CASE STUDY: ACTIVITY BASED BUDGETING AT AGRICULTURAL HOLDINGS IN LITHUANIA

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Successful business operations are hardly possible without planning. Therefore presently there are extensive discussions about the importance of planning business activities and estimating the resources required to achieve the objectives set by an enterprise. For this purpose, scientists and practitioners suggest that enterprises should implement a budgeting system. This paper introduces a budgeting model for agricultural holdings using the Activity Based Costing (ABC) approach. The topic of the paper was chosen in view of the fact that such a combination of accounting management elements is not broadly used by Lithuanian agricultural holding. The key objective of this paper is to present the budgeting system as an important tool in planning and managing the business of an agricultural enterprise. This paper looks into the theoretical principles and provides a practical model of the budgeting system. The performed research leads to a conclusion that more accurate production cost calculations, budgeting, and budget control are the safeguards, which help to prevent business failures in the changing and adverse business environment.

Key words: *budget, budgeting system, cost, costs, activity, Activity Based Costing (ABC).*

JEL Classification: *M41.*

Introduction

This paper examines the practical aspects of developing and controlling budgeting models, which use the Activity Based Costing (ABC) approach. The topic of the paper was chosen in view of the fact that such a combination of accounting management elements is not broadly used by Lithuanian agricultural holding. The analysis of relevant empirical and theoretical research works conducted by Lithuanian and foreign scientists revealed that detailed research and analysis deal with the ABC benefits separately from the practicality of the budgeting system. Consequently, the Activity Based Budgeting could be an alternative system for improving business management at agricultural holdings.

Budgets measure the set objectives and prompt a rational behaviour of a business as well as determine a systematic approach towards the economic activities of the organisation. Many countries, including Japan, the United States, and Western European countries acknowledge this conception. In the current tough economic environment with increasing inflation rates, shrinking sales volumes, and rocketing business expenses as well as due to many other factors influencing agricultural activities, the Activity Based Budgeting system could be a safeguard in coordinating and stabilizing all the fields of the enterprise operations.

Research aim: to present the Activity Based Budgeting system as an important tool for planning and coordinating the business of an agricultural holding.

Research tasks:

1. to implement the budgeting system model in an agricultural holding (i.e. a dairy company) as a viable business alternative;
2. based on the obtained results, to make suggestions for further business development.

Research object: the process of business planning and control at an agricultural holding.

Research methods: The first part of the paper analyses theoretical aspects of the budgeting system efficiency. The second part of the paper deals with empirical research aimed at revealing the aspects of the Activity Based Budgeting system related to milk production cost calculations using the ABC method and compiling a budget of the dairy company. The research focused on the dairy business owing to the fact that dairy farms, on a par with other agricultural holdings, are going through difficult times: the purchasing price of milk in Lithuania is among the lowest in Europe.

Theoretical validation of the budgeting system

Studies reveal by that the concepts and methods used in management accounting are similar all over the world. However national studies suggest that a changing environment of an organisation has a direct impact on the modifications in the management accounting. A management accounting system is closely related to the projected changes of the internal management system of an organization. The faster modifications in the management system take place, the faster management accounting changes. The conducted studies show that new management accounting methods are rather successfully adopted by fast developing countries, including Lithuania (Valančienė, Gimžauskienė, 2007).

Experts in agricultural economics (White (2007), Greaser and Harper (1994), Doye, Sahs (2005)) maintain that budgets of organisations are designed to provide agricultural production with a decision framework for short

term and long term economic analyses. The budgeting system of an organisation facilitates a better understanding of costs and returns from a production operation. It helps to identify potential risk sources and to appraise the alternatives. Budgeting knowledge and the ability to use it helps producers to make sound business decisions.

The main uses of an agricultural holding budget include:

1. clear identification of all inputs required for production;
2. easy identification of 5 major expenses for the purpose of cost control management;
3. identification of potential changes in the operations;
4. determining the revenue likely to be generated by the organisation;
5. breakeven price and breakeven yield analysis.

Literature separately deals with the advantages of implementing the ABC and a budgeting system. Nonetheless the synthesis of the ABC and the budgeting system is considered to be an advanced alternative for planning operating costs of an enterprise (Greaser and Harper, 1994). The ABC approach was developed and introduced by R. Cooper and R. Kaplan. Quite shortly this system gained popularity and a large number of scientists and practitioners contributed to its further advancement (Roztocki et al.). In literature, this approach is referred to as one of the best modern accounting methods. Other researchers consider this method to be self-contradictory and consequently they maintain that it can not be successfully used by organisations as it provides the internal consumers with even less accurate information than classical accounting methods (Armstrong, 1999). However, the analysis of the ABC method shows that it can produce more accurate calculations of the production cost and lead to more precise budgets.

