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**UNIVERSITY OF WEST HUNGARY**  
Faculty of Agricultural and Food Sciences  
Mosonmagyaróvár  
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**H-9201 Mosonmagyaróvár, Vár 2.**



## Problems of milk quota management in accounting system their effect on property status of enterprises

ÁRPÁD KISS

University of West Hungary  
Faculty of Agricultural and Food Sciences  
Institute of Economics  
Mosonmagyaróvár

### SUMMARY

According to both international and Hungarian accounting standards milk quota shall be capitalised among the assets of the enterprises. It is necessary for the implementation of the activity; its value can be defined based on market processes and regulations of the authorities. Due to the possibility of trading quotas on the market it would be the only solution to avoid the recognition of requested and purchased quotas on different values in the accounting system. Considering the total amount of quotas a HUF 40 billion increase of assets could be reached by the enterprises in milk production, if quotas were recognized among the intangible assets. Based on the results of a questionnaire survey the majority of enterprises did not perform the valuation tasks, therefore the total asset value is lower than the realistic value by HUF 50 million (by 7.2% of the total asset value). The study introduces the possible methods of the calculation of historical cost and depreciation.

**Keywords:** milk quota regulation, evaluation of milk quota, accounting, amortisation.

### LITERATURE REVIEW

Intangible assets are immaterial assets that support the activity of an enterprise for more than one year. According to the Act on Accounting enterprises shall categorize them into five balance sheet entries (1. capitalised value of formation, promotion and restructuring expenses; 2. capitalised value of research-development; 3. rights; 4. intellectual property; 5. Goodwill). By animal keeping enterprises milk quotas represent intangible assets, which should be recognized as rights.

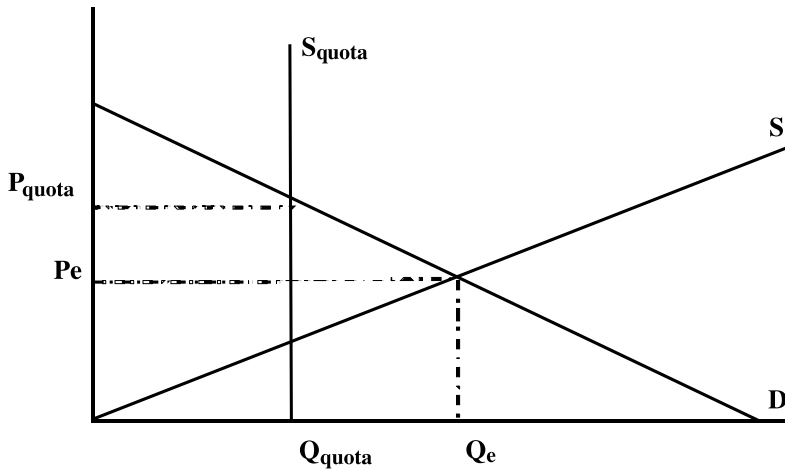
### Theory of quota regulation

Fertő (1999) classifies milk quotas as one of the quantitative regulators in the agro-economic regulation system. Its efficiency mechanism can be described by curves of demand (D) and supply (S) as follows (Figure 1.).

Figure 1. The efficiency mechanism of milk quotas

S: supply, D: demand, P: price, Q: quantum

Source: Fertő (1999)



Restriction of production makes resources (capital and workforce respectively) available for other sectors of the economy. Profits coming from resource savings are represented by the area under the curve of  $S = \text{supplies}$  (described by  $Q_{\text{quotas}}$ ). The decrease of consumption can be described by the area between  $Q_{\text{quota}}$  under the curve of  $D = \text{demand}$ . Among conclusions made by the author upon the analysis of the figure, herewith we need to emphasize the effect of the quota on the structure of production. Production quotas result in a less flexible production structure, which can follow the changes in market demands less flexibly, because the quota equally limits the production of both efficient and inefficient producers, hindering a more effective re-structuring of resources.

If the milk quota regulation enables the transfer of quotas:

- less effective producers may sell their quotas,
- forced termination of production will require lower government support (income compensation) and
- quota trading will be suitable for the redistribution of quotas based on the relative efficiency of producers (Fertő 1999) theoretically.

Actual efficiency of advantages highly depends on the actual way of administrative regulations, e.g. quota withdrawal automatism do not allow many producers to stop inefficient

production. If they did so they would expel themselves from the milk-producing sector for a long time. It is well known that economic participants do not make decisions only on the basis of profitability. This kind of risks can be reduced by the method of quota leasing. As a summary the production quota has the following effects on the most important processes and participants (*Table 1*).

