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BASIC DIRECTIONS FOR FORMING PERSPECTIVE FORMS OF AGRICULTURAL INTEGRATION

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Abstract. The article discusses the formation of regional food sub-complexes at the present stage. The continuity of the processes of expanded reproduction along the entire technological chain “production - processing - sales of final products” is justified in order to stabilize agro-industrial production and increase its competitiveness. The agro-industrial complex in developing countries does not yet ensure food independence, full competition in the food market with manufacturers from more developed countries, and the satisfaction of consumer demand in domestic products, which indicates its low efficiency and the need to increase competitiveness based on its structural adjustment. The global financial crisis creates the prerequisites and creates an objective need to develop priority areas for overcoming it based on the formation of effective market structures and mechanisms with effective state management of the economy through economic leverage. To do this, we should use the internal factors of stabilization and growth in the agro-industrial complex itself: they fully include structural transformations within the framework of integrating agro-industrial sectors into a single reproductive cycle. At the same time, the purpose of agro-industrial specialization of production is to create conditions for increasing the competitiveness of industries on the basis of increasing production volumes, reducing costs, increasing labor productivity, product quality, solving social problems, which has recently been reflected in the implementation of the priority national project “Development of the agro-industrial complex”.

Keywords: food subcomplex, integration, cooperation, competitiveness, efficiency, economic growth.

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JEL Classifications: Q16, Q18

1. Introduction

The country's agro-industrial complex is a holistic socio-economic system consisting of organically interconnected structure-forming elements, the functioning of which is mutually dependent on the development of both individual elements and the entire system as a whole. The openness of such a system manifests itself, first of all, in the fact that its functioning is significantly influenced not only by the internal (micro), but also the external (macro) environment in relation to it (Colleran, 2020; Samusenko et al., 2020).

Currently, agro-industrial integration is a multifaceted multi-level process, where firms, corporations, regional groups for the production of agricultural raw materials, processing and sales of products, which are called transnational corporations (TNCs), participate in a wide variety of forms. Their essence consists in the presence of large-scale associations of credit and financial, production, scientific, technical, trade and service structures in the agro-industrial complex, which carry out their operations not only in the host country of the parent company, but also in many other regions and foreign countries. A distinctive feature of the functioning of TNCs in the agricultural sector is the presence of direct foreign investment and the production of goods and services of an agricultural profile, moreover, efficiently operating medium and small farms and cooperatives are increasingly being included in their business sphere (Gapsalamov et al., 2020; Rahman and Bobkova, 2017).

The development of agricultural cooperation provides for its formation in four main areas: cooperation at the enterprise level, inter-farm cooperation, territorial cooperation at the district and regional levels, and inter-regional cooperation (German et al., 2020; Kazmina et al., 2020; Minakhmetova et al., 2020). For this purpose, within the framework of a specific regional product sub-complex (sugar beet), in parallel with the cooperation of agricultural enterprises, it is necessary to create associative formations of processing enterprises to combine material and financial resources, master rational technologies, etc (Prokhorova et al., 2016; Bykanova and Akhmadeev, 2019). However, in order to link the interests of participants, the need to create agro-industrial groups that promote vertical integration, combining agricultural production with processing, marketing, supply and agro-service. The development of these areas is due to the objective economic process, associated, on the one hand, with the social division of labor and its specialization, scientific and technological progress, natural and economic conditions, and on the other, with the need for interaction between specialized sectors and types of agricultural and industrial production (Coluccia et al., 2020; Voronkova et al., 2020a,b; Plaskova et al., 2020; Fomin, 2018; Polyakova et al., 2019).

The structure of the agro-industrial complex that developed in stagnant years does not fit into market conditions, and especially in conditions of cyclical economic development, accompanied by impressive local, regional and world crises. The difference in production conditions by region, the level of development of productive forces, national and local traditions determines the multivariate approaches to the formation and effective functioning of regional agro-industrial subcomplexes, which are components of the agro-industrial complex. Regional agro-industrial complex is a set of technologically, organizationally and economically related agro-industrial sectors of the region, the purpose of which is to satisfy the needs of the country's population in food products and commodities from agricultural raw materials.