No modern enterprises can successfully achieve their objectives unless they plan their activities. The planning process starts with pinpointing the course of future operations, choosing the methods of working towards the set objectives, and forecasting the potential results. Budget planning is an important precondition for efficient coordination of the operations of an organisation. Budget control mechanisms trigger a further progress of the operations, which is crucial in meeting the financial objectives. Such control makes it possible to identify problems and to solve them at an early stage (Jagminas, 2004). Thus, a budget is a plan, which defines the indices of the business activities of an organisation measured in cash and quantitative numbers in order to achieve the objectives of the organisation (Mackevičius, 2003).

Generally speaking, planning is required to determine methods for meeting the objectives. An organisation operating under the market conditions should plan:

- the quantities and types of products be produced and the product mixes which are best capable of satisfying the existing market conditions;
- the amount of the organisation resources to be used and the required amounts to be borrowed;
- the methods of production and technologies to be used and organizations the enterprise will have to cooperate with;
- the prospective buyers of the products and the methods of distribution to the customers and consumers;
- the ability of the organization to change and adapt itself to market changes (Bagdžiūnienė, 2005).

Budget planning is about forecasting the financial needs. The success of the operations of an organisation depends on the availability of relevant resources, and financial resources in particular. Financial needs differ and so does their availability. Thus, in order to analyse the availability of resources required for the operations of an enterprise, large organizations are broken down into smaller and easier to manage units, which are called responsibility centres. A responsibility centre can be described as a function or a unit of an organisation, where relevant decisions can be made and resources can be controlled. It can assume the responsibility for the decisions taken and the results achieved (Valančienė, 2003). Therefore, the responsibility centres mean decentralization of the operations of an organisation. Each responsibility centre is in charge of a separate function of the enterprise. As a result of such break down of the activities of the organisation, managers can have greater control over the revenue and expenditure flows pertinent to a relevant activity. Budgets are planned based on the analysis of the information provided by responsibility centres. The budgets show whether the resources of the organisation are sufficient for a particular purpose.

Practical application of the budgeting system

Description of dairy operations

The largest part of revenue earned by Enterprise “X” comes from dairy production. Therefore, when we consider creating value at a milk processing enterprise, it is important to focus on the value chain as an enterprise can be characterised by its ability to organize and manage its workflows and the value chain of dairy production. When a business budget is drafted, it is assumed that the costs are caused by certain activities; therefore, the main objective is to control the causes of costs, rather than the costs themselves. Owing to the fact that not all activities generate value, it is important to define how much value is created by each of them (see Figure 1).

