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Research on Standards Cost in Animal Feed Processing Enterprises in Vietnam

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Abstract

The study has synthesized theories on building production standards cost in manufacturing enterprises. Standards cost are one of the tools to control costs. Production standards cost include direct material standards cost, direct labor standards cost, and general production standards cost. Standards are a measure of determining costs for a unit of product. The results of cost implementation will be compared with estimates to determine cost fluctuations, so standards cost is the key to cost control and the basis for organizing responsibility accounting. Standards cost is one

of the measures to evaluate the performance of responsibility centers, especially cost centers. The study was conducted on 52 animal feed processing enterprises and the study conducted an in-depth survey of Rural Technology Development Joint Stock Company to assess the current situation of building production standards cost at animal feed processing enterprises. in Viet Nam. The study has provided complete solutions for building standards cost to serve cost control and evaluation of business performance.

Keywords: Standards Cost, Direct Materials Cost, Direct Labor Costs, Cost Management, Animal Feed Processing Enterprises

1. Theoretical Basis

1.1 Standard Cost

Standards cost is the amount of cost to produce one unit of product. Building Standard cost can be done by one of the following methods or a combination of methods to get the best results: The technical method is to study the time of production work to determine the amount of cost. Consumable materials and wasted labor time required to produce the product; The method of analyzing historical data is to review the costs of previous periods as a basis for determining production norms for this period; The adjustment method is to adjust standard costs to suit the technological conditions, management capabilities and existing human resources of the enterprise^[3]. Building Standard cost includes building raw material Standard cost, direct labor standard cost, and production Standard cost.

Direct Materials Standards Cost

Direct labor costs are variable costs. Direct labor standard cost is built on the basis of price standard and raw material quantity standard. These two factors need to be identified separately. Raw material price standard is the price of 1 unit of raw materials to directly produce the product. Quantity standard for 1 unit of product is the amounts of raw materials needed to produce 1 unit of product:

$$\begin{array}{l} \text{Standard cost of} \\ \text{raw materials for} \\ \text{1 unit of product} \end{array} = \begin{array}{l} \text{Determine the} \\ \text{price for 1 unit} \\ \text{of raw materials} \end{array} \times \begin{array}{l} \text{Quantity of raw} \\ \text{materials for 1 unit} \\ \text{of product} \end{array}$$

Direct labor standard cost

Direct labor costs are variable costs. Direct labor standard cost include standard on the price of a unit of direct labor time and standard on the amount of time needed to produce a unit of product. Standard on the price of 1 unit of direct labor time include salary, other allowances such as liability insurance, toxic allowances. Standard on the amount of time needed to produce a unit

of product. Product is the time needed to produce 1 unit of product including rest time, time to address personal needs, time to clean the machine and time to rest the machine.

$$\text{Determine direct labor costs} = \text{Standard for the price of a unit of direct labor time} \times \text{Standard for the amount of time required to produce one unit of product}$$

General Operation Standard Cost

General production costs are costs formed including many cost elements, including variable costs, fixed costs and mixed costs. Therefore, administrators must use methods to separate mixed costs into fixed costs and variable costs. Because mixed costs are separated into fixed and variable costs, when building direct labor standard cost, we will build variable production overhead standard and production overhead standard and need to determine them for each. Cost factor. For general production variable standard cost, it can be built in one of the following two ways:

Variable manufacturing overhead costs have a close relationship with direct costs such as direct material costs or direct labor costs, then:

$$\text{General production variable cost norm for 1 unit of product} = \text{Direct Standard cost for a unit of product} \times \text{The ratio of variable manufacturing overhead costs to direct costs}$$

In case based on the criteria to allocate direct labor costs such as number of operating machine hours, number of products produced, number of labor hours of direct workers, the norm of variable production overhead costs is determined as follows:

$$\text{The unit cost of allocating variable production costs to 1 unit of allocation criteria} = \frac{\text{Estimated total variable manufacturing}}{\text{Total allocation criteria}}$$

$$\text{General production variable cost norm for 1 unit of product} = \text{The unit cost of allocating variable production costs to 1 unit of allocation criteria} \times \text{Number of units of criteria allocated to produce 1 unit of product}$$

Standard cost is the initial basis for enterprise budgeting activities. At the same time, standard cost is also the basis and standard for evaluating the cost implementation situation, attaching responsibility for the use and management of costs to the cost-generating department, helping management and control activities effective business costs. Standard cost also provides information for product pricing and timely business decision-making on the basis of established norm data. Standard cost is used as a measure in the enterprise's estimating system and is the basis for comparing actual costs incurred with standard cost to determine fluctuations and causes of cost arising. This is the basis for cost control.

