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## The Developments in The World Hazelnut Production and Export, The Role of Turkey

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**Abstract:** Although hazelnut is cultivated in many countries around the world, the number of countries producing hazelnut in international trade scale is limited. The major producer and exporter countries are Turkey, Italy, USA and Spain. Other producer countries are not at a producing level that can affect the world hazelnut markets. Turkey, having 67% of the world hazelnut production, is a pioneer country in hazelnut cultivation. The quantity of hazelnut production has shown a rapid increase over the years in Turkey and as a result, supply surplus product has appeared in certain years especially after 1980. In recent years, competition among countries has increased due to supply surplus of hazelnut in the world. This situation has led the countries, such as Turkey, to develop policies in topics like low-cost production, elevating the number of hazelnut crops and production of high quality hazelnut suitable to processing industry.

**Key words:** Hazelnut, hard-shelled fruit, Eastern Black Sea

### INTRODUCTION

Hazelnut has a high consumption share with 35% in hard-shelled fruits in the world. Hazelnut is a feedstock that is widely used in food industry especially in chocolate. Eighty percent of the world hazelnut production is used in chocolate sector, 15% in cake, biscuit and sweet sector and 5% in marketing as appetizers (Fiskobirlik, 2003).

The largest and the most suitable ecologic area for hazelnut cultivation is located in Anatolia. The best quality of hazelnut cultivars that can grow only in temperate climate zone in northern hemisphere is produced in Eastern Black Sea region of Turkey. The first hazelnut cultivation and trade in commercial sense in the world has begun in Turkey. The fact that hazelnut is an important export crop has given way to increase of production of hazelnut producing countries and appearance of new producer countries. As a result of the fact that producer countries, Turkey as a pioneer producer country, have increased the production, world hazelnut production has exceeded the consumption. Turkey was the severely affected country from the difficulties in hazelnut export. Especially after 1980, large hazelnut stocks have developed, because Turkey was not able to dispose its ascending hazelnut production. This situation leads Turkey to reduce the hazelnut production and then the government has to uproot hazelnut orchards by paying compensation in flat land. Other producer countries, except Turkey, are making strenuous efforts to increase their production.

In this study, developments in the world production and export quantity of hazelnut, which has an important role in terms of foreign trade, have been given. Furthermore, the marketing role of Turkey, that is controlling approximately one-third of the world hazelnut production as well as export and hazelnut policies that are changing in recent years have been discussed.

### MATERIALS AND METHODS

Major figures in this study have been obtained from the sources of FAO, DIE (State Institute of Statistics Prime Ministry Republic of Turkey) and Fiskobirlik (Union of Agricultural Cooperatives for the Sale of Hazelnut in Turkey). Moreover, the related literatures have been used. Statistical methods, such as means and percentages have been used in the study.

### THE WORLD HAZELNUT PRODUCTION

Hazelnut can be cultivated in almost all of the regions in temperate climate zone in northern hemisphere of the world. According to FAO records, the number of countries producing hazelnut was 13 in 1970's, whereas it has risen up to 24 today (FAO, 2006). However, countries producing hazelnut in economic sense and having impact in hazelnut foreign trade are: Turkey, Italy, Spain and USA. Approximately 93% of the world hazelnut plant area exists in these four countries (Fiskobirlik, 2006). Although, other countries except for these main countries

**Table 1: The development in the world hazelnut production (FAO, 2006)**

Countries	1971-74 (Annual average)		2002-05 (Annual average)		Increase between 1971-74 and 2002-05 (%)
	(Ton)	(%)	(Ton)	(%)	
Turkey	212725	59.9	482500	67.0	127
Italy	89638	25.3	118841	16.5	33
Spain	19150	5.4	21828	3.0	14
USA	9201	2.6	27872	3.9	203
Others	24069	6.8	69435	9.6	188
World	354783	100.0	720476	100.0	103

are making strenuous efforts to increase their production, their production is not at a producing level that can effect world markets today.

In Turkey, 97% of hazelnut production region is scattered along the Black Sea coast. In Italy, 91% of hazelnut production area is in Campania region (Napoli, Avellino, Salerno) and in Sicilia island, 7% of hazelnut production area is in the central part of Italy and 2% of it is in Northern Italy. In USA, hazelnut production regions are spreading over Oregon and Washington states which have temperate climate. Ninety two percent of production regions are in Oregon, while 8% of it is in Washington state. In Spain, 90% of production region is in Aregon and 8% of it is in Asturia (Berber, 1996).

According to the annual average of 2002-05 term, the total hazelnut production in Turkey, Italy, USA and Spain is approximately 720476 tonnes (90.4% of world hazelnut production). Among these mentioned countries, Turkey is the major producer country with 67% share, followed by Italy with 16.5% share, USA with 3.9% share and Spain with 3.0% share. The share of other countries except for these mentioned are 9.6% and 7% of this is composed of the shares of mainly Azerbaijan, Georgia, Iran and China. The world hazelnut production in the last three decades has shown an increase of 103%. Among these countries, Turkey has absolutely displayed the most increase in hazelnut production. The country increasing her production mostly in proportion is USA with 203%. During that period, in the world's hazelnut production, the shares of Turkey and USA have increased while the shares of Italy and Spain have decreased (Table 1).

