

RECOGNITION OF DAIRY CATTLE AS BIOLOGICAL ASSET IN THE ANNUAL REPORTS OF ESTONIAN DAIRY FARMERS

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Abstract. Annual reports are supposed to offer users of information relevant and true information about the assets of a reporting entity, biological assets included. Various methods can be employed to recognise biological assets in reports; however, the information supplied should be understandable for the users of report while also being compliance to minimum disclosure requirements. The article studies recognition of dairy cattle as a biological asset in the annual reports of Estonian dairy farmers. The aim of the article is to study the relevance of established hypotheses and explain whether recognition of dairy cattle in the annual reports of Estonian dairy farmers complies with the accounting practice of accounting entities and whether audit requirements, owners and structure of annual reports, applicable in Estonia, will have any effect on recognition of dairy cattle for reporting purposes. By general rule, annual reports observe the chosen accounting practice requirements for the purposes of recognition of dairy cattle. The study also confirmed the hypothesis that audited reports offer users of information a better overview of dairy cattle accounting principles and the pre-requisites that affect fair value but also more detailed information about the changes and adjustment of value of group of biological assets over the reporting period. Establishment of a standard structure for annual reports has ensured uniform format of such reports; however, the contents of such reports is not uniform, which makes comparison difficult.

Key words: biological assets, biological assets disclosure, dairy cattle, annual report.

JEL code: M41

Introduction

In Estonia, accounting entities will be required to recognise biological assets, dairy cattle included, according to internationally recognised financial reporting standards or good accounting practice of Estonia, for the purposes of accounting and reporting, and for that purposes, small and medium sized companies will be required to observe a specific set of standards (International Financial Reporting Standard for Small and Medium-sized Entities, hereinafter the SME IFRS). After having used the information from annual reports of Estonian agricultural companies, the authors observed that methods employed to disclose biological assets were highly different. The same fact has been identified by various authors (Concalves and Lopes, 2014a, 2014b). Transition to assessment of biological assets at their fair value has resulted in both positive and negative circumstances that influence reporting information (Hinke and Starova, 2014). The influence of audit, above all, the size of audit companies, has been investigated by several authors who have disclosed positive information on the quality of

reporting information; however, this was not revealed in a study by Concalves and Lopes (2014a, 2014b). Important users of financial year information are owners of companies and thus, it was considered important to study whether there are relations between owners and disclosure of information in annual reports. Since 2010, annual report structure, including standard templates, incl. a note on standard biological assets, is applicable in Estonia, allowing for the submission of standard uniform reports (Visberg and Parts, 2010).

The following hypotheses were established for the study:

- Estonian dairy farmers comply with selected annual reporting practice requirements for the purposes of recognition of dairy cattle as a biological assets in standard statements of annual reports and notes thereto;
- annual reports to be audited will give users of information a more detailed overview of accounting principles, used in companies for the purposes of dairy cattle recognition, and changes in composition of assets during the reporting period;

- comprehensibility of accounting principles, used to disclose biological assets in annual reports, will depend on owners of companies;
- based on the structure of annual reports, applicable in Estonia, annual reports will provide users of information true and fair view of the principles that are used to assess dairy cattle as biological assets and changes in composition of assets during the reporting period;
- establishment of standard structure for annual reports provided for the submission of uniform and comparable information in annual reports and notes thereto.

Annual reports for the last completed financial year, 2014, of Estonian companies having milk quota, were included in the study. As sole proprietors, involved in milk production, are not required to submit reports to public registers, it was not possible to use their information for the purposes of the study.

The following methods were used in the study: observation, empirical observation, personal observations, descriptive statistics and correlation analysis.

Research results and discussion

1. Recognition of biological assets for the purposes of annual reports

At the end of each financial year, an accounting entity is required to prepare an annual report which consists of the annual accounts and the management report (Article 14, subsection (1) of the Accounting Act (AA)). The purpose of the annual accounts is to give a true and fair view of the financial position, economic performance and cash flows of the accounting entity, which can be used for the purposes of adoption of economic decisions (Article 15, subsection (1) of the AA). Information, submitted in annual accounting reports, must comply with either national accounting practice, chosen by accounting entity, or international financial reporting standards (Palea, 2013). Dairy farmers,

who have issued securities that have been admitted by regulated stock markets of Estonian or a contract country of the European Economic Area for trading, must comply with the provisions of international financial reporting standards (IFRS/IAS) for the purposes of compilation of annual accounting reports. By general rule, international accounting practice is intended to be observed by small and medium sized enterprises that do not take part in stock markets (Palea, 2013). The Accounting Act of the Republic of Estonia does provide that the Estonian good accounting practice consist of guidelines of the Estonian Accounting Standards Board that should be observed by accounting entities. However, Estonia has been in legislative vacuum for years as the aforementioned guidelines are not legal acts, intended for compulsory implementation, and these could be ignored.

