple concentrate, they are producing also sour cherry, grape, apricot, peach, strawberry, quince and pomegranate concentrate. Their yearly fruit process capacity is 120.000 tons.

Another important firm which operates in our region is Elmasu Factory. Elmasu produces fruit juice concentrate, tomato sauce and puree from now on 1990 in Isparta province Atabey district. Puccinelli-Elmataş belongs to same group and their core area is fried fruits and vegetables.

Group has 20.000m<sup>2</sup> indoor facilities, and they have the capacity of processing 120.000-150.000 tons fresh vegetable and fruit. Elmasu produces 7.500 tons apple juice concentrate, and 600 tons sour cherry concentrate seasonal.

In addition to this production, they have created “çıtırElma” brand and started trial production. They are planning huge investments through market demand.

“Asya Fruit Juice Factory is providing the most technological and modern fruit juice concentrate and puree processing activities with its 14,000 square meters of indoor facility in Turkey.”



## 5. CONCLUSION

As is seen from the table of 'Supply percentage' (Table 4), WMR has significant and sufficient potential not only for "100% fruit juice" raw material such as apple, orange, lemon, pomegranate, but also several other fruits such as peach, apricot and sour cherry that are used for the production of 'fruit nectar' and 'flavoring drink'.

Eğirdir's emerging as the "apple center" of Turkey by the help of the activities of Isparta Commodity Exchange in order to create "Apple Exchange"; supply-demand equilibrium adjustment that contributes to price stability are both have importance for fruit juice production and its predictability.

As WMR has railway network, seaport and airports, this gives essential advantages in domestic and international transportation of mid-products that have high export potential such as apple, orange, grape and pomegranate puree/concentrates and other fruit juice kinds.





Another prominent advantage of the WMR can be pointed out as West Mediterranean Development Agency (WMDA) and Agriculture and Rural Development Support Agency (ARDSA) that make Isparta as regional center gives supports for fruit process facility investments.

As WMR has a significant place in production of apple, orange, lemon and pomegranate in countrywide, offers considerable advantages in stated points below for the investors who built a facility in WMR:

- Access to raw material ( Access to these fruits approximately in 100 kilometers diameter)
- Logistics advantage (compared to logistics of the concentrate and puree, logistics of fruit has cost disadvantages in respect to volume and weight and has logistics risks such as putrefaction and contusion)

