

BEEKEEPING ENTERPRISES IN TWO EUROPEAN COUNTRIES: SIMILARITIES AND DIFFERENCES

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Abstract

Honey bees are important for the pollination of agricultural crops and bee products represent both food and medicine for humans. The aim of the present study is to compare beekeeping enterprises from France and Romania using descriptive statistics. The following aspects are analysed: the legal status of the enterprise, age of the enterprise, number of honeybee colonies, distribution channels, type of bee products sold, profitability and several socio-demographic characteristics of the owners of beekeeping enterprises. The results of the study reveal that the beekeeping enterprises from both countries are similar concerning the legal status of the enterprise, the age of the enterprise, profitability, the socio-demographic characteristics of the owners and differ regarding the size of the apiary. The national per capita consumption of bee products from each country influences the strategies adopted by the beekeeping enterprises regarding the distribution channels and the type of bee products sold.

Key words: bee products, distribution channels, honeybee colonies, France, Romania

INTRODUCTION

Honey bees are essential in the pollination of many agricultural crops, as the production of 80% of the 264 crop species cultivated in the European Union depends directly on insect pollinators (Gallai et al., 2008). The apicultural sector offers humans a variety of products such as: honey, royal jelly, pollen, beeswax, propolis etc. The production and consumption of bee products contributes to human welfare by satisfying two important needs: food and health (Pocol et al., 2012). Consumers' interest in natural products such as honey is increasing due to health reasons. It is a fact that honey has a variety of positive nutritional and health effects (Alvarez-Suarez, 2010). According to Qaiser et al. (2013), apiculture is a profitable business which could promote sustainable rural livelihoods, providing a source of income for the rural people. Honey producers should be encouraged to take advantage of all the bee products such as propolis, royal jelly and wax in order to increase profitability (Baba et al., 2014).

Countries counting more than 100 000 hives are among the major producers of honey in the European Union, mainly Spain, Germany, Romania, Hungary, France, Greece, Poland, Bulgaria and Italy. The accession to the EU of several honey producing countries such as Hungary,

Bulgaria, Poland and Romania has led to the increase in the EU honey self-sufficiency rate since the year 2000 (European Commission, 2013).

MATERIAL AND METHOD

Data were collected by means of an email survey from July until October 2014. A structured questionnaire was sent to the owners of 1300 beekeeping enterprises in France and in Romania. The two European countries were chosen for analysis as they are among the leading producers of honey in Europe (Chauzat et al., 2013). In France, out of the 1300 apicultural enterprises, 107 responded and filled in the questionnaire, which is a response rate of 8.23%. Within the 107 respondents, 7 entrees were dropped because they were not complete. In Romania, out of the 1300 apicultural enterprises, a total of 165 valid responses were received, that is a response rate of 12.6%. Within the 165 respondents, 5 entrees were dropped because they were not complete. This resulted in 100 valid responses from France and 160 from Romania to be used in the statistical analysis. The data were analysed using SPSS statistical program v. 19.

The questionnaire covered personal data of the owner-manager such as gender, age, education, beekeeping experience. It also included questions related to apiary size (number of honeybee colonies), the legal status of the firm, the type of beekeeping practiced, the age of the beekeeping enterprise, the number and type of products sold, the diversification of the distribution channels, the export of bee products. The other factors analysed were the number of honeybee colonies, the number of bee products sold (honey, pollen, propolis, royal jelly, beeswax, venom, swarms, queens, honeycombs, beekeeping equipment), the distribution channels used (selling to friends and acquaintances, selling to the local market, selling in specialized shops, selling in one's own shop, selling to processors, selling to retail chains, online) and the age of the enterprise. The current study aims to identify similarities and differences between the beekeeping enterprises from France and Romania. Data analysis was carried out using descriptive statistics.

RESULTS AND DISSCUSIONS

The majority of the apicultural enterprises are sole proprietorship (*entreprise individuelle*) both in France (85%) and in Romania (67.5%) (Table 1). 15% of apicultural enterprises in France and 13.1% in Romania are private limited companies. Regarding the size of the apiary, in Romania it is greater: most of the enterprises (39.4%) have between 51 and 100 honeybee colonies, while in France most of the beekeeping enterprises (54%) have 50 colonies of bees at the most. Producers that have over 100

honeybee colonies can be regarded as professional beekeepers (Zaric et al., 2013).

Table 1

Descriptive statistics per country		France (%)	Romania (%)
Legal status of the enterprise	Sole Proprietorship	85	67.5
	Individual enterprise	-	16.3
	Family enterprise	-	3.1
	Private limited company	15	13.1
Age of the enterprise	< 3 years	20	13.1
	3-10 years	56	65.6
	11-20 years	9	15.6
	21-30 years	8	4.4
	31-40 years	6	0.6
	> 40 years	1	0.6
Number of honeybee colonies	0 honeybee colonies	0	5.6
	< 50 honeybee colonies	54	13.8
	51-100 honeybee colonies	14	39.4
	101-150 honeybee colonies	9	15
	151-200 honeybee colonies	10	13.8
	> 200 honeybee colonies	13	12.5
Distribution channels*	Selling to friends and acquaintances	85	86.3
	Selling to the local market	54	26.3
	Selling in specialized shops	32	30
	Selling in one's own shop	24	13,1
	Selling to processors	1	54.4
	Selling to retail chains	3	5.6
	Online	21	21.9
	Type of bee products sold*	Honey	97
Pollen	39	68.1	
Propolis	42	80.6	
Royal jelly	23	24.4	
Wax	39	70	
Venom	4	6.9	
Packages	22	40	
Queens	15	28.1	
Honeycombs	7	19.4	
Beekeeping equipment	4	8.8	

*Multiple responses, percentage of respondents who said "Yes".

