ABSTRACT. The performance management is a strategic and integrated approach for long-time success of the activity of agricultural companies, by improving the performance of the organization, teams and individuals. In search of success, the performance management uses a variety of models, techniques and methods, some taken from other systems and improved and others of its own, focusing on strategy and differentiating features that provide a strong competitive advantage. The Balanced Scorecard (BSC) model identifies several dimensions of the organization, representing areas where organizations need to achieve results at department, team or individual level. According to the type of the agricultural company, there can be essential financial aspect, customers, internal processes, knowledge and learning, service quality, market share etc. The company under study, S.C. Agrocomplex Lunca Pașcani S.A., is representative in terms of ownership, farm and profile of the agricultural production in Moldavia region. According to the methodology developed, starting from the strategy of S.C. Agrocomplex Lunca Pașcani S.A. we identified the strategic objectives for each situation and the level of reaching the objectives using several indicators. In the second stage of the BSC analysis, the indicators are defined according to the management priorities of S.C. Agrocomplex Lunca Pașcani S.A. in four categories, corresponding to the four dimensions of the classical model: customer perspective, perspective of processes within the company, employee perspective and financial perspective.

Key words: Agricultural company; Performance management; Balanced Scorecard (BSC) model.

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REZUMAT. Estimarea performanței în afaceri a societăților agricole utilizând modelul Balanced Scorecard.
Managementul performanței reprezintă o abordare strategică și integrată a asigurării succesului de durată în activitatea societăților agricole, prin îmbunătățirea performanței organizației, echipelor și indivizilor. În căutarea succesului, managementul performanței utilizează o diversitate de modele, tehnici și metode, unele preluate de la alte sisteme și perfecționate și altele proprie, cu accent pe strategie și pe elemente de diferențiere puternice care să ofere un avantaj față de concurență. Modelul Balanced Scorecard (BSC) identifică mai multe dimensiuni ale organizației, reprezentând zone în care organizațiile trebuie să obțină rezultate la nivelul departamentelor, echipelor sau indivizilor. În funcție de tipul societății agricole, dimensiunile esențiale pot fi: aspectul financiar, clienții, procesele interne, cunoștințele și învățarea, calitatea serviciului, cota de piață etc. Asociația luată în studiu, S.C. Agrocomplex Lunca Pașcani S.A., este reprezentativă în ceea ce privește forma de proprietate, de exploatare și de profil a producției agricole în zona Moldovei. Conform metodologiei elaborate, pornind de la strategia S.C. Agrocomplex Lunca Pașcani S.A., sunt identificate obiective strategice pentru fiecare situație în parte, iar gradul atingerii obiectivelor este măsurat cu ajutorul unor indicatori aleși. În a doua etapă a analizei Balanced Scorecard, indicatorii sunt delimitați în funcție de prioritățile conducerei S.C. Agrocomplex Lunca Pașcani S.A. în patru categorii, corespunzătoare celor patru dimensiuni ale modelului clasic: perspectiva clienților, perspectiva proceselor din întreprindere, perspectiva angajatului și perspectiva financiară.

Cuvinte cheie: societăți agricole; managementul performanței, modelul Balanced Scorecard (BSC).

Short overview on the performance management in agricultural companies
The performance management is a new concept in the domain of management of agricultural companies, even if most of its major elements have been present, known and practiced for a long time (Denton, 2005). Modern agricultural society has as a characteristic the emphasis of the role of manager in the management process. Some economists consider management the fourth factor of production, after land, labour and capital. The new management oriented the farmers towards the use of inputs based on economic criteria, encouraging them not to exceed the consumption of inputs which do not ensure maximum profits.

High performance can not be only the product of intuition, due to the more complex character of the agricultural activity, but more to their qualification and verification in time. The economic efficiency resulting from the activity of the individual manager or management team is the criterion of value which is at the basis of its certificate in top jobs. Performance management should be understood as an ongoing process, reflecting the normal management practices, not "special techniques" imposed on the managers of agricultural companies. The performance management is a strategic and integrated approach for ensuring long-lasting success in the activity of agricultural companies, by
improving the performance of organization, teams and individuals (Berrocal and Perez-Diaz, 2011).

