Organizational And Economic Bases Of Pig Breeding In Ukraine

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Abstract- The article examines and summarizes the foreign experience of organizational support for the functioning of breeding pig production in the leading countries that have now formed the most developed system of breeding and breeding work in pig breeding. The generalization of foreign breeding systems testifies to the high economic efficiency of modern breeding programs based on innovative genetics, breeding and biotechnology of reproduction of the herd and requires systematization of the organizational and economic bases of the Ukrainian breeding pig breeding system.

The efficiency of the actual system of breeding and breeding work of domestic breeding farms - breeding yards and breeding producers is evaluated. The restraining factors of the breeding pig breeding are revealed and a number of effective measures and instruments of the general economic and internal organizational nature are offered that will ensure the intensive development of the breeding enterprises. The revival of breeding pig breeding needs to improve the regulatory framework, modernization of the system of taxation of breeding pig breeding enterprises, especially as regards the application of a single tax to 4 groups of payers and a phased introduction of a profit tax on sales of products, which will facilitate the updating of the material and technical base in the agricultural sector, and in the result will ensure the competitiveness of pig products in the domestic and foreign markets.

The organizational and economic principles of functioning of pedigree pig breeding and formed by the algorithm of creation of system of development of breeding pig breeding in Ukraine are substantiated. The directions of the competitiveness of breeding pig production, the development of which is based on resource-saving technologies and the use of innovative breeding developments, which enables commodity producers to significantly reduce costs and increase the economic efficiency of pig products production, are offered.

Keywords: breeding pigs, genetic resources, herd productivity, reproduction, breeding and genetic centers.

1. INTRODUCTION

A balanced development of the pig products market can be ensured under the condition of comprehensive modernization of breeding pigs. As convinces the world experience, modern breeding branch of the industry and the effective use of genetic characteristics of animals, on the basis of which it is necessary to create a system of regulation of complex biological resources, becomes of great importance in modern pig breeding. The organization of the breeding and breeding system in pig breeding is based on the use of modern breeding methods and takes into account a number of key indicators that make it possible to adjust the population genetic parameters, evaluate the genetic potential of the lines, breeds or individual populations of animals, and determine the impact of various factors on the selection efficiency. The full functioning of this system begins with the balance of the market of pedigree products, which will promote the increase of genetic potential, preservation and improvement of the gene pool of valuable breeds.

2. ANALYSIS OF THE LATEST RESEARCH AND PUBLICATIONS

The peculiarities of functioning of pig breeding were studied by scientists, among them Alexeyuchuk T.V., Berezivsky P.S., Rybalko V.P., Rusnak P.P., Talavyrya M.P., Topiha I.N., Khristenko O.I., Schepienko P.V. At the same time, comprehensive research aimed at increasing the economic efficiency of breeding and breeding work in pig breeding in our country has not been carried out, there is no single method of economic evaluation of breeding achievements. Implementation of the program for the development of