

Theory of the Dairy Industry Modernization

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Lead: The article proves the importance of theoretical and methodological approaches to the modernisation of the dairy unit. The authors point out the reasons for ineffective modernisation and describe the methods for designing an innovative plan and programme of modernisation. The article explains the interconnection of the dairy industry state ad implementation of the state's food security concept.

Key words: Modernisation, Rehabilitation, Equipment, Dairy industry, Reprocessing of the livestock product, governmental support, agriculture.

Modernisation is a derivative of the French word *moderne*, which means “new”, “up-to-date”. Modernisation means the improving of a human, society, state, economy, branch of business in general as well as its individual components. And it needs an objective estimating of authenticity, necessity and effectiveness of the current processes in order not determine their utility and not only their up-to-dateness and novelty.

While supposing the updates, rehabilitation of the object, its bringing to correspondence with new requirements and norms, quality indices, the modernisation is an integral part of the economic growth. Nevertheless, inconsistently implemented modernisation can result in serious loss to the branch and throw it back for decades in its development. Thus, the choice of certain methods of modernisation

implementation in the field but not the question of necessity of modernisation itself is of greatest importance.

According to the data of the spending pattern (fig. 1) for the technological innovations, three fourth of the spendings for modernisation were implemented for the account of organisations' funds up to 2013. The amount of help for modernisation of the industry from funds of federal budget and lower levels budgets was only 3-7.5%.

Implementation of modernisation processes in the agro-industry, including those for the milk production, is preceded by the designing of innovative plane in which the following is pointed out:

- a) idea of modernisation;
- b) goal of modernisation;
- c) object of modernisation;
- d) means and mechanisms of modernisation;
- e) sources of funding of modernisation processes;
- f) dates of implementation of modernisation processes;

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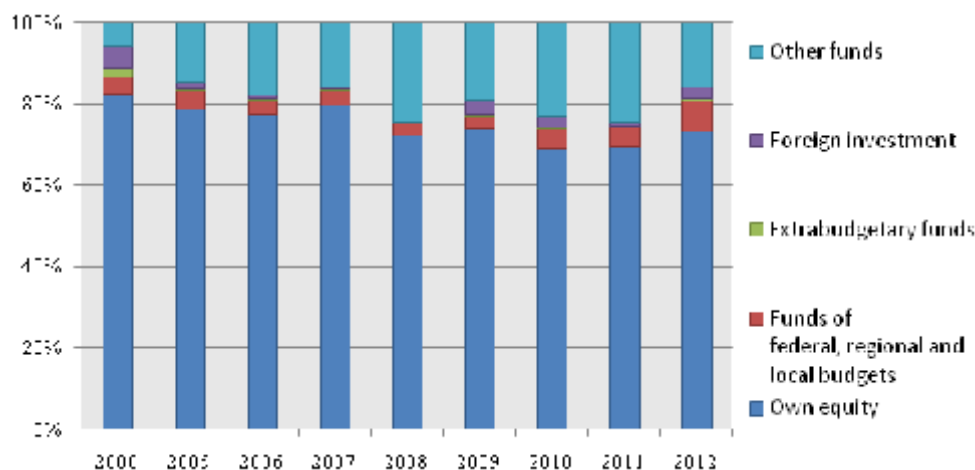


Fig. 1. The pattern of spending for technological innovations in the industry according to the sources of funding (in per cents)³

- g) evaluation of the anticipated results of modernisation;
- h) making decisions of modernisation processes implementation in the field;
- i) implementation of modernisation plan in the field;
- j) analysis of the acquired results of modernisation plan implementation in the field;
- k) correction of modernisation plan in the field;

While creating such innovative plan it is necessary to remember the concept of technological, economical and social modernisation in the field.

The reality is that nowadays technological modernisation of dairy industry is dealing mostly with the problems of rehabilitation of traditional livestock houses and new construction. But the construction of the large livestock object which has both economic advantages and social disadvantages is more preferable.

The problems of modernisation of breeder and milking stock on the basis of mostly imported and own reproduction of young breeder of cattle is questionable. What about the problems of milk processing, implementation and price formation, they are almost not subjected to modernisation, which nullify the effectiveness of technological modernisation of the field.