The strategic character arising from concern for broader issues the organization has to deal with in order to operate efficiently and effectively in the external environment and also taking into account the general direction it wants to take in order to meet the medium and long term objectives. Moreover, the establishment of any program of strategic management has as starting point the mission, vision, objectives and strategies of the organization, defined in the strategic planning phases. From them there are further developed the processes of performance evaluation and measurement.

In search of success, the performance management uses a variety of models, techniques and methods, some taken from other systems and improved and others of their own focusing on strategy and strong differentiating features that offer an advantage in comparison with the competition (Kaplan, 2005). A major concern of managers and specialists of the agricultural companies was to obtain clarity at the organizational level and alignment to a strategic direction, in order to see their business visions put to practice. This can be achieved by using a business excellence model called the Balanced Scorecard (BSC). This model was introduced in the science of modern management (Kaplan and Norton, 1996) as “a concept created for measuring the activities of an organization according to its vision and strategies”.

Some authors prefer to use both variants at the same time: “formal technique of management and formal system of management” (Hasan and Tibbits, 2000), increasing the already existing confusion. Other researchers consider BSC to be a management philosophy as well as a performance management system (Hanson and Towle, 2000). Although it is quite common for the management terms to have different definitions, the literature on the BSC goes one step forward. The concept is not only defined differently, but it is presented and perceived in different ways.

Translated into Romanian as the BSC, this concept offers the managers a comprehensive image of performance of a business. According to Denton (2005), De Wall (2003) and Bourne (2008) the BSC was introduced in early 1990 as a new management concept, being immediately adopted both in academia and in business. The value of this new concept has been recognized since then by awards such as that for the best theoretical model from American Accounting Association (Norreklit, 2003), while Harvard Business Review considered the concept of BSC as one of the most influential ideas for performance analysis in business of a company. De Wall (2003) appreciated the concept of BSC as the most successful in the domain of performance management.
The BSC model identifies several dimensions of the organization, representing the areas where organizations need to achieve results, at department, team or individual level. Depending on the type of the agricultural society, essential can be the following: financial aspect, customers, internal processes, knowledge and learning, service quality, market share etc. Kaplan and Norton (1996) stop at four essential dimensions, giving four perspectives from which the business organization must be examined. This directly implies the obligation of managers to find answers to some key-questions:
- The financial aspect: its financial health. How do shareholders see the company? What does the company represent for shareholders?
- Customers: (external) customer satisfaction. How do customers see the company? What does it mean to our customers?
- Internal processes: process control. How can we control the primary business processes to create value for customers? What processes must we excel in to satisfy the customers continuously?
- Knowledge and learning: skills and attitudes of the employees and the organization's ability to learn. How can the company remain successful in the future? How must we learn and communicate in order to improve ourselves and thus achieve our vision?

As tool the BSC is considered, a comprehensive management tool (Ahn, 2001), a strategic management tool (Hueng, 2000) or a strategic management mechanism (Pforsich, 2005). Some authors admitted from the very beginning that the BSC is more than just a simple technique of performance measurement and labelled the concept as a management system (Butler et al., 1997).

Strategic management of farms
Through its nature and peculiarities any farm, regardless of its size, unfolds its activity in an environment whose complexity is specific only to agriculture. The productive character of the farm production makes it interrelate economically, technologically, socially, legally etc. with different companies.

In this context, the farm represents an open system that interacts with the external environment directly and generally. The direct environment includes customers, suppliers, competitors and government agencies, professional organizations etc. The general environment circumscribes macroeconomic environment, technological environment, social, political and international environment. Also, the environment has an impact on the farm through the influence of numerous factors: natural (including biological), technological, economic etc., in a favouring or disfavouring way for the agricultural production. All these elements with greater or lesser risk, call for a strategy to ensure balance, sustainability and a certain level of
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economic performance in the long run.