2. Research Methods

The research uses statistical methods and comparison and synthesis methods to synthesize theories on standard cost based on articles, textbooks and other documents. At the same time, the study surveyed 52 animal feed processing enterprises in Vietnam to evaluate the situation of setting standard cost. The study conducted an in-depth survey at Rural Technology Development Joint Stock Company (RTD Company) to evaluate the reality of setting standard cost in animal feed processing enterprises, as a basis for making recommendations. Complete solution for building standard at animal feed processing enterprises.

3. Actual Situation

According to the survey results, animal husbandry enterprises have initially paid attention to building Standard cost. 46/52 surveyed enterprises (accounting for 88.5%) have built Standard cost, only 6 enterprises have not yet developed Standard cost (11.5%) (Fig 1). Enterprises are very interested in building raw material Standard cost, 44/52 enterprises have built raw material Standard cost (Fig 2). Starting from the characteristics of animal feed production, product production must ensure quality according to animal feed standards for protein, fat, nutrition... announced by the enterprise and according to standards. of the Ministry of Agriculture and Rural Development.

Fig 1: Business statistics table for building Standard cost

		Quantity	Percent %	Valid Percent %	Cumulative Percent
Valid	Yes	46	88.5	88.5	88.5
	No	6	11.5	11.5	100.0
	Total:	52	100.0	100.0	

Fig 2: Statistics table for enterprises to establish direct material Standard cost

		Quantity	Percent %	Valid Percent %	Cumulative Percent
Valid	Yes	44	84.6	100.0	100.0
	No	8	15.4		
Total:		52	100.0		

Raw material Standard cost are shown in the raw material norms table for producing each type of food provided by the technical department. However, the new Direct Labor Standard cost is only established as norms in terms of the amount of raw materials needed for one kilogram of finished food product. This is the basis for determining the volume of raw materials shipped for a batch of products by multiplying

the norm of raw materials by the number of kilograms of finished products to be produced. Raw material norms in terms of quantity are shown in the Production order cum material delivery note of Chén biến thức ăn chăn nuôi companies (Fig 3): Production order cum material delivery note-RTD Company.

Fig 3: Production order cum material delivery note

Rural Technology Development Joint Stock Company						
PRODUCTION ORDER CUM MATERIAL DELIVERY NOTE						
Number: PX 10061002						
Name product:	Super high protein meat pork (5kg)					
Model:	B52V.05					
Quatity:	30.000 kg					
Date:	90 days					
Code	Name	Unit	Qty	Unit price VND	Amount	Note
1521.BOTC	Fish powder Cà Mau	Kg	390	20,050	7,819,500	
1521.BOT	Blood powder	Kg	90	8,700	783,000	
1521.BOTN	Heavy powder	Kg	36	840	30,240	
1521.BOTT	Meat and bone meal	Kg	240	5,230	1,255,200	
1521.CUSO	CuSO4	Kg	6	37,700	226,200	
1521.DAU	Yellow beans	Kg	42	7,100	298,200	
1521.DPC	D.C.P	Kg	54	4,500	243,000	
1521.KHO	Soybean	Kg	2,067	5,114	10,570,638	
1521.MOC	Fish fat	Kg	45	9,405	423,218	
1521.MUOI	Refined salt	Kg	24	3,400	81,600	
1521.KEM	K - enzym	Kg	6	35,214	211,284	
	Total:		3,000		21,942,080	

Direct labor costs and Direct labor costs norms are also initially of interest to CBTAC businesses with the corresponding ratio of established norms being 21/52 enterprises (accounting for 40.4%), 19/52 businesses (accounting for 36.5%).

4. Solution

Standard cost is the basis for implementing, evaluating and analyzing actual costs, contributing to detecting unreasonable costs. Building Standard cost is building quantity norms and price norms of various types of costs to produce a unit of product.

* Direct Material Standards Cost

To build raw material Standard cost, it is necessary to build quantity and price norms for each type of raw material to produce each type of animal feed. Chăn nuôi thức ăn chăn nuôi enterprises have two typical product lines: concentrated product lines and mixed product lines. Each product line is divided into different types of livestock, poultry and aquatic products. And within each group of animals, animals are divided into age groups with different nutritional needs. Therefore, the raw materials to produce each type of animal feed are also different. Therefore, TT raw material consumption norms are built separately for each type of animal feed. Specifically on building Direct Labor Standard cost as follows.

