

# Analysis of Romania's Honey Market

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## Abstract

The paper aimed to present the evolution of Romania's honey market in the period 1990-1997, by means of the specific indicators: number of beekeepers, number of bee families, honey yield and production, ecological honey production, honey trade and price. The analysis has pointed out that beekeeping has been continuously developing mainly after the year 2000. In 2007, 34,971 beekeepers were keeping 1,085,905 bee families, producing 18.56 kg honey per family in average, meaning 20,159 honey tons. The major producing regions are the Central, South West, West, North East, South East and North West areas. Romania produces 50 % mixed honey, 30 % Robinia honey and 25 % lime honey and honey price is related to honey quality. Ecological honey is produced in 584 apiaries and accounted for 2,300 tones in 2008. Honey consumption per capita is 0.19 kg, still at a low level compared to other EU countries. In 2007, Romania exported 6,236 tons of honey and imported 1,8 tones. Romania is a net honey exporter having a positive trade balance. Romania produces 6.26 % of the EU honey production and 1.87 % of world production. It also contributes by 5.67 % to the EU honey exports and by 1.53 % to the world exports.

**Keywords:** analysis, honey, market, Romania.

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## 1. Introduction

Honey is well appreciated both in the Romanian and international market. Romania has a high potential in producing honey because its tradition in beekeeping longer than 2,000 years and the favorable geographical conditions as presented by Popescu Agatha [1]. Romania plays an important part in the European and world honey production and trade as discussed by Popescu Agatha [2,3,4]. In this context, the paper aimed to present the evolution of honey market in Romania in the period 1990-2007 by means of number of beekeepers, number of bee families, honey production, consumption and trade balance based on the data provided by National Institute for Statistics [4].

## 2. Materials and methods

In order to set up this paper, the following specific indicators characterizing honey market have been

used: number of beekeepers, average size of apiaries, average honey yield, honey production and its structure by honey type and Euro-region, number of ecological apiaries, ecological honey production, total honey consumption and consumption per capita, honey exports, imports and trade balance, Romania's share into the European honey trade and average honey price.

The data have been provided by National Institute of Statistics, Yearbook 2008 [5], but also The reference period is 1990-2007. The calculations have been based on the usual methodology for such a product market study.

## 3. Results and discussion

**The Number of beekeepers** was 45,800 in the year 1990. The dissolution of agricultural cooperatives and state units determined a reduction by 49 % of the number of beekeepers till the year 2000. Starting from this moment, beekeeping has become an attractive sector in agriculture mainly for people living in the rural areas. For this reason, the number of beekeepers

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has increased accounting for 34,971 persons in the year 2007 (Table 1).

**Table 1.** Number of Beekeepers and Average Apiary Size in Romania during the period 1990-2007

	1990	1995	2000	2005	2007	2007/1990 %
Number of Beekeepers	45,800	28,380	23,409	34,971	34,971	76.36
Average Apiary Size	25.59	26.32	26.11	26.27	31.05	121.33

Taking into account the favorable areas for beekeeping in Romania, the distribution of beekeepers in the territory by Euro-region is the following one: North West region 18.6 %, North-East 17.8 %, South 15.8 %, West 11.3 %, South East 8.7, South West 9.8 % and in Bucharest area 5.8 %.

**The Number of Bee Families** has registered a various evolution from a period to another. In the year 1990, Romania had 1,172,111 bee families, but in the coming years their number has continuously decreased reaching the lowest level in the year 2000, 611,237 bee families. Starting from this year, the number of bee families has registered an increasing trend accounting for 1,085,905 families in the year 2007 (Table 2).

**Table 2.** Number of Bee families in Romania during the period 1990-2007 ( thou bee families )

	1990	1995	2000	2005	2007	2007/1990
Bee families	1,172	747	611	919	1,086	92.65

The number of bee families is relatively equally distributed in the territory, its share by Euro-region ranking between 12-17 %, except the capital area where it has been noticed just 2.1 % of the total number of bee families.

However, the highest number of bee families is situated in the South West region, but also in South and Central part of Romania (Table 3).

**Table 3.** Distribution of Bee families by Euro-zone (%)

	1990	1995	2000	2005	2007
NW	6.9	10.7	10.6	12.6	12.2
C	12.2	10.9	10.7	13.6	14.1
NE	15.5	15.3	13.8	16.0	13.5
SE	15.7	16.4	16.5	12.6	12.9
S	17.7	18.6	17.9	14.7	14.4
SW	17.9	16.1	16.9	14.6	17.9
B	4.5	2.3	3.6	3.9	2.1
W	9.6	9.7	9.9	12.0	12.9

The counties with the highest number of bee families are: Arges, Valcea, Vaslui, Mehedinti and Bucharest.

