

Development of Methodological Foundations for Stating the Cost of Agricultural Products

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Abstract — The key task of managing the production of a modern economic entity is to minimize the labor product cost. Its value, in turn, is determined by choosing the method of cost accounting and calculating the labor product cost, depending on characteristics of the production process. The current methodological approach to planning production costs and the use of calculated indicators does not meet agricultural conditions and requires significant adjustments. The proposed reorientation of the general methodological approach to planning and cost accounting and determining the cost of agricultural production involves fundamental changes in determining reporting periods of production. The article substantiates the need to revise the timing of the implementation of budget, provisory and actual costing in agricultural organizations. An example of the preparation and adjustment of the cost budget of production costs is presented, which may be used to prepare the relevant budget documentation. The implementation of the proposed approach helps to improve the accuracy of accounting information about the planned and actual cost and will also make optimization and efficiency of control functions and management decisions possible.

Keywords — statement of agricultural products' cost; cost budget; provisory costing; actual costing; long production cycle.

I. INTRODUCTION

According to the Concept of accounting in the market economy of Russia in relation to information for internal users, the purpose of accounting is to generate information that is useful for the organization's management to make management decisions.

In the accounting system, economic information is generated about events and facts of economic activity, the nature and total of which, in turn, are largely determined by specific management decisions.

The relevance of accounting records is ensured by the use of an appropriate tool base for processing primary data. The formation of guidance material in management accounting is inextricably linked with the instrumental base of management. In turn, the information processing technique in an economic entity should be applied within the framework of generally accepted legal norms (Fig. 1).

The instrumental base of accounting in the activity of a separate economic subject is specified in the in-house organizational and administrative documentation, which

contains instructions for performing the functions of an accounting employee.

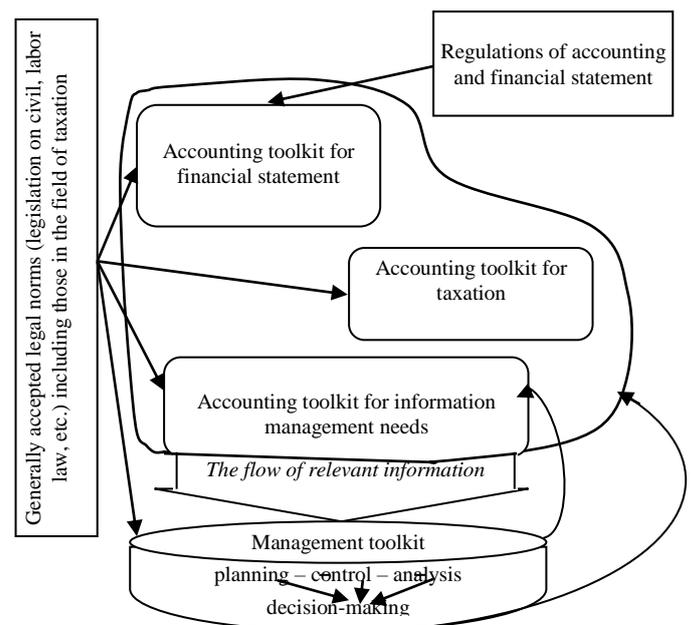


Fig. 1. Instructive sources to form the instrumental base of accounting of an economic entity

The establishment of clear instructions for accountants in the enterprise in order to prepare financial statements or taxation often requires independent choice or development of techniques and methods in view of the multivariance or lack of specification on issues regulated at a higher regulatory level.

The relevance of management information for the needs of managing an economic entity determines the greatest concretization of accounting tools, provided by the results of estimated and other planning, control, analysis and, ultimately, management decisions [1–3].

One of the key tasks of strategic production management of a modern economic entity is to minimize the labor product cost. At the same time, the regulation of cost accounting and determination of its value does not represent severe restrictions. Existing industry instructions are indicative.

The choice of the method of cost accounting and calculating the labor product cost depends on a detailed approach to production management, which, in turn, is based

The proposed reorientation of the general methodological approach to costs planning and accounting and determining the cost of agricultural products involves fundamental changes in determining reporting periods of production.