Source: own calculations based on the survey

Regarding the age of the enterprise, the majority of enterprises in France (56%) and in Romania (65.6%) have between 3-10 years old. The average age of the enterprise is 9.59 years in France and 7.32 years in Romania. The analysis of the distribution channels used by beekeeping enterprises proves that a similar percentage is found in the sale to friends and acquaintances (86.3% in Romania and 85% in France) and in the sale to

specialized shops (30% in Romania and 32% in France). As in other European Union countries (Pidek, 2002), direct purchase of honey from the beekeeper prevails both in France and in Romania. The direct sales strategy allows the producers to increase the product added value and gain customer loyalty (Zaric et al., 2013). About half of the honey produced in the European Union is sold directly to consumers; the other half is sold to packers and conditioners (European Commission, 2013).

In Romania, a much higher percentage of beekeeping enterprises sell their products to packers and conditioners (processors) for export (54.4% in Romania and only 1% in France). A possible explanation is that in France the consumption of bee products is higher and domestic production covers domestic consumption by 50% (Albouy and Le Conte, 2014). The French consume about 40.000 tonnes of honey a year. This consumption corresponds to 600 grams per inhabitant per year which places the country among the highest consumers of Europe. French apicultural enterprises do not have to call in processors in order to sell their products. In Romania, honey consumption is between 300-400 grams per capita per year. If the consumption of bee products in Romania increased, the volume of bee products sold to processors would diminish. The conditioners/exporters (processors) have a negotiating advantage in the trade with small beekeeping enterprises, resulting in lower prices for the beekeeping enterprises (Mogni et al., 2007). Finally, the processors sell the end product to wholesalers and retailers who have substantial buying power and create their own private labels.

In France, the number of enterprises that sell their products on the local market (54%) and via a personal shop (24%) is higher than in Romania. Honey is sold by almost all the enterprises, 97% in France and 98.9% in Romania. Pollen, propolis, royal jelly and beeswax are sold to a greater extent in Romania, as compared to France, demonstrating that product diversification is higher in the Romanian apicultural enterprises.

Table 2 gives an overview of the socio-demographic characteristics of the owners of the apicultural enterprises studied. As for the distribution according to age, it can be noticed that in France the owners are almost equally ranked within the four age groups (25-34, 35-44, 45-54, 55-64), while in Romania the majority (38.1%) are between 35-44 years old. The average age of the owner is 46.19 in France and 44.06 in Romania. This implies that the majority of the honey producers are in their very active age (30-40 age range) which adds a good advantage to the production level of honey in both countries (Famuyide et al., 2014). 93.1% of the Romanian owners are men. A similar distribution is observed in France where 88% of owners are men. In terms of beekeeping experience, 38.8% beekeepers in Romania and 47% in France have an experience between 3 and 10 years.

The majority of owners have higher education qualifications: 63.8% in Romania and 61% in France.

Table 2

Socio-demographic characteristics of the owners of apicultural enterprises		France (%)	Romania (%)
Age (years)	18-24	1	3.1
	25-34	19	15.0
	35-44	25	38.1
	45-54	24	20.0
	55-64	25	21.3
	> 64	6	2.5
Gender	Male	88	93.1
	Female	12	6.9
Experience in beekeeping (years)	< 3	10	1.9
	3-10	47	38.8
	11-20	19	32.5
	21-30	13	17.5
	31-40	7	8.1
	> 40	4	1.3
Education	Secondary school	2	1.3
	Vocational school	11	3.8
	High school	8	22.5
	Post high school	18	8.8
	Higher education	61	63.8

Source: own calculations based on the survey

As regards enterprise profitability, 88.1% of Romanian enterprises recorded a profit during the past 3 years, while in France the percentage of beekeeping businesses that registered profit during the past 3 years is 72%.

CONCLUSIONS

The results of the study reveal the fact that the beekeeping enterprises from France and Romania are similar regarding the legal status of the enterprise, age of the enterprise, profitability, socio-demographic characteristics of the owners of apicultural enterprises and differ regarding the size of the apiary. Combined similarities and differences exist regarding the distribution channels and the type of bee products sold. Distribution of bee products takes place primarily through the beekeeping enterprise-consumer channel in both countries. Direct sales lead to better prices for the beekeeping enterprises, but imply higher costs related to honey processing. In Romania, as opposed to France, half of the beekeeping enterprises sell their products to packers and conditioners for export, therefore holding a weak position as negotiators in the competitive structure of the bee products market. Beekeeping enterprises from both countries offer their customers a variety of products, therefore obtaining additional product demand and high

profits, but product diversification is higher in Romania. Beekeeping enterprises contribute to the maintenance and creation of employment and local economic development. Moreover, through the diversification of their activities, beekeeping enterprises support regional economic diversity.

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