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SOME ASPECTS OF CALCULATING THE COST PRICE OF VEGETABLE PRODUCTS GROWN IN CLOSED GROUND



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Abstract. This article examines some aspects of calculating the cost price of vegetable products grown in closed ground. The definitions and approaches of economists to the concept of cost price have been studied and the author's approach has been formed. Conclusions have been formed on improving the calculation of the cost price of vegetable products grown in closed ground, and recommendations have been developed.

Keywords: vegetable growing, vegetable products, production costs, cost, calculation of the cost of vegetable products grown in closed ground.

Аннотация. Ушбу мақолада ёпиқ ерда етиштирилган сабзавот маҳсулотлари таннархини ҳисоблашнинг айрим жиҳатлари ёритилган. Таннарх тушунчасига иқтисодчи олимларнинг таърифлари ва ёндашувлари тадқиқ қилинган ва муаллифлик ёндашуви шакллантирилган. Ёпиқ ерда етиштирилган сабзавот маҳсулотлари таннархини ҳисоблашни яхшилаш бўйича хулосалар шакллантирилган ва тавсиялар ишлаб чиқилган.

Калит сўзлар: сабзавотчилик, сабзавот маҳсулотлари, ишлаб чиқариш харажатлари, таннарх, ёпиқ ерда етиштирилган сабзавот маҳсулотлари таннархини ҳисоблаш.

Аннотация. В данной статье рассматриваются некоторые аспекты расчета себестоимости овощной продукции, выращенной в закрытом грунте. Изучены определения и подходы экономистов к понятию себестоимости и сформирован авторский подход. Сформированы выводы по совершенствованию калькулирования себестоимости овощной продукции, выращиваемой в закрытом грунте, и разработаны рекомендации.

Ключевые слова: овощеводство, овощная продукция, затраты на производство, себестоимость, калькулирование себестоимости овощной продукции, выращенной в закрытом грунте.

Introduction. Attention is also being paid to scientific research on the issues of cost accounting in vegetable growing in the world. Scientific research is being conducted in such areas as the formation of a system of objects and calculation units for calculating the cost of products, the scientific substantiation of methods for calculating the cost of

vegetable products, the organization of cost accounting and product cost accounting based on the requirements of international standards.

The reforms being carried out in Uzbekistan to increase the production of fruit and vegetable products, increase export potential and reduce cost are aimed at fulfilling the tasks of "encouraging the creation of an added value chain in the fruit and vegetable sector, ensuring the production of quality fruit and vegetable products and the sustainability of their exports" [1] and "... reducing costs and cost, localization and profitability, and undoubtedly increasing the competitiveness of products" [2]. These issues require extensive research and improvement of the existing theoretical and methodological foundations for calculating cost of production in vegetable growing.

This research work serves to a certain extent in implementing the tasks set by the Decree of the President of the Republic of Uzbekistan No. PF-5853 dated October 23, 2019 "On approval of the Strategy for the Development of Agriculture of the Republic of Uzbekistan for 2020-2030" [3], and the Resolution No. PP-4239 dated March 14, 2019 "On measures to develop agricultural cooperation in the field of fruit and vegetable growing" [1].

Research method. The monographic and abstract-logical methods were used in the research process. The theoretical and methodological basis of the study was formed by the works of economists of our republic, scientific and educational literature, articles in scientific journals, and information from regulatory documents.

Literature review. In the general system of indicators reflecting the efficiency of production activities in an economic entity, the cost price indicator plays a key role. Since the composition of the cost price consists of the sum of the relevant costs that make it up.

In accordance with the Regulation "On the composition of costs of production and sale of products (works, services) and the procedure for forming financial results", approved by the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 54 dated February 5, 1999, the costs that form the cost price of production of products (works, services) are divided into groups according to their economic content into the following elements: material costs related to production (excluding the cost of recoverable waste); labor costs of a production nature; social insurance contributions related to production; depreciation of fixed assets and intangible assets of production significance" [4].

Cost of goods sold are the costs associated with creating the value of a product through the production of products. It would be appropriate to provide a scientific explanation of the approaches to the concept of "cost of goods" in scientific and educational and methodological sources (Table 1).

Analyses and results. Having studied the definitions and approaches of economists given in Table 1, the following author's approach to the concept of "cost of goods" was formed: "Cost of goods is the monetary expression of the total current expenses incurred for one unit of manufactured products, performed work and provided services."

