

МИХАЙЛОВ

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MECHANISM OF IMPLEMENTATION OF
INVESTMENT AND INNOVATION
TECHNOLOGIES IN THE AGRICULTURAL
SPHERE OF UKRAINE

ПІЗНЯК

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МЕХАНІЗМ ВПРОВАДЖЕННЯ
ІНВЕСТИЦІЙНО-ІННОВАЦІЙНИХ
ТЕХНОЛОГІЙ В АГРАРНІЙ СФЕРІ
УКРАЇНИ

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Introduction. In the conditions of continuous development of investment and innovative technologies the necessary requirement for the further successful and productive development of an agro-industrial complex is updating of technics, technologies, management methods, the organization of production.

The purpose of the paper is to study the innovative development of the agricultural sector of Ukraine and to develop a mechanism for implementing investment and innovation technologies.

Results. The implementation of the mechanism of introduction of investment and innovation technologies in the agricultural sector should become an effective means of ensuring innovative development in all parts of the technological chain of agricultural production.

The main task of the mechanism is primarily to ensure the coherent development of all its components – agricultural enterprises on the basis of deepening agro-industrial integration and involvement in the production of the latest advances in science and technology.

Thus, the mechanism of introduction of investment and innovation technologies in the agricultural sector should ensure the implementation of a number of tasks:

- stimulating scientific developments aimed at creating new technologies and agricultural products;
- effective transfer of scientific achievements, knowledge and results of scientific developments into production;
- financing of investment and innovation projects on acceptable terms for agricultural enterprises;
- fair distribution of results of investment and innovation projects;
- deepening agro-industrial integration;
- development, examination and support of investment and innovation programs and projects;
- education, training and retraining;
- formation of investment and innovative way of thinking;
- participation of the state and regional authorities in investment and innovation activities of agro-industrial enterprises.

Conclusions. Thus, the need to implement the mechanism of investment and innovation technologies in the agricultural sector will create a favorable environment for innovation, bring the agricultural sector of Ukraine to the world level, will ensure the receipt of competitive agricultural products.

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Вступ. В умовах невинного розвитку інвестиційно-інноваційних технологій необхідною вимогою для подальшого успішного та продуктивного розвитку агропромислового комплексу є оновлення техніки, технологій, методів управління, організації виробництва.

Метою статті є дослідження інноваційного розвитку аграрної сфери України та розробка механізму впровадження інвестиційно-інноваційних технологій.

Результати. Імплементация механізму впровадження інвестиційно-інноваційних технологій в аграрному секторі має стати дієвим засобом забезпечення інноваційного розвитку в усіх ланках технологічного ланцюга виробництва сільськогосподарської продукції.

Головне завдання механізму полягає насамперед у забезпеченні спряженого розвитку всіх його складових – сільськогосподарських підприємств на основі поглиблення агропромислової інтеграції і залучення у виробництво останніх досягнень науки і техніки.

Отже, механізм впровадження інвестиційно-інноваційних технологій в аграрну сферу має забезпечити реалізацію низки завдань:

- стимулювання наукових розробок, що мають на меті створення нових технологій і продуктів сільського господарства;
- ефективну передачу досягнень науки, знань і результатів наукових розробок у виробництво;
- фінансування інвестиційно-інноваційних проєктів на прийнятних умовах для сільськогосподарських підприємств;
- справедливий розподіл результатів інвестиційно-інноваційних проєктів;
- поглиблення агропромислової інтеграції;
- розроблення, експертизу і супроводження інвестиційно-інноваційних програм і проєктів;
- освіту, підготовку і перепідготовку кадрів;
- формування інвестиційно-інноваційного способу мислення;
- участь держави та регіональних органів влади в інвестиційно-інноваційній діяльності агропромислових підприємств.

Висновки. Отже, імплементация механізму інвестиційно-інноваційних технологій в аграрній сфері дозволить: сформувати сприятливе середовище для здійснення інноваційної діяльності, вивести аграрну сферу України на світовий рівень, забезпечити отримання конкурентоспроможної сільськогосподарської продукції.

