

## Eco-Economic Management as a Tool of Development of Agriculture

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### Abstract

*The purpose of the research is to determine the perspectives of the uses of eco-economic management for development of agricultural business. It is offered to use proprietary methodology of evaluation of effectiveness of managing marketing in business. The authors determine principles and factors which set specific form of organization of ecological management in business structure and analyze the process of eco-economic management of business subjects. The key results of the research are development of the scheme of balance approach to the development of agricultural business and model of eco-economic management of development of agricultural business. As a result of the research, the authors come to the conclusion that provision of necessary level of ecological security is a significant factor of development of modern entrepreneurship. Under these conditions, a task of national significance is intensive formation of new business structures and organizations of ecological orientation. Due to that, eco-economic management is an effective tool of development of agricultural business. The offered model of eco-economic management of development of agricultural business allows taking into account ecological factor in the process of conduct of business activities and ensuring the balance of interests of environment protection and development of business, which shows the expedience of its use in modern agricultural business.*

**Keywords:** eco-economic management, agricultural business, development of business, agricultural territories.

### 1. Introduction

One of the factors of sustainable development of rural territories is stimulation of business activities in rural entities. Strengthening of business orientation of agricultural enterprises is certainly a positive phenomenon which facilitates the formation of market economy. Agricultural business is highly adaptable to changing economic environment and is in close proximity to consumer. That's why it allows solving various problems of rural territories, among which the most actual are provision of food security in rural areas, use of local resources and new technologies, provision of employment of population, together with the improvement of living conditions, and formation of middle class (Popkova et al., 2013).

A perspective tool of development of business activities in rural areas is eco-economic management. This tool is aimed at formation and implementation of portfolio of strategic alternatives for creation of various organizational and managerial forms of agricultural business and coordination of interests of rural entrepreneurs and environment (Davydyants et al., 2012). Totality of the above tendencies and directions of development of agricultural business predetermined the actuality of the chosen topic under the modern conditions.

### 2. Methods

On the whole, the problems of ecological management in business structures are treated differently in the economic science. There is no single position in the methodology of building and functioning of the system of ecological management among scientists and specialists. At the same time it is reasoned that constant and planned work for organization of ecological management should be performed on the basis of formation and development of intra-organization system of ecological marketing (Skopenko & Sagaydak, 2013; Earnhart & Glicksman, 2015; Nair & Ndubisi, 2013)

This requires evaluation of the state and effectiveness of marketing system of business structure on the whole, as the most important part of general system of management of business structure (which functions at three levels – management of activities, management of function, and management of demand), aimed at achievement of coordination of internal possibilities of business structure with requirements of external environment (Kimmel & Hull, 2012; Haq et al., 2013; Yang et al., 2013).

Issues of agricultural enterprises management are covered in works of the following scientists: (Bernardes, 2015), (Grouiez, 2012), (Hastori et al., 2015), (Medernach & Burnod, 2013), (Stepanov et al., 2015).

Management of ecological activities is a strategically important direction in the system of ecological marketing; it determines the management of function and demand, as effectiveness of ecological management of marketing activities is formed and integrated into the system of management of business structure at the highest level in view of specific production activities (Table 1).

**Table 1.** Matrix of levels of effectiveness of marketing management in agricultural business

Effectiveness of marketing management											
Effectiveness of activities management				Effectiveness of function management				Effectiveness of demand management			
E(Um)	E(Ms)	E(U)	E(Lo)	E(P)	E(O)	E(M)	E(K)	E(Mp)	E(Ms)	E(Mp)	E(Mc)

**Source:** compiled by the authors

$$E(AM) = f(E(AM), E(FM), E(DM)) \tag{1}$$

Effectiveness of management of activities consists of evaluation of factors of market orientation of upper management (Um), market orientation of staff (Ms), cooperation of upper management and staff (U), and level of openness of the system of management to environment (Lo):

$$E(AM) = f(E(Um), E(Ms), E(U), E(Lo)) \tag{2}$$

Effectiveness of function management depends on the indicators of effectiveness of such variables as planning (P), organization (O), motivation (M), and control (C):

$$E(FM) = f(E(P), E(O), E(M), E(C)) \tag{3}$$

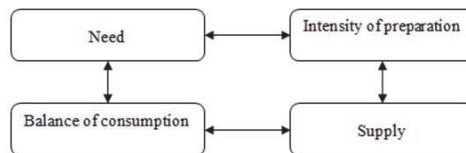
In its turn, effectiveness of demand management can be represented by function of indicators of effectiveness of main functions of marketing of business structure: management of product (Mp), management of sale (Ms), management of price (Mp), and management of communications (Mc):

$$E(DM) = f(E(Mp), E(Ms), E(Mp), E(Mc)) \tag{4}$$

A special role in evaluation of effectiveness of management of marketing belongs to the level of positions of marketing department in business structure (i.e., whether they are decisive, top-priority, or ordinary). Also, an important role belongs to cooperation of marketing department with other departments (i.e., which departments of business structure are guided by marketing experts' recommendations), which, on the whole, characterizes the level and fullness of performance of complex of marketing tasks.