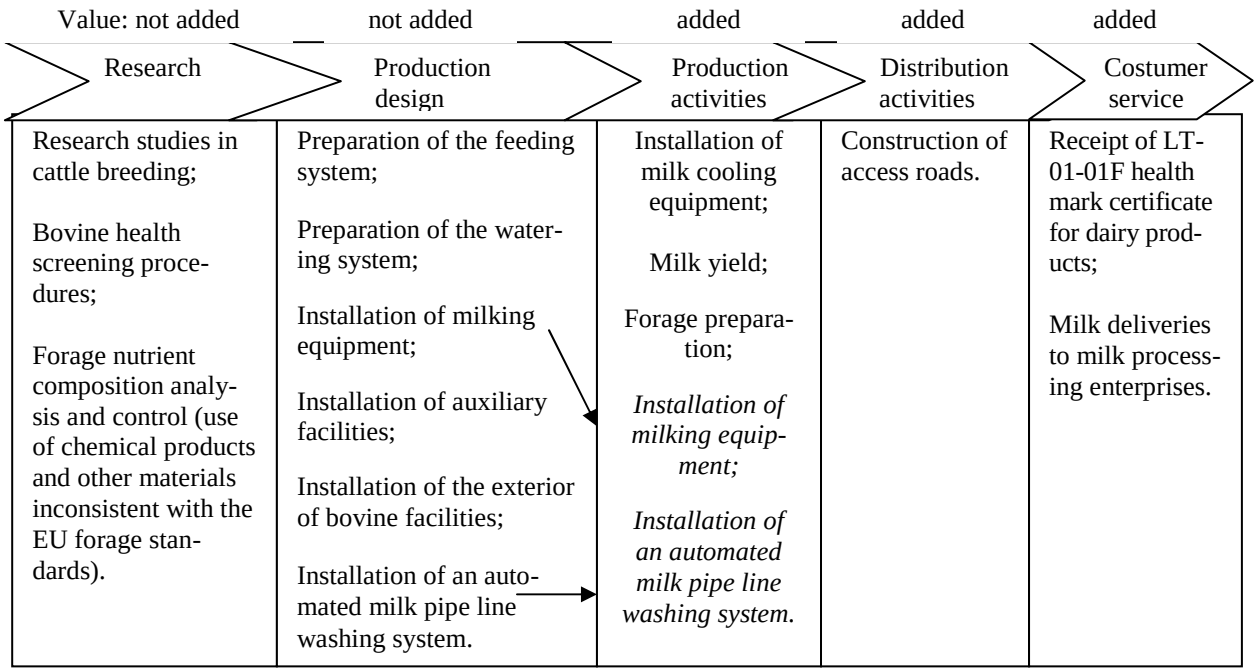

Fig. 1. Value chain at Enterprise "X"

The analysis of Enterprise "X" dairy operations reveals value-adding activities and non-value adding activities. In order to improve the value chain, special emphasis should be placed on scientific research, because the business objectives of Enterprise "X" include supplying organic produce to milk buyers. Even though supplying milk to milk buyers does not represent an important production design activity, the processes of upgrading livestock feeding, watering, and milking systems indirectly create value (see Figure 1.). We can see that a continuous improvement of the existing operating system based on the experience of other European Union countries is among the strengths of Enterprise "X".

Production cost calculation and interpretation

Table 1 provides the calculation of the production cost of 1 kilogram of milk based on the information reflected in the documentation of the agricultural holding.

Table 1. Method of milk production cost calculation at Enterprise "X"

Total annual expenses attributed to milk production, LTL	Milk quantity kg	Milk production cost LTL/kg
1.245.149	1.767.000	0.705

The above method of accounting for milk production expenses fails to reveal the amounts of overheads and direct expenses attributable to 1 kilogram of milk. Thus it can be assumed that calculations of the production cost of milk products may contain variations. Due to missing information, the implementation of the budgeting system at Enterprise "X" would fail to be efficient, i.e. it would inflate the expenses incurred by the Enterprise rather than produce benefit.

The process of measuring costs attributable to 1 kilogram of milk based on the traditional costs accounting system can be described as follows:

1. identification of the cost object, i.e. the product, the costs whereof are going to be measured;
2. identification of direct costs attributable to milk yield;
3. selection of the indirect cost allocation base;
4. calculation of the actual indirect cost rate per cost driver unit;
5. product costs are calculated with respect of the direct and indirect products cost.

Table 2. Enterprise "X" expenses

Type of activities	**Expenses LTL**
Forage	448.479
Pharmaceuticals	29.573
Veterinary services	3.432
Repair of agricultural buildings	7.769
Spare parts	27.313
Other materials	36.267
Administrative costs	482.694
Utilities	153.749
Other	2.440
Depreciation	67.833
Total costs:	**1.259.549**

Firstly, costs related to milk production, i.e. keeping and feeding milkers, are provided in a centralised manner (see Table 2). The annual milk yield, which amounts to 1.767.000 kilograms, was chosen as the cost allocation base (see Table 3).

Table 3. Allocation base calculations

No	Allocation base calculations	Milk kg
1.	Milk yield kg/cow	6.449
2.	Number of cows	274
3.	Annual milk yield kg	6,449×274= 1.767.000

The information on the costs incurred in agricultural production revealed in the reporting of Enterprise "X" is useful as it offers exhaustive details on the annual costs of the livestock unit as well as total partial costs incurred by the cost centres. However, as it was mentioned above, it does not reveal the amounts of overheads and total expenses attributable to the dairy sector. Thus, the development of business at Enterprise "X" could be best reflected by the Activity Based Accounting (ABC) system.

The process of measuring costs attributable to the product using the ABC system:

1. Identification of the main operations.
2. Identification of cost drivers for each operation.
3. Identification of cost centres for each operation.
4. Calculation of the production costs.

