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**The importance of cost optimization of management services of milk processing**

This article describes the organization of management accounting in the processing of milk, including problems related to protsesa control equipment, preparation, production, sale. Accounting in modern conditions of formation of the market does not provide the function of providing information system in the milk processing companies at that level, which is necessary in making operational decisions, which requires a mechanism of formation of management accounting. The very concept of management accounting has not been fully applied in the organizations or companies processing of off milk in our country yet. For this reason it is necessary to improve system of accounting, to develop a technique of management accounting on «fields of activity» is a supply preparation, production processing, sale realization and management of this field of activity. This article not only enhances importance of costs management as increasing organization's efficiency tool and also proposes marginal analysis methods.

**Key words:** Management accounting, business processes, supply, production, marketing-implementation, management, costs, losses, opportunity costs, processing of raw materials, marginal analysis.

Арыстамбаева А.З.  
**Сүт өңдеу қызмет саласының шығындарының тиімділігін арттыру қажеттілігі**

Бұл мақала сүт өңдеу қызмет саласының шығындарының тиімділігін арттыру қажеттілігі мәселелеріне арналған. Қазіргі қалыптасқан нарықтық жағдайларда сүт өңдеу компанияларындағы бухгалтерлік есеп басқару есебін қалыптастыру механизмі қажет ететіндей оперативті басқару шешімдерін қабылдау барысында қажет болатын деңгейді қамтамасыз ете алмай отыр. Басқару есебі деген түсініктің өзі біздің еліміздің әртүрлі ұйымдарында және сортталмаған сүтті өңдеу компанияларында әлі толыққанды қолданыста емес. Сол себепті бухгалтерлік есеп жүйесін жетілдіру, басқару есебінің «қызмет сфералары» – жабдықтау-дайындау, өндіру-өңдеу, сату-өткізу және оларды басқару әдістемесін дайындау қажет. Шығындарды басқару ұйым қызметінің тиімділігін арттыруға мүмкіндік береді, ал тиімділікті арттыру әдісі ретінде маржиналдық талдау әдісі ұсынылады.

**Түйін сөздер:** басқару есебі, жабдықтау, өндіріс, өткізу-сату, басқару, шығындар, қорларды сатып алу.

Арыстамбаева А.З.  
**Необходимость оптимизации затрат сферы деятельности по переработке молока**

Данная статья посвящена проблемам организации управленческого учета сферы деятельности по переработке молока. Бухгалтерский учет в современных условиях формирования рынка не обеспечивает функции предоставления информационной системы в компаниях переработки молока на том уровне, которое необходимо в принятии оперативных управленческих решений и в котором нуждается механизм формирования управленческого учета. Само понятие управленческий учет еще не в полной мере применяют в организациях или компаниях переработки несортного молока в нашей республике. Именно поэтому необходимо совершенствовать систему бухгалтерского учета, разрабатывать методику управленческого учета по сферам деятельности: снабжению-заготовлению, производству-переработке, сбыту-реализации и управлению этой сферой деятельности. Управление затратами дает возможность повысить эффективность деятельности организации, в качестве метода повышения эффективности предложен метод маржинального анализа.

**Ключевые слова:** управленческий учет, хозяйственные процессы, снабжение, производство, сбыт-реализация, управление, затраты, потери, альтернативные затраты, переработка сырья, маржинальный анализ.

**THE IMPORTANCE OF  
COST OPTIMIZATION  
OF MANAGEMENT  
SERVICES OF MILK  
PROCESSING**

**Introduction**

With the development of market entrepreneurship, problem teaching basic accounting related to the management of areas of activity of the companies, firms processing of off-milk-based cost savings for income and ensuring the competitiveness of producers on the market today, demanding a certain approach to the formation of the necessary information in these circumstances. Accordingly, the following problems:

- Modern accounting is not associated with marketing;
- The lack of an established system of process supply of raw materials, which is a major disadvantage in the processing companies;
- The lack of good systems to receipt of the information for internal operational management, based on the requirements of a market economy;
- Do not use this category as a future tenge;
- Do not keep records of the relevant costs;
- Not determine deviations of actual costs from those projected;
- The lack of methodological foundations of management accounting.

Accounting in modern conditions of formation of the market does not provide the function of providing information system in the milk processing companies at that level, which is necessary in making operational decisions, which requires a mechanism of formation of management accounting. The very concept of management accounting has not been fully applied in the organizations or companies processing of off milk in our country yet .