In this regard, the reporting period should be set separately for the production of a specific type (group) of products, depending on natural time periods for its production. Specific species (groups) are predetermined. For example, crops are optimally grouped according to the principal varietal characteristics of cultivation and peculiarities of the agricultural area planned for cultivation of the corresponding crop.

Table 1 presents the example of compiling and adjusting the planned costing of spring barley production. The presented sections of the tables are perfect for the preparation of the relevant planning documentation. The same register has details information on actual costs and cost, which ensures the compatibility of information for analysis. It is obvious that the value of the adjusted planned (provisory) cost is more consistent with the actual one, which confirms the rationality of its use for evaluating the finished product when it comes from production.

TABLE I. COSTS PLAN AND CALCULATION OF COST OF PRODUCTION OF SPRING BARLEY VICONT

Field 3-18 Area: sown – 620 ha; harvested – 620 ha

1. Calculation of the total cost

Month	Cost items	Planned amount of costs, thousand rubles.		Actual amount of costs, thousand rubles (as of September 30, 2018)
		statement March 20, 2018	adjustment July 05, 2018	
	Costs to prepare the production of previous months	2,553.65	2,553.65	2,553.65
April	Capital consumption	205.84	205.84	205.84
	Fuels and lubricants	65.32	68.20	68.20
	Spare parts, repair and building materials for repair	35.24	33.11	33.11
	Labor costs	45.18	48.13	48.13
	Social benefits	13.55	14.44	14.44
	Other prime costs	18.65	22.05	22.05
	Works and services of third-parties	13.85	12.47	12.47
	Mineral and organic fertilizers	305.85	381.64	381.64
	Electricity	15.00	15.58	15.58
	The costs of organizing production and its maintenance	200.00	198.98	198.98
Management costs	110.00	114.66	114.66	
	Total per month	1,028.48	1,115.1	1,115.1
May	Capital consumption	205.84	205.84	205.84
	Fuels and lubricants	149.62	166.30	166.30
	Spare parts, repair and building materials for repair	42.59	48.23	48.23
	Labor costs	92.58	73.15	73.15
	Social benefits	27.74	21.95	21.95
	Other prime costs	20.00	17.69	17.69
	Works and services of third-parties	13.54	18.54	18.54
	Seeds and planting material	963.35	980.95	980.95
	Mineral and organic fertilizers	53.85	58.21	58.21
	Electricity	17.50	16.61	16.61
The costs of organizing	220.00	224.17	224.17	

	production and its maintenance				
	Management costs	130.00	136.70	136.70	
	Total per month	1,936.61	1,968.34	1,968.34	
June	Capital consumption	205.84	205.84	205.84	
	Fuels and lubricants	76.12	87.27	87.27	
	Spare parts, repair and building materials for repair	59.13	61.09	61.09	
	Labor costs	63.15	65.45	65.45	
	Social benefits	18.95	19.64	19.64	
	Other prime costs	23.00	23.64	23.64	
	Works and services of third-parties	38.95	39.45	39.45	
	Mineral and organic fertilizers	605.35	589.09	589.09	
	Plant and animal protection agents	303.12	283.63	283.63	
	Electricity	18.30	21.82	21.82	
	The costs of organizing production and its maintenance	230.00	266.94	266.94	
	Management costs	130.00	130.91	130.91	
		Total per month	1,771.91	1,794.77	1,794.77
	July	Capital consumption	205.84	205.84	205.84
		Fuels and lubricants	278.65	278.65	290.86
Spare parts, repair and building materials for repair		90.00	90.00	83.10	
Labor costs		155.00	155.00	145.43	
Social benefits		46.50	46.50	43.63	
Other prime costs		30.00	30.00	41.94	
Works and services of third-parties		60.00	60.00	62.27	
Plant and animal protection agents		500.85	542.56	560.90	
Electricity		19.00	19.00	20.78	
The costs of organizing production and its maintenance		220.00	220.00	241.00	
Management costs		130.00	130.00	137.12	
		Total per month	1,735.84	1,777.55	1,832.87
August		Capital consumption	205.84	205.84	205.84
		Fuels and lubricants	708.63	736.33	740.99
		Spare parts, repair and building materials for repair	90.00	98.00	102.92
	Labor costs	315.36	358.45	349.91	
	Social benefits	94.61	107.54	104.97	
	Other prime costs	55.00	55.00	61.75	
	Works and services of third-parties	45.15	45.15	52.33	
	Electricity	19.00	19.00	20.58	
	The costs of organizing production and its maintenance	230.00	230.00	236.7	
	Management costs	140.00	140.00	144.08	
		Total per month	1,903.59	1,995.31	2,020.07
	September	Capital consumption	205.84	205.84	205.84
		Fuels and lubricants	189.25	189.25	166.81
		Spare parts, repair and building materials for repair	105.00	105.00	133.45
		Labor costs	104.32	104.32	100.09
Social benefits		31.30	31.30	30.03	
Other prime costs		25.00	25.00	33.36	
Works and services of third-parties		90.00	90.00	83.41	
Electricity		19.00	19.00	23.36	
The costs of organizing production and its maintenance		230.00	230.00	230.20	
Management costs		130.00	130.00	129.28	
		Total per month	1,129.71	1,129.71	1,135.83
		TOTAL production costs	12,059.79	12,334.43	12,420.63