Keywords: investment and innovation technologies, agrarian sphere, innovations, investment and innovation technologies, agrarian sphere

Ключові слова: інвестиційно-інноваційні технології, аграрна сфера, інновації

INTRODUCTION

The agricultural sector plays a key role in the development of Ukraine. It is a filler of the state budget, supplies foreign exchange earnings, ensures food security of the country. The development of market relations in the agricultural sector requires businesses to use the latest technologies, new management mechanisms to increase the competitiveness of agricultural enterprises in the face of intensifying competition and intensifying globalization processes. In the conditions of unceasing development of investment and innovative technologies the necessary requirement for the further successful and productive development of an agro-industrial complex is updating of technics, technologies, management methods, the organization of production. Thus, the implementation of modern investment and innovation technologies in the agricultural sector will increase efficiency and increase the commodity potential of agriculture, reduce the risk of non-reimbursement of full costs incurred in the production and sale of agricultural products, which is an important task of management in the agricultural sector.

Analysis of recent research and publications.

Leading foreign and domestic scientists have studied the problems of investment and innovation development of the agricultural sector. Significant scientific achievements in this area have been made by such foreign scientists as O. Amosha [1], D. Bessant [2], P. Drucker [3], and et.al. Domestic scientists have also made a significant contribution to scientific approaches to the development of investment and innovative technologies in the agricultural sector. In particular, meaningful proposals are contained in the works of V. Andriychuk [4], V. Ambrosov [5], S. Volodin [6], M. Kropyvka [7], M. Malik [8], A. Mikhailov [9], and et.al. However, the mechanism of introduction of investment and innovation technologies in the agricultural sphere of Ukraine needs further research.

The **PURPOSE** of the paper is to study the innovative development of the agricultural sector of Ukraine and to

develop a mechanism for implementing investment and innovation technologies.

RESEARCH METHODS

The following methods are used in the research process: abstract-logical (theoretical generalizations and formation of propositions), monographic (study of theoretical bases of developments and introduction of the mechanism of investment-innovative technologies in the agrarian sphere of Ukraine).

RESULTS

Today, agricultural producers have different levels of security of their activities with the resources of the production process. At the same time, they operate in the same conditions of the domestic market of agricultural raw materials, infrastructural, price and competitive levers of which further deepen this stratification.

Gary Moore, an American historian and director of agriculture and domestic graduate programs at North Carolina State University, has compiled a list of the top 10 innovations of the last century. Here it is [10]: computers, biotechnology, agricultural chemicals, electrification of rural areas, artificial insemination in animal husbandry, soil protection service, farm loans, gas tractors, hybridization, cooperatives.

"Many people have repeatedly heard of the incredible success in agriculture in Australia, Israel, the United States, Canada and the Netherlands, where IT solutions in agriculture are widely used. In Ukraine, innovation is worse – the percentage of penetration of high technology in the agricultural sector is still quite low – about 10-12 % compared to world leaders, but we are clearly on the right track "[11].

Experts say that "among modern innovative solutions that will affect the future of all mankind, importance is given to technologies related to agricultural production and food supply – technologies that will radically change agriculture [12]." (table 1).

Table 1

Technologies that will soon change the agriculture of Ukraine

Sensors	Food	Automatization	Engineering
Biometrics of farm animals	Creation of new strains of animals and plants	Agricultural work	Creation of closed ecological systems
Yield sensors	Meat production "in vitro"	Robotic farm swarms	Vertical agriculture

"Foreign investors in 90 % of cases are customers of agroinnovation developments for Ukrainian IT specialists. If Ukrainian agricultural companies do not reconsider their attitude to innovation, they will be doomed to constantly catch up with foreign competitors in the introduction of new technologies" [13].

The implementation of the mechanism of introduction

of investment and innovation technologies in the agricultural sector should become an effective means of ensuring innovative development in all parts of the technological chain of agricultural production.

The mechanism should ensure the implementation of the functions of motivation for innovation, diagnosis, development and selection of project development, fore-

casting, implementation and monitoring. These functions correspond to the stages of the innovation process, as the mechanism must ensure the implementation of each stage, the sequence, continuity and cyclical nature of the investment and innovation process.

The main task of the mechanism is primarily to ensure the coherent development of all its components – agricultural enterprises on the basis of deepening agro-industrial integration and involvement in the production of the latest advances in science and technology.