Weak motivation in the dairy industry is

the result of inability of economic factors, their helplessness in the conditions of little credit availability, insufficient governmental help, low production effectiveness, which, undoubtedly, promises no good prospects for the development of this branch.

According to the State programme of agriculture development and market regulation of agricultural products, raw materials and food for 2013-2022, where modernisation is paid a lot of attention, the measures of technical re-equipping are pointed out into special sub-programme "Technical and technological modernisation, innovative development" - for these goals 23.7 billion roubles are granted for the period of the Programme².

Nowadays 30.9 million tons of milk per year is produced in the RF. These figures which can be compared to the volume of annual production of milk in such states as China (37.8 million tons), Germany (30.5 million tons) and Brazil (32.3 million tons), speak for the fact that Russia has all the opportunities for becoming one of the world leading producers of dairy products. D. A. Medvedev claimed the serious potential of dairy industry in Russia during the meeting "About the development of dairy cattle husbandry" in Voronezh region in October, 2013⁴.

However now the situation in dairy industry is crucial - dairy cattle livestock is being decreased in agricultural organisations, total milk

yield is also decreased and the shortage of this product is being increased.

According to the Federal State Statistics Service the consumption of milk and milk products in 2012 was 265 kg per 1 person, in 1990 this index was 380 kg per 1 person. There appears the necessity of provision of growing demand for milk and milk products by means of development of dairy industry.

Increasing of the demand and level of consumption is not the only factors which speak for the importance of effective modernisation of milk production. According to the Food Security Doctrine, the ratio of the Russian agriculture products in the total volume of market resources in the home market for milk and milk products by 2020 should be not less than 90%. In such conditions top modernisation of dairy industry of Russia becomes the most urgent task which should be solved by the combined efforts of the state and organisations of dairy industry in the country.

In August 2014 the Russian Federation Presidential Decree of August 6, 2014 No. 560 "About the taking of special measures for securing the Russian federation" was signed. In order to perform this Decree the Government of the Russian Federation stated to "institute a ban for the import of agricultural products, raw materials and food in the Russian Federation, if the country of consignment of the above mentioned items is the United States of America, countries of the European Union, Canada, Australia and Kingdom of Norway, according to the list as per enclosure"¹. This enclosure included milk and products of its processing.

Taking into account the social aspect of the problem the Government of the RF immediately started to search the import substitution with the other import of dairy products from Argentina, New Zealand, Uruguay, Chile etc. Along with this they plan to increase of production capacities, increase of the productive dairy cattle livestock in our country in order to satisfy growing demands of the people. In the conditions of the overseas and economic changes the dairy sector of the Russian agro-industry has got a unique chance for the last few decades to rehabilitate and strengthen the positions since the previously cheap import braked its development.

But in spite of the optimistic forecasts for

the Russian producers from our viewpoint the situation on the dairy market will not significantly change as new experts will come instead of the old ones. The problems of the branch are not the cheap import which occupies 20-30% of the Russian market, but the problems are the absence of the free access to cheap credits, weak system of production grant, unstable price formation, disparity of inter-branch exchange and, consequently, low effectiveness of performance.

Thus we can design a situation: in order to increase the effectiveness of the branch it is necessary to perform its modernisation, and its low effectiveness contradicts the implementation of its innovative modernisation. This will take place until the state write off the debts of agricultural producers, does not deny the system of selective and point crediting and granting which are aimed not for the strengthening of the weakest part of the agro-industry, organisation and branch, but for the enlargement of the strongest part of the economy. In such conditions it is quite difficult to bring the agriculture to the new better level. These are the reasons why the efforts of the government of the RF do not make proper effect, and the plan for milk production of 37 million tons in 2012 was not performed, that's why the State programme 2020 of the 38.2 million tons of milk is at the risk of failure.

That is why agricultural producers should by themselves search for the means of their innovative production modernisation off take basing on the effective use of the whole resource potential. Some authors think that: "It is necessary to distinguish: the process of traditional modernisation which is based on the improving of some parameters of the productive-business system within the ruling technological level of processes organisation in the system; the process of innovative modernisation which is based on the extreme change of the ruling technological level of its processes organisation"⁵.

