

PECULIARITIES REGARDING THE COST CALCULATION IN HORTICULTURE

PARTICULARITĂȚI PRIVIND CALCULAȚIA COSTURILOR ÎN HORTICULTURĂ

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Abstract: *The knowledge of the cost, as an expression of the consumptions, presents a major importance in the fundament the managerial decisions. The purpose of the paper is in establishing the peculiarities that the production process in horticulture presents and in determining the influences of these peculiarities over the cost calculation of the horticultural production. The method of research chosen starts from general aspects regarding the role of the costs in the managerial decision making and leads to the particular aspects of the types of specific production costs in horticulture. In the process of profitable leadership, besides knowing the costs, their structure, an important role comes to establishing the methods, procedures and techniques used in the production costs establishment. By analyzing the calculation methods of the complete cost in horticultural units, we consider that we can apply a calculation of the total costs on types of cultures. A defining characteristic of this method of cost calculation is in the activity delimitation of each subunit (agricultural farm, auxiliary sector) as to the production expenses, incomes and financial result. This delimitation is made at the level of the subunits through the system of operative records. We can conclude that, dividing the activities of the horticultural unit in production farms, auxiliary sectors and functional compartments represents the support for the delimitation and responsibility growth in accomplishing the agricultural unit's objectives as an economical entity.*

Keywords: cost, decision, strategy, performance, forecast.

Rezumat: *Cunoașterea costului, ca expresie a consumurilor, prezintă o importanță deosebită în fundamentarea deciziilor manageriale. Scopul lucrării constă în stabilirea particularităților pe care le prezintă procesul de producție din horticultură și în determinarea influențelor acestor particularități asupra calculației costurilor producției horticole. Metoda de cercetare aleasă pornește de la aspectele generale referitoare la rolul costurilor în decizia managerială și ajunge la aspectele particulare ale tipurilor de costuri specifice producției din horticultură. În procesul conducerii profitabile, în afară de cunoașterea costurilor, a structurii acestora, un rol important îl are stabilirea metodelor, procedurilor și tehnicilor utilizate în stabilirea costurilor de producție. Analizând metodele de calculație ale costului complet în unitățile horticole, considerăm că se poate aplica o calculație a costului complet pe tipuri de culturi. O trăsătură definitorie a acestei metode de calculație a costurilor o constituie delimitarea activității fiecărei subunități (fermă agricolă, sector auxiliar) sub raportul cheltuielilor de producție, veniturilor și rezultatului financiar. Această delimitare se realizează la nivelul subunităților prin sistemul evidenței operative. Putem concluziona că, împărțirea activității unității*

horticole pe ferme de producție, sectoare auxiliare și compartimente funcționale reprezintă suportul pentru delimitarea și creșterea responsabilităților în realizarea obiectivelor unității agricole ca entitate economică.

Cuvinte cheie: cost, decizie, strategie, performanță, previziune.

INTRODUCTION

The strategies and policies elaborated by managers have a crucial role in the conceiving and foundation process of the economical entity's activities. What characterizes the informational flow of the costs is the emphasis on operatively information. Without the cost calculation in real time and viable predictions on the costs evolution, it wouldn't be possible to adopt the most efficient managerial strategies and policies. The prediction function of the accountancy becomes more and more important. No matter the form they take, information regarding costs is one of the basic instruments of the modern firm's management.

Through costs we assure" the measurement of the necessary efforts made in accomplishing a product or a service" (Rayburn L. G., 1986). Knowledge of the costs is 'one of the basic imperatives in decision making, whether it's about the enterprise or not" (Bouquin H., 2003).

MATERIAL AND METHOD

The choice of a calculation of the costs method for production costs in horticulture is influenced by a series of particularities of the production process (Băviță I. and others, 2008). The term to which the production cost can be determined is the first particularity in determining the costs in horticulture. If in most industrial units the production cost can be established monthly, in horticultural farms, establishing a production costs at short time periods (a month) can be difficult because of the mismatch between the period when the consumption of resources takes place and the period when the production is obtained. The time gap, relatively long, between the date of the expenditure and the date of obtaining the production, the lack of rhythmicity under quantitative aspect of the obtained production, the expenses related to the administrative and managing of the farms processes, which take place after the production is obtained, are all criteria which must be taken into consideration when establishing the moment in which the calculation of the unit costs of the production can be made.

The unit cost of production can be determined monthly only if the expenses made and the production obtained in that month is known. Calculation of the monthly unit cost of production based on the reference data month of obtaining the production or on aggregate data should not be considered a final cost. Unit cost of production, being a size which must result from reporting the actual costs to the obtained production, requires farms to make at the end of the year the final calculation based on data representing the level of actual resources consumption.

Another feature of the production process in horticulture relates to the complexity of the production process that causes an exchange of activities between production farms or between production farms and ancillary sectors. The critical coordinate regarding the evaluation of the exchange activities that must be taken into consideration when calculating unit costs, should be the effective level of effort by each firm or sector production assistants.

Following the particular horticultural work, we intend to explore the possibility of applying calculation methods of costs in horticulture. In choosing the method of calculation of costs one must take into account the following factors generators of production costs (Budugan D., 2002): the specific technology of production, type of production and its organization, the size of the horticultural farm, organization structure of the horticultural farm, the production process, technical progress and the character of the production process. For horticultural farms, the production is generally seasonal in nature. In deseasonalization they can not make a proper calculation of costs, but they register expenses incurred by the maintenance of equipment, preparation for future production, etc. These costs are considered anticipated expenses.

