

## THE PECULIARITIES OF THE ACCOUNTING OF CONSUMPTIONS CONCERNING GAPS REMOVAL IN VINEYARDS

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### *Abstract*

*Today's methodology of the accounting of the economic operations concerning gaps removal in vineyards is imperfect; it generates numerous uncertainties and it doesn't take into account some factors that directly influence gaps removal technology. In our opinion, the rationality of gaps removal in fruitful vineyards may be argued from both economic and biological points. Some authors suggest solving this problem by classifying current accounts that is doubtful as these suggestions don't have a sound accounting basis and they neglect the fundamental principles of the accounting. That is why, this article suggests the economic way of solving this problem by determining the time of consumptions recovery when planting, caring and growing the cuttings till they give fruit.*

**Key words:** biological fixed assets, consumptions capitalization, consumptions recovery, vineyards

### INTRODUCTION

Today there may appear some gaps (lack of a plant) in vineyards from various reasons: the most frequent causes are exceptional events (drought, frost, etc.) as well as wrong procession and plant protection technologies (plant damage from plowing, tillage between rows, plant protection activities with delay, etc.). As a result the firm will obtain a smaller volume of agricultural products, the relative cost will grow and the profit from these products' sale will decrease, all the indicators used in the efficient evaluation of the exploitation of biological fixed assets will reduce. We consider that the firm can perform certain activities to eliminate those gaps. In this respect it is important to solve the following problems: to determine the period of time that is necessary for gaps elimination in fruitful vineyard; to show the features of precaution principle when finding the gaps; to identify the methods of determination of the consumptions related to planting, caring and growing the cuttings till they give fruit; to expose the method of accounting of the mentioned consumptions; to identify the way of improvement of balance sheet value of the long-term mature biological asset from which

it is necessary to calculate the depreciation according to the precaution principle.

### MATERIALS AND METHODS

In The researches in the field have been carried out being based on the generalization of problems, disagreements and uncertainties related to highlighting of the consumptions concerning gaps removal in vineyards in several entities from the agro-alimentary sector of the Republic of Moldova (Ltd "Focaro-Agro", Ltd "Bebei-Prim" from Stefan-Voda region, etc.). The methodological support of the researches is fundamental conventions and basic principles of the accounting [1], legislation in force related to the theme. The preference was given to monographic study method also using analysis and synthesis elements, induction and deduction elements.

### RESULTS AND DISCUSSIONS

This The problem of gaps removal in vineyards while determining the year when it is rational to perform these operations hasn't been studied. In our opinion, the rationality of gaps removal in fruitful vineyards may be motivated from biological and economical

points of view. The economical solution of the mentioned problem needs the determination of the recovery period of the consumptions (capital investments) when planting, caring and growing the cuttings till they give fruit. Thus, there appears the problem of the determination of these consumptions amount. Besides cuttings' price, the consumptions of digging or soil drilling and cuttings planting, the other consumptions conditioned by technological operations (vine cuttings, vines tying, plant protection, etc.) have common features, they are simultaneously assigned to exploitation consumptions and to the consumptions that are to be capitalized after young plants have grown. The consumptions of cleaning the soil and the cost of mineral and organic fertilizers used while executing this technological operation won't be included in the consumptions of growing and caring of this plant in order to remove gaps, because they are the elements of the input value of the fruitful vine lot. It is known that at the beginning long-term biological assets are assessed at the entry cost according to N.A.S 16 "The accounting for long-term tangible assets" [2] that includes (while planting and cultivating perennial plantations till they bear fruit or till the completion of tree crowns for protective forest strips or for forest areas) the amount of the effective costs concerning the first year plantation plus the accumulative costs concerning plantations caring and growing in the following years the cumulative sum till the plantations are given in service (in case of performing the operations on own), as well as the cost of the cuttings and slips and respectively the cost of the activities when planting them (in case dry seedlings are replaced or destroyed in the first and the second year of vegetation) if their share is significant. The cost of dry seedlings and cuttings will be scrapped and the repair costs will be capitalized.

In 201N Ltd "Focaro-Agro" planted 15 hectares of vine, according to the scheme 2.75×1.4 m the number of the cuttings constitutes 38340 cuttings, the cost is 526500 leis, and the costs of caring in the first year of vegetation are 120000 leis. At the end of the

year 201N there was found that because of weather conditions 8% of the cuttings perished that is 3067 cuttings at the price of 41000 leis. In spring of the year 201N+1 these cuttings were planted in order to replace the perished ones. The price of these cuttings is 7210 leis.

According to the data from the example, in order not to allow vine overvaluation, the entity will:

- scrap the cost of the perished cuttings with the discount of the costs of caring in the first year to 51709.71 leis  $[(526500 \div 38340) \times 3067] + [(120000 \div 38340) \times 3067] = 42110 + 9599.71 = 51709.71$  leis;
- increase the cost of the vine planted with the costs of the cuttings that replaced those perished at the amount of 48210 leis (41000+7210);
- account the contract value of vines planting and caring till they bear fruit (exploitation) in case when the works are performed by others. The perennial plantations are considered active in progress until they get the category of the plantations that bear fruit [3]. When including the perennial plantations into the structure of mature biological assets (those that bear fruit), they are evaluated at the effective price at the moment of transfer that constitutes the sum of the costs accumulated during the period of growth and care with the cumulative total reduced by the value of the products obtained from these young plantations.