*Table 1.* The effects of production quota on the most important processes and participants

<b>Economic process, participants</b>	<b>Effect of producing quota</b>
Production	unutilised capacities are building
Consumption	reduces due to price-rising effect
Producers surplus	can change depending on the extent of sanctions for surplus
Consumers surplus	reduces due to higher price level as a result of quotas
Value, efficiency of capital	reduces due to maximizing production
Value, efficiency of work	as an effect of milk quota cannot be clearly presented due to special characteristics of demand.

*Source:* Own research based on *Fertő* (1999)

### ***Situation of milk quota regulation in Hungary***

Ministry of Agriculture and Rural Development (FVM) Decree No. 69/2004 (*FVM* 2004) regulates the legal conditions of requesting milk quotas and changing animal population. Detailed rules are laid down in the milk quota regulations, which were elaborated and are being maintained by the Agricultural and Rural Development Office (MVH) (<http://net.jogtar.hu>). Herewith we need to emphasise two important criteria: Firstly, only milk producers can possess milk quota. Milk producers are all the legal and natural entities that produce milk or sell dairy products, or make preparations to do so. Secondly, only milk producers can sell milk or dairy products if they possess milk quotas. The quota determines the maximum value of tradable milk. .

The quantity of quotas can change due to the following causes:

- 1) Quota withdrawal
  - a) If the yearly performance remains under 70%. (70%-yearly performance)
  - b) If there is no (0%) yearly performance the total amount of quotas will be withdrawn. Such centralised quotas will be distributed upon request and free of charge. The practice of quota withdrawal means that milk producers, who want to or are forced to continue producing, need to go on with milk production up to 70% of their individual quotas, even if it is not profitable any more.
- 2) Final quota transfer
  - a) If individuals offer quotas for the benefit of state reserves
  - b) Requesting quotas from the national reserves through purchase
  - c) Requesting quotas from the national reserves without payment
  - d) Quota transfer between quota holders

- 3) Final Quota transfer (free of charge).
- 4) Rearranging sub-contractors' and direct marketing quotas.
- 5) Changing buyers within quotas.
- 6) Re-structuring, split and merger of economic enterprises and co-operations.
- 7) Individual milk producers join or withdraw from milk producing co-operations or economic enterprises.
- 8) Collection of quotas into one hand among members of the family farm or milk producers belonging to one family.
- 9) Inheritance

Quota trading can be carried out under strict administrative regulations.

1. Buyer shall possess a client-registration number.
2. Buyer shall be regarded as milk producer in the foregoing quota year, i.e. they need to register in the year before the quota transfer.
3. MVH has to approve the deal.
4. In sub-contractors quota transfer the buyer has to certify the quantity and fat content of milk supplied in the quota year.
5. The milk purchaser shall declare its intension to purchase the milk from the buyer at a quantity determined by the quota.

A detailed regulation is required because of the regulations of the European Union on one hand and because of the administrative nature of regulation on the other hand. Applying such a method the law-maker is needed to draw up a system of procedure or protocol that includes all the possible events.

## **MATERIALS AND METHODS**

The methodological nature of the analysis required on one hand the elaboration of legal rules regarding the group of assets for sake of finding the ways for evaluation and recognition in the balance sheet. On the other hand the actual practice of accountants was analysed upon a set of data collected by a questionnaire and through processing the AKI pilot plant data collection. Data collection by questionnaire provided valuable data from 10 collective farms in the West-Transdanubian region.

## **RESULTS: EVALUATION OF MILK QUOTA**

Determination of the value of milk quota reflects the complexity of requesting and circulating them. Being a asset element acquired free of charge quotas shall be handled as assets that were taken over without service in return and the relevant regulations shall be applied. According to 50. § (4) of the *Accounting Law* (2000) the known market value shall be considered for those assets. There are two sources of information available to determine it:

1. FVM determines the price level of the quantity of the quotas that can be requested in the form of offer or payment (market cost determined by handing over). The currently valid price is 20 HUF/kg (<http://www.mvh.gov.hu>).
2. The value that was established in transactions within the Agriculture and Economic Research Institute (AKI)-pilot plant system (market value).  
Producers could get more objective data to determine the market value if there were a larger and more active market. Information about the present market situation is available from the data-collection of AKI (Table 2.).