**The average Honey Yield** has continuously increased from 9.03 kg/bee family in 1990 to 18.56 kg in the year 2007, in this moment being 2 times higher than in 1990.

**The Honey Production** has registered a continuous increasing trend and this was due only to the higher average honey yield. In 1990, honey production was 10,579 tons and in the year 2007, it was 1.9 times higher, that is 20,159 tons (Table 4).

The contribution of Euro-zones to honey production is the following one: 19.5 % Central part of Romania, 14.9 % South West region, 13.4 % South region 12.7 % West region, 12.5 % North East region, 12,5 % South East region, 12.2 % North West region and 2.3 % Bucharest area (Table 5).

**Table 4.** Average Honey Yield and Honey Production in Romania in the period 1990-2007

		1990	1995	2000	2005	2007	2007/2000
Average Honey Yield	Kg/Bee family	9.03	13.97	19.22	21.07	18.56	206.8
Honey Production	tons	10579	10434	11746	19366	20159	190.56

**Table 5.** Distribution of Honey Production in the territory by Euro-region in Romania in the period 1990-2007 (%)

	1990	1995	2000	2005	2007
NW	6.5	7.8	8.5	12.5	12.2
C	11.7	9.5	10.1	19.3	19.5
NE	12.5	12.1	12.4	13.4	12.5
SE	18.8	19.5	18.9	11.9	12.5
S	18.2	18.1	17.9	14.3	13.4
SW	21.2	19.9	19.1	13.4	14.9
B	3.5	3.6	3.5	2.6	2.3
W	7.6	9.5	9.6	12.6	12.7

**Honey Production Structure** is 50 % mixed honey, 30 % Robinia honey and 25 % lime honey. In the year 2007, all these sorts of honey have registered a double production.

**Ecological Honey** has become more and more required in the EU market. For this reason, according to the development strategy of apiculture in the future, a major objective is represented by the implementation of modern beekeeping technologies in order to obtain diversified and healthy honey products. According to the EU standards, Romania is obliged to proceed to flower resource mapping and identify the polluted areas where honey quality could be affected.

The zonal centers for honey quality control and monitoring are responsible to check every sort of honey using modern analyze techniques and methods for determining honey quality.

Taking into account that the main source of honey pollution is represented by the chemicals used for bee diseases treatment, alternative technologies have been implemented in order to reduce at minimum the effect of chemical therapy. At the same time, research in apiculture is more and more involved in bee families selection based on their natural resistance to various diseases.

The beginning of ecological apiculture is marked by the year 2000. Since that time, the number of bee keepers dealing with ecological beekeeping has continuously increased. In the year 2008, the number of ecological apiaries accounted for 584 being 4.42 times higher that in the year 2005.

The average of ecological honey yield was 30 kg/bee family in the year 2005 but 26 kg in the year 2008. As a result, honey production has registered a continuous increase from 610 tons in the year 2000 to 2,300 tons in the year 2008 (Table 6).

**Table 6.** Ecological Honey Production in Romania in the period 2005-2008

Specification	MU	2005	2006	2008	2008/ 2006 %
Nr. of Apiaries	No	132	335	584	442.4
Average Honey Yield	Kg/bee family	30.0	20.8	26.0	86.6
Honey Production	tons	610	700	2,300	377.0

**The Average Honey price** has varied from a year to another according to the variation in offer demand ratio in the market. In the year when honey production registers a lower level, honey price is higher and in the years with higher production, the price is lower. Honey production is deeply influenced by many factors, but the main import ones are the power of a bee family and the climate conditions during the period of nectar picking. In the year 2007, the average honey price was lei 8/kg for mixed honey, lei 9/kg for lime honey and lei 10/kg for Robinia honey. The ecological honey is better paid, its average price increasing from lei 12/kg in the year 2005 to lei 14 per kilogram in the year 2008.

**The Honey Consumption** has registered a continuous increasing trend from 1990 to 2007.

In the year 2007, total honey consumption accounted for 4,031.8 tons, being 1.9 times higher than in the year 1990, when it recorded just 2,115.8 tons. At the sometime, the honey consumption per inhabitant has followed a similar increasing trend, starting from 0.09 kg/capita in

1990 and reaching 0.19 kg/capita in the year 2007 (Table 7).

**Table 7.** Honey Consumption in Romania in the period 1990-2007

Specification	MU	1990	1995	2000	2005	2007	2007/2000
Total consumption	tons	21158	20868	23492	38732	40610	19050
Honey consumption per inhabitant	Kg/capita	009	009	011	018	019	211.11

**Romania's position in the European and World Honey Production.** Romania plays an important part among honey producers, contributing by 20.1 thousand tons to the EU honey production which accounted for 321 thou tons in the year 2007. Therefore, Romania's honey production represents 6.26 % of the EU production.