Methods of calculation of the costs are divided into two broad categories: methods of calculating the full cost and method of calculating part of the cost. The best known method of calculating the full cost is: global method, the phase method, method based on order and the standard cost method. The best known methods for determining the partial costs are variable cost method and the method of direct costs. The method for determining the partial costs does not primarily calculate the unit costs, but calculates and analyzes profitability across economic units.

RESULTS AND DISCUSSIONS

Dividing the activities of the horticultural unit in production farms, auxiliary sectors and functional compartments represents the support for the delimitation and responsibility growth in accomplishing the agricultural unit's objectives as an economical entity.

Comparing the activity content of the production farm with the activity of other economical subunits in other branches, the quantification of the financial result on production farms is doable. If in industry the final product is the result of successive processing of the raw materials in more production sections or of the parallel processing of some materials in order to mechanically assemble them, in the case of horticultural units the final product is delimited for each production farm. In this situation the incomes and expenses of each agricultural farm are easily quantifiable.

In order to follow the way in which the production factors were consumed by the horticultural unit and in order to calculate correctly the production costs and therefore the financial results, accountancy must register in time and in full, the production expenses.

To determine the advantages and disadvantages of the methods of calculation of costs is necessary a comparative study of two methods: partial cost method and cost method complete.

The effects of the two categories of methods are highlighted by the following example:

We consider that at a horticultural farm, in the period under review, we obtain 30 tons from the product A. The structure of production costs is as follows: Direct production costs 60 000 RON, variable overheads 500 lei / tone, fixed costs of production 9 000 lei. From the production is sold a quantity of 27 tones. Marketing expenses have the following structure: fixed marketing expenses 6 000

lei and variable marketing costs 600 Euro / tone. General administration costs are fixed for 5 000 lei. We determine the unit cost of production, total production costs, the cost of goods sold, expenses recorded in the profit and loss balance of the final products.

Data presented and calculations are presented in Table 1 which compared the effects of variable cost methodology as a part of the costs and full cost methodology.

Table 1

Variable costs method and full cost method

Elements	Variable costs method	Full cost method
Unit cost		
Direct expenses (60 000 lei/30 tone)	2 000	2 000
General variable expenses (15 000 /30 tone)	500	500
Fixed production expenses (9 000 lei/30tone)		300
Unit cost of production	2 500	2 800
Total production expenses to be accounted 30 tone x 2 500 lei 30 tone x 2 800 lei	75 000	84 000
Deductible expenses in determining the profit		
Cost of the sold goods 27 tone x 2 500 lei 27 tone x 2 800 lei	67 500	75 600
Fixed production expenses	9 000	
Fixed marketing expenses	6 000	6 000
Variable marketing expenses 27 tone x 600 lei	16 200	16 200
Fixed general administration	5 000	5 000
Expenses that appear in the profit and loss balance	103 700	102 800
The balance of the final products 3 tone x 2 500 lei 3 tone x 2 800 lei	7 500	8 400

Analyzing data from Table 1 we find differences between the two methods both in terms of unit cost of production and the costs that appear in the profit and loss balance. These differences are generated by the fact that in the method of variable costs, fixed production costs are not charged on units produced, but are treated as period costs.

Variable cost method provides an essential economic judgment in the short term, in which the horticultural entity uses its existing production capacities. It allows the comparisons between the performances of the portfolio comprising agricultural entity. Performance brought by each product is given by gross margin per unit of the variable cost which is determined as the difference between the turnovers achieved from the sale of each product and the cost of the variable.

In using the variable costs method it should be taken into account its limits. Average profitability per product, only depending on the size of the unit gross

margin cost variable is not sufficiently relevant. Also, structure expenses are fixed only on periods of time, and their separation of the variable ones is often difficult.

Regarding the full costs, we can say that the phase method, the method on orders and the standard cost method are least applied in horticulture, but the overall method can be used successfully for crops and vegetable crops in open field which show a single product, for greenhouses if at it's level grows a single product and ancillary sectors serving a horticultural farm.

The global method is used by companies in the horticulture field who have an homogeny production, implying that the structure of the company or even the whole society is to achieve a single type of product or service work. Determining the cost is based on the collecting costs on responsibility centers (farms, areas of service) or the according to the nature of the expenditure (raw materials, wages, depreciation, electricity and water). All costs of production can be identified directly in the process in which they occurred or in the production process who has generated them.

The phase method may still be used in determining the cost of the wine production process because it involves going through several phases.

We believe that the method on orders is not suitable for horticultural production cost calculation. At most it can be used to determine the cost of ancillary sectors such as mechanical workshop.

The rigidity of standards and constraints imposed by these constitute the main drawbacks of using the standard cost method. In addition, in horticulture there are a number of factors that can intervene (temperature, humidity, etc.) which can not be quantified with precision for a long period of time

Costs and their calculation is a true instrument of leadership due to their forecast character. For managers of horticultural entity, the future is what counts and the present should be seen as a step towards the future.

CONCLUSIONS

Horticultural production cannot be accomplished without involving the fixed expenses, which become, by applying the complete costs method, a component part of the production cost.

In the case of businesses, in which there are stocks due to production seasonality, the presence of fixed expenses in the cost of these stocks is required and, therefore, the complete costs method cannot be avoided.

The variable costs method can be used for reporting in the decision making analysis, especially when we must choose between the continuations of a certain type of vegetal culture and introducing a new type of vegetal culture.

The best cost for a horticultural farm isn't necessarily the lowest, but the one that occurs at the right time and at the right place.

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