The overheads accounted for by Enterprise "X" are given in Table 4.

Once the total annual overheads are calculated, the costs can be allocated using the annual milk yield as a cost drive (see Table 5).

Table 4. Calculation of overheads incurred over a period of 1 year

No	COSTS	*Amount LTL*
1.	Oil products and gas	98.804
2.	Electricity	54.945
3.	Veterinary services	3.432
4.	Depreciation of long-term assets	67.833
5.	Spare parts	27.313
6.	Other materials	36.267
7.	Repair of agricultural buildings	7.769
	Total:	296.363

The influence of the calculated amount of overhead costs is reflected in the profit budget (see Table 5). The overhead costs represent 23.53% of the total costs incurred by the livestock unit. The low profitability of the milk production at the enterprise was caused by the awkward system of milk purchasing prices: 1 kilogram of milk is sold to the state at a price which is almost equal to its production cost. The unfavourable agricultural policy framework mainly affects dairy farms and other agricultural holdings.

Table 6 provides a profit budget produced using the traditional budget accounting system.

Table 5. Allocation of overhead costs

No	Allocation of overhead costs	*Milk*
1.	Total overhead costs LTL	296.363
2.	Annual milk yield kg	1.767.000
3.	Overhead costs allocated to 1 kg of milk (Line 1 / Line 2)	0.18 LTL/kg

Table 6. Profit budget using the traditional accounting system

Items	Amount LTL
Turnover from sales of products LTL	1.431.270
Total directs costs LTL	948.786
Overheads LTL	296.363
Cost of products sold LTL	1.245.149
Gross profit LTL	186.121
Administrative expenses LTL	11.684
Profit from operations LTL	174.437
Profit tax LTL	0
Net profit LTL	174.437

When the traditional method is used to calculate the production cost of 1 kg of milk, which was the case at Enterprise "X", it is not possible to identify specific operations causing higher costs. Therefore, the ABC method enables to identify auxiliary activities involving indirect costs (see Table 7). The allocation base is a material cost driver, i.e. the annual milk yield, kg.

Table 7. Production and overhead costs

Item	Costs LTL	Cost driver	Allocation base	Standard	Cost distribution %
Production costs					
Forage production	448.479	milk yield kg/year	1.767.000	0.254	54.33
Wages	376.925.28	milk yield kg/year	1.767.000	0.213	45.67
Overheads			Total	0.467	100
Pharmaceuticals	29.573	milk yield kg/year	1.767.000	0.017	6.81
Veterinary services	3.432	milk yield kg/year	1.767.000	0.002	0.79
Repair of agricultural buildings	7.769	milk yield kg/year	1.767.000	0.004	1.79
Administrative costs	105.768.72	milk yield kg/year	1.767.000	0.060	24.36
Oil products and gas	98.804	milk yield kg/year	1.767.000	0.056	22.76
Electricity	54.945	milk yield kg/year	1.767.000	0.031	12.66
Spare parts	27.313	milk yield kg/year	1.767.000	0.015	6.29
Other materials	36.267	milk yield kg/year	1.767.000	0.021	8.35
Depreciation	67.833	milk yield kg/year	1.767.000	0.038	15.62
Other	2.440	milk yield kg/year	1.767.000	0.001	0.56
Total costs:	1.259.549		Total:	0.246	100
			Production cost of 1 kg milk	0.713	LTL/kg

The data in Table 7 show that the highest costs include administrative costs (24.4 %), oil products and gas (22.8 %), depreciation (15.6 %), and electricity (12.7 %). The obtained findings should warn the management of the organisation that disregard of individual activities and a failure to analyse the causes of costs may result in a further increase of the cost price of the products.

The overview of the cost allocation system at Enterprise "X" shows that in pursuance of higher profits predominant emphasis should be placed on individual operations and the costs incurred thereby. Furthermore, it is vital to choose a relevant production cost calculation method. Since Enterprise "X" is a multi-activity organisation, it generates profit in any case. However the dairy operations require improvements in management and business organization. Moreover, sources of financing should be sought to expand the business and to improve the quality of marketed milk.

Drafting master budgets for the dairy sector

In order to assess the efficiency of a budgetary system, it is necessary to produce a fragment of the annual budget of the dairy sector, i.e. a one-month budget. The main operations of Enterprise "X" are those, which have the largest impact on milk production. The costs caused by such activities are direct costs. The master budget includes: 1) direct materials budget, 2) direct labour budget, and 3) other direct and manufacturing overhead budget.

