COSTS OF PRODUCTS AND SERVICES BEE

COSTURILE PRODUSELOR ŞI SERVICIILOR APICOLE

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Abstract. *Researches conducted were intended to improve the methodology for quantification of specific economic efforts bee products and services. The need for this approach was drawn from socio-economic research group that showed the shortcomings of current diagnostic tools used as basis for decision making. In this respect, have improved processes determining production costs by expanding and adapting them to bee economy requirements.*
Key words: costs, services bee, bee products, methods of quantification

Rezumat. *Cercetările realizate au avut scopul de a îmbunătăţi metodologia de cuantificare a eforturilor economice specifice produselor şi serviciilor apicole. Necesitatea acestui demers a fost desprinsă din cercetările socio-economice de teren care au evidenţiat lipsurile instrumentelor actuale de diagnostic utilizate ca fundament în luarea deciziilor. În acest sens, au fost îmbunătăţite procedeele de determinarea a costurilor de producţie prin completarea şi adaptarea acestora la cerinţele economiei apicole.*
Cuvinte cheie: costuri, servicii apicole, produsele apicole, procedee de cuantificare

INTRODUCTION

The need for this research was identified after the initiation of the approach to develop technical guidelines for good practice in economic research project partnerships, PN II, "Development of viable models of farm bee European economic context."

A specific objective is to identify its optimal production structure based on the comparative economic efficiency products involves determining unit costs.

Known methods for determining the cost are not adapted to the technical and economic analysis in beekeeping because:

- do not show the influence of secondary income caused by construction of a particular product or service such as hives on the cost of direct payments by the purchasers authorized marketing of honey;
- do not allow proper allocation of costs to each product or service that is exclusively accomplished by the structure of income distribution.

MATERIAL AND METHOD

The first phase of the study was to identify methods for determining the cost of production which can be used in beekeeping economy and quality analysis results. (Barbu, 2000; Nica, 1996)

The second phase of the study was to adapt the known methods and their application in two bee farms.

Research methods used were the case study and economic and technical diagnosis.

RESULTS AND DISCUSSIONS

Production costs are all factors in terms of value and consumption by a company to obtain goods and services. Production costs of a firm will depend on the inputs they use. The multiple uses, the greater the cost. More specifically, the relationship depends on two elements:

• total factor productivity. The more than their physical productivity, the lower the required amount of these factors to produce a given level of output and thus lower the cost of that production. In other words, there is a direct link between output and marginal costs of production;

• price factors. The higher their price, the greater will be the cost of production.

To determine the profitability of beekeeping exploiters, regardless of their size, it is necessary to know the use of financial and human resources necessary to conduct business therein (Ştefan, 2006).

Production cost, cost per product or unit cost reflects the cost of production per unit of product incumbent (how to spend to get 1kg of honey).

Meet the situations for which the cost of products is higher than their selling price, but overall profit record bee farm. This is because some products or services have a cost higher than their price causing losses (Pânzaru, 2005).

So, the usefulness of determining the cost of production is given by comparing the sale price to determine which products are unprofitable and that eventually bring loss. In this situation you will give as unprofitable products and services and will actively develop

It is also necessary to know the cost of production to make decisions about how production and marketing services. For example, in some cases the cost of honey production may be higher than the selling price of honey in procurement (wholesale) but lower than the price of honey by selling directly to final consumer. Direct selling involves some additional costs to the cost of production so will add a cost of distribution. If the sum of two rates is still lower than direct sale prices when beekeepers will opt for this method of marketing. (2)

Determining the cost of production for bee products and services have some difficulties. For this reason have been given three situations in which different calculation methods are used:

1. In the event that made bee farm and selling a single product (ex honey) when determining the cost of production (Cp) is reduced to simple division method is to determine the ratio of total production costs (Cht) and total output (Qt).

$$Cp = \frac{Cht}{Qt} \quad (5)$$

2. Where the bee farm mainly produces and sells a product (ex. honey) and one or more products (ex. wax, pollen, clusters), it is necessary to use the remaining value method involves reducing the production costs of secondary production value (Vps)

$$Cp = \frac{Cht - Vps}{Qp} \quad (5)$$

For this method requires a clarification. In addition to income from secondary production, can also identify other revenue arising directly productive activities such as: subsidies, partial compensation for the affected production, etc.. These revenues will reduce the cost of production.