The strategy involves its all major long-term objectives, the main ways of achieving the necessary resources and the steps to achieve them (Gruia, 2011). The content of the main components of the definition of strategy refers to:

a) **The major objectives of the farm** represent some economic, technological, organizational or social long-term goals. The period of these objectives is usually of 3 to 5 years, and for a number of branches, such as viticulture, fruit trees, some branches of animal husbandry, the deadlines may be much higher. An important strategic objective is, for example, streamlining production.

b) **The means to achieve strategic objectives** have in view the methods and tools used. These will be chosen according to the economic status of an enterprise (farm), and the favourable or unfavourable effect of the factors of production, managerial competence etc.

c) **The necessary resources** refer both to their nature (financial, material, human) and the size and opportunities of insurance (own or borrowed). Generally, the limited character of these resources, in agriculture, requires careful and correct evaluation, given the inflation rate, interest on loans etc.

d) **Deadlines for achieving the objectives** have in view: the date of starting the strategy implementation; intermediate deadlines that mark significant progress in outlining the strategic objectives, final deadline for implementation of the strategy.

The strategies are developed and pursued at all levels of farm management. The aim of the strategy is to determine how the results will be achieved, the targets set by taking into account the internal and external factors. The strategy has a strong entrepreneurial character, i.e. managers always have to choose between different ways of carrying out the activities, to maintain an active and competitive atmosphere if a change appears in relations with the external environment (Burja and Burja, 2010).

In agriculture, some of the most important strategic options that are available for managers are: profiling; specialization, farm size, cooperation, diversification of agricultural production, computerization of agricultural activities; integration. Although for most farms (companies, in particular), the newest trend is the specialization of production, connected to the latest and most complex developments of the market economy; quite often there appear, some opportunities for the diversification of production. The diversification of the agricultural production is to expand the range of products produced, as a main way of superior valorisation of natural, economic, technological and human resources available, at a time, in an agricultural farm (Brezuleanu, 2009).

The diversification of the production can be effective, especially in large farms, with a considerable
economic and human potential manifested in a number of branches of production, which meet the most favorable marketing conditions. The diversification of the production, as a strategic policy is a main way of achieving the objective of creating more products, determined by the social division of labour. Through the diversification of the agricultural production it is ensured the highest level of the economic, technical and human potential in farms, where this potential is already very strong.

As a strategic option, the computerization of the farms involves the design of the changes necessary in their activities in order to enable a significant increase in operation and effectiveness, based on widespread use of electronic computing equipment. The high costs involved are offset by the greater advantages: increasing computerization level and the rate of decision reaction and action of staff, with direct effects in terms of economic results.

Highly complex economic process, the farm integration consists in gathering under one organizational authority the whole chain of the organisation that carries out an agricultural product. The integration process is initiated and conducted, usually by a trader who is called integrating pole and the structures of production or service that take part in the integration are called integrated structures.

Case study: Balanced Scorecard (BSC) model in a Romanian agricultural company

The farm under study S.C. Agrocomplex Lunca Paşcani S.A is representative in terms of ownership, farm and agricultural production profile in Moldavia region.

S.C. Agrocomplex Lunca Paşcani S.A is headquartered in Paşcani town, Iaşi County, Romania, and has as activity the vegetal agricultural production, namely cereal and industrial crops cultivation, selling agricultural products production, delivery service in agriculture and livestock production. Currently the company uses 3246 hectares, land for which there are long-term lease contracts and concessions, of which 3061 ha is arable land and the remaining 185 ha is cultivated pasture. The company also deals with dairy cattle whose effective range at around 545 heads and sheep milk with about 779 heads. In the service sector, the company has a modernized bakery according to the EU norms which was opened on 15.04.2005, and which produces 13,000 loaves of bread daily.