### 3. Results

Strategy of development of agricultural business should be built on the basis of long-term forecast of reproduction of natural and resource base of separate territories. The strategy also has to take into account the fact that business on such territories very often uses agricultural resources. It is also important to forecast reproduction of nature and resource base. This includes scientifically substantiated forecast (balances) of tendencies in change of natural environment and production & territorial system in view of ecological consequences of resources consumption (Fig. 1).



**Figure 1.** Scheme of balance approach to development of agricultural business

**Source:** compiled by the authors

Long-term forecasting of development of business in view of reproduction of nature and resource base should be based on the following principles:

- 1) determining the reduction of single loads on natural complexes in areas with developed system of business;
- 2) prevention of harmful influences on natural complexes in areas of active development of business;

- 3) reduction of common and specific (for item of final product) volumes of consumption of natural resources by means of irrational losses at their acquisition (no complexity and fullness of extraction) by business subjects for all groups of resources. Land resources – as spatial basis of production placement with multipurpose character of natural and economic use. Water resources – as component of natural and resource basis of development of production powers of any territories. Forest resources – as renewable natural and raw basis of development of any territory. Biological and fish resources – as basis for creation of optimal conditions for development of commercial fishing spheres, and secondary resources as the most important link for optimization of natural resource use);
- 4) in view of ecological conditions of development of business, the rates of growth of nature renovation spheres of economy should not be lower than rates of development of nature exploitation types of business activities.

The above principles prove the position that progress in economic development could be achieved only when it is not bought with "capital consumption" of nature and human health.

Agricultural business is actively developing in mutual cooperation with surrounding environment, and each level of organization of business activities has its fixed tasks of rational nature use and protection of environment (Shakhovskaya et al., 2011):

- 1) at macro-level of management of development of business on the whole, the task of well-balanced development of economy with maximization of socio-economic result is solved: ideally, there should be the selection of rational structure of agricultural business with minimum of all production costs and damage from influence on the environment;
- 2) at regional level of management of development of agricultural business, the possibility of reproduction of local natural resources and quality of environment, as well as possibility for conduct of corresponding nature protection measures is taken into consideration;
- 3) at sectorial level of development of business, high-quality ecological factors in the form of model-connection "sphere in region" in view of ecological potential of sectorial production;
- 4) at level of separate business structure in agricultural territories, integration of ecological preferences into the system of economic interests of economic subjects is performed.

Strategic goals of ecological management in agricultural business activities include:

- 1) successive solutions of the problems of development of agricultural complex of rural territories, at which their ecological and economic conditions for provision of population's well-being are fully taken into account;
- 2) successive achievement on each specific rural territory of living environment that conforms not only to required sanitary and hygienic norms but also the system of evaluation of possibilities for renewal and preservation of balance on local, regional, and global levels, as well as genetic fund of animals and flora;
- 3) development of ecological requirements to economic activities of business subjects, anthropogenic loads, and state of surrounding environment in view of its "ecological volume".

Implementation of functions of ecological management, as a tool for perfection of strategies of development of agricultural business, is implemented with the help of various methods: organizational and efficient, economic, and socio-psychological.

Specific controlling (1) and economic tools (2) for management of the process of perfection of strategies of development of agricultural business structures are represented by their totality:

- 1) law on ecology and nature & resource; ecological monitoring from local authorities; ecological standards and norms; licensing of economic activities; ecological certification; ecological expertise of agricultural products and ecological audit;
- 2) nature & resource payments for polluted environment; market prices for natural resources; but and sell of rights for pollution of natural environment; deposit system; market prices for recycled waste; direct market negotiations and self-regulation; voluntary nature protection agreement between bodies of ecological control and business structures, between separate business structures which are natural resource users; financing nature protection measures (loans, credits, subsidies, etc.); accelerated amortization of nature protection equipment; ecological and resource taxes; insurance of ecological risks.

One of the main preconditions for making strategic decisions in the sphere of ecological management in rural areas is business subject's policy focus at ecological acceptability. Managerial decisions are made in the environment that, based on the possible consequences, is characterized by different attitude to risk. Conditions of certainty - when the result of each alternative variant of choice is precisely determined. Conditions of risk - when results are not certain, but there's a probability of emergence of each of them. Conditions of uncertainty when it is impossible to evaluate the probability of potential results.

