THE 16TH EDITION OF THE INTERNATIONAL CONFERENCE
EUROPEAN INTEGRATION
REALITIES AND PERSPECTIVES

Instructions for Accurate Accounting of Direct Costs on Phototechnical Materials

Tatiana M. Chira[1]

Abstract: One of the directions for improving the accounting of costs that directly from the consumption of objects of work in phytotechnics is the establishment of a process determined by the allocation of the cost of fertilizers in the total cost of products obtained based on a solid scientific support.

Keywords: the cost of fertilizers; the cost of fertilizers; cost accounting; consumption of work objects; settlement principles

JEL Classification: M41

Material and research methods. The study was based on economic-general, scientific-managerial, abstract-logical, economic-statistical, structural-functional and constructive methods, as well as the method of data analysis, the method of system analysis, the method of forecasting.

Research results and their discussion. One of the ways to improve the accounting of costs directly from the consumption of objects of labor in phytotechnology is the training of the process determined by the distribution of the cost of fertilizers in the total amount of costs related to products obtained on a solid basis. scientific support. Compared to other objects of work in this industry, which are calculated in the technological process, fertilizers have more distinctive features, for example:

• the proportion of absorption of the main (active) substances in fertilizers depends entirely on the conditions of their storage, preparation and application after administration. As an example, we note that when compost manure is applied outside the roots, it no longer retains its ammonia nitrogen content and, accordingly, loses about fifty percent of its value even 2-4 days after application (Kidin & Torshin, 2016, p. 347);

• fertilizers of industrial origin, for example, containing potassium as an active ingredient, have a very detrimental effect on the quality of the final product, but at the same time contribute to an increase in the yield of the obtained crop. (Kidin & Torshin, 2016, p. 277);

• active substances of fertilizers of any origin (organic and mineral) due to special circumstances (the appearance of insoluble compounds, flushing with water at a certain depth of incorporation, etc.) will never be able to fully utilize its useful spectrum. The conclusions of agrochemists, based on their extensive experience, state that the maximum degree of action for all types of fertilizers is definitely less than 60 percent.

[1] PhD in progress, Ștefan cel Mare University of Suceava, România, Address: 13 Universității Str., Suceava 720229, Romania, Tel.: +4 0230 216 147, Corresponding author: tbasoc@bk.ru.

But the main feature of fertilizers in comparison with other circulating assets is that both under the action of fertilizers and in the presence of a significant post-asset that contributes to the development of plants and obtaining quantitative and qualitative results in dynamics. The extension of the effect of fertilizers applied after the appointment, in dynamics, that is, more than one or two years, is confirmed by the well-grounded experience of the relevant research institutes. For example, the scientist V.

Kydin notes that: "In the crops for which fertilizers are applied, a maximum of one third of the active substance is used (at best), but in agricultural practice, in all cases, only 10-12 percent is used active ingredient for organic fertilizer. So, embedded fertilizers based on phosphorus in the year of planting a separate crop, as a rule, the degree of use does not exceed 20-25 percent, fertilizers based on potassium only 30-50 percent, and fertilizers based on nitrogen then 50-60 percent. percent. In this case, there are cases when the degree of capitalization of active elements is even lower, for example: 7-10, 20-25 and 30-40 percent, respectively" (Kidin & Torshin, 2016, p. 160).

Modern research in this important area eloquently shows that a significant proportion of fertilizers are fixed in fertilized soil for a long time and contribute to its fertility. Experiments with nitrogen fertilizers also confirm that about 30 percent of fertilizers applied to crops are consumed not by them, but by organisms of a microorganic nature. At the same time, a certain amount of nitrogenous substances absorbed by microorganisms is very quickly removed and remains available for crops, and another amount is fixed in such a way that over time they turn into humus (Kidin & Torshin, 2016, p. 164). From the foregoing, it is clearly seen that the beneficial effect of fertilizers is manifested in dynamics over several periods. As an example, for the sake of conviction, in the section of the utility coefficients of valuable substances from fertilizers for field crops and fruit plantations by years of action and after exposure, we present the data in Table 1.