2. The estimation of the cost per unit of production

Parameter	Plan		Fact as of September 30, 2018
	statement March 20, 2018	adjustment July 05, 2018	
Total harvest, dt	35,974.67	34,312.82	32,380.81
Cost of 1 centner, rub.	335.23	359.47	383.58

The possibility to automate the relevant calculations will allow timely providing the necessary information to the accounting process of the enterprise and the feedback function [18]. However, to increase the relevance of the information, it is proposed to combine the results of calculations of the adjusted planned cost of different crops according to the example in Table 2.

TABLE II. INFORMATION ON THE PLANNED COST OF GRAIN CROPS ACCORDING TO THE ADJUSTMENT OF JULY 05, 2018

Crop	Adjusted planned cost of 1 centner, rub.
Spring wheat Agate; field 1-18	324.58
Spring wheat Lada; field 2-18	328.17
Spring barley Vicont; field 4-18	359.47
Winter wheat Viola; field 4-18	423.85

In dairy cattle breeding, it is rational to group cows according to the month of their insemination [16]. In this case, the initial planned calculation of the cost of the offspring should be made according to the group of cows (or in more detail for each cow) at the end (or in the month) of insemination and in the month of dry period to adjust its value. The calculation of the actual cost of the offspring should be carried out at the end of the month of calving.

In this case, the planned cost of milk can be determined once at the beginning of each month also by the previously provided groups of cows, since the cost and volume of milk produced depends on the phases of the offspring formation: in months of milking after calving, in months of milking of pregnant cows, in months of the dry period [16].

Calculation is acceptable for each group of cows for each month of the pregnancy period (for groups of dairy pregnant cows, dry cows and in-calf heifers) or the milking period (for groups of milking cows), systematizing the information according to the example in Table 1. For groups of milk springers, it is necessary to foresee the distribution of costs for the production of the offspring and milk in the calculation algorithm [16] and to do this one should add the appropriate details to the register. The calculation results for different groups of animals are also recommended to be combined according to the example in Table 2 to provide the accounting process with the necessary data.

III. CONCLUSION

The specifics of economic activities with a long production cycle, agricultural production in particular, necessitates a serious adjustment of the applied cost accounting methods to increase the accuracy and efficiency of accounting information. The current level of development of technical means and computer programs allows implementing and optimizing the time-consuming processes of calculating values and detailing information to ensure the greatest accuracy and relevance of the resulting data. The development of methodological foundations for cost accounting of agricultural organizations involves:

- preparation of planned (initial) costing immediately before the start of the production cycle;
- compilation of provisory costing, involving the adjustment of the planned (expected) cost to a more accurate value before the estimated month of receipt of products from production;
- determination of the actual production cost of manufactured products at the end of the month in which the products of a particular type (group) are capitalized in full from production.

In addition to the improvement of the accuracy of accounting information about the planned and actual cost, the implementation of the proposed approach will allow optimization and efficiency of control functions and management decisions.

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