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STRATEGIC INNOVATIVE BENCHMARKS OF UKRAINIAN AGRO-INDUSTRIAL ENTERPRISES IN THE CONDITIONS OF INFORMATION SOCIETY

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Abstract

The purpose of the work is to identify the important role of information technology development in the context of the global information revolution, which is the impetus for the further development of enterprises of the agro-industrial complex (AIC). In this aspect, the aim of this work is to develop a mechanism of relations between enterprises of diversification structure, proposed organizational schemes and solutions in the direction of diversification processes.

The research was conducted on the materials provided from the large agro-industrial enterprises of Ukraine, State Statistics Service of Ukraine, Global innovation index, and numerous other publications. Methods of descriptive statistical analysis - for the analysis of dynamics of an index of volume of production of agro-industrial production and volume of the realized agro-industrial production, synthesis and comparison were used during the research, which allowed the authors to identify strategic activity areas for the formation the innovative benchmarks of development of Ukrainian agro-industrial enterprises. Also the methods of systematization and generalization - in the process of substantiation the conceptual approach for the development of schemes of formation the strategically oriented personnel potential of agro-industrial enterprises, the methods of complex evaluation (the portfolio analysis of enterprises and assessment of the level of monopolization using the Herfindahl-Hirschman index) for defining conceptual macro- and micro-landmarks of the formation a system of innovative diversification strategies.

The results of identifying targets in the phased development of a strategic management scenario are outlined, taking into account potential opportunities and existing threats to the external environment of enterprises. Taking into account the importance of forming an innovative personnel component of the agro-industrial complex, a scheme was developed for the formation of a strategically oriented personnel potential in order to ensure the economic, organizational and social development of the enterprise, due to the effective use of modern information technology.

As a result of mechanism development of staged formation of innovative strategies of enterprise activity, it is concluded that the implementation of these strategies implies moderate and radical changes, but in each of them they increase uncertainty in the functioning of the enterprise and, therefore, require adequate tools for timely response. Strategic management of innovation changes is defined as one of these tools, the efficiency, complexity and timeliness of which predetermines the probability of successful results of agricultural enterprises in the long run.

Key words: Innovative development targets, Strategic human resources potential, System of innovative IT-solutions, Innovative strategies of AIC enterprises, Strategic management of innovative changes.

1. Introduction

The establishment and development of innovative and information reorientation of enterprises takes place in accordance with the market conditions of the information society, which, in turn, dictate the need to ensure the vital value and quality indicators of manufactured products - one of the main criteria of national agroindustrial producers recognition.
on domestic and world markets. Developing innovative strategies for agro-industrial enterprises in a euro-oriented economy requires the implementation of priority development directions and the identification of potentially new opportunities for the revival of the national agro-industrial complex. Nowadays, in this regard, there is an objective need to formulate effective strategies for innovative development of enterprises, taking into account the latest information technologies (IT) in the direction of intensification the processes of activity.

Vectors of strategic orientations of enterprises are aimed at finding a compromise in between branch lines, based on the maximum possible use of the strong sides, based on diagnostic of the elements of micro- and macro-systems of innovative infrastructure for providing, enhancement and expansion of the production of qualitative competitive products. In this context, optimal target is the balance between the defining key part the resource potential of the enterprise and attracting innovative resources that are being set for the development of additional areas of economic activity.

Issues of worldwide importance regarding the choice of directions and methods of innovative development of enterprises had quite a few of foreign scientists engaged in, such as: Anderson et al., [2], Braun and Kanjee, [3], Berri, [4], Capaldo et al., [5], Chandler and Hwang, [6], Eddowes and Stensfeld, [8], González-Pernia et al., [9], Gort, [10], Grandell, [11], Heyden et al., [13] and Lee and Kim, [14]

The importance of the issue of innovative agro-industrial is significantly increasing as a complex strategic system in which the processes of defining the substance, structure, organization, methods and forms of development and implementation of innovative strategies are provided with strategic information alternatives to a whole mutually agreed process of functioning and development. Theoretical and practical development issues of innovative strategies and methodological tools of implementation efficiency were highlighted in the scientific papers of such prominent economists as: Đokić and Jović, [7], Hayami, [12], Pitts and Hopkins, [15], Porter, [16], Schumpeter, [17], Schendel and Hatten, [18], Tompson and Strikland, [22], and Wan et al., [23].