According to experts, 80-90% of vegetable crops in developed countries are grown in summer and autumn. In order to provide continuous supply of vegetable products, in the third millennium, it will be transferred to a full system of cultivation of products in protected land areas. Regardless of the weather and climate, growing crops in a

greenhouse will yield several times more than in the open field, and it will be possible to meet the demand for food. The demand for modern greenhouses in the cultivation of vegetable products in agriculture is increasing.

Table 1

The main approaches of economists to the concept of "cost"

Source of information	Definitions and approaches to the concept of cost price
"National Encyclopedia of Uzbekistan" State Scientific Publishing House of the National Encyclopedia of Uzbekistan, Tashkent. - 2000. -264 p.	"Product cost price is the monetary expression of the total current costs incurred by an enterprise for the production and sale of products and the performance of work or the provision of services" [5]
B.A. Khasanov, A.A. Hashimov. Management account. Textbook. - Tashkent National Library of Uzbekistan named after Alisher Navoi, 2003. -260 p.	"Product cost price is the sum of direct costs incurred in the production of products" [6]
B. Rozmetov, O. Bekturdiyev, Q. Yoidasheva, S. Matkarimov. Cost calculation. Tashkent, "ILM ZIYO", 2006. -230 p.	"Product cost price is the monetary expression of the costs incurred in the production and sale of products" [7]
A. T. Makhkambaev, F. T. Abduvakhidov, D. A. Satyvaldieva, E. T. Shodiev. Calculation sebestoimosti: Uchebnoe posobie. - T: Izdatelsky dom "ILM ZIYo", 2012. - 208 p.	"Product cost price is the monetary expression of the total costs incurred by an enterprise for the production and sale of products, based on the current costs of production" [8]
N. Yu. Noskova. Uchet zatrat, kalkulirovaniye i budjetirovaniye v razlichnykh otraslyakh proizvodstvennoy deyatel'nosti: uchebnoe posobie/ N. Yu. Noskova. - Ulyanovsk: UIGTU, 2009. – 124 p.	"Product cost price is a type of cost that is financially It is allowed to reduce the financial results (that is, to deduct from income) based on export principles and reporting principles»[9]
V. E. Kerimov. Uchet zatrat, kalkulirovaniye i budjetirovaniye v otdelnykh otraslyakh proizvodstvennoy sfery. - Moscow, 2005. - 246 p.	"The cost of production is the total costs of the enterprise in the form of money, which is based on the transaction costs of production in the production and sale of the product" [10]

Modern greenhouses cover the area with light-transmitting covers and provide artificial climate conditions. Modern greenhouses provide a 5-6 times higher quality crop than in the open field. Growing 2-4 types of crops in one area in modern greenhouses during the year further increases the total yield.

At the same time, large amounts of money and labor are spent on the construction of modern greenhouses, which in turn makes the cost of vegetable crops grown there significantly higher than in the open field.

It is worth noting that outdoor and indoor vegetable farming differ from an organizational and technological point of view, requiring the use of different methods for calculating their cost.

Therefore, calculating the cost of vegetable products grown in closed ground has its own characteristics. Indoor vegetable production is mainly done in greenhouses and greenhouses. Such structures are more common in regions around large cities. The costs of growing vegetables indoors are calculated separately for each type of structure (winter greenhouses, spring greenhouses covered with glass or transparent film, small-scale film-covered areas, heated areas, hydroponics) and each crop in them on specialized farms, and for each structure on non-specialized farms. In accordance with the current rules, the object of calculation of costs in indoor vegetable growing is the cost of the type of structure (winter, spring greenhouses, greenhouses, etc.). Since these costs are calculated for the entire facility, since different products are grown in each greenhouse, it is necessary to divide the costs incurred for their cultivation into types of products. Such a division is carried out in proportion to the established base.

Information on the costs incurred for products grown in greenhouses is taken from the vegetation journal maintained for each facility. As an example, we give the calculation of the cost of products grown in a spring greenhouse (Table 2).

Products obtained from greenhouses are divided into products intended for export and domestic consumption and are entered into the budget. In the presence of products intended for sale on the domestic market, costs are allocated between these quality groups (in order to calculate their cost separately) in accordance with the generally established procedure, that is, in proportion to the value of the products determined at the market price. It should be noted that in winter greenhouses, amounts of unfinished production may remain at the end of the year. In this case, it becomes necessary to determine it and thereby distribute all costs between the products received and the products grown at the end of the year. The assessment of unfinished production is carried out in accordance with the generally established procedure, that is, the number of square meter days and the cost of planting materials are calculated for the crops grown in accordance with the data of the vegetation journal. Based on this, costs related to work in progress are determined.