**Experimental part**

These issues were investigated by such scientists as the Drury K., Entoni P., Ris Dzh., O. Ponomareva, L. Prodan, Larina N.P.

Metodological basis of the study is the dialectical method of cognition.

## Results and discussion

For this reason it is necessary to improve system of accounting, to develop a technique of management accounting on «fields of activity» is a supply preparation, production processing, sale realization and management of this field of activity. Isn't a secret that during the Post-Soviet period and today it's not an exception that the main attention of scientific economists in the field of the account is directed on improvement of the accounting of costs of production, and the attention to the accounting of other processes as supply, realization sale, and moreover management of these processes wasn't paid.

In the conditions of an economic crisis, a systematic approach to the cost optimization is highly necessary. The analysis of expenses, introduction of minimizing costs regime and other similar decisions is undoubtedly correct actions. But in order to avoid «economy on paper clips» result and to not let improvement of one indicators to be followed by deterioration of others, is necessary to develop certain approach to the solution of problems.

This problem is especially important in the conditions of an economic crisis. The manager of an organization must clearly understand the real cost of production of a particular unit of product to prevent possible losses from the overestimation of the prices. Therefore, for the effective management of the search of ways of optimization costs it is necessary to begin with especially important sections of the accounting in an organization – the accounting of the cost of goods sold and semi-finished products. Having the full list of incurred expenses and costs, the head of an organization has an opportunity to make favorable decisions on production optimization: decreasing expenses and (or) increasing labor productivity. [1]

Accountant analyst can provide great help in finding answers to the following questions: What is the impact on profit would have decrease in the selling price or realization of a large amount of goods? What is the volume of sales required to cover the additional fixed costs in connection with advertising works? These and other similar questions can be answered, according to K. Drury, using the method of «cost-volume of production-profit» (CVP, cost-volume-profit). [2]

During this type of analysis a systematic review and study of the relationship between changes in production output and total revenues from product realization, costs and net profit are carried out. The purpose of the CVP analysis is to determine what

will happen to financial results, if level of operating activity or production volume changes.

In order to assess what will happen in the future and make a decision for a short time period, R. Anthony and J. Rees, emphasized importance of a special type of management accounting – differentiated. Differentiated costs are the costs, the value of which can change if the costs would have been incurred under other circumstances. Differentiated income referred to such income, the value of which in certain conditions may be different from the value of income generated under other circumstances. [3]

The breakdown of relevant types of differentiated expenses is used to carry out the analysis on each specific problem. The differentiated expenses always belong to the future, as they show what will be expenses in the future at a certain behavior model, but they don't show reflection of past expenses.

Thus, we see that every management decision must be made taking into account three indicators: production costs, output (sales) production and profit margins. It is important to correctly predict the amount of each indicator at predetermined value of other indicators, that are defined in the marginal analysis. [4]

Theoretical bases of the marginal analysis were invented by the American engineer Walter Rautenstrauch in 1930. He developed a method named «Schedule of Critical Output of production» which was used in planning, subsequently was finished and turned into the method of managerial calculations called by the marginal analysis.

Marginal analysis is carried out under the following conditions:

- costs must be divided to fixed and variable costs
- variable costs change in the proportion to the volume of production (realization) units;
- fixed costs don't change in the range of business activity of the organization which is established proceeding from the capacity of the organization and demand for production;
- equality in production volume and realization (sales) volume within the considered period.
- production efficiency, level of prices for production and for consumed production resources won't be exposed to essential fluctuations during the analyzed period;
- proportionality of receipt of revenue to the volume of the realized production.

Marginal analysis let us to determine break-even realization point by calculating the threshold of profitability and cost recovery for a given value of price, fixed and variable costs. With the help of

marginal analysis we can determine the amount of sales required to obtain planned amount of profit. Marginal analysis is used to approve such managerial decisions as the choice of the optimal product range, best prices on new type of products, choice of level and nature of production technology, used equipment and others.

The main category of the marginal analysis is the marginal profit. Marginal profit – is excess of sales proceeds over all variable expenses connected with this sales volume. In other words, the marginal profit is a difference between sales proceeds and variable costs:

$$MP=TR-VC, \quad (1)$$

where, MP – marginal profit; TR – total revenues from realization; VC – variable costs.

If we deduct fixed costs from marginal profit, we will get profit amount:

$$P=MP-FC, \quad (2)$$

where MP – marginal profit; FC – fixed costs.