In this case it is necessary to supplement this method by replacing the formula for the value of secondary production (VPS) income arising from the production side (Vs). When calculating the relationship will take the form:

$$Cp = \frac{Cht - Vs}{Qp}$$

Holding that the subject of the first marketing case study honey and wax produced mainly as a byproduct. It sells wholesale honey production and get a subsidy of 10 Euro / bee family. Consequently, the main product cost will be reduced by the amount of secondary production and the subsidy.

Table 1

Determining the cost of production of honey

Specification	UM	V1	V2
Total expenditure	lei/fam	162,0	162,0
Home Production (honey)	kg/fam	28,0	28,0
Secondary production (wax)	kg/fam	0,3	0,3
Secondary production price	lei/kg	15,0	15,0
Direct Payments	lei/fam	0,0	10,0
Production cost	lei/kg	5,6	5,3

By using the appropriate method of hone cost is reduced to 5.6 lei / kg to 5.3 lei / kg as shown in table 1. So, the beekeeper will have a different starting point in marketing decision making in production.

Although it can be easily used, these two methods do not adapt well enough to analyze the costs of beekeeping as in most apiaries is performed several key products or more types of product.

3. It is therefore appropriate to use coefficients method assumes the existence of several key products and possibly secondary.

For its application is necessary to know the expenditure share for each main product, the total expenditure. The criterion for the distribution of expenditure that can be economically produced but may also consider other characteristics such as energy content, content of active substances, the necessary manpower has been consumed, etc..

Product share in total primary production (Ki) is determined by sales price and output produced for each product. It should be mentioned that these two indicators are characterized by high variability, which is why the unit cost will be calculated over this feature.

$$Ki = \frac{Qpi \times Pvi}{\sum_{i=1}^{n}(Qpi \times Pvi)} \times 100 \qquad (5)$$

where:

QPI - primary production that calculates the cost of production,

PVI - the selling price of the product for which calculates the cost of production;

$\sum_{i=1}^{n}(Qpi \times Pvi)$ - amount of income from marketing major products.

After determining the coefficient which expresses the share income from the sale of each product in total production is going to determine the actual cost of production for each product (Cpi).

$$Cp = \frac{(Cht - Vps) \times Ki}{Qi}$$

In this way one can determine the unit cost for any product or service beekeeping.

A major shortcoming of this method is that if we are to determine the economic efficiency of each product to determine the structure of production, these indicators will have the same value as can be seen from Table 2 variant V1.

This phenomenon occurs because this method is not carried out any differentiation by type of product specific costs although often recorded

separate charges for each product (Chsi). It is therefore indicated to improve this method by determining the cost of production based on the cost of completed joint expenses determined by the specific costs.

In this case, the relationship of the calculation will have the following form:

$$Cp = \frac{(Cht - Vs - \sum_{i=1}^{n} Chsi) \times Ki}{Qi} + \frac{Chsi}{Qi}$$

Variant V2 in table 2 uses this method of determining the cost of production for each main product. In this case, both production costs and different rates of return.

Table 2

Determining the cost of production for two main products - honey and pollen

Specification	UM	V1	V2
Total expenditure	lei/fam	184,0	76,0
Specific expenses honey	lei/fam	0,0	82,0
Pollen specific expenditure	lei/fam	0,0	26,0
Honey production	kg/fam	26,0	26,0
Pollen production	kg/fam	0,8	0,8
Wax production (secondary)	kg/fam	0,3	0,3
The price of honey	lei/kg	7,0	7,0
Price pollen	lei/kg	250,0	250,0
Secondary production price	lei/kg	15,0	15,0
Direct payments	lei/fam	10,0	10,0
Honey production cost	lei/kg	3,1	4,3
Pollen cost production	lei/kg	110,9	72,7
Honey unit profit	lei/kg	3,9	2,7
Pollen unit profit	lei/kg	139,1	177,3
Honey profit rate	%	125,4	63,5
Pollen profit rate	%	125,4	243,6

Consequently, the driver holding that the subject of the second case study will be able to decide to increase production of both products because both are profitable. If capital resources are limited or labor, will decide to increase production volume of pollen because it causes a higher return.

CONCLUSIONS

1. Adaptation is the remaining value method of achieving recognition of other income as the main product components to reduce production cost.

2. Determining the cost of production for several key products is done by dividing total expenditure in each product specific costs and overheads.

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