The final products of the regional agribusiness are represented by various food products and products of other industrial sectors-consumers of non-food agricultural raw materials. However, the enterprises of each branch of the agro-industrial complex are guided by their own interests, which are isolated from each other as business entities. And yet they are forced to constantly renew economic ties, because each of them performs only one technological stage of a single reproductive process of the final products (Osadchy and Akhmetshin, 2015; Yemelyanov et al., 2018). They are interconnected sequentially: each is a consumer of resources produced at the previous stage of the reproductive cycle, and at the same time, is a producer of resources intended for consumption at the subsequent stage.

Owing to the increased demands of the population for high-quality, affordable and well-packaged products, a separate agricultural or processing enterprise is not able to create a market niche for itself and successfully compete with suppliers of imported food. This is hindered by the traditional uncoordinated actions of various sectors of the agro-industrial complex and the contradiction of their interests. Even in individual interindustry and inter-farm processes, a lack of proportionality, consistency and rhythm in work is often manifested, which leads to losses in the entire agricultural sector, and in the most vulnerable link - agriculture (harvesting, storage, processing and marketing of products).

2. Methods

In the absence of centralized planning in order to improve management, forecasting, planning, there is an objective need to create an integrated system of market relations, where each of its elements works for a common end result - satisfying the needs of the population in food products and maximizing profits. Such an integrated system is regional food sub-complexes, which allow combining agro-industrial sectors in a single reproduction cycle “production - processing - sales” on the basis of specialization in the production of final food products. At the same time, the aim of the regional agro-industrial specialization of production is to create conditions for increasing the competitiveness of industries on the basis of increasing production volumes, reducing costs, increasing labor productivity, product quality, and solving social problems. The criterion for identifying each specific product subcomplex in the regional agribusiness system as independent planning objects is the technological connection in the movement of the product from its initial raw material stage to the final product necessary to satisfy consumer demand (Nechaev et al. 2009).

The following subcomplexes can be distinguished in the agricultural sector of the region (Fig. 1).

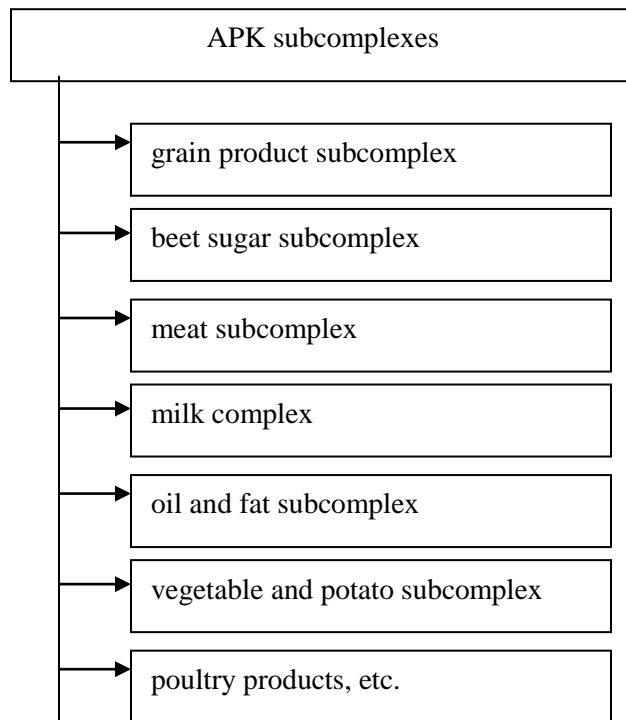


Figure 1. Subcomplexes of the agro-industrial complex

Source: own research

The feasibility and necessity of considering the regional agro-industrial complex by product sub-complexes is important from the point of view of establishing rational proportions at different reproductive stages, each of which belongs to different industries. For example, the production of raw materials is agriculture; storage - both agriculture and specialized storage facilities in the processing industries; processing - processing industry; sales of finished products - trade. Table 1 presents the rating of world exporters of agricultural products in 2018.