However, despite the large number of scientific papers on the specified issues, lately the question of strategic innovation benchmarks definition for agricultural enterprises remains not completely resolved. They are considered as a set of specific decisions and actions, the effectiveness of which depends on the optimal decision making and degree of coordinated action to ensure the competitiveness of AIC in the long run.

In this aspect, the aim of this work is to develop a mechanism of relations between enterprises of diversification structure, proposed organizational schemes and solutions in the direction of diversification processes.

2. Materials and Methods

The research was conducted on the materials provided from the large agro-industrial enterprises of Ukraine, as well as from State Statistics Service of Ukraine [19, 21], Global innovation index [20], and numerous publications.

For identifying strategic activity areas for the formation the innovative benchmarks of development of Ukrainian agro-industrial enterprises in the research were used the method of descriptive statistical analysis - for the analysis of dynamics of an index of volume of production of agro-industrial production and volume of the realized agro-industrial production. Synthesis and comparison methods were used during the research in the process of substantiation the conceptual approach for the development of schemes of formation the strategically oriented personnel potential of agro-industrial enterprises. For defining conceptual macro- and micro-landmarks of the formation a system of innovative diversification strategies in the article was used the method of complex evaluation (the portfolio analysis of enterprises and assessment of the level of monopolization using the Herfindahl-Hirschman index).

3. Results and Discussion

The defining feature of the agro-industrial complex of Ukraine is functioning of enterprises in conditions of substantial uncertainty and risk. Problems of market environment unpredictability, as well as the fact that in the agro-industrial complex, unlike other industries, the reproduction process is closely related to natural climatic and biological factors, which directly affects the end results of enterprises’ activity in the short-term, is underlying the need for combining different sectors in the agro-industry, which are characterized by minimal dependence on the effects of climatic, natural and biological factors. The urgent character of this necessity is caused by organizational-technical and info-communication links between manufacturing, processing and distributional enterprises. At the same time, the scarcity of land resources requires the selection of areas of activity that are slightly related to land use. Such directions are organization of product processing, expansion of distribution channels, and development of subsidiary farms.

Important preconditions for organization of the enterpriser’s own processing are also the considerable disparity in prices for agricultural products and raw materials for their production. As a rule, service and processing enterprises are monopolists who dictate
their policies to agricultural enterprises. This leads to the fact that agricultural producers are forced to sell their products at low prices and, as a result, they lose a significant amount of their own profits. Besides, location of the enterprise is also a significant factor impacting the organization of its own processing facilities and distribution channels, because remoteness of processing plants and distribution channels significantly increases the cost of transportation and delivery of products to processing points [4].

It should be noted separately that economic and institutional conditions for agricultural business in the coming years will undergo dynamic changes as a result of accelerated development of economy, scientific and technological development, as well as the impact of globalization and informatization on the development of socio-economic processes as a whole. Consequently, those opportunities that were previously used by agribusiness on the basis of traditional technologies of crop and livestock production management, which until recently provided more or less acceptable income, are irrelevant today, since the process of intellectualization is constantly being updated and changed, and the possession and use of information is an important factor in social and economic development of any country.

Regarding the agro-industrial complex of Ukraine, it should be noted that it is characterized by complication and complexity of the tasks which are to be solved. At the same time, complications of social, economic and political situation in the society, quick development of industrial production, changes in the dynamics of processes in all spheres of human activity caused the need for rapid increase of public awareness, stimulating the development of new tools for meeting information needs that are significant for the society.

Against this background, for the purpose of ensuring the minimization of costs and optimization of agro-industrial production processes, there is a need to use the achievements of scientific and technological progress, i.e. transition to new methods of info-communication and management in the field of agriculture, the extensive use of automated systems and information technologies.

Moreover, rapid development of new technologies is turning into a global information revolution, which is the impetus for the further development of society, the revaluation of which takes its course exactly to the informational sphere. This leads to creation of a united information space, access to which is simplified along with development of information technologies and global information systems [5].

Information is one of the most important strategic and managerial resources, its production and implementation form the necessary basis for effective functioning and development of various spheres of economy, and, especially, the agro-industrial complex. On the other hand, information as a set of numerous factors, such as characteristic features of the crop being cultivated, weather conditions, soil conditions, is a central starting point for effective economic management. The system for application of leading IT technologies instruments for agro-industrial enterprises, which works by means of the collected data and corresponding algorithms, allows to plan as quickly and qualitatively as possible the spring-field works, harvesting, to define necessary commodity stock and supplies, the list of technological operations, norms of seeds and fertilizers, application of the necessary active raw materials for maximum yield within each field.