As we have mentioned above, the foundation of perennial plantations requires the record of the costs concerning soil cleaning, seedlings and saplings planting, and of the costs with the cumulative total during the whole period of growth, care and plant protection (vegetation years) till they are transferred to bearing category. All these costs are accounted by increasing tangible assets during the execution and by decreasing the costs of current assets, support activities, indirect production costs and by increasing the liabilities and the depreciation of tangible and intangible assets. The costs of seedlings and saplings and growth and care costs concerning the losses because of weather conditions in

the first and second years of vegetation, when the number of seedlings is significant, are considered losses, and the costs of soil cleaning and its preparation for the foundation of perennial plantations (bushes clearing, bushes loading and transportation, plowing, land leveling and picketing, marking, incorporating manure, including manure costs, project cost, etc.) are not included in the amount of these losses. The mentioned losses are accounted as the increase of other expenses and the decrease of tangible assets during the execution. The costs, concerning the replacement of the perished seedlings, are accounted by increasing tangible assets during the execution and by decreasing current assets and other current debts.

The net achievable value of the harvest (grapes, fruit) obtained during the period of growth and care of perennial plantations till they bear fruit is recorded at the entries by increasing products and decreasing tangible assets during execution.

In April 201N Ltd. "Bebei-Prim" planted vine with wine grapes varieties on the area of 10 hectares according to scheme 2.75×1.4m. 24840 seedlings at cost of 360000 leis were planted, the cost of soil cleaning, soil preparation and the cost of the project – 125312 leis, espalier installing that started to be used on 1.06. 201N-524262 leis, plant care and protection in the year of vegetation 201N – 195000leis, in 201N+1 – 38500 leis, in 201N+2 – 88273 leis, in 201N+3 – 107850 leis. In the second year there were found dry cuttings (because of drought) that constituted 8%, this amount exceeds the materiality threshold established in the entity accounting. These gaps were eliminated by planting 1988 new cuttings at the cost of 27832 leis, the costs of dry cuttings replacement – 5650 leis. In the third year of vegetation there were harvested 28q, and in the fourth year – 35q, the market price of 1q of grapes is 280 leis, sale expenses of 1 q of grapes are 30 leis.

On 1.04.201N the entity gets a 2-year loan of 300000 leis with an interest rate of 15% annually, on 1.08.201N it receives a subvention of 200000 leis (20000×10), and on 1.06.201N it repays to the bank the first installment in the amount of 80000 leis.

According to the data from the example the entity will account the following economic facts:

1. 1.04.201N: loan receiving in the amount of 300000 leis by increasing money means and long-term liability;
2. 201N. The recording of the costs of vine plantation and care in the first year of vegetation – 680312 leis (360000+125312+195000) as the increase of running tangible assets and the decrease of current assets, of indirect production costs and the increase of current liabilities;
3. 1.04.201N – 1.06.201N The recording of the costs of espalier installing in the amount of 524262 leis by increasing running tangible assets and decreasing current assets, by increasing liabilities and decreasing the costs of auxiliary activities;
4. 1.04.201N – 1.06.201N The capitalization of liability costs for the first 2 months of vine plantation and caring and of espalier installing, in total 7500 leis  $[(300000 \times 0.15) \div 12 \times 2]$ , of which 3250 leis for the espalier, 4250 leis for the vine as the increase of tangible assets and of the current liability;
5. 1.06.201N – 31.12.201N. The capitalization of the costs of the liability of vine plantation and caring in the amount of 8400 leis  $[(300000 \times 0.15) \div 12 \times 2] + [(300000 - 200000) \times 0.15 \div 12 \times 5]$  as the increase of running tangible assets and of the current liabilities;
6. 1.06.201N – 31.12.201N. The attachment to the costs of the liability cost 8750 leis  $[(100000 \times 0.15) \div 12 \times 7]$  as the result of other basic expenses and of the current liability;
7. 1.06.201N. The recording of the espalier at the entries in the amount of 527512 leis (524262+3250) as the increase of fixed assets and the decrease of running tangible assets; next the espalier's depreciable value, the period of use and the amount of the depreciation amount are determined. Under the condition that the exploitation time is 20 years, for the espalier it will be 23 years, the scrap value of the espalier will be 65000 leis. The amount of the annual depreciation will be 20109.22 leis  $[(527512 - 65000) \div 23]$ , and

monthly the amount will be 1675.77 leis ( $20109.22 \div 12$ );

8. June 201N – December 201N+3. The calculation of the espalier's depreciation allotted to the cost of vine growing and caring at 72031.05 leis  $[(20109.22 \times 3) + (1675.77 \times 7)]$  as the increase of running tangible assets and fixed assets depreciation;

9. 1.01.201N+1–1.06.201N+1.