Table 1. Rating of world agribusiness exporters in 2018

Rating	Country	Revenues from export of agricultural products, \$ billion	The average price per kg. export products, \$
1	USA	105,7	0,6
2	Netherlands	73,2	1,7
3	Brazil	65,1	0,5
4	Germany	64,0	1,4
5	France	53,6	1,0
6	China	52,5	1,8
7	Spain	43,1	1,7
8	Canada	36,6	0,7
9	Italy	35,3	2,0
10	Belgium	34,3	1,3
...
20	Russia	17,6	0,3

Source: Data from NEO, 2019

However, the regional agro-industrial complex cannot develop without the production of means of production for agriculture, the processing industry, and other branches of the subcomplex. Therefore, it is advisable to distinguish the following areas according to the functions performed, the role in food production and providing them with the population in the regional agro-industrial complex:

- production of means of production for agriculture, processing industry and other industries of sub-complexes;
- agriculture - agricultural production, storage of agricultural raw materials;
- processing - the processing industry, specialized storage facilities in the processing sectors of agricultural raw materials;
- production and market infrastructure - agricultural service, procurement of raw materials and finished products, storage, transportation and sale of raw materials and finished products.

The structure of the product subcomplex is characterized by the contribution (specific gravity) of each sphere to the cost of the final product. With a rational structure of the subcomplex, the bulk of the cost of the final product is made in the third and fourth areas, since agricultural raw materials are processed, stored, packaged and packaged. However, in fact, in most grocery sub-complexes in these areas less than half of the retail cost of the product is created. The existing imbalances between sectors in food sub-complexes can also be judged by the structure of labor resources and fixed production assets. So, if in developed countries the share of workers in the processing, storage, transportation and marketing of products is about 70%, and directly in agriculture is about 30%, then in our country this ratio is diametrically opposite (Melnikov, 2019).

A rationally formed structure of food subcomplexes provides: obtaining the maximum number of final products and profit with minimal labor and funds per unit of production, combining in a single technical process of

production, storage, processing and sale of products, uniform loading of production capacities of processing enterprises, high competitiveness of semi-finished and finished products products.

3. Results

The formation of regional food subcomplexes should be carried out on the basis of a program-targeted approach, linking production processes in the agro-industrial sectors within the framework of a single reproduction process. The criterion for classifying enterprises and industries as a food subcomplex can be the degree to which industries interact with agriculture, which is part of the food subcomplex on a territorial basis. An indicator in which this criterion finds quantitative certainty at the regional level is the ratio of the optimal capacity of enterprises of the industry in this region to the real need for their services. If the indicated ratio is less than unity (or equal to it), then it is included in the composition of this food subcomplex (Kosenchuk, 2019). With this approach to determining the composition of regional food subcomplexes, enterprises of the group of capital-forming industries — tractor and agricultural engineering, equipment for the food and light industry, the production of mineral fertilizers, and a number of processing industries involved in the primary processing of agricultural raw materials remain outside. Consequently, capital-forming industries must provide their products to the entire regional agro-industrial complex, and a regional beet-sugar subcomplex, for example, may include agricultural enterprises engaged in the production of sugar beets, including seed production; processing enterprises of the sugar industry (production of sugar from sugar beets, raw sugar and bringing it to the consumer); production and market infrastructure (system of procurement, transportation, sale of sugar beets, sugar); social infrastructure (Fig. 2).