International Accounting Standard IAS 41 *Agriculture* defines biological asset as a living animal or plant (IAS 41, Clause 5). An entity shall recognize a biological asset or agricultural produce when, and only when (1) the entity controls the asset as a result of past events (2) it is probable that future economic benefits associated with the asset will flow to the entity; and (3) the fair value or cost of the asset can be measured reliably (IAS 41, Clause 10). The same definitions have been established with the Estonian Good Accounting Practice and guidelines of the Estonian Accounting Standards Board ASBG 7 *Biological Assets* (ASBG 7, Clause 6 and Clause 12).

Accounting principles must be assigned in an enterprise for every class of biological assets; for the purposes of assignment of accounting principle one must consider that biological assets, subject to reliable assessment by means of reasonable cost and effort must be recognised at their fair value minus estimated sales expenses upon both initial recognition and on balance sheet dates to follow (ASBG 7, Clause 13). Fair value represents the amount that will allow sell

or buy the asset in a transaction between knowledgeable, interested and independent parties (Hinke and Starova, 2014). In the case of absence of active market, the assessment of fair value may rely upon (a) the most recent market price, on the assumption that transaction was concluded between independent parties and there have been no considerable changes in economic environment between the date of transaction and balance sheet date; (b) market price of analogical or sufficiently similar assets, which has been adjusted by the influence of existing differences; and (c) value derived on the basis of comparative analysis, carried out in agricultural sector (Hinke and Starova, 2014).

Fair value of biological assets can be reliably measured by employing the method of discounted cash flows; for the purposes of implementation of this method the cash flows, resulting from the use of assets in an enterprise will be discounted at market interest rate (Sedlacek, 2010). There are certain doubts, concerning the different models for the calculation of fair value, which may result in distorted calculation results (Palea, 2013).

Biological assets will be recognised on balance sheet at acquisition value (purchase price), minus accumulated depreciation and possible discounts, resulting from decline in value of assets if the assessment of fair value is not possible by employing reasonable costs and efforts (Sedlacek, 2010). Acquisition value can be also treated as fair value of biological assets in the following situations: (a) assets have not undergone considerable biological transformation after acquisition; and (b) effect of biological transformation on cost of the value is negligible (ASBG 7 Clause 23).

Biological assets must be recognised in Estonian annual accounting reports by basic groups, which allow for classification as consumables or assets kept for sales and bearer assets (ASBG 7, Clause 35). Bearer assets

include dairy cattle that will be recognised on balance sheet as a group of tangible assets.

Description of material accounting principles will be disclosed in annual accounting reports (ASBG 15, Clause 12).

Accounting entities that recognise biological assets with fair value method must disclose the following in annual reports (ASBG 15, Clause 41):

- description of sets of biological assets;
- analysis of change of balance of biological assets over the reporting period;
- methods applied to identify fair value and assumptions that played material role in identification of fair value;
- profits and losses resulting from initial recognition of agricultural produce, generated during the year under reporting, and adjustment of fair value, as consolidated amounts.

Accounting entities that recognise biological assets with acquisition value method will disclose the following in annual reports (ASBG 15 Clause 43):

- description of assets, recognised at acquisition value, and explanation of reasons for neglecting fair value method as a reliable evaluation tool;
- depreciation methods and rates applicable;
- analysis of change of balance of biological assets over the reporting period.

The auditing requirements are laid down by the Auditors Activities Act (Article 91, 92) and the Commercial Code (Articles 190 and 328). The purpose of audit is to enhance the reliability and credibility of financial statements for the intended users (Handbook ..., 2015). Gearemynck and Willekens (2003) concluded that the auditors' report adds value to financial reporting information by providing reasonable assurance about the degree to which the annual report represents economic phenomena faithfully.

Standard format for annual reports, applicable since January 2010, established common rules and requirements for all the accounting entities to be observed for the purposes of complication of basic annual reports and notes thereto; thus, information made available for users of annual accounts is uniform and allow for easy comparison (Visberg A-E., Parts, V. 2010). The requirement for three mandatory notes (accounting principles, payroll expenditures and related parties) as a part of standard structure will contribute to submission of non-uniform information to users of information. Disclosure of all the other records and components of standard structures (incl. biological assets, current and fixed assets) as notes to annual accounts is voluntary.