Table 2

Calculation of the cost of products grown in the greenhouse using the proportional method (in the example of the Salar Sakhavat farm)

Crop types Indicators	Cucumber	Tomato	Total
Land area, m2	1000	1000	2000
Vegetation period, days	90	100	X
Square meter days	90 000	100 000	190000
Total direct costs	8 700 000	10 800 000	19 500 000
Seedling	3 300 000	4 200 000	7 500 000

Film	2 400 000	3000 000	5 400 000
Mineral fertilizer	1400 000	2000 000	3 400 000
Salary	1600 000	1600 000	3 200 000
Indirect (distributable) costs	19 152 500	21 168 090	40 320 590
Hot water supply	18 000 000	20 000 000	38 000 000
Water usage tax	1 004 500	1 000 090	2 004 590
Electric energy	148 000	168 000	316 000
Cost of 1 m ² , soum	-	-	20 160,3
Total cost, so'm	27 852 500	31 968 090	59 820 590
Received product, kg	7500	9500	X
The cost of 1 kg of product, so'm	3 714	3 365	X

The indicated shortcomings of the existing greenhouses, the need to increase productivity, to reduce the cost and cost of the cultivated products, require the ways of improving the construction of protected land structures, the methods of their use, and changing the technology of growing vegetable crops.

Crop output is determined by dividing the total amount of production costs by the amount of gross output. Taking the above points into account, we will consider the example of the "Turon" farm, which specializes in vegetable growing, as an example. (Table 3).

Table 3

Calculation of the cost of vegetable products on the protected land area (in the case of the Turon farm)

Product type	Number of rums, pcs.	Vegetation period, days	Number of rum-days	Gross yield, kg	Actual costs, so'm	1 kg actual cost, so'm
Cucumber	1 000	45	45 000	20 000	28 125 000	2 812,5
Green onions	500	22	11 000	7 500	6 875 000	916,6
Total :	1 500	x	56 000	x	35 000 000	x

In the protected areas of the farm, 10 kg of cucumbers and 15 kg of green onions were grown under each greenhouse roof. The data in the table shows that the cost of 1 kg of the products obtained is 2,812.5 sums for cucumbers and 916.6 sums for green onions.

After determining the actual cost of vegetable products, seeds, commodity products that were not used at the end of the year, as well as products sold, processed, used for livestock and other needs, are revalued, that is, their planned cost is equalized to the actual cost.

Studies have confirmed that the analysis of the cultivation of vegetable products in closed ground has its own characteristics. In this case, the characteristics of vegetable cultivation in winter and spring greenhouses and heated ground - in heated rows under

film, etc. should be taken into account. It should be noted that such crops are not measured in hectares, but greenhouses and heated ground are measured in m². The yield in them is determined both by the number of seedlings "per thousand" and by the amount of vegetables grown. The planned or actually carried out number of rotations can be compared with the various products harvested from 1 m², and even one frame in each rotation.

Then, factors affecting yield are studied: sowing and harvesting times, soil preparation for sowing and renewal of the old soil, fertilization, temperature regime, air humidity, etc. The average number of seeds sown per 1 m² of greenhouse or seedlings planted per frame is compared with the planned norm. The costs spent on vegetable cultivation and the cost of a unit of production are determined.

The indicators of vegetable cultivation in closed ground are considered only after the end of the season, that is, until the beginning of summer. This will not only provide an appropriate assessment of the achieved results, but will also allow you to determine the most favorable dates for planting and implementing agronomic measures in the next cycle of using greenhouses, hotbeds and heated soils. Table 4 can be used to analyze indoor vegetable growing.

Table 4

**Method for calculating the cost of products in indoor areas
(On the example of the Rohatoy farm)**

Indicator s	Usable area	Product	Total yield		The total amount of expenses		1 ts product cost, so'm	
			Plan	In fact	Plan	In fact	Plan	In fact
Winter greenhouses	1000, m ²	Vegetables, seedlings, thousand pieces	1200	1340	141600	136680	1180	1020
Spring greenhouses		Vegetables, seedlings, thousand pieces	1640	1200	188600	194400	115	162
Crops in heated soil and film-covered lands	5000 m ²	Vegetables, seedlings, thousand pieces	600	460	64800	54740.0	108	119

Conclusion. The yield from winter greenhouses is higher than that from spring greenhouses, the winter crop can be harvested 2 or 3 times during the season.

The costs of winter greenhouses are also higher than those for spring greenhouses or crops grown in heated soil and film-covered areas. However, the costs of the latest generation of winter greenhouses are decreasing slightly. This creates the opportunity to use winter greenhouses more often and increase profits.

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