Enterprise "X" budget fragment is compiled for February 2009. In February it is expected to produce 148.340 kilograms of milk and to sell it for LTL 0.81 per kilogram (see Table 8). The estimated sales volumes and price are based on the information for the previous months.

Table 8. Sales budget

Product	Estimated sales kg	Price per unit LTL	Estimated sales LTL
Milk	148.340	0.81	120.155.40

Typically, the production budget is based on the stock of unsold products at the beginning of the relevant period, the production capacities of the organisation, and the estimated stock of finished products at the end of the period. While planning the production volumes, it is necessary to take into account the potential seasonal demand fluctuations and the availability of human and material resources (Table 9). In the analysed case, there is no stock of milk: the products produced by cows are immediately delivered for sales.

Table 9. Production budget

No	Index	Dairy products
1.	Estimated sales volumes kg	148.340
2.	Estimated stock of finished products at the end of the year kg	0
3.	Demand for production (Line 1 + Line 2)	148.340
4.	Factual stock of finished products at the beginning of the budget year kg	0
5.	Budgeted finished product volumes kg (Line 3 – Line 4)	148.340

The master budget of Enterprise "X" includes forage, forage additives, water, etc. The forage is produced onsite depending on the number of cattle and horses and the available land resources. The calculations of a one-month relevant raw material rate per one cow are based on the analysis of the data on the annual bovine forage and water demand (the enterprise has 274 cows), (see Table 10).

Table 10. Direct materials budget

Raw materials LTL	Monthly raw material rate LTL/cow	Estimated raw material demand LTL
Forage	145.14	39.768.00
Water	6.57	1.800.50
Total		41.568.50

The direct labour budget is drawn up based on the number of people employed in the dairy unit, the pay rate per one working day, and the number of working hours per month. The daily wages amount to LTL 23 per employee. The working day is 8 hours. The estimated labour budget accounts for LTL 9.177. The direct labour budget is presented in Table 11.

The overhead budget is provided in Table 12. In the budgeted month, the overhead costs of Enterprise "X" account for LTL 39.796.60.

The overhead budget is prepared for the whole stockbreeding unit. The overheads are allocated to the dairy unit in conformity with the estimated expense rate per 1 kg of milk. Given the total amount of overhead expenses and the monthly yield, 1 kg of milk is allocated LTL 0.268. The calculations are presented in Table 13.

Table 11. Direct labour budget

Activity	Number of employees	Fixed number of monthly working hours per one person	Total working hours	Total workdays	Directs labour costs (total workdays × daily wages amount to LTL23 per employee)
Dairy operations	21	152	3.192	399	9.177

Table 12. Overhead budget

No	Costs items	Amount LTL
1.	Pharmaceuticals	2.710.86
2.	Veterinary services	314.60
3.	Repair of agricultural buildings	712.16
4.	Administrative costs	9.695.47
5.	Oil products and gas	9.057.03
6.	Electricity	5.036.63
7.	Spare parts	2.503.69
8.	Other materials	3.324.48
9.	Depreciation	6.218.03
10.	Other	223.67
	Total	39.796.60

Table 13. Overhead allocation to 1 kg of milk

No	ITEMS	*Amount LTL*
1.	Total overhead expenses LTL	39.796.60
2.	Monthly milk yield kg	148.340
3.	Overhead expenses per 1 kg of milk (Line 1 / Line 2)	0.268

Once all the above budgets are compiled, the production cost budget per 1 kg of milk can be produced. This budget shall specify the direct materials, direct labour, and overhead expenses, as well as the costs of finished goods, which reflect the sum of the above (see Table 14).

Table 14. Estimated production cost budget of 1 kg of milk

No	Indices	Expense rate LTL/1 kg
1.	Forage	0.268
2.	Water	0.012
3.	Direct labour costs	0.062
4	Overhead expenses	0.268
	Total production cost per one unit	*0.61*

Functional budgets serve a basis for planning the master budget of the dairy operations at Enterprise "X". The master budget reflects the financial position of a relevant operation. It summarizes and finalizes the budgetary cycle. The master budget forecasts the financial position of the business activity in the future. The cash flow budget requires performance figures for a period of one month or less. Cash flow means receipts and payments attributable to individual operations. It is presented in Table 15.