Table 2. Changes in Milk quota in 2005–2006

Designation	Amount of Quota (thousand kg)		Quota (HUF/kg)	
	2005	2006	2005	2006
Requested milk quota, year begin	1,448,818,198	1,175,200,534	20.13	20.17
Purchased milk quota, year end	235,398,068	310,720,849	16.25	15.76
Milk quota	16,448,098	54,749,096	15.40	18.34
Milk quota selling	24,703,029	17,847,477	29.21	19.62
Milk quota leasing	1,363,284	10,340,424	1.03	20.74
Milk quota bought	12,425,296	15,485,900	10.16	8.44
Milk quota stock end of year	1,687,023,347	1,527,968,477	19.35	19.09
Milt production per year	1,823,538,000	1,743,527,600		

Source: Own research based on data of KSH (Central Statistic Office) and AKI (Agricultural Economic Research Institute) ([http://portal.ksh.hu/pls/ksh/does/hun/sxtadat\\_eves/tabl4\\_25\\_16/a.html](http://portal.ksh.hu/pls/ksh/does/hun/sxtadat_eves/tabl4_25_16/a.html); [www.akii.hu](http://www.akii.hu))

The analysed set of data collected data of milk producers producing more than  $\frac{3}{4}$  of milk quotas. The rate and amount of milk-quota transfer were minor in the period of analysis. A higher value reached the milk quota purchase in 2006 (3.68%) compared to the number of cows at the beginning of the year, but this rate was also very low.

Complicated and strict regulations, that do not hide the intension to drive quota-transfer into administrative fields, do not contribute to market development not even at high efficiency, where the demands and supplies of quotas or their returns could objectively be estimated, which might be used in determining value-relationship.

The regulations are clear for buying quotas: historical cost of quota equals the value paid for it. In case of leasing quotas not the market cost shall be calculated but cost against the returns of the fiscal year.

Based on pilot plant data the prices of milk-quota transfer approach this value.

The quota-assets of enterprises involved into the analyses did not change remarkably (by 5% from 2004 till 2006). The quantity of quotas increased on average by 2.3% for the benefit of the buyers and quota leasing amounted 2.14% of the total quotas for the benefit of the leasing enterprises.

AKI pilot plant system uses a value similar to values listed by FVM for the evaluation of milk quotas possessed by subjective law. Differences from the final values of the years were caused by different prices of milk-quota transfer, and the low rate of trading.

60% of the enterprises did recognize the value of the owned milk quotas among the property elements. 40% of them recognized this right at the value of 23.50 HUF/kg. If other enterprises had performed this capitalisation task, the total property value of the enterprises would have increased by 4.35–10.12% in 2006.

Milk quota is a long-term asset, if its value is reduced because of usage, it should be expensed as scheduled amortization over several years. In the system of amortisation historical cost (or registered value), the useful lifetime and the residual value should be considered. Residual value has a key role, as at the time of usage it is the expected value of the assets at the end of their useful lifetime. During the useful lifetime the value of the assets will only reduce if they are used up physically, get obsolete, or the time of the rightful usage reduces. Milk quotas, as intangible assets, are not used physically therefore there is no fear of becoming obsolete and there is no objective time limit of their usage. The residual values will probably not be lower than the price at the time of starting usage similar to land, securities and works of fine art. Therefore it is not justifiable to expense scheduled amortization either for quotas bought with or without charge. In spite of that there is an amortisation indicated in the data provided by pilot plants (*Table 3*).

*Table 3.* Amortization of milk quota based on data of pilot plant

<b>Designation</b>	<b>Unit</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Total historical cost	t.HUF	4,959,482	4,981,008	6,397,124
Deprecation in fiscal year	t.HUF	253,044	177,625	160,363
Deprecation in fiscal year	%	5.10	3.57	2.51
Purchased mlk quota in fiscal year	t.HUF	1,414,564	253,321	1,003,967
Purchased mlk quota at fiscal year begin	t.HUF	3,335,223	3,825,009	4,897,975
Purchased mlk quota at fiscal year end	t.HUF	4,496,750	3,894,151	5,689,819
Deprecation of purchased milk quota	t.HUF	239,122	177,625	160,358
Deprecation of purchased milk quota against				
Value bought in fiscal year	%	16.90	70.12	15.97
Value bought in fiscal year begin	%	7.17	4.64	3.27
Total value bought fiscal year end	%	5.32	4.56	2.82

*Source:* Own research based on pilot plant data

The guide explaining how to fill in the form contains the following regulations under the topic of amortisation:

1. The basis of accounting is the difference between the historical cost and residual value to be expected at the end of the useful lifetime.
2. There is no possibility to apply block depreciation for milk quotas.
3. The method of amortisation is time proportional, a continuous straight-line amortization.

These rules comply with the regulations of the Accounting Act. As a result the data of the table are uneasy to understand. The yearly differing amortisation key could be explained by the unknown residual value, but besides the value increase of historical costs being



the basis of accounting and the increase of asset values at the beginning and at the end of the year, the continuous reduction of the value and the rate of value reduction cannot be explained. As a result information on intangible assets and the sum of amortisation cannot be reliable and valid in the data processing of pilot plants. One is sure: amortisation is calculated upon purchased milk quotas. Based on the forgoing statements I do not think that this could have a real economic or legal background.