About Quantity of Raw Materials Standards Cost

Animal feed processing businesses determine the amount of raw materials needed to produce one kilogram of animal feed. The amounts of raw materials are calculated separately

for each type of raw material, including raw materials, refined materials, combined to determine the amounts of raw materials needed to produce 1 kg of animal feed. The standard quantity of raw materials to produce 1 kg of animal feed is established by the technical department in animal feed processing enterprises. It should be noted that the consumption norms for the amounts of direct materials need to take into account the allowable loss during storage due to humidity or transportation. Based on the amounts of raw materials consumed to produce 1 kg of finished product, how many kg the enterprise needs to produce, then multiply by the number of kg needed to produce to calculate the amounts of raw materials needed to deliver to the warehouse manufacture.

About Raw Material Prices Standards Cost

The price norm for raw materials is the price of 1 kg of raw materials for animal feed production. Raw material price norms are also calculated separately for each type of raw material and determined by the purchasing department. To build raw material price norms, it is necessary to base on the market price situation, exchange rate policy, tax policy and the government's animal feed policy to determine the price for one kilogram of raw materials. Raw material price norms must be determined including purchase costs and all costs incurred in the process of purchasing raw materials.

Taking the quantity norm and multiplying it with the raw material price norm, you can calculate the raw material cost standards. The standard cost of raw materials to produce 1 kg of Super high protein pork meat with code B52V.05 of RTD company is 7,314 VND/kg.

Fig 4: Table of direct material standards cost

Rural Technology Development Joint Stock Company						
Direct materials cost table						
Month (Quarter):...						
Product's name: Super high protein pork meat						
Product code: B52V.05						
Code	Name	Unit	Quantity standards	Prices standards VND	Amount	Note
1521.BOTC	Fish powder Cà Mau	Kg	0.130	20,050	2,607	
1521.BOT	Blood powder	Kg	0.030	8,700	261	
1521.BOTN	Heavy powder	Kg	0.012	840	10	
1521.BOTT	Meat and bone meal	Kg	0.080	5,230	418	
1521.CUSO	CuSO4	Kg	0.002	37,700	75	
1521.DAU	Yellow beans	Kg	0.014	7,100	99	
1521.DPC	D.C.P	Kg	0.018	4,500	81	
1521.KHO	Soybean	Kg	0.689	5,114	3,524	
1521.MOC	Fish fat	Kg	0.015	9,405	141	
1521.MUOI	Refined salt	Kg	0.008	3,400	27	
1521.KEM	K - enzym	Kg	0.002	35,214	70	
	Total:		1		7,314	

* Direct Labor Standards Cost

The specific production and business activities of animal feed processing enterprises govern the way to determine direct labor costs. The animal feed processing process is a closed process from putting raw materials into the machine to producing finished products and packaging. The entire process of mixing, grinding, pelleting... raw materials is on the production line, so direct labor costs in businesses are mainly salary costs of workers directly operating machinery and expenses. Wage costs of transportation workers. Therefore, to build labor Standard cost in this case, animal feed processing enterprises need to divide the activities of direct production workers into 2 groups of work, specifically labor costs.

▪ Labor Costs of Machine Operators

The standard labor cost of a machine operator is calculated = the standard amount of time spent standing on the machine to produce 1 kg of finished product * the standard salary price of 1 hour of work for a machine operator.

▪ Labor Costs of Transport and Bagging Workers

Norms for labor costs of transport and bagging workers calculated for 1 kg of finished products. The company determines shipping and packaging costs based on the volume of shipping and packaging. Combining the labor costs of the above two activities will calculate the standard Direct Labor Cost to produce 1 kg of product.

* General Production Standard Cost

Direct labor costs in animal feed processing businesses include many cost factors. Those cost elements can be fixed costs and mixed costs. Standard cost Fixed direct labor costs do not change within the appropriate scope of activities. For mixed general production costs, to build a norm of general production costs, businesses first need to analyze mixed costs into fixed costs and variable costs, then perform Build standards for mixed direct labor costs. To build Direct Labor Standard cost, it is necessary to build norms for each cost element or group of cost elements with the same cost source characteristics. Can be grouped into the following groups: Generator rental costs, testing costs, electricity costs, gasoline and oil costs, engine oil change costs, air

conditioning gas refills, oxygen tank replacement costs, utility costs tools. After determining the groups of manufacturing overhead costs, build direct labor Standard cost for the cost groups.

5. Conclusion

The study has provided an overview of standard cost. Standard cost is built for a unit of product, while budget is built for the entire output. There is a close relationship between norms and cost budget, standard cost is the basis for making budget, conversely, budget is the basis for evaluating and checking the appropriateness and science of the project. Norms to have measures to improve the norms. The estimate clearly shows how to mobilize capital and use other resources such as people, fixed assets, raw materials, resources of the enterprise periodically and is presented systematically through forms and forms. Different metrics. Standard cost plays an important role in controlling production costs in animal feed processing enterprises.

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