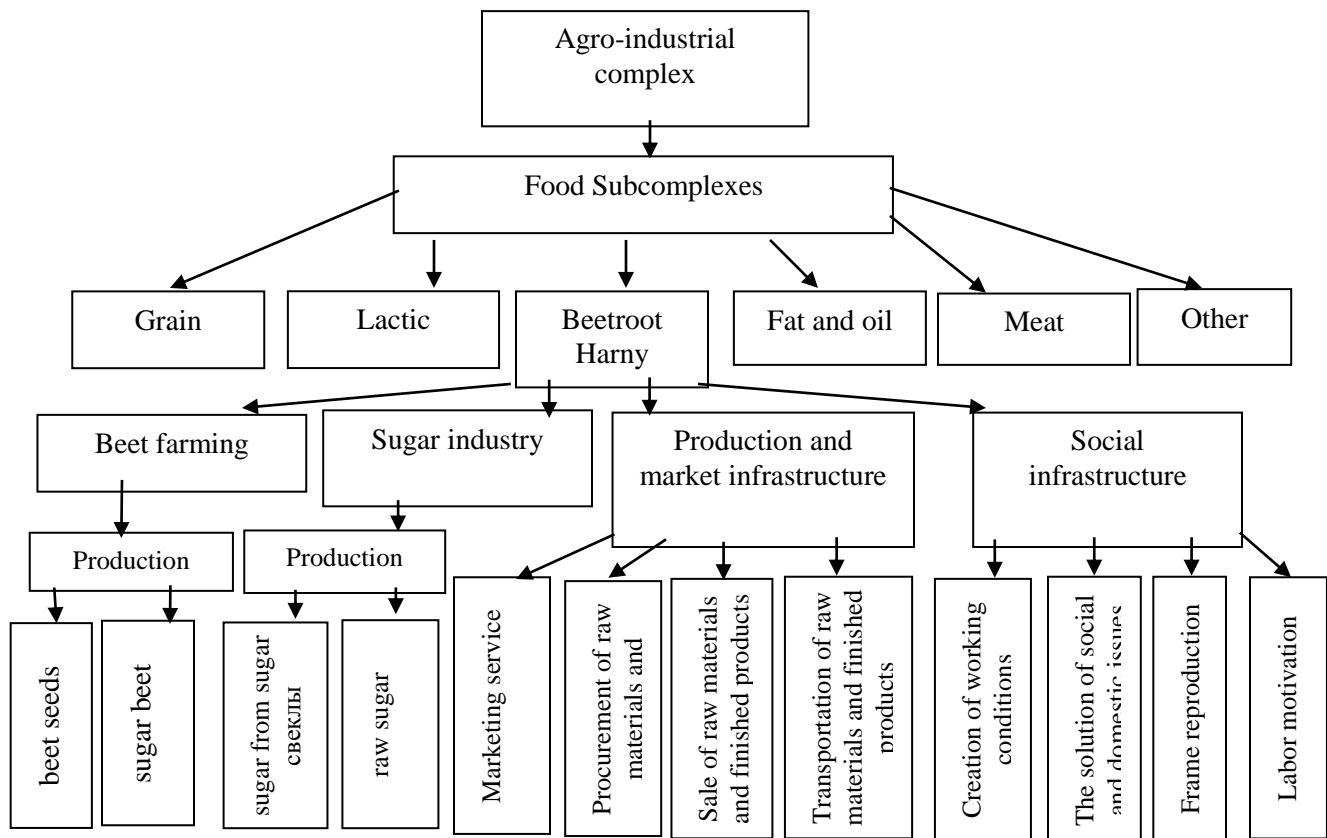


Figure 2. The product structure of the agricultural sector

Source: Authors' research

The product structure of the regional agro-industrial complex, unlike the industrial one, provides orientation of each sub-complex to the final result with the aim of improving production technologies, its organization, marketing of finished products, and regulation of economic relations between its participants. Product sub-complexes have greater reliability. Cooperative agroindustrial and other organizational and economic formations contribute to improving the location of agricultural production, deepening its specialization, the rational use of raw materials and production potential, increasing the efficiency of agricultural sectors. At the same time, the close interconnection and dependence of agricultural cooperation, specialization, concentration and agro-industrial integration is manifested, which creates conditions for the growth of the efficiency of agricultural production. In practice, the mismatch between the location of processing enterprises and the raw material base within the region, the breakdown of intersectoral ties in food subcomplexes are the reasons for the reduction in food production, the presence of large imbalances between industries, large production and commercial risks (Kozlov, 2019).

Based on the foregoing, the formation of regional food sub-complexes is influenced by the territorial specialization of agricultural production, which is manifested in the differentiation of the distribution of agricultural sectors, that is, concentration in certain territories with relatively more favorable production conditions for certain types of agricultural products and processing enterprises. The concentration and specialization of agriculture within a certain territory determines the development of the processing of agricultural products and infrastructure sectors. At the same time, the opposite effect is also observed, that is, the development of processing industries actively affects the specialization of agriculture in a particular region. The result of these processes is the establishment of sustainable intersectoral relations between producers of agricultural raw materials, processing enterprises and infrastructure.

The main economic task in improving the efficiency of production processes is the production of competitive products that provide the necessary income to producers. Therefore, it is important to methodologically correctly evaluate the competitiveness of individual sectors and industries in agro-industrial formations.

Competitiveness is understood as a complex of consumer and price characteristics of a product (product) that determine the possibility of its profitable sale, obtaining the largest amount of profit (per 1 ha, unit of capacity, raw materials, labor, invested capital, etc.). At the regional level, the assessment of product competitiveness can be determined by the formula:

$$K_n = P / S$$

where K_n - is the level of regional competitiveness of the product, rubles. ha;

P - the amount of profit (loss) from its sale;

S - sown area or arable land used for its production.