The calculation of the profit in the amount of 6250 leis  $[(300000 - 200000) \times 0.15 \div 12 \times 5]$  as the increase of anticipated current expenses and of current liabilities;

10. 1.06.201N+1. Credit redemption in the amount of 80000 leis as the decrease of current liability and of money means;

11. 1.06.201N+1. The subvention for vine plantation credit at 4964.38 leis  $[(0.15 \times 80000 \div 365 \times 151)]$  as the decrease of the current liability to the bank and the increase of financing and special payments (anticipated current profits);

12. 1.01.201N+1 – 1.06.201N+1. 1285.62 leis (6250-4964.38) by increasing running tangible assets and the decrease of anticipated current expenses;

13. 1.01.201N+1–1.06.201N+1. The appropriate amount of calculated profit is attributed to expenses- 4964.38 leis as the increase of other expenses and the decrease of anticipated current expenses;

14. June 201N+1. The acceptance of the profit that originated from the subventions 4964.38 leis as the increase of other profits and the decrease of special financings;

June –December 201N+1. The capitalization of liability costs 1750 leis  $[(300000 - 200000 - 80000) \times 0.15 \div 12 \times 7]$  as the increase of running tangible assets and of the current liability;

15. April 201N+1. The disposal of the costs of the perished cuttings and the costs of the cuttings caring – 34388.62 leis  $[(360000 \div 24840 \times 1988) + (195000 - 125312) \div 24840 \times 1988]$  as the increase of other expenses and the decrease of running tangible assets;

16. April 201N+1. The capitalization of the costs of the replacement of the perished cuttings in the first year of vegetation -33482 leis (27832+56450) as the increase of running tangible assets;

17. January-March 201N+2. The calculation of the profit as the increase of running tangible assets at 3750 leis  $[(100000 \times 0.15) \div 12 \times 3]$ , the increase of other basic expenses to 7500 leis  $[(200000 \times 0.15) \div 12 \times 3]$  as the increase of other basic expenses, the increase of current liabilities-11250 leis  $[(300000 \times 0.15) \div 12 \times 3]$ ;

18. 201N+2 – 201N+3. Stating the costs of vine caring in the amount of 196123 leis (88273+107850) as the increase of running tangible assets, the decrease of current assets, the increase of current liabilities and of the depreciation of tangible and intangible assets;

19. 201N+2 – 201N+3. The recording of the obtained harvest during the period of vine growing and caring – 15750 leis  $[(28+35) \times 28.0] - [(28+35) \times 30]$  by increasing finished products and decreasing running assets;

20. December 201N+3. The vine transfer to the category of fruit bearing – 953210 leis (680312+7500+8400+72031+1750+34388+33482+3750+196123-15750) as the increase of fixed assets and the decrease of running tangible assets.

Let's examine further the accounting of the operations concerning the consumptions for gaps removal in fruitful vineyards. If we admit that the entry value of a vineyard lot with the area of 5 hectares is 600000 leis, the probable remained value is 0, the exploitation time-20 years, the amount of cumulative depreciation is 97500 leis, and the gaps constitute 25%, then the balance value at the moment of gaps removal is of 502500 leis (600000-97500), and its share for the disposal - 125625 leis (502500×0.25).

Thus we have the accounting recording: the partial disposal of the balance sheet value of the mature biological asset as the increase of exceptional expenses and the decrease of tangible assets to the amount of 125625 leis.

The depreciation of the lot with vineyard after the partial disposal of the balance sheet value of the object will be calculated from the balance sheet value partially disposed (502500) leis, that annually will constitute 22500 leis  $[(502500 - 125625) : 16.75]$ , and monthly it will be 1875 leis (22500:12) where

16.75 will be 16 years and 9 months transformed into years after disposal.

If in the fourth year of the fruitful vineyard lot exploitation (5 hectares) there have been carried out gaps removal works, the firm will calculate the depreciation 4 years more – the period of growing and caring of young plants at the same amount. In this period we suggest direct consumptions concerning young plants and all the consumptions concerning their plantation and growing to be accounted as the increase of running tangible assets and the decrease of the stocks, of the costs of auxiliary activities, of current liabilities, etc. The common consumptions will be distributed among young plants and they will constitute a component part of the entry value of the young plants when they pass to the category of fruitful vines that will constitute exploitation consumptions of these mature biological assets.

## CONCLUSIONS

While removing gaps in fruitful vineyards the following actions are necessary:

1. The compliance with the precautionary principle that requires partial disposal of the vine balance value;

2. The determination of the consumptions concerning young plants according to the described above method;

3. The identification of the cumulative consumptions concerning young plants plantation and growing reduced by the cost of the obtained harvest in the third and the fourth years;

4. The recalculation of the balance value of the long-term mature biological assets (fruitful plants) when finding gaps and when passing the young plants to the category of fruitful plants in order to calculate the depreciation.

## REFERENCES

[1] The Accounting Law: No.113 – XVI. – Chişinău, April, the 27th, 2007. In: The Official Gazette of the Republic of Moldova. 2007, No. 90 – 93, part I, art. 399.

[2] The National Accounting Standard 16 “The accounting for long-term tangible assets”. In: Accounting and Auditing. 1998, No. 1, p. 102 – 128.

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