Theoretically such understanding of the modernisation processes is to our mind not correct and does not display their essence since, first of all, the author does not suppose the innovations of the agro-industry system in the first case, and does not suppose crucial changes of functions and structures of this system in the second case; this cannot lead to its improving, but can result in

formation of a new system of production.

That's why we offer the definition of modernisation as the realisation of the necessity of innovative changes in the system of doing business in this field which is aimed at increase of its effectiveness allowing rehabilitating the system but not breaking it.

During the investigation and implementation of modernisation processes it is necessary to take into account the levels of objects:

- a) part of the system of branch running;
- b) part of the system of cattle breeding running;
- c) part of the system of agricultural organisation running;
- d) part of the system of regional agriculture running;
- e) part of the system of regional agro-industry running;

Each part of the system is a production factor which according to its priority degree can be the factor of the first level - priority-factor, factor of the second level - comprehensive, or the factor of the third level - necessary one.

It should be noted that the priority of factors can be of temporary or constant character. Significantly: for the English milk producers the factors of price formation and production distribution were necessary but not priority one

until August 2014. After the embargoing of the products supply to Russia these factors turned to the most priority ones.

It is easy to notice that with the achieving of the target parameters the priority factor loses its former urgent nature and becomes a necessary factor. That is the factors circulation within the system. The normal functioning of the mechanisms of comprehensive factors speaks for the stability of the system until some of its parts start to "rust". Generally the improvement of the system can be performed in three variants depending on the set goal:

- a) modernisation of the weakest part of the system;
- b) modernisation of all the parts of the system;
- c) modernisation of the strongest part of the system.

The example of the third variant can be the power industry which is the main factor in the Russian economy system.

Distribution of factors according to their priority allows us to focus the resource potential on the main direction of the production development, sets the stages, terms and sequence of modernisation processes implementation. On figure 2 you can see the diagram of factors priority in the system of dairy industry.

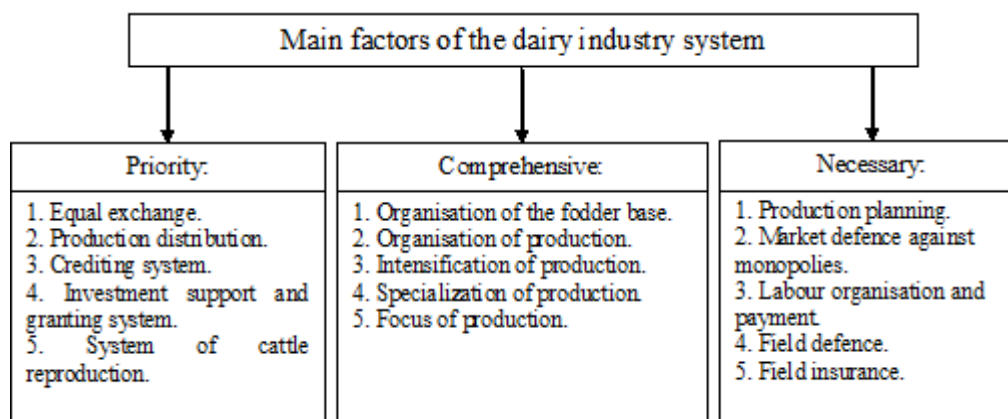


Fig. 2. Diagram of factors priority in the system of dairy industry of Tambov region agricultural organisations

The investigators of the system usually find its weakest part and develop measures to strengthen it.

According to figure 2 the system of dairy industry in the region has five weak parts which

are the reasons for low-margin running of the branch and that is why they are called priority ones. Generally all the parts or factors of the system of dairy industry need modernisation. But there is no doubt that the implementation of this idea is quite

difficult due to the financial inability of agricultural organisations of the region.

That's why there is a task to implement innovative modernisation of the factors which determine strategic direction of dairy industry development aimed at increase of its effectiveness in agricultural organisations on Tambov region.

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