Romania's honey production represents 1.87 % of world honey production and its share is continuously increasing which is a positive aspect (Table 8).

**Table 8.** Romania's position in Honey Production at international level ('000 tons)

Specification	2000	2005	2007	2007/2000 %
World honey production	1,255.2	1,410.4	1,073.0	85.48
EU honey production	289.8	342.6	321.0	110.76
Romania's honey production	11.7	19.4	20.1	171.79
Romania's Share in :				
- World production	4.03	5.66	6.26	-
- European production	0.93	1.38	1.87	-

While world honey production has registered continuous decline in the period 2000-2007, in the year 2007 being by 15 % lower than in the year 2000, the EU honey production has increased by 10.76 %. But the most dynamic increase, 71.79 %, has been performed by Romania in the same period of time reflecting its potential for producing honey.

**The honey Trade Balance.** Because of its high quality, Romanian honey is more and more required on the external markets and mainly on the EU market. In the year 2000, Romania honey exported 7,510 thousand tons and in the year 2007 its export accounted for 6,254 thou tons. The imported honey is of less importance and it has decreased from 99 thou tons in 2000 to 18 thou tons in the year 2007. Therefore, honey trade balance is a positive one, meaning that Romania is

a net honey exporter. Among the European countries, Romania comes on the 4<sup>th</sup> position concerning honey export after Hungary (23.8 tons), Germany (23.7 tons) and Spain (13.8 tons). Concerning the amount of imported honey, Romania comes on the 20<sup>th</sup> position after Germany, United Kingdom, France, Spain, Italy, Belgium, Netherlands, Austria, Denmark, Slovakia, Poland, Greece, Sweden, Ireland, Czech Rep, Portugal, Hungary, Finland and Slovenia. In the year 2007, Romania contributed by 5.67 % to the European honey export and by 1.53 % to the world honey export.

In the same year, Romania's honey import represented 0.0079 % of the imported honey at world level (Table 10).

**Table 9.** Romania's Honey Trade Balance in the period 2000-2007 ('000 tons)

Specification	2000	2005	2007	2007/2000 %
Export	7,510	6,636	6,254	83.27
Import	99	20	18	18.18
Trade Balance	-7,411	+6,616	+6,236	84.14

**Table 10.** Romania's contribution to the EU and World Honey Exports and Imports (%)

Specification	2000	2005	2007
Romania's share in:			
-EU Honey Export	9.05	7.41	5.67
-World Honey Export	2.01	1.56	1.53
-EU Honey Import	0.047	0.0087	0.0079
-World Honey Import	0.026	0.0047	0.0042

#### 4. Conclusions

Romania's honey market is continuously developing. The favorable geographical conditions, higher export requirements in the EU market and export price are major factors stimulating Romanian beekeeping. Since the year 2000, the number of beekeepers has continuously increased reaching 34,971 persons in 2007.

Also, the number of bee families accounted for 1,085,905, relatively equally distribute by the 8 Euro-regions, but mainly in SW, S and Central part of Romania.

In 2007, honey yield was 18.56 kg/bee family being 2 times higher than in 1990 and this aspect is the major factor contributing to the increase of honey production. In 2007, Romania produced 20,159 tons honey by 90 % more than in 1990.

The largest producing regions are Central, SW, W, NE, SE and NW areas.

The honey production structure consists of 50 % mixed honey, 30 % Robinia honey and 25 % lime honey.

Since the year 2000, beekeepers are interested in producing ecological honey which is better paid in the EU market. In 2008, 584 ecological apiaries achieved 26 kg/bee family in average and 2,300 tons honey.

Honey price is different from a sort to another and depends on honey quality. In 2007, the highest price was lei 10/kg for Robinia honey, lei 9/kg for lime honey and lei 8/kg for mixed honey.

The price per kilogram of ecological honey was lei 14, by 40 % higher than for traditional honey.

Honey consumption reached 2,115.8 tons in the year 2007, being 1.9 times higher than in 1990. This means 0.19 kg honey/capita, a double consumption compared to 1990, but still lower compared to honey consumption level in other EU countries.

Romania is an important honey producer in Europe and in the world. Its honey production represents 6.26 % of the EU production and 1.87 % of world honey production.

Romania is a net honey exporter because its exports are higher than imports. In the year 2007, honey trade balance registered a surplus of 6,236 thou tons, due to the high exported amounts accounting for 6,254 thou tons and low imports.

Romania contributes to the EU honey exports by 5.67 % and to the world export by 1.53 %.

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