Among the enterprises involved in the testing we could only analyse those that recognized the value of milk quotas in their financial report. 50% of the enterprises expensed amortisation the other 50% not.

The depreciation has a special influence on the profit of the enterprise if an asset has not been purchased but has been acquired free of charge Both the international and the Hungarian regulations accept the revenue-approach against the capital approach. The values of the milk quotas requested free of charge and recognized among intangible assets shall be indicated as extraordinary and later on as deferred revenues and as a growth in property. Elimination of deferred revenues will be carried out in proportion to the settlements of expenses reflecting the usage of assets or if there is no economic reason, they shall be eliminated as extraordinary revenues when the period of their possession is over.

Using the first method the amortization in the fiscal year will be expensed among the expenses of activity, however extraordinary revenues do not modify the net profit before taxation of the enterprise. Enterprises expensing amortisation use this kind of method.

We can find some information about the change in the value of milk quotas only in the supplementary notes of the annual report. The Accounting Act requires, that the most important items of the deferred revenues shall be detailed and the net value of milk quotas acquired free of charge belong to them as well. The Acc. Act exempts those enterprises from such disclosure, which prepare simplified annual report. Enterprises involved into testing have prepared annual report and published the information required by law.

### CONCLUSIONS, SUGGESTIONS

Both the international and Hungarian regulation of accounting states, that enterprises shall capitalise milk quotas among the assets of the enterprise. It is necessary to carry out the required activities, their values can be determined on the basis of market processes and the regulations of the issuer, further on they can be put on the market, and this way it can be avoided that quotas (requested without charge or purchased ones) are handled differently. Considering the total amount of milk quotas in Hungary it would mean a property value of about HUF 40 billion for milk producing enterprises. Most of the tested enterprises did not perform this evaluation task. As a result their property value is lower than the realistic value by HUF 50 million (by 7.2% of the total assets value). In order to eliminate mistakes like that professional organisations of accountancy should investigate the practice applied in similar critical fields and considering the results they should complete the thematic of training professionals providing accounting service.

In connection with the amortisation of milk quotas the Hungarian regulations of accounting should accept the revenue approach in accordance with IAS 20, 38 (International Accounting Standards). In absence of this Hungarian enterprises apply different approaches and as a result their statements cannot demonstrate a reliable and valid situation.

As a summary we should conclude that neither economic nor legal aspects indicate any amortization for milk quotas. Those assets do not have any functions except for ensuring the right of trading during the period of possession. They do not transfer any value into the product (milk) they cannot become obsolete and no other factors can cause amortization to them during the time of possession.

## **A tejkvóta számviteli kezelésének problémái és ezek hatása a vállalkozások vagyoni helyzetére**

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### **ÖSSZEFOGLALÁS**

A nemzetközi és a magyar számviteli szabályok szerint is kötelező lenne a tejkvóta aktiválása a vállalkozások eszközei között. Szükséges az adott tevékenység végzéséhez, értéke a piaci folyamatok, illetve a kezelését végző szervek szabályozása alapján megállapítható, illetve a piaci forgalmazás lehetősége miatt csak így kerülhető el, hogy az igényelt és a vásárolt tejkvótákat különböző értéken tartsa nyilván a vállalkozás. Az összes tejkvótát figyelembe véve közel 40 milliárd forint vagyonerék-növekedést jelenthetne a tejtermeléssel foglalkozó vállalkozások számára, ha a birtokolt kvótát a vállalkozások felvennék az immateriális javak közé. Egy kérdőíves felmérés alapján a vállalkozások nagyobb része nem végezte el az értékelési feladatokat, így összevont vagyonerékük 50 millió forinttal (az összesített vagyon 7,2%-a) alacsonyabb a reálisnál. Dolgozatomban a bekerülési érték meghatározás, az értékcsökkenés elszámolás lehetséges megoldásait vázoltam fel.

**Kulcsszavak:** tejkvóta szabályozás, tejkvóta értékelés, számvitel, értékcsökkenés.

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*Address of the author – A szerző címe:*

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Nyugat-magyarországi Egyetem  
Mezőgazdaság- és Élelmiszertudományi Kar  
Vállalatgazdasági és Szervezéstudományi Intézet  
Számviteli és Pénzgazdálkodási Tanszék  
H-9201 Mosonmagyaróvár, Vár 2.  
E-mail: [kissa@nyme.mtk.hu](mailto:kissa@nyme.mtk.hu)

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Megjelent  
**a Competitor-21 Kiadó Kft.**  
9027 Győr, Külső Árpád út 35.  
gondozásában  
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Andorka Zsolt