Thus, the mechanism of introduction of investment and innovation technologies in the agricultural sector should ensure the implementation of a number of tasks:

- stimulating scientific developments aimed at creating new technologies and agricultural products;
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- deepening agro-industrial integration;
- development, examination and support of investment and innovation programs and projects;
- education, training and retraining;
- formation of investment and innovative way of thinking;
- participation of the state and regional authorities in investment and innovation activities of agro-industrial enterprises.

State participation is a catalyst for investment and innovation and the driving force of the mechanism of investment and innovation development of the agricultural sector because, without the active participation of the state, this mechanism will not work. At later stages of development it is possible to form an investment and innovation mechanism capable of independent movement and self-development. Unfortunately, this is not a short-term prospect.

The mechanism of introduction of investment and innovation technologies in the agricultural sphere is presented on fig. 1.

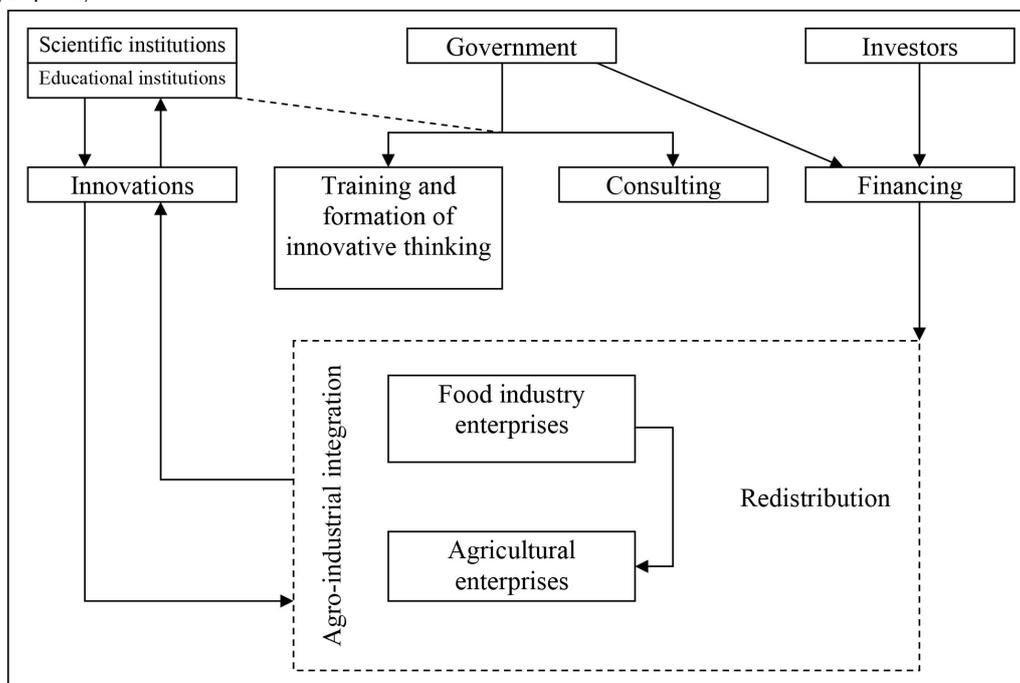


Fig. 1. The mechanism of introduction of investment and innovative technologies in the agricultural sphere of Ukraine

To stimulate the development of agro-industrial complex, in our opinion, it is advisable to use the experience gained in other countries to create regional integrated production structures. For example, to stimulate the development of the agricultural sector it is necessary to create territorial clusters in which technological processes are carried out according to the scheme of a complete closed cycle: from feed production to processing of raw materials and sales of finished products through its own trade network [4]. To attract investment, participants in targeted programs are provided with guarantees from the regional budget to obtain bank loans, property tax benefits. The regional authorities can bear the costs of creating the necessary engineering infrastructure of livestock and crop facilities under construction and access roads to them.

CONCLUSIONS

Thus, the need to implement the mechanism of investment and innovation technologies in the agricultural sector will create a favorable environment for innovation, bring the agricultural sector of Ukraine to the world level, will ensure the receipt of competitive agricultural products. Research institutions and organizations must create an appropriate climate for investment and innovation entrepreneurship in an integrated structure. And undoubtedly, as already mentioned, to achieve positive results requires support from the state: guarantees of the region, financing and co-financing of projects and programs.

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