Significant advantages of improving and introducing of high technologies into the production process, the presence in the market of high concentration of land by agricultural holdings, as well as obtaining high incomes provides agro-industrial enterprises with a highly competitive position of important players in the market arena of agrarian business in Ukraine [1]. Analyzing the efficiency of precision agriculture use and other methods of IT technologies, automated control systems in agro-industrial complex, it will be relevant to survey the positive dynamics of the agricultural production volume index, which indicates formation and development of Ukrainian agro-industrial complex for the period of 2011 - 2018 (Figure 1).

![Figure 1. Dynamics of agricultural production volume index and volume of sales, in Ukraine (million EUR) (2011-2018)](images/figure1.png)

Source: Calculated by the authors on the basis of [1, 21]
Negative trends of 2015 can be explained by the fact that the deep crisis of the economy of Ukraine in the period 2013 - 2015 caused a chain reaction of discrepancy by all macroeconomic indicators. Nevertheless, once again we can find that since 2016 there has been an increase in agricultural production [19]. Such dynamics are explained, first of all, by the growth of the range of activity and production volumes in large companies, the development of the agro-industrial complex on the basis of modern information technologies.

At the stage of strategic development of the enterprise, determination of the factors influencing the definition and development of strategic innovative development benchmarks plays an essential role. The interaction of these factors is quite specific in the agro-industry, and it is characterized by the presence of dynamic changes over time, since the choice of a particular strategic orientation depends on the complementary influence of certain factors in a particular strategic situation. The set of factors that determine innovative risk orientations differ at each of the stages of implementation. Therefore, there is a need for a comprehensive assessment of the whole set of exogenous and endogenous factors for determining the target benchmarks for the development of a strategic management scenario. The complexity of such benchmarks is, first and foremost, limited by: legislative processes in the state, state social policy, state regulation of economic processes and internal political instability. The enterprise may find itself in a risky area of pressure arising from certain social groups, public authorities and the national social atmosphere of society.

In this regard, well-known is a fact that an increase in the number of enterprises facing the unresolved part of the problem of satisfaction of public rights, taking into account the values and priorities of society, considering and ensuring the regulatory norms set by the legislation in the conditions of development of the information society, namely in terms of: positivity of response to social priorities and requests of the society, constant readiness to take regulatory measures, maintenance of balance between the interests of shareholders and the society as a whole and ensuring a stable competitive position of the enterprise in the market [23].

The idea of social adaptation of a certain business entity constitutes the basis of the task of formalizing the strategic mission of the enterprise for the long term. At the same time, each innovative strategy of the enterprise should be as closely as possible to the specificity of the industry and be competitive in the conditions of exogenous influence factors (Figure 2).

At the stage of a sectoral level, the attractiveness of the industry and, accordingly, the level of competition, become the crucial factors for identifying and developing innovative development benchmarks. The assessment of the influence of these factors by the enterprise directly influences the choice of market position and innovative benchmarks of competition. At the stage of deciding regarding the unattractiveness of the industry in particular market conditions, the innovation activity of the company seeks to regulate this situation by directing investment resources into a more attractive area of industry. For this reason, application and implementation of innovative technologies is aimed at protecting the competitive position of the enterprises, which will ultimately lead to the revision and selection of their own innovative strategies for the long term [18]. Considering the potential of the enterprise and the existing threats of the environment are key factors influencing the strategy development. Assuredly, a reasonable approach to the justification of company’s strategic goals is intended for providing potential competence for dynamic growth in the conditions of protection of its strategic position from internal and external threatening risks.

Taking into account entrepreneurial risks in the process of defining strategic innovative development benchmarks is ensured by organizations that are able to take risks and not lose benefits. Their activity is aimed at finding alternative directions and ways of achieving high efficiency indicators by “innovative attack” at each stage of strategic actions of the enterprise. The result of such activity is the established value of strategic guidelines, which is the dominant sign of the choice of a particular strategic direction of successful functioning and development of the enterprise.