According to the methodology developed (Brezuleanu et al., 2011), based on the strategy of S.C. Agrocomplex Lunca Paşcani S.A we identified the strategic objectives for each situation and the level of reaching the objectives using several indicators. In order to ensure the accuracy of the information on the achievements of the vital domains of activity of S.C. Agrocomplex Lunca
Pașcani S.A there are defined both the monetary indicators and non-monetary ones, for example relating to customer satisfaction, functionality of internal processes or innovations. From this perspective, the BSC is a management approach, with the help of which S.C. Agrocomplex Lunca Pașcani S.A. can be run, after defining and monitoring some strategic, flexible and efficacy indicators. The objective of BSC is to provide a picture of the development of the company and of the main areas of responsibility to the leadership of S.C. Agrocomplex Lunca Pașcani S.A and to the employees. The determined indicators are not just one set of unidirectional sizes, but a complex system of mutual dependence. In practice the usefulness of this system of indicators was maximum as far as managers of the company turned their attention on 25 most relevant indicators. The indicators underlying the BSC model can be separated at first in early indicators and late indicators. Early indicators are used at the beginning or at an early stage of a process. They measure those processes, which, today, must establish with certainty the profit or cash flow that the company will have over 5 years. The early indicator signals to what extent there have been investigated the desires and expectations of the customer and also how much known were his ways to achieve the product or services before signing the contract. The late indicators are calculated at the end of a process and indicate a retrospective approach to the extent that the process was more or less well managed. Examples of such indicators are: turnover, "the cash flow", profit, production cycle, return on investment, staff satisfaction.

In the second stage of analysis, the BSC indicators are divided according to the management priorities of S.C. Agrocomplex Lunca Pașcani S.A. into four categories corresponding to the four dimensions of the classical model: customer perspective, perspective of business processes, employee perspective and financial perspective.

The four perspectives of the classical model of the BSC applied to the S.C. Agrocomplex Lunca Pașcani S.A. are presented below.

**Customer perspective.** What expectations can customers create if the strategy is implemented successfully?

At the centre of customers’ perspective of S.C. Agrocomplex Lunca Pașcani S.A. is fulfilling the wishes and expectations of the customers. Among the major factors influencing the future success of S.C. Agrocomplex Lunca Pașcani S.A. there are customer satisfaction, their loyalty and winning new customers. Even the indicators taken into account in customers’ perspective are connected by cause-effect relations. In case of size of image and reputation an important role is played by immaterial factors as the name of the agricultural company. These factors are particularly important for the company's attractiveness in the eyes
of customers. The third category of the relationship with customers includes delivering, reaction and delivery time as well as the quality to be found quickly and easily. Indicators for the customers’ perspective should reflect the customer’s point of view on S.C. Agrocomplex Lunca Pașcani S.A. Indicators listed above may be supplemented by various other indicators: new customers assigned to interest groups, the percentage of deliveries at term, total supply amount, the waiting time at signing the contract, frequency of mentions of the name S.C. Agrocomplex Lunca Pașcani S.A. in press, radio and television, the number of articles in the press, the number of visitors to specialized fairs, the number of sponsorships.

**Perspective of processes.** In this regard, the question is formulated as follows: What processes should be improved to satisfy customers? The production processes in S.C. Agrocomplex Lunca Pașcani S.A. are deemed to commence with the technological works for field crops and forage plants, works in a dairy farm, and ends when obtaining an order and delivery of various types of crops and livestock for the business customers by submitting to the provisions of the strategy. The production is mechanized and performed on the compact surfaces, using high power tractors together with all the range of agricultural machinery for field crops and forage base. In the spirit of environmental law there are preoccupations for biological and integrated disease and pest combat, doing away with pesticides, fungicides and insecticides with high toxicity, achieving products capable to protect people health. The design of a Scorecard requires the identification of the critical processes that constantly influence customer satisfaction and financial goals of S.C. Agrocomplex Lunca Pașcani S.A. The appropriate indicators of this dimension may be: production cycle, production costs, raw material costs, number of hierarchical levels for every 100 employees, extent of external periodic report of the company.

**Perspective of employees.** The appropriate indicators of employees provide a perspective on the skills and potential of the employees and on the use of information technology. They generally have long-term significance and because of this, they are very important.