Table 15. Receipt and expense budget

No	Receipt budget	Amount LTL	No	Expense budget	Amount LTL
1.	Receipts	120.155.40	1.	Forage and water	41.568.50
2.	Trade creditors	8.113.25	2.	Wages	9.177.00
3.	Total receipts	128.268.65	3.	Overhead expenses	39.796.60
			4.	Total expenses	90.541.6

The efficiency of operations is best disclosed by the cash budget, which reflects all financial and cash transactions. The cash budget is based on the receipt and expense budgets (the figures are taken from Table 15) (see Table 16).

Table 16. Cash budget

No	Items	Amount LTL
1.	Income	128.268.65
2.	Expenses	90.541.6
3.	Cash at the beginning of the month	10.450.20
4.	Cash at the end of the month	48.177.25

Cash budgeting helps to measure the contribution of the dairy operations in the overall performance of the organisation over a period of one month. The forecasted cash comes up to LTL 48.177.25. The information provided by this budget may help to take notice of the problems, which require adjustments to be made not only to the financial (cash) budget but also to the functional budgets (e.g., review of the operating expenses, etc.).

The described operating expense budgets comprise the budget system of Enterprise "X" dairy operations. The said budgets are made compatible with each other and consequently their interaction reflects the coordination of all dairy production responsibility centres and their joint activities (see Figure 2).

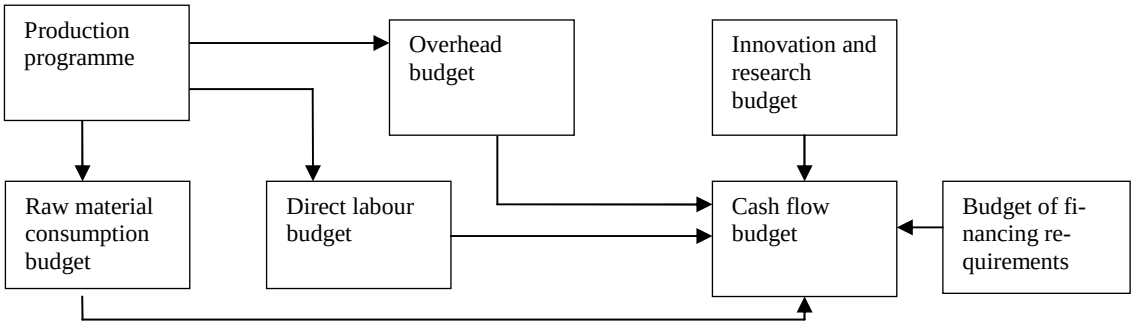

Fig. 2. Budgeting system of Enterprise "X" dairy operations

Such budgeting system enables to plan the activities and to meet the objectives and consequently to increase the sales of milk yield and earn bigger profits. In the context of the dairying budgeting system, the cash-flow budget plays an important role. It helps to make estimations of the upcoming cash-flow surplus that can be used for short-term investments or enables to make early relevant arrangements for the likely shortage of money and thus to cut down the level of potential risks over the budgeted period.

Control of the key budgets of the dairy production

After one month of operations, the chief executive of the organisation and a budget expert can compare the actual performance figures of the dairy operations with the planned (budgeted) figures based on the actual information on the revenue earned and expenses incurred over that period.

Firstly, in February 2009 a static budget is drawn up, which reflects the expected milk purchasing price and the direct and overhead expenses (see Table 17).

Table 17. Static budget

Data	Milk
Selling price LTL/kg	0.81
Directs costs (materials and wages) LTL	0.28
Sales volumes kg/month	147.320
Allocated overhead costs LTL	39.796.60

In March 2009, the below performance figures were reported (see Table 18). The actual overhead costs were lower than the budgeted figure entered in February. The more favourable situation resulted from the milk purchasing price policy: the milk was sold at a higher price than it was expected (see Table 18).

Table 18. Actual budget

Data	Milk
Selling price LTL/kg	0.85
Directs costs (materials and wages) LTL	0.302
Sales volumes kg/month	148.230
Allocated overhead costs LTL	40.250.44

The actual Profit and Loss Account compiled in February 2009 reveals that the profit increased due to lower variable and overhead costs (see Table 20).

Table 19. Actual production cost budget per 1 kg milk

No	Indices	Expense rate LTL/kg
1.	Directs costs (material and wages) LTL	0.302
2.	Overhead costs	0.27
	Total production unit cost	*0.572*

The actual production cost of 1 kg of milk is calculated in Table 19. The actual production cost shrank by LTL 0.038 compared to the budgeted figure of LTL 0.61 per kilogram.