Increased impact of such values is partly reflected in the activities of companies that have achieved superiority in innovative developments, the latest IT technologies, high global standards of product quality, while focusing on the human factor, which is key in developing optimal effective ways to meet consumer needs. The responsibilities of the enterprise, in the context of development of these strategies, include flexible pricing, additional consumer benefits, increased productivity and manufactural efficiency using modern IT technologies - the fundamental basis of the entire process of determining strategic innovation development. Complex of all the components that support this process operates in a dynamic, multi-criteria external environment and aims to implement innovative strategies with alternatives to effective IT solutions in terms of domestic and transnational cooperation [20]. An important element of the process of defining of strategic innovation benchmarks for the development of agricultural enterprises is the availability of sufficient scientific, technical and intellectual property. A sufficient number of industry experts and scientists is considered to be particularly important in order to provide the process with: new skills, knowledge, innovative
The main strategy of the company

Endogenous factors

- National social stability and interest in the common result of the activity
- Stable and stable support from the state
- Key political factors of influence

Formation of strategic goals

- Development of strategic plans
- Development of strategic programs

Strategic mission

- Formation of a strategic mission
- Development of strategic programs

External market conditions and sales policies

- Sustainable competitive advantages in the foreign market
- External conditions for the foreign market

Innovative impact on the effectiveness of solutions

External economic policy of economic development for the long term

The level of stability of external demand

The level of professional development in accordance with international standards

The level of perspective impact of leading global IT technologies

Innovative benchmarks of corporate level

Corporate concept

Operational actions of the divisions to strengthen competitive strategic positions

Operational decisions regarding change of functional directions

Operational approach to improving and increasing the efficiency of industrial divisions

Innovative benchmarks of the industry (business) level

Conceptual approach to change of directions of the diversification strategy

Innovative benchmarks of the operational level

Comprehensive approach to effective investment placement

Choice of strategic innovation benchmarks

Strategic solutions to strengthen competitive positions

Comprehensive approach to effective investment placement

Groups of strategies of the functional level

- General strategic competencies of branch units
- Financial
- Innovative
- Production
- Investment
- Marketing
- Information
- Technological

Ensuring the fulfillment of important strategic objectives of diversification through effective IT solutions

Integrated association of competence possibilities of strategic potential of the enterprise

Innovative benchmarks of the functional level

Operational level strategies

Figure 2. Target benchmarks for the phased development of a strategic management scenario

Source: Developed by the authors
Scheme of formation of strategically oriented human resources potential of all profiles and links in agro-industrial production

Innovative approaches to modern IT solutions
- Modernization of the vocational education and training system in accordance with modern requirements of the information society
- Competence, professionalism, intensification, integration and diversification of employee training
- Ensuring systematicity, optimization and efficiency of the educational process

Competence-potential capabilities of IT solutions
- Information support for potential IT developments
- Developing the capacity for analysis and long-term planning based on flexibility and consistency
- Developing the capacity for self-preparation and self-analysis in management decision-making

Conceptual and targeted methods
- Systemics, alternativity, definiteness and interdependence, idealization, formalization, axiomatics, rationalism, deductive and inductive analysis and synthesis, theoretical and experimental modeling

Information and telecommunication direction
- Analysis of internal and external market of IT technologies in agro-industry
- Design and implementation of the content of basic IT disciplines
- Design and selection of forms of the educational process
- Design and implementation of the main approaches to the interaction of participants in the educational IT process in the field of agribusiness

Constructive and methodological direction
- Standards
  - Introductory and regulatory part
  - Methodology of execution for the set goals and tasks
  - Mastering of practical skills
- Variations
  - Conceptual and targeted methods
  - Information and communication readiness of the future agribusiness employees to complete tasks based on IT tools and management decisions of the system

Significant aspects of meaningful IT system training for staff
- Information and telecommunication direction
- Constructive and methodological direction
- Analytical and organizational aspect of organizing extracurricular activities
- Adaptive tasks

Stages of the project
- Analytical and management
  - Purposefulness design of the project management system
- Instrumental
  - Formation and maintenance of the system of information and methodological support of the project
- Organizational and methodical
  - Implementation through the use of generated RCTs and system solutions in IT
  - Assessment of the methodology for the application of predictive trends of development
- Analytical and evaluating
  - Analysis and evaluation of the economic, methodological and organizational effectiveness of the project
  - Analysis of predictive trends
- Corrective
  - Action plan related to the project’s correlation features, correction and error elimination