Example of late indicators corresponding to the employee perspectives are: employee satisfaction, employee loyalty, employee productivity; and of the early indicators there are: training employees, suggestions of improvement from the part of employees, setting and reaching goals with employees’ help, effective teamwork, informal infrastructure (information and communication flows). Other indicators that can be considered for this dimension are: percentage of employees who are also shareholders, increasing turnover per
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employee, income tax, tax increase, the degree of solving the complaints, the number of proposals for improvement.

Financial perspective. What financial result can be presented to shareholders while the strategy is implemented successfully? The financial perspective is the most important perspective of BSC. A feature of the BSC approach is to consider both current data and the future ones, in order to identify the problems early. It describes the long-term objectives of S.C. Agrocomplex Lunca Paşcani S.A. in terms of profitability, increase revenue, increase productivity, reduce costs and so on. The objectives of the other perspectives are to be found eventually in the financial perspective. The indicators corresponding to the financial perspective are a measure for the success of the company. For the BSC, only those indicators that provide strategic significance should be chosen. The financial indicators refer specifically to: liquidity, profitability and stability but may be supplemented by income, return on equity, return on turnover, cash flow, growth of turnover, percentage of new products in turnover. Financial analysis shows how to achieve financial balance on short and long term as objective of the analysis based on the balance sheet (Tables 1 and 2).

Table 1 - Indicators of profit and loss account

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover, lei</td>
<td>9941879</td>
<td>11128177</td>
<td>14170243</td>
<td>12313571</td>
</tr>
<tr>
<td>Total revenues, lei</td>
<td>10446189</td>
<td>13686206</td>
<td>15226548</td>
<td>14853470</td>
</tr>
<tr>
<td>Total expenses, lei</td>
<td>10222353</td>
<td>13565330</td>
<td>14996905</td>
<td>14584493</td>
</tr>
<tr>
<td>Gross profit</td>
<td>223836</td>
<td>120876</td>
<td>259643</td>
<td>268977</td>
</tr>
<tr>
<td>Net profit</td>
<td>182541</td>
<td>93158</td>
<td>248928</td>
<td>250503</td>
</tr>
<tr>
<td>Number of employees</td>
<td>125</td>
<td>113</td>
<td>113</td>
<td>110</td>
</tr>
</tbody>
</table>

Table 2 - Indicators of profitability

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross profit margin (%)</td>
<td>2.19</td>
<td>0.89</td>
<td>1.73</td>
<td>1.84</td>
</tr>
<tr>
<td>Net profit margin (%)</td>
<td>1.78</td>
<td>0.68</td>
<td>1.65</td>
<td>1.71</td>
</tr>
<tr>
<td>Labour productivity lei/employee</td>
<td>83569.5</td>
<td>121116.9</td>
<td>132715.9</td>
<td>132586.3</td>
</tr>
</tbody>
</table>

So, in 2013, the agricultural company had a positive financial evolution in comparison with the previous years. The financial management of the agricultural society tends to maintain a financial balance and good liquidity. This positively influences the activity of production and investment programme. The technical equipment made in recent years is one of the key elements of the results. The high
degree of equipment with technical means, is a strength to the agricultural company under study in comparison with the competition. From a technical standpoint, the agricultural company is effective because the equipment positively affect the costs, marketing activity and activity of achieving the mechanical works on time and of high quality.

Although the BSC approach offers to managers S.C. Agrocomplex Lunca Pașcani S.A. information from four different perspectives, at the same time it minimizes the workload of information, limiting the number of performance measures used. It forces managers to focus on a set of measures that prove to be ethical.

Table 3 - Perspectives of Balanced Scorecard (BSC) model for S.C. Agrocomplex Lunca Pașcani S.A.