Regional competitiveness of agricultural products (food) is a combination of climatic, socio-economic characteristics that determine the receipt of a relatively greater profit per 1 ha of arable land and agricultural land. It is determined by the ratio of the amount of profit from the sale of manufactured products to the number of land that was used for its production in a particular year.

Studies have shown that a low concentration of agricultural crops in the raw material zones of the processing industry does not contribute to the deepening of specialization, and as a result of high transportation costs, its production becomes uncompetitive. For example, the production of sugar beets at a distance of more than 50 km from the sugar factory is unprofitable. Therefore, we propose, within the framework of regional food sub-complexes, to concentrate the production of agricultural raw materials in the most favorable natural and economic zones where there are processing capacities, and it is advisable to deepen the specialization of agricultural producers on the basis of the introduction of

scientifically-based crop rotation, that is, the creation of specialized farms of that direction, to the subcomplex of which they relate.

An important aspect of the problem of increasing the efficiency of agricultural production is the identification and classification of growth factors. We believe that in a market economy they can be divided into three groups: demand and exchange, supply, economic interaction of enterprises with the state (Fig. 3).

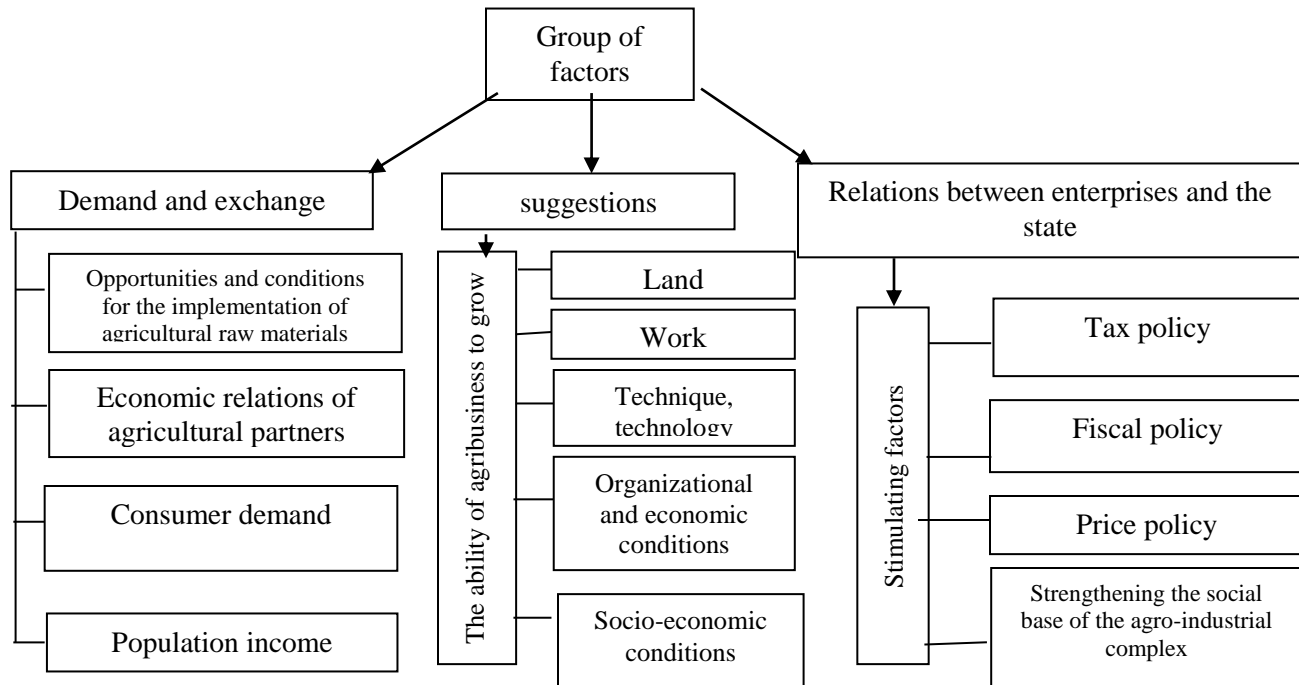


Figure 3. Classification of growth factors for the efficiency of agricultural production

Source: Authors' research

The first group of factors (demand and exchange) determines the possibilities and conditions for the sale of agricultural raw materials, the economic relations of agricultural partners, the purchasing demand of the population for food.