PROJECT PERFORMANCE MONITORING
- Formation levels
  - Low
  - Allowable
  - Average
  - High
- Formation criteria
  - Motivational and perspective
  - Intellectual and cognitive
  - Creative and modification
  - Personally reproductive (progressive)

Long-term result - instrumentally and methodologically formed system of resource-competence potential of employees of agro-industrial complex within the framework of innovative system of efficient IT solutions

Figure 3. Structurally logical scheme of formation of strategically oriented human resources

Source: developed by the authors
ideas, inventions, know-how, innovative technologies, based on fundamental research and development, whose effectiveness is to reduce costs for applied research due to the reduction of probationary errors, and the accumulation of valuable ideas that can be used in the long term. This strategic component of the enterprise should be paid the most attention towards its maintenance and development.

Formation of strategic-oriented personnel potential is the main priority innovative direction of functioning and development of the enterprise, both in the external and internal market, which determines the crucial ways to achieve the long-term goals of the organization. In this regard, the decisive goal of the company is to develop a long-term program of concrete actions to realize the concept of utilization and development of human resources to create a highly professional, responsible and cohesive team, taking into account the strategic goals of development and resources of the enterprise (Figure 3).

According to the developed scheme above, the strategic goal of any personnel management system is to ensure the economic, organizational and social development of the enterprise through the efficient use of human capital. In the course of a personnel management strategy formation, the main task is to identify and take into account the future development trends, justify changes that provide sustainable development.

The process of implementation of IT technologies is carried out on a step-by-step basis. The first stage involves creation of automated workstations (AWS) for specialists of all profiles. At the second stage, the integration of the controllers' AWS into the local computer networks takes place. The third stage integrates local networks of a departmental or regional bodies with local information networks of enterprises and organizations belonging to the industry or located in the region in case.

At the same time, revolutionary changes in such industries as microelectronics and sensor technologies, as well as reliable integration of data with precision work tools, are the impetus for new developments, which in the future will lead to a reduction in human resources in agro-industrial production, as high-tech machines allow identify and list the current state of work in the field, instantly evaluate the information provided and purposefully initiate the necessary efficient actions for business. It is also important to specify that the relationship between the participants of concrete actions program development for the implementation of the concept of use and development of human resources, the project of innovative IT-solutions and the consistency of the choice of the concept of IT technologies in a separate unit and at the enterprise as a whole, depend largely on the project manager. The innovation project manager coordinates the work of the group without interfering with the workflow, thereby organizing discussion of the results obtained, formulating tasks and approving the final innovation project [22]. On the basis of the results of the analysts' work and their own experience, the competent specialist conducts a systematic evaluation of variants of ideas, technical and innovative solutions in terms of the maximum possible satisfaction of consumers, technical and economic requirements both internal environment of functioning of the enterprise, and external - market. The project manager for the selection of certain perspective areas of strategic innovation development coordinates the work of the group, eventually organizing a discussion of the results obtained to formulate the main tasks for the development of promising landmarks of innovative development (Figure 4).

The results of research of the functional structure of the visual scheme have demonstrated the presence of purposeful managerial influence in the management system. Within the framework of this system, enterprises purposefully analyze and evaluate the situations, while carefully selecting the ways to achieve the strategic goals of innovation activities. At this stage it is extremely important to prevent uncontrolled, unsystematic and chaotic actions within the implementation of certain strategic IT solutions, since the further development and functioning of the enterprise will be conditioned by random events and factors. Purposeful managerial influence is a kind of organizing factor and contains a set of relevant decisions and commands that are formed by the managerial subject. However, management influence must possess some methodological basis to justify the tasks, conceptual approaches, principles, methods, levers and directions of management.

In terms of development and implementation of innovative strategies, an important role is afforded to the consideration of ensuring the competitive position of the enterprise in the target market. It is well known that the impact of rapid development of scientific and technological progress is fully included in the issue of globalization of world economic processes [22].