<table>
<thead>
<tr>
<th>Customer perspective</th>
<th>INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1 Development of mass of customers</td>
<td>% of new customers</td>
</tr>
<tr>
<td>C2 Customer loyalty</td>
<td>Turnover from new customers</td>
</tr>
<tr>
<td>C3 Development of the image of the agricultural company</td>
<td>Customers lost</td>
</tr>
<tr>
<td></td>
<td>Increase of turnover by customer loyalty</td>
</tr>
<tr>
<td>Processes perspective</td>
<td>ha cultivated with cereals, fodder</td>
</tr>
<tr>
<td>P1 Development of strategic segments</td>
<td>Market share</td>
</tr>
<tr>
<td>P2 Development of innovative processes</td>
<td>Number of new varieties of bread put on the market</td>
</tr>
<tr>
<td>P3 Quality</td>
<td>Turnover related to products</td>
</tr>
<tr>
<td>P4 Observation of European environmental laws</td>
<td>Litigations</td>
</tr>
<tr>
<td></td>
<td>Complaints</td>
</tr>
<tr>
<td>Employees perspective</td>
<td>Increase of labour productivity per employee</td>
</tr>
<tr>
<td>A1 Development of competences</td>
<td>Knowledge of legislation in the sales department</td>
</tr>
<tr>
<td>A2 Stability in the company</td>
<td>Degree of resolution of complaints</td>
</tr>
<tr>
<td>A3 Employee satisfaction</td>
<td>Number of proposals for improvement</td>
</tr>
<tr>
<td>Financial perspective</td>
<td>Increase turnover</td>
</tr>
<tr>
<td>F1 Increase of the activities of the agricultural company</td>
<td>Variation of operating profit</td>
</tr>
<tr>
<td>F2 Increase rate in operating profit</td>
<td>Variation of financial expenses</td>
</tr>
<tr>
<td>F3 Compliance rates of return on adequate capital</td>
<td>Resources / turnover of their own means</td>
</tr>
<tr>
<td>F4 Decrease of financial costs</td>
<td>Indirect costs / net turnover</td>
</tr>
<tr>
<td>F5 Improve operational performance</td>
<td></td>
</tr>
<tr>
<td>F6 Reducing indirect expenditure</td>
<td></td>
</tr>
</tbody>
</table>

Analysing Table 3 we can see that the BSC model brings together in one report, many seemingly disparate elements of a plan for a competitive market for S.C. Agrocomplex S.A.: customer focus, reducing response time, promoting teamwork, reducing the launching time for new products, management for long-term development etc. By forcing the top
managers to consider simultaneously all the important operational measures, the model allows them to see whether the improvements in one area happened somehow at the expense of other areas, protecting against sub-optimization.

CONCLUSIONS

Acquiring high performance management capabilities in agriculture requires professional training and periodic renewal of knowledge within an organized framework, as the most competent entrepreneurs have the highest chances to gain profit.

The technical and economic training under conditions of agriculture requires complex management capabilities, allowing entrepreneurs to use management tools and techniques specific to them, to organize and develop a sense of fairness, to know how to talk to farmers.

The vocation of modern management is performance. Performance in management is the sum of leading performances and in the system of the leaders of farms. Management products are economic efficiency of farm system, expressed by its ability to cope with change, way of the organization and materialization of relations between all components, the selection of favourable actions, the mobilization of the entire management team, the ability to adapt to restrictive and regulatory system created by legislation.

Some of the major benefits that come with the successful implementation of a strategic system of management based on the Balanced Scorecard (BSC) to S.C. Agrocomplex Lunca Pașcani S.A. are the following: improves the management by reducing costs and increasing productivity, allows alignment of operational activities to the strategic plan, the visibility provided by this model supports taking better decisions faster for budget and control of processes of the company under study. This model offers recognition of both individual and team merits by facilitating the link between learning, performance and reward. Once the strategic planning process based on the BSC is completed, it must be constantly revised and updated to ensure relevance of the strategy in relation to any changes in internal or external environment.

REFERENCES


Bourne R., Jenkins M., 2008 - The dynamics of values in organizations. In: Academy of Management Conference, Chicago, USA.
S. BREZULEANU, Carmen Olguța BREZULEANU, I. BRAD, T. IANCU, A. CIANI