It can be said that even if the establishment of new hazelnut orchards are banned, with the effect of escalation trend in yield, hazelnut production will continue to increase in the future as long as present orchards are not reduced.

USA has increased the quantity of hazelnut production in recent years, having increased the area and yield and gone beyond Spain in terms of production quantity. Because of marketing aids and project based structural supports given to hazelnut producers of European Union members, by means of producer organizations, member countries will be able to increase their hazelnut production in the future.

Among hazelnut producing countries, USA has the highest hazelnut yield with 2493 kg ha<sup>-1</sup> according to 2002-05 term average. In hazelnut yield, countries following USA are Italy with 1724 kg ha<sup>-1</sup>, Turkey with 1338 kg ha<sup>-1</sup> and Spain with 945 kg ha<sup>-1</sup> (FAO, 2006).

Due to the high price of hazelnut and its not being a compulsory food, the consumption of hazelnut is generally realized by countries with high income per capita. Countries consuming hazelnut mostly are Switzerland and Germany with 1.7 kg year<sup>-1</sup> and Austria with 1.3 kg year<sup>-1</sup>. In Turkey, being the biggest hazelnut producer, consumption per capita is 0.5 kg (which is very low) in type of inshell hazelnut (Fiskobirlik, 2003).

### THE WORLD HAZELNUT EXPORT

The producer countries and some importer countries are effective in the world hazelnut export. Hazelnut export is carried out by the leading producer countries, such as Turkey, Italy, USA and Spain. Turkey as the leading country in the world hazelnut export has imported hazelnut in recent years even though it is limited. Italy, USA and Spain are also the hazelnut importers. Germany, being an important importer country, generally markets the imported hazelnut to European Union and other countries.

Turkey ranks the first in hazelnut export, as well as in the hazelnut production. During the years between 2001 and 2004, averagely 87.2% of world hazelnut export in type of inshell hazelnut was carried out by Turkey, Italy, USA and Spain. 70.6% of total export belongs to Turkey. Turkey, Italy and Spain have decreased but USA and other countries have increased their shares in hazelnut export in the last three decades. Additionally, an absolute reduction can be seen in hazelnut export of Italy and Spain. The country increasing its hazelnut export absolutely in the last three decades is Turkey; however, the highest proportional increase was realized in USA (Table 2).

The increase in demand of hazelnut has not developed in accordance with the production and as a result, the important quantities of hazelnut stocks have occurred especially after 1980. The main reasons of this situation can be stated as follows: the increase of hazelnut production of other producer countries; the appearance of new hazelnut producer countries; the increase in the production of other hard-shelled fruits that can substitute hazelnut; inadequate increase in the world hazelnut consumption and deficiencies in Turkey's marketing policy. Other producer countries' efforts to increase their production gradually may engender a reduction in the share of Turkey in hazelnut export.

countries especially to Germany. As far as the importer countries for Turkish hazelnuts are concerned, Germany is the most important market. On average, 33% of Turkish hazelnuts (between 2000 and 2004) were exported to Germany (KİB, 2005). Germany has a highly developed hazelnut industry and processed Turkish hazelnuts are re-exported to other countries (especially to EU countries). Interestingly, some important producer countries have also imported hazelnuts from Turkey. One of the main reasons is that the hazelnut supply of these countries has not met domestic and EU demands (Demiryürek, 2000).

Export prices of hazelnut are changing in accordance with the production quantity of Turkey. Generally, export prices are low when the production quantity is high, vice versa, export prices are high. When the hazelnut production goes into full production, the government stocks certain amount of hazelnut through Fiskobirlik. In this way, surplus supply of hazelnut has not been submitted to markets and extreme price decline is prevented.

## RESULTS AND DISCUSSION

Turkey, producing a large amount of hazelnut in the world can be said to continue the leadership in the world markets for several years. However, Turkey needs to make a long-term production planning to make use of this advantage which is provided by hazelnut precedence over other countries.

Turkey carries out most of her export to European Union especially to Germany and this means an undue dependence. Turkey should rise her market share in other countries; apart from EU and should constitute big markets having developed processed industry as Germany.

Hazelnut yield of Turkey is very low when compared with USA and Italy. Low yield is the basic problem of hazelnut production in Turkey. Low yield reduces the competition chance of Turkey in foreign markets. The escalation of hazelnut production has derived from area expansion until now. This situation should be converted into yield elevation and for this purpose, methods providing yield escalation should be supported.

Turkey's keeping hazelnut export prices high might reduce demand and also this situation might encourage the production of rival countries. However, in low price levels, due to the low demand flexibility of hazelnut, export quantity will not increase drastically. Therefore, Turkey should state an optimal price level having taken the prices of other producer and rival countries into account while determining hazelnut export prices.

Turkey should give up the price and purchase intervention carried out by means of Fiskobirlik. Fiskobirlik should function as a cooperative that is defending the rights of the producers. Hazelnut prices should occur in free market conditions.

High quality products appropriate for foreign markets should be produced improving the processing industry in Turkey.

Countries of EU, USA, Azerbaijan and Georgia are spending efforts to increase their hazelnut production. This situation will affect Turkey's market share negatively in the future. Therefore, yield and quality should be risen up and costs of producers should be reduced in Turkey.

Among the major hazelnut producer countries, the lowest organization level exists in Turkey. This situation makes producers go through financial and technical problems.

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