Table 1. Coefficients of the use of active substances in fertilizers by field crops and fruit plantations

Year of validity and post-promotion	Organic fertilizers			Mineral fertilizers		
	N	P_2O_5	K_2O	N	P_2O_5	K_2O
1	0,10-0,15	0,10-0,15	0,10	0,20	0,15	0,20
2	0,15	0,10	0,10	0,10	0,10	0,15
3	0,05-0,10	0,10	0,05	0,05	0,05-0,08	0,10

Source: (Balan & Frecăuţeanu, 2005, p. 101)

Here we note that we support the recommendation of economists I. Balan and A. Frekaushyanu to distribute the cost of the applied fertilizers per year in accordance with the production data tables, considering the proportion of action and post-action of these fertilizers (Balan & Frecăuţeanu, 2005). Currently, the method of distributing the cost of fertilizers applied per year in accordance with production data tables, considering the proportion of the effect and aftereffect of these fertilizers, is not regulated by the regulatory framework in this area, but is not found in modern economic or agrotechnical recommendations for calculating the effectiveness of fertilizers.

This disadvantage associated with the lack of a reasonable distribution of the cost of fertilizers applied per year according to the production passports, considering the proportion of the action and post-action of these fertilizers, leads to the fact that the total annual cost of fertilizers is recognized as part of the cost of that year. The considered method of accounting for these costs leads to an unjustified rise in the cost of plant products obtained in the first year, an artificial decrease in the efficiency of the technological and agricultural process and significantly reduces the expected effect of fertilization. The solution to the

problem of distributing the cost of fertilizers applied by years of production, considering the share of action and post-action, is possible depending on:

● the method of using fertilizers approved by the household, containing a list of measures related to the dose of fertilizer application, the method and conditions of application, the principles of settling, destruction, etc.;

● term in years and geography of application of mineral and organic fertilizers to perennial plantings or cultivated crops.

The distribution of the costs associated with the application of fertilizers by years (periods) of separate production, after their effective influence on the size of the resulting production volume, should be performed on the basis of the proportions of the action and post-action of fertilizers established experimentally in scientific research (Kidin & Torshin, 2016, p. 348). These proportions, for example for fruit plantations, are shown in the table below:

Table 2. Proportions for the distribution of the cost of fertilizers in fruit growing by action and after exposure, % (Balan & Frecăuţeanu, 2005, p. 101)

Year sharing	Organic fertilizers	Mineral fertilizers		
		nitrogen	phosphorus	potassium
1	35	60	50	45
2	45	30	35	35
3	20	10	15	20
GENERAL	100	100	100	100

As follows from the calculations presented above, with a stepwise distribution of fertilizer costs over three years (periods) of production only in the 3rd year (period) of production, the total amount of distributed costs coincides with the cost of fertilizers introduced radically into the fruit tree plantation. If the doses of fertilizers introduced during the operation of plantations differ by years (periods) of production (such a situation is plausible and typical for economic activities of households in the agricultural sector), then the total cost of production adjacent to the distribution of costs by years (periods) will differ significantly.

If we express what we stated above, the mathematical ratio W t ≠ does not remain constant, then: Csa ≠ for, s, t, the stepwise distribution of the cost of fertilizers when applying adjacent production years (periods) is very necessary for accounting purposes and, of course the same, for a reliable calculation of the cost of the finished product received. In the case of inconsistent application of fertilizers, the distribution of their costs by years (periods) of production in the background is more efficient from the point of view of the accuracy of calculating the actual costs, considering the peculiarities of the use of fertilizers. Thus, although in the third-year fertilizers were applied to the garden in the amount of 20,000 lei, in actual value, according to the proposed method, only 17,500 lei should be distributed. In the fourth year, no fertilizers were applied, but considering the phenomenon described by the post-action of fertilizers applied in the previous periods, the actual cost is followed by the distribution of the corresponding amount in the amount of 7,500 lei.

According to the fertilizer distribution methodology in the system of accounts, this should be reported separately. If the cost of fertilizers is initially listed in the Expected Long-Term Costs account, it turns out that for individual fertilizer groups (nitrogen, phosphorus, potash or organic), separate accounts must be opened for analytical records to reflect the status of the fruit plantation (classic, intensive, super intensive, irrigated, etc.), duration of plantation operation and production potential, type and variety,

period of application, proportions of action and aftereffect (in% quotas). Subsequently, by switching to the "Current expected costs" account, their cost is again distributed in proportion to the corresponding share for the periods of management in the separate actual cost of production. For example, we assume that 6,000 centers of organic fertilizers (i.e. 300 kg per hectare) were applied to an intensive orchard with an area of twenty hectares, for a total of 66,000 lei. In this order of ideas and in accordance with the above statements, the following actions should be taken and properly reflected in the system of accounts:

• in the first year - to pay off the cost of the respective fertilizers (the account "Long-term expected expenses" is debited and the account "Materials" is credited - in the amount of 66,000 lei); reflect the cost share of organic fertilizers according to the proposed methodology (the account "Current expected costs" is debited, and the account "Long-term expected costs" is credited - in the amount of 23,100 lei [= 66,000 x 35 ÷ 100]); attribute the cost part of fertilizers to the costs of intensive planting of fruit crops for certain years (periods) of production (the account "Main activities" is debited, and the account is credited "Current expected expenses" - in the amount of 23 100 lei); to calculate at the end of the financial year the fertilizer cost corresponding to the posting for the 2nd year, the "Current expected costs" account is debited, and the "Long-term expected costs" account is credited in the amount of 29,700 lei [= 66,000 x 45 ÷ 100]);

• in year II - to assign the value part of fertilizers corresponding to a 45 percent share in the costs of the given production year (period) (the account "Main types of activities" is debited, and the account "Current expected costs" on credit - in the total amount of 29,700 lei); at the end of the financial year, the cost of fertilizer is calculated corresponding to the post-payment for the third year, the account "Current expected costs" is debited, and the account "Long-term expected costs" is credited - in the amount of 13 200 lei]);

• in year III - assign the value of fertilizers corresponding to a 20 percent share of the costs of this year (period) of production of an intensive fruit plantation (the account "Main types of activities" is written off, and the account "Current expected costs" is credited - in the total amount of 13,200 lei).

Conclusions

Accounting for fertilizers calculated with appropriate cost allocation in the Long Term Expected Costs account is more complex if we take current practice as a benchmark for comparison. Thus, technically and methodologically, this method is attractive and, accordingly, more preferable, especially considering the expansion of the field of use of information technologies. Other costs associated with the use of fertilizers, such as: costs associated with grinding and mixing fertilizers, costs of transportation, storage and spreading around the garden, etc.) do not deserve to be singled out and calculated separately. management records.

In this respect, we rely on the provision that the mentioned costs do not lag behind fertilizers, and the excessive number of obvious destruction (e.g. agricultural work) and the corresponding calculation will certainly complicate the accounting process, as a result of which accounting problems prevail over efficiency. and efficiency. It should be noted that the system of soil fertilization is not limited only to the main application of fertilizers, which also provides additional planting of plants during the growing season (Nederița, 2000, pp. 385-386). The additional inclusion of necessary substances during the growing season eliminates the lack of elements that have been depleted by plants in the process of their intensive development (flowering, mature growth, etc.).

In special cases, the doses of fertilizers are administered in moderation and, accordingly, do not have a large share in the total cost of costs, they can be quickly absorbed and, accordingly, have less post-action.

For these reasons, the cost of additional applied fertilizers can be paid directly on the product that will be received during this management period.

We also want to look at green (or sidereal) fertilizers, which also make a significant contribution to the overall maintenance of arable land. The main feature is that nitrogenous substances in them are more accessible to plants and, equally important, they have a higher degree of decomposition.

However, we note with regret that the issue of action and post-action when using these fertilizers is similar to that used by the main application principle. In this chapter, the scientist V. Kydin notes that: "... after plowing the land with sidereal crops in the first year, on average, only 25% of nitrogen, 30% of phosphorus and 50% of potassium are used" (Kidin & Torshin, 2016, p. 135). At the same time, it turned out that after the furrow cultivation on the lands occupied by sidereal crops: "50 percent of the organic mass of the roots decomposes in the first year, which, in turn, removes 62 percent of nitrogen and phosphate components. and 94 percent warm. After four growing seasons, only 27 percent of the organic matter of the roots remains on the corresponding soil, where the percentage of nitrogen, static and potassium substances is: 20, 22 and 4" (Kidin & Torshin, 2016, pp. 119-120). The problems and solutions listed above, in our opinion, generate additional work associated with the distribution of sidereal soil costs between trees or vines (as well as other crops) at different stages of plant development, technological requirements, production times, etc. authentic methods for calculating the actual costs of individual finished products.

As an alternative to everyday practice, we propose to widely use the proposed method of distributing the actual cost of fertilizers used in the operating costs of a specific sub-sector within an agricultural enterprise.

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