Table 20. Actual Profit and Loss Account LTL

Items	Amount LTL
Sales volume kg	148.230
Turnover from sales	125.995.5
Variable costs	44.765.46
Marginal income	81.230.04
Fixed costs	40.250.44
Profit	40.979.60

Once the static operating budget is compiled, a flexible use of the budget is essential for the control purposes. The performance results can be controlled by comparing the actual expenses to the budget expenses. The flexible budgeting method is not complicated, but the obtained results are accurate only when the changes in costs comply with the projected trends. This budget is presented in Table 21.

Table 21. Static and flexible budget planning

	Static budget	Flexible budget
Sales volume kg	148.340	148.230
Turnover from sales	120.155.40	120.066.3
Variable costs	50.732.28	50.694.66
Marginal income	69.423.12	69.371.64
Fixed costs	39.796.60	39.796.60
Profit	29.626.52	29.575.04

In the analysed case, level 1 and 2 activities are controlled. Level 1 variance analysis reveals only superficial inconsistencies in the profit results, thus the actual reasons for their occurrence are not disclosed (see Table 22).

Table 22. Level 1 analysis. General (static budget) variance

DeflectionVariance LTL	Amount LTL
Revenue	5.840.1
Production cost:	5.512.98
Variable costs	-5.966.82
Fixed costs	453.84
Profit	327.12

Once a flexible budget is prepared (revised in accordance with the actual sales volumes), the Level 2 control allows to evaluate the impact of the changes in price and sales volume on the performance results. The price variance is reflected by the difference between the profits of the actual price and flexible budgets, while the sales volume variances are revealed by the difference between the profits in the flexible and static budgets (see Table 23).

A general (static) budget variance indicates that the actual profit differs from the budgeted one by LTL 327.12 (see Table 22). The Level 2 control reveals the reasons behind this difference. The actual milk sales vol-

umes (148.230 kg) are slightly lower than budgeted (148.340 kg), thus, in view of the actual results, the budgeted profit decreased by LTL 51.12. When a forecast of the purchasing price was made, the earnings were expected to be lower. However the variance between the actual and forecasted price amounted to LTL 0.04, i.e. the actual price was higher than the forecasted price. Due to this reason the budgeted profit increased by LTL 11.404.56. The management of Enterprise "X" should focus on the forecasted milk purchasing prices, since the price variance has the largest impact on the changes in profit.

Table 23. Level 2 analysis. Sales volume and price variances LTL

	Actual budget	Static budget	Flexible budget	Sales volume variance	Price variance
Profit	40.979.60	29.626.52	29.575.04	-51.12	11.404.56

The current position of Enterprise "X" can lead to a conclusion that the future of the dairy enterprise will depend on the breeding system and a careful selection work rather than prices. Primary responsibility is placed on the research staff, as the studies and findings represent the basis for the future operations of the enterprise. The director of the organisation and the budgeting expert, who organise the control of all units of the enterprise, including stockbreeding, will be able to identify the main constraints in the development of Enterprise "X".

Discussion

In summary, considering the current general position of the dairy enterprise it can be assumed that the future of this organisation and other agricultural holdings will depend on the improvement of the breeding system and a careful selection rather than prices. Primary responsibility is placed on the research staff, as the studies and findings represent the basis for the future operations of the enterprise. Subject to a designed budget system of the organisation and incorporation of the Activity Based Costing into the existing accounting system and control of operations of the enterprise, the management of the organisation will have a possibility of identifying the major constraints in the development of the enterprise and the advantages for maintaining future operations. Furthermore, a question could be raised whether the budgeting system of the organisation is based on the new Activity Based Costing (ABC) approach will be beneficial for the enterprise or will it just inflate the operational costs. Those questions should be answered by the management of the enterprise, who decide whether they should linger at the current level of costs management or whether they prefer to choose a more up-to-date management accounting tool (i.e. cost budgeting system).