The second group includes land, labor, technical and technological, organizational and economic, socio-economic and other factors (Herningsih et al., 2019). They determine the physical ability of agricultural production to grow.

The third group of factors reveals the conditions of relations between enterprises and the state. It is about improving the tax, credit and financial, social policy of the state, aimed at stimulating agricultural production.

Thus, the use of such an approach to increasing the efficiency of agricultural production necessitates the justification of new (innovative) approaches to the formation and effectiveness of the functioning of regional food subcomplexes, taking into account the influence of the above internal and external economic factors.

It should be noted that the legal forms of large product groups created and can be varied, depending on the capital structure, partnership and economic goals - mixed public-private companies, private firms and corporations, joint ventures with foreign capital, financial and industrial groups, production and sales unions, associations, etc. The head of such companies and corporations can be both head integrator companies (processing enterprise, livestock complex, trading company, etc.), and a specialized management company with its own brand (Vasilev et al., 2019). At the same time, practice shows that food sub-complexes can and should be both highly specialized (for example, dairy, meat, grain, beet sugar, etc.) and multidisciplinary when they are involved in the production and

marketing of many diverse types of food. Their effective activity largely depends on due consideration of the characteristics of individual industries, due to a fairly close relationship, and sometimes interdependence. Thus, a close relationship is observed in the production of grain, sugar beets, milk and meat, and the products of these industries are included in four food subcomplexes: grain, sugar beet, dairy and meat. Waste and by-products of some sub-complexes are often used in others. For example, straw, oilcake, beet pulp, stream, bard obtained from the processing of agricultural raw materials (grain crops, sugar beets) are effectively used for livestock feed in dairy and meat sub-complexes (Poltarykhin, 2020).

Thus, the food subcomplex is a combination of horizontal agricultural cooperation, specialization, concentration and agro-industrial vertical integration of enterprises and organizations that successively carry out the stages of the reproduction cycle - "production of raw materials - processing - sale of finished products".

Based on the definition of a regional food subcomplex, it is important to justify a system of indicators for its economic assessment in order to conduct a comprehensive analysis and draw conclusions about the main directions of increasing the efficiency of agricultural production throughout the reproduction chain. Indicators should be objective, proceed from its essence, reflect the pace and effectiveness of this process. Today, large discrepancies exist in determining indicators of the level of intensity of links in a regional food subcomplex. Some authors believe that the level of intensity can most justifiably be measured by one complex integral indicator, while others - by a system of indicators. Some believe that the level of this process can be determined by the gross output. Most economists measure the intensity of the concentration of investment of means of production and labor per unit of land. At the same time, some authors attach paramount importance to one type of cost, and others to another (Nechaev et al. 2009).

Agro-industrial integration as the basis of expanded reproduction, when the costs of social labor and its results appear and change in organic dependence, allow expressing it in a specific causal system of indicators. The measuring system of the degree of integration within the framework of production processes should be based on a set of indicators in terms of value and in kind and money terms, which allows more accurate and comprehensive measurement of this complex economic process. At the same time, since many individual indicators do not allow obtaining reasonable data on the level and dynamics in individual industries, regions and making unambiguous conclusions, there is a need to improve the methodology for determining generalizing indicators.

Currently, there are no contradictions among economists in comparing the effect with resources; the need to take into account all the resources or costs used in production and acting as growth factors. In scientific research and in practice, basically two methods are used to determine the effectiveness of agricultural production, corresponding to two forms of measuring effect and resources. According to the first of them, the efficiency of agroindustrial production is expressed in a fraction, in the numerator of which the effect (revenue) is indicated, in the denominator - resources (costs). This calculation is widely used in the analysis of criteria and intensity indicators of various levels and meets the requirement of measuring the effect with all resources. This method provides comparability of the results of individual links (with a reasonable assessment of products and resources) in time and space. However, it does not reflect the scale of production, and, consequently, the volume of contribution to the final results. The second method boils down to subtracting the cost effect of its creation from the magnitude. This is how volume indicators are formed: profit, net production (gross income), etc. However, they only reflect part of the resources consumed in the valuation (material costs, wages, depreciation). Created inventories are not taken into account, living labor costs are estimated by wages, which does not meet the requirement of commensurate homogeneous resources. If you use the estimated profit, from which the payment for production assets and fixed (rental) payments are deducted, and adjust the amount of retained earnings depending on the quantity and quality of labor resources (in the form of payment for these resources), then subject to the above requirements, a reasonable assessment of the products and resources, the mass of estimated profit will characterize the intensity (efficiency). In addition to profit, net production is also assumed as an indicator of efficiency (to characterize the activities of a particular enterprise). In practice, the level of profitability is used as a general indicator of production efficiency (Poltarykhin, 2020).