Marginal profit can be called the amount of coverage, as this is the part of the revenue that remains to cover fixed costs and form profit. The higher marginal profit, more quickly fixed costs are reimbursed and the organization receives as much profit as possible.

Marginal profit can be calculated not only on the entire volume of production, but also for each unit of production. In economic terms, this figure shows the amount of profit gain from the issue of each additional unit of production:

$$MPU=(TR-VC)/PV, \quad (3)$$

where, MPU – marginal profit per unit of production; PV – production volume.

Indicators of marginal profit per each type of product direct managers towards issue of more profitable production for the organization. If this figure is negative, it indicates that the proceeds from the sale of this product do not even cover variable costs. If there is no possibility of reducing variable costs of such type of products, the manager must make the decision on withdrawal of this product from the range of issued products.

In order to quickly affect profitability level of individual products through the system of costs, variable costs should be divided into the groups. Using specific groups of variable costs corresponding figures of marginal profit can be calculated, which

allow us to determine the main directions of the cost savings and receiving more profit.

The basic model of the marginal analysis is breakeven point. The following conditions are met in the model of breakeven point:

- During the whole period variable costs and prices, as well as the structure of the production remain unchanged;
- The behavior of fixed and variable costs can be accurately measured;
- Sales volume is equal to the volume of production.

The marginal analysis allows to determine conditions under which the maintenance of the enterprise becomes unprofitable from the economic point of view. To do this, closing point of the organization is determined, by comparing the sales amount with fixed costs. If the value of sale proceeds is equal to fixed costs, the organization needs to be closed. The closing point of the organization determines the volume of production and sales on which the production becomes unprofitable. Closing point is determined by dividing fixed costs to unit price. If the actual volume of production and sales is less than the closing point, it means that the organization functions at a loss and it should be closed. If it is vice versa, the organization can continue to operate even if it gets loss. In this case, more attention should be paid to the optimization of variable costs.

With the help of marginal analysis production risk of an organization can be estimated. To determine this indicator – safety edge is calculated. This figure is defined as the difference between the actual and the critical volume of production and sales in real terms by the next formula:

$$SE=AP-CP, \quad (4)$$

where, AP – actual amount of production and realization; CP – critical amount of production and realization or breakeven point

The lower the safety edge, the greater the risk that the actual volume of production and sales will reach a critical point and the organization would be in the losses area. Therefore, this indicator is called the index level of organization risk. This indicator is used to calculate the critical percentage, which indicates the percentage of a possible reduction in the volume of production and sales until getting in loss. Critical percentage is defined as the ratio of the safety edge to the actual volume of production and sales.

The marginal profit and other above mentioned indicators are widely used to predict the cost, the

selling price of products, allowable appreciation of the costs of goods sold, to evaluate the effectiveness and feasibility of increasing production volume and in other calculations to optimize management decisions. [5]

### Conclusions

In crisis conditions: monitoring of authorization costs procedures, motivation of staff to reduce costs and disbursements, connected with of non-core activities of the organization is particularly necessary. Following this direction, next procedures must be completed:

1. The formation of the organization's budget. Cost planning and delegation of authority to departments' managers will allow to significantly reduce the costs of the organization. Forming budgets for key production departments will optimize cash flows and keep costs at a determined level.

2. Horizontal and vertical integration. Horizontal integration works as the search for procurement opportunities with another buyer, which will allow to receive massive discounts. Vertical integration means working more closely with suppliers of major items of raw materials.

3. Analysis of the possibilities of outsourcing expensive processes. It is necessary to assess which components will be profitable to produce on

company own, and which is cheaper to buy from other manufacturers.

4. Introduction of new forms of payments to contractors, such as exchange bills, barter, and others.

5. Strengthen control on all types of costs. It is necessary to reduce overhead costs, which affect the cost of goods sold. In many industrial organizations enhanced electricity and water saving mode is introduced.

6. Technological process optimization in the following regimes:

– Search for the best mode in the current conditions;

– Search for the best mode at the planned change in the conditions of the process.

7. Reduction in labor costs. The development of bonus schemes for the staff of the organization and motivation them to reduce costs.

Cost and production processes optimization include a range of techniques that help to assess the current state of the organization, identify the causes of the deterioration of quantitative and qualitative indicators of its activity. In addition to activities such as cost reduction, expansion of the product range, debt restructuring, it is necessary to take drastic measures to improve the organization, reorganization of its operating activity, strategic innovation changes.

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