Conclusions

1. The empiric research brings to a conclusion that: a) the calculations of the production cost of the milk yield (the cost driver) provide a detailed overview of the expenses and their relative percentage in the total production cost of the milk yield. Furthermore, based on the obtained findings decisions can be made regarding the functions where changes could be made depending on the value created by the function to the end user; b) on the other hand, a more accurate production cost of milk raw material calculated using the ABC principles allows to make more exact budgets of the organisation that facilitate a rational estimation and allocation of the enterprise resources in tackling the goals of the enterprise; c) the control of the compiled budgets provides variances between the actual and budgeted results of the function. Economically, the obtained variances are treated as favourable or negative with respect of the performance of the enterprise. Any variances that are significant in the performance of the enterprise require thorough analysis in order to identify the reasons of their occurrence and to take preventive measures in the future.

2. According to scientific and empiric researches, the application of the cost budgeting system at agricultural holdings could be an alternative measure under the changeable and variable economic and business circumstances.

References

1. Anderson, Needles, Caldwell. (1989). Managerial accounting. Boston: Houghton Mifflin Enterprise.
2. Bagdžiūnienė V. (2006). Biudžetai ir jų vykdymo kontrolė. Vilnius: Conto litera.
3. Jagminas V. (2004). Įmonės biudžetų esmė ir jų parengimas // Apskaitos ir mokesčių apžvalga, 2004 09.
4. Jagminas V. (2005). Kaštų apskaita pagal veiklas// Apskaitos ir mokesčių apžvalga, - 2005 04.
5. Jurkštienė A. (2002). Valdymo apskaita. Kaunas: Technologija.
6. Doye D., Sahs R. (2005). Using Enterprise Budgets in Farm Financial Planning. *Oklahoma Cooperative Extension Service*, pp.243-1 – 243-7. Available at: http://osufacts.okstate.edu (visited 02.02.2009).
7. Drury C. (1996). Management and Cost Accounting. 4rd edition. International Thomson business press. pp. 374-375.
8. Drury C. Management and Cost Accounting. 5rd edition. – London: Thomson learning, 2000. pp.321.
9. Друри К. (1994). Введение в управленческий производственый учет. Москва: Аудит.
10. Greaser G. L., Harper J. K. (1994) Enterprise Budget Analysis. Available at: http://alternatives.aers.edu/Publications/enterprise_budget_analysis.pdf (visited 02.02.2009).
11. James A. F. Stoner, R. Edward Freeman, Daniel R. Gilbert, Jr. (1999). Vadyba. Kaunas: Poligrafija ir Informatika.

12. Horngren Ch. T. (2004) Management Accounting: Some Comments. Journal of Management Accounting Research, Volume Sixteen, pp.207-211.
13. Kalčinskas G. (2004). Įmonės biudžetai – vadybos atramos taškas//Vadovo pasaulis, 2004 01. pp. 39-42.
14. Kalčinskaitė R. (2005). Kokią savikainą geriau skaičiuoti?// Apskaitos ir mokesčių apžvalga, 2005 10. pp.34-37.
15. Kalčinskaitė R. (2006). Biudžetas: kaip jį parengti//Vadovo pasaulis, 2006 06.
16. Lucey T. (1990). A First Course in Cost and Management accounting. London: DP PUBLICATIONS LTD.
17. Mackevičius J. (2003). Valdymo apskaita. Koncepcija, metodika, politika.Vilnius: TEV.
18. Radzevičienė R. (2001). Įmonės biudžeto sudarymas//Apskaitos, audito ir mokesčių aktualijos, 2001 09.
19. Roztocki N. (2005). Introduction to Activity Based Costing (ABC). Available at: http://www.pitt.edu/~roztocki/ abc/abctutor/index.htm (visited 2009-02-01).
20. Taraškevičienė M. (2009). Pieno ūkiai – perdirbėjų nerangumo gniaužtuose. Available at: http://www.zebra.lt/lt/aktualijos/ verslaslietuvoje/Pieno-ukiai-perdirbeju-nerangumo-gniauztuose-2009-02-09.html (visited 2009-02-10).
21. Valančienė L. (2003). Atsakomybės centrų valdymas. – Kaunas: Technologija.
22. Valančienė L. Gimžauskienė E. (2007). Changing Role of Management Accounting: Lithuanian Experience Case Studies//Engineering economics 2007, No 5 (55). pp.16-22.
23. White A. (2007) Financial Analysis of an Agricultural Business – the Enterprise Budget. Available at: http://www.ext.vt.edu/news/periodicals/fmu/2007-04/financial_analysis.htmlvisited 19.02.2009).
24. Zabielavičienė I. (2005). Valdymo apskaita, analizė ir sprendimai įmonėje. Vilnius: Technika.