The emerging need for in-depth studies of the effectiveness of integration of agricultural production necessitates the establishment of not only a general indicator, which is somewhat limited, not complete, but also a system of private indicators. Integration is such a multifaceted and multifactorial category that a full reflection of all its aspects is possible with the help of a system of indicators.

4. Discussion

Having determined the regional competitiveness of all types of agricultural products produced in the region, it is possible to plan a promising structure for the production of agricultural products, as well as the structure of crops, marketable products, etc.

An important aspect of the problem of increasing the efficiency of agricultural production is the identification and classification of growth factors.

The first group of factors (demand and exchange) determines the possibilities and conditions for the sale of agricultural raw materials, the economic relations of agricultural partners, and the consumer demand for food.

The second group includes land, labor, technical and technological, organizational and economic, socio-economic and other factors. They determine the physical ability of agricultural production to grow.

The third group of factors reveals the conditions of relations between enterprises and the state. It is about improving the tax, credit and financial, social policy of the state, aimed at stimulating agricultural production.

Thus, the use of such an approach to increasing the efficiency of agricultural production necessitates the justification of new (innovative) approaches to the formation and effectiveness of the functioning of regional food subcomplexes, taking into account the influence of the above internal and external economic factors.

Conclusion

Agrarian enterprises enter this unifying movement, striving to reduce the risk associated with production, its dependence on climatic conditions, the spontaneity of the agricultural product market, the dictates of processing enterprises, and the need to increase the competitiveness of production. Processing and servicing enterprises also strive to secure stable incomes due to the availability of a reliable raw material base, better use of raw materials, improving the quality of their products, reducing their cost and conquering sales markets. The choice of this or that form of integration depends on the production and economic situation in the region, the state of the food market, forms of pooling capital and their participation in management, the capabilities of the parent enterprise, but regardless of the form chosen for all agro-industrial groups, the main thing is that they unite the entire reproductive process, from the agricultural producer to the consumer of the finished product.

Thus, the formation of regional product sub-complexes at the present stage is closely connected with the processes of cooperation and integration, due to the need to ensure technical, technological, organizational and managerial, economic unity and continuity of the expanded reproduction processes along the entire production chain “production - processing - implementation of final products” with the goal of stabilizing agricultural production and increasing its competitiveness.