In contrast, the strategic sphere of activity of the enterprise is the scope of influence of endogenous and exogenous factors, which, in turn, provide and form alternative development of certain strategic segments of management that the enterprise seeks as optimal when considering the tasks of implementation of innovative strategies. The task of providing innovative resource-competence potential of the enterprise is a set of mutually agreed actions of all links of the economic process, which are capable of providing the enterprise with strategic innovative resources. This, in turn, determines the potential for innovative development, the realization of which will help to reach the target stra-
Development and formation of conceptual project of effective IT solutions
Discussion of optimal technical and technological solutions
Discussion of ideas of conceptual IT solutions

Figure 4. Structural and functional scheme of development of the project of system of innovative IT-solutions
Source: Created by the authors

Figure 5. Mechanism of gradual formation of innovative strategies of agro-industrial enterprises’ activity
Source: Developed by the authors
tacic markets in accordance with the pace of development of science and technology.

At the stage of ranking the sequence of innovative strategic processes from the aspect of the existing diversity of high technologies, the process of selecting the optimal strategic plans for development of certain innovative solutions takes place. The fact of dynamic development of prospective enterprise activities usually depends on their ability in the context of implementation and development of advanced IT technologies, new market segments, as well as the generation and integration of knowledge in the system of human capital formation. Nevertheless, in the context of the globalization processes of the world socio-economic systems, it is extremely important to adhere to the established technology-science interconnection.

The dynamics of modern IT technologies development are directly interconnected with the dynamics of the development of key factors of detail and justification of the main differences between these technologies from the economical and aggregate technology. Consequently, strategic forecasting, measurement and modeling of the high-tech development are based on the results of the factor approach to the comparison of different information elements in the agro-industrial sphere of management. Therefore, the study of types and patterns of replacement of one technology-intensive technology with any other alternative is based on the study of positive technological dynamics in accordance with modern innovative development. The importance of rapid strategic change in a well-defined business space, with elements of high technology, should also be considered. In risky economic conditions, as well as in uncertainty of innovative development benchmarks, an important aspect is the mechanism of step-by-step formation of the most adapted rational group of benchmarks (Figure 5).

The urgency of the issues of prospective strategic forecasting is largely determined by the uncertainty of strategic forecasts like “the volume of capital is the result of innovative development”. There is a specificity of innovation risk associated with obtaining step-by-step results of the activity and bringing efficiency to the final result.

There is one more individual pattern of innovation development efficiency, namely to achieve bordering capital efficiency, to bring technical, technological and information complex systems to efficiency, which means: to ensure the exponential dependence of approximation of various efficiency parameters of optimal IT solutions to the boundary technological levels, which tend to change within information variability of market economy.

Frequently there is a situation when modern agro-industrial companies do not possess long-term forecasts, scientific achievements, as well as innovative potential. As a result, these business units have to take extreme measures related to the development of innovative benchmarks in line with the modern development of information management. It is closely connected with reconsidering of the fact that a radical information change in the views of the socio-economic environment of the enterprise is a driving force of reorientation of the enterprise’s systematic and economic values, which, ultimately, leads to bridging the information and technological gaps in business activities.

In addition, the difficulties encountered in implementing innovative developments lead to the implementation of defensive strategies based on following the leader and maintaining the competitive positions. An important role here is to take into account the values of the ability to reproduce situations with certain strategic changes within the current environment.

Therefore, the implementation of any enterprise strategy involves strategic changes. Depending on the strategy being chosen, changes can be moderate or radical, but they inevitably intensify the uncertainty of the enterprise’s functioning, and consequently require adequate tools for timely response. One of such tools is the strategic management of innovation changes. Effectiveness, complexity and timeliness of such management determinates the likelihood of positive results in the long run.

4. Conclusions

- The effectiveness of defining the strategic guidelines for the innovative development of agribusiness enterprises depends on the long-term objectives and goals set. At the same time, the strategic goal must be consistent with the potential opportunities and advantages of the enterprise and should be aimed at ensuring stable economic activity both in the internal and foreign markets. The main tasks of strategic management of innovation changes are the formation of optimal and new benchmark development benchmarks that meet the needs of the market and regulate the functioning of the innovation structure in accordance with the existing potential and the degree of prospect of strategic changes.

- In the future, introduction of the latest benchmarks for the development of agricultural enterprises will require the use of conceptual approaches, which is, first of all, due to the complexity of the management object, the formation of strategically oriented human resources, a wide range of elements of management influence, as well as the need to take into account the specifics of agro-industrial sphere. The specificity of choosing the best innovative solutions in the field of the agricultural complex is due to the peculiarities of
this industry as one of the key sectors of the national economy. At the same time, these features can be considered as determining prerequisites for innovative restructuring of the agro-industrial complex of Ukraine.

5. References