2. Recognition of dairy cattle as biological asset in annual accounts of Estonian dairy farmers

Estonian companies that were in possession of milk quota at the end of September 2014 represented the general sample/population of the study, 229 enterprises matched the definition. A random sample was established for the study and annual reports for 2014 of every third company were included in the study. Two of the selected companies had failed to submit their annual reports to the Commercial Register. One company reported income from sales of milk; however, bearer biological assets were not shown on the balance sheet; notes to the annual accounts lacked any information about the accounting principles, applicable to dairy cattle. As the consequence, the final sample included 72 companies. The permissible error at 95% confidence level was 9.58%. All the accounting

entities, included in the sample, used Estonian good accounting practice. None of the auditors of the companies were included in BIG 4. Four group reports were included in the sample.

Sales revenues of the companies, included in the sample, ranged from EUR 63,042 through EUR 7,763,529; five companies received sales revenues from outside Estonia. The value of bearer biological fixed assets, incl. dairy cattle, on balance sheet varied from EUR 33,473 (33.5% of the value of total assets) to EUR 4,412,552 (20.7% of the value of total assets).

Table 1 shows the evaluation criteria for the accounting principles, their respective bases and evaluations. Nine operators (12.5% of the sample) had failed to describe the accounting principles, applicable to biological assets, incl. dairy cattle, in compulsory note. The table demonstrates the chosen accounting principles, yet without specifications. Readers of reports will have trouble in understanding highly laconic information. Most reports do include a statement that "dairy cattle will be recognised at fair value"; however, in 43.7% of the cases the pre-requisites, which affect the determination of fair value, have not been shown. The reports did not show what is understood as market price/value. Enterprises most frequently err against the requirement to open the description of each set of biological assets. More than half (55.6%) of operators had not provided this type of information; reports of only 17 operators provided such reporting information in a format, understandable for consumers. One company in the sample used acquisition value to recognise dairy cattle, yet failed to depreciate the value of dairy cattle.

Table 1

Distribution of evaluation criteria of accounting principles and evaluations on the basis of annual accounts of the Estonian dairy farmers for 2014

Bases for the criterion	Evaluation criterion, evaluation	Number	Percentage of respondents
ASBG 15 clause 12	Description of general accounting principles for biological assets, shown in notes to accounting principles (N=72)		
	Not available	9	12.5
	Available	63	87.5
ASBG 7 clause 13	Accounting principle for biological asset in structural table (N=72)		
	Not available	6	8.3
	Fair value	42	58.3
	Acquisition value	1	1.4
	Not clear whether fair value or acquisition value	23	32.0
ASBG 15 clause 41(c)	Assumptions that affected the determination of fair value (N=71)		
	Not available	31	43.7
	Market value	8	11.3
	Market value minus sales costs	26	36.6
	Based on transaction involving similar objects/assets	1	1.4
	Evaluation/decision of management board	5	7.0
ASBG 15 clause 41(a)	Description of each set of biological assets (N=72)		
	Not available	40	55.6
	Available, but unclear	15	20.8
	Exhaustive overview	17	23.6
ASBG 15 clause 41(b)	Analysis of changes in balance of biological assets, a structural table in note		
	Structural table unavailable	9	12.5
	Structural table meets the requirements	36	50.0
	Structural table does not meet the requirements	27	37.5

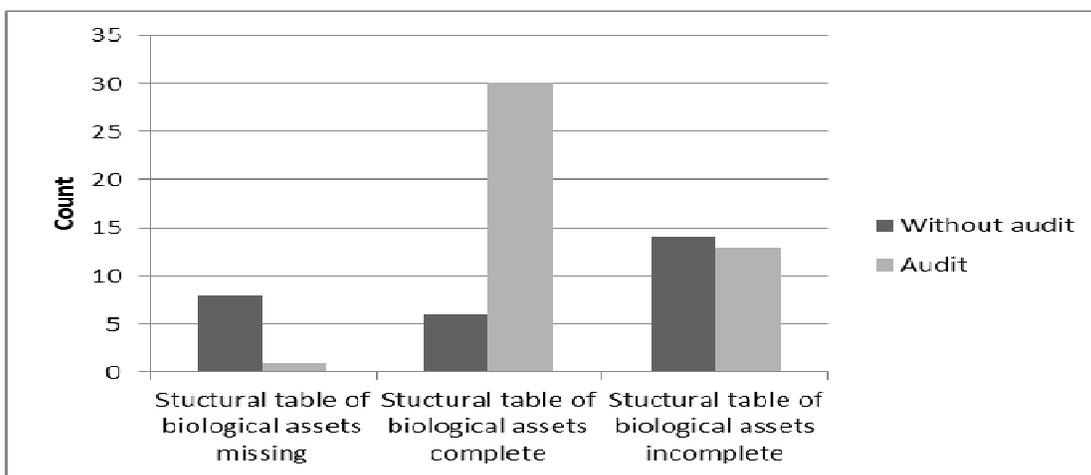
Source: authors' calculations based on the sample of annual reports of companies