References

- Bykanova, O.A. & Akhmadeev, R.G. (2019). Universal VAT Loyalty Policy for B2B E-Commerce. Proceedings of the 34th International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Management of Innovations through Sustainable Economic Competitive Advantage, 3046 – 3051.
- Colleran, H. (2020). Market integration reduces kin density in women's ego-networks in rural Poland. *Nature Communications*, 11(1) <https://doi.org/10.1038/s41467-019-14158-2> Data from NEO Center Consulting Company, RBC 2019
- Coluccia, B., Valente, D., Fusco, G., De Leo, F., Porrini, D. (2020). Assessing agricultural eco-efficiency in Italian regions. *Ecological Indicators*, 116 <https://doi.org/10.1016/j.ecolind.2020.106483>
- Fomin, A. (2018). Import substitution in the agro-industrial complex of Russia. *International Agricultural Journal*, 61(1), 1.
- Gapsalamov, A. R., Merzon, E. E., Kuznetsov, M. S., Vasilev, V. L., Bochkareva, T. N. (2020). The education system in the context of socio-economic transformations. [O sistema educacional no contexto das transformações socioeconômicas] *Periodico Tche Quimica*, 17(34), 874-883.
- German, L. A., Bonanno, A. M., Foster, L. C., Cotula, L. (2020). "Inclusive business" in agriculture: Evidence from the evolution of agricultural value chains. *World Development*, 134 <https://doi.org/10.1016/j.worlddev.2020.105018>
- Herningsih, Tchuykova, N. M., Shankar, K., Wekke, I. S., Qadri, M. N. (2019). The starbucks effect: It affects on nearby organization. *Journal of Critical Reviews*, 6(5), 160-165. <https://doi.org/10.22159/jcr.06.05.28>
- Kazmina, I. V., Shafranskaya, C. Y., Saenko, I. I., Kozhemov, S. I., Gayazova, S. R., Zatsarinnaya, E. I. (2020). An economic security management system of an enterprise in the digital economy. *Talent Development and Excellence*, 12, 454-466.
- Kosenchuk, O., Shumakova, O., Zinich, A., Shelkovnikov, S., Poltarykhin, A. (2019) The development of agriculture in agricultural areas of Siberia: Multifunctional character, environmental aspects. *Journal of Environmental Management and Tourism*, 5(37), 991-1002
- Kozlov, V., Poltarykhin, A.L., Vasyutkina, L., Ponomarev, V., Filippova, O., Popkov, S. (2019) Economic and environmental concept of food development in Russia. *Journal of Environmental Management and Tourism*, 7(39), 1509-1517.
- Minakhmetova A.Z., Pyanova E.N., Bochkareva N.G., Borisov V. V. (2020). Digital Socialization of Teenagers. *Talent Development and Excellence*, 12(3s), 292-300.
- Nechaev, V.I., Nechaev, I., Vasiliev, N.K., Reznichenko, S.M. (2009) Development of agribusiness based on investments. *Economics of agriculture in Russia*, 6, 67-78.
- Osadchy, E. A., Akhmetshin, E. M. (2015). Integration of industrial and educational sphere in modernization of economic relations. *Journal of Applied Economic Sciences*, 10(5)
- Polyakova, A. G., Loginov, M. P., Strelnikov, E. V., Usova, N. V. (2019). Managerial decision support algorithm based on network analysis and big data. *International Journal of Civil Engineering and Technology*, 10(2), 291-300.
- Poltarykhin, A., Ivanova, V., Ivanov, S. (2020) World experience in the formation and development of the "digital economy". *Talent Development and Excellence*, 12, 372-384.
- Plaskova, N. S., Prodanova, N. A., Prokofieva, E. V., Seliutina, T. S. (2020). Reforming the methodological support of the information and analytical base for evaluating the effectiveness and investment attractiveness of organizations. *Journal of Critical Reviews*, 7(5), 747-749. <https://doi.org/10.31838/jcr.07.05.152>
- Prokhorova, V. V., Klochko, E. N., Kolomyts, O. N., Gladilin, A. V. (2016). Prospects of the agro-industrial complex development: Economic diversification, business development, mono-industry town strengthening and expansion. *International Review of Management and Marketing*, 6(6), 159-164.
- Rahman, P. A., Bobkova, E. Y. (2017). The reliability model of the fault-tolerant border routing with two Internet services providers in the enterprise computer network. *Journal of Physics: Conference Series*, 803(1). <https://doi.org/10.1088/1742-6596/803/1/012124>

Samusenko, A. S., Plaskova, N. S., Prodanova, N. A. (2020). *The analysis of the external environment to determine the practical focus of applied research and development in the framework of innovation* https://doi.org/10.1007/978-3-030-44703-8_27

Yemelyanov, V. A., Yemelyanova, N. Y., Morozova, O. A., Nedelkin, A. A. (2018). Specialized computer system to diagnose critical lined equipment. Paper presented at the Journal of Physics: Conference Series, 1015(5) <https://doi.org/10.1088/1742-6596/1015/5/052032>

Vasilev, V. L., Vlasova, N. I., Kazakov, A. V., Kotova, X. Y., Ilyasov, R. H. (2019). Improving Management Functions at an Enterprise: Levels of the Internal Control System. *Quality - Access to Success*, 20(171), 39-43.

Voronkova, O. Y., Ovchinnikov, Y. L., Avdeev, Y. M., Fomin, A. A., Penkova, A. N., Zatsarinnaya, E. I. (2020a). Land Resource Management in the Agro-Industrial Sector of Russia. *Talent Development and Excellence*, 12(3s), 422-431.

Voronkova, O. Y., Goloshchapova, L. V., Karabasheva, M. R., Khadzaeva, A. R., Popok, L. E., Turgaeva, A. A. (2020b). Development of the organic production sector in the regions: Economic, social and budgetary effect. *Talent Development and Excellence*, 12, 26-37.

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