The process of ecological management of business subjects in rural areas is performed through consequent implementation of the functions of planning, organization, motivation, control, and coordination at all levels (Zabaznova et al., 2014):

- 1) planning – determination (generation or setting from outside) of goals, in the basis of conditions of natural environment of rural area; development of the most effective methods of implementation of set goals; evaluation of resources necessary for achievement of goals;
- 2) organization - formation (appointment, determination) of existing organizational structure, oriented at implementation of set goals; its provision with necessary technologies and resources; formation of intra-organizational culture;
- 3) motivation – activation of actions of separate members of created organizational structure, their groups on the whole on the basis of various methods for effective and timely realization of goals;
- 4) control – setting of standards, quantitative and qualitative evaluation of achieved results and their correction at all stages of activities, from formation of goals to their full implementation;
- 5) coordination – provision of coordination of activities of all departments, links, and functions of managing the way of building rational communications between them.

Environment of making managerial decisions related to ecology is never deterministic. In most cases it includes risks conditions, when large part of decisions is taken under uncertain conditions. Making managerial decisions is a search for compromises, accounting of negative consequences and side effects, modernization of traditional and implementation of alternative technology, and taking measures of organizational nature.

As a result, ecological strategy and tactics of agricultural business activities are formed – components of eco-economic management of development of agricultural business, reflected in Fig. 2. This creates economic preconditions for the growth of sustainability of development of rural territory on the whole.

The factors that determine specific form of organization of ecological management in business structure and theoretical research include:

- 1) production and technical processes and manufactured products;
- 2) ecological law;
- 3) external and internal evaluation of risks of business activities;

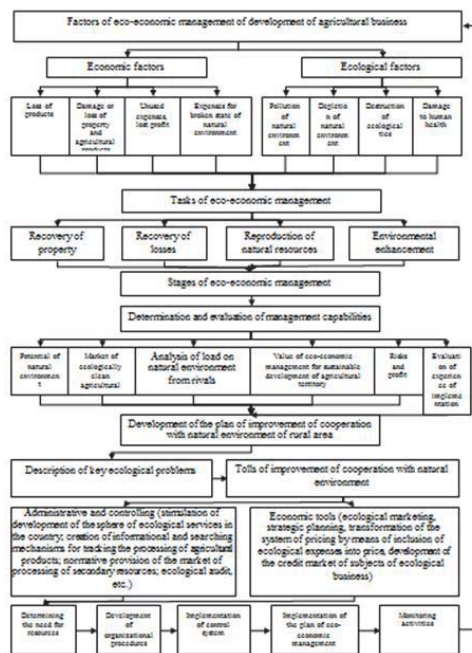


Figure 2. Model of eco-economic management of development of agricultural business

Source: compiled by the authors

- 4) external evaluation of ecological management in business structure by consumers, shareholders, mass media, and interested society;
- 5) internal potential of business structures for protection of environment and means for conduct of corresponding events.

Under the modern conditions, it is possible to distinguish the following approaches in differentiation of ecological management from the positions of criteria of environment protection:

- 1) determining the most ecologically acceptable production process on the basis of modeling material flows;
- 2) study of ecological priorities of consumption for the purpose of determination of optimal assortment of production on the basis of accounting of various phases of life cycle of products;
- 3) conducting ecological policy of business structure for the purpose of cooperation of manufacturers and consumers on the basis of information exchange;
- 4) scientific and practical orientation of the process of economic activities and its ecological consequences for the purpose of implementation of socio-economic positions on the basis of evaluation of damage to environment.

#### 4. Conclusion

Thus, it is possible to conclude that eco-ecological management is an effective tool for development of agricultural business. Peculiarities of emerging relations in the process of formation of spheres of agricultural business under the modern conditions include contradiction of tendencies; in production – specialization and concentration; in consumption – universalization and differentiation in demand for ecological services.

This state is caused by specifics of functioning of business structures of nature exploiting productions which cooperate, on the one hand, under the conditions of natural environment, and, on the other hand, under the conditions of social environment, being at their intersection. Provision of necessary level of ecological security is a significant factor in substantiation of economic expedience of their location and practical management, in the center which is ecological acceptability of product (service) in all its phases - from manufacture to utilization of waste (ecological life cycle of product).

Under these conditions, a very important task of national level is intensive formation of new business structures and organizations of ecological orientation. The offered model of eco-economic management of development of agricultural business allows taking into account ecological factor in the process of conduct of business activities and providing harmony of interests of protection of environment and development of business.

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