Correlation analysis was used to identify weak links of statistical importance between disclosure of accounting principles and presentation of biological assets method in standard table at 1% level of significance ($r=0.289$; $p=0.14$) and between disclosure of accounting principles and pre-requisites that affect the identification of fair value at 5% level of significance ($r=0.360$; $p=0.002$).

The established standard format for annual reports requires submission of uniform information. The presentation of structural table

of biological assets did not meet the requirements among 37.5% and was not reflected at all among 12.5% of the sample. Such a situation is due to a fact that structure of biological assets is not a mandatory element.

Figure 1 depicts links between biological assets note's standard structure and audit. It is clearly understandable that standard structure met the requirements in 68.2% of audited reports (in total, 44 annual reports were audited). The same result for un-audited annual reports was merely 21.4%.



Source: authors' construction based on the sample of annual reports of companies

Fig. 1. Audit control and presentation of changes in structural table of biological assets (N=72)

Correlation analysis identified the following links of statistical importance for the purposes of audit:

- average positive link to recognition of biological assets by means of a standard structure ($r=0.490$; $p<0.000$, at 5% level of significance);
- weak positive link to recognition of biological assets by means of a standard structure ($r=0.302$; $p<0.10$, at 1% level of significance);
- weak positive link to pre-requisites that affected the identification of fair value ($r=0.289$; $p<0.14$, at 1% level of significance).

The study did not demonstrate considerable statistical links between owners and biological assets for the purposes of conforming information, disclosed in annual reports.

The opinion that establishment of a standard structure for annual reports will contribute to more uniform and easily comparable information, included in annual reports, was partly confirmed. The reports overall do have a uniform structure. Biological assets were recognised in balance sheet, with one exception. Certain conflicts were identified among the standard notes. For example, information on sales revenues from sales of dairy cows was disclosed, yet the

analysis did not include adjusted fair value, resulting from the sales of animals. In many cases, analysis of change of balance of biological assets only included one line, either "Miscellaneous adjustments" or "Profit/loss resulting from adjustment of fair value". According to the authors, lack of substance in reports may occasionally result from non-mandatory nature of guidelines of the Estonian Accounting Standards Board. Most reports only included the following description: "Biological asset is a living plant or animal. Biological assets with a fair value that can be reliably assessed at reasonable costs and efforts will be recognised, upon both initial recognition and on balance sheet dates to follow, at their respective fair value, minus estimated sales costs. Biological assets which fair value does not have reliable estimation will be disclosed by employing acquisition value method."

Examples from reports:

- 1) "Explanations concerning adjusted value of biological assets are available from the appropriate notes to annual accounting reports". Explanations are not given.
- 2) "Biological assets have been recognised at fair value, which was determined on the basis of market value minus sales costs". Followed by explanation that the fair value of biological

assets has been established by the management board at fixed prices; in another case – fair value will be established by the management board.

3) "Fair value and acquisition value of assets will be used to recognise biological assets. Value has been established at the end of the year on the basis of market value."

4) "Biological assets have been recognised at fair value, which is based on real value of appraised assets."

Conclusions

- Requirements of chosen accounting practice are observed for the purposes of recognition of dairy cattle; however, there are some deficiencies. Lack of substance in reports may occasionally result from non-mandatory nature of guidelines of the Estonian Accounting Standards Board. Reports are often quite laconic in wording and usually repeat the wording of the guidelines of the Board. Most often, description of each set of biological assets is missing. Positive relations between presentation of accounting principles

of biological assets and pre-requisites that affect the determination of fair value are statistically weak.

- The hypothesis that audited annual reports will provide users of information with a better overview of principles for accounting for dairy cattle and pre-requisites that affect fair value, was statistically proven; the same goes for more detailed information on adjustment of value of group of biological assets during the reporting period.
- The study showed that the comprehensibility of accounting principles, used to disclose biological assets in annual reports, didn't depend on owners of company.
- Statistically weak positive correlation exists between the presentation of accounting principles and standard structure i.e. structural table of biological assets.
- Establishment of a uniform standard format for annual reports has contributed to uniform format of such reports; however, the substance remains non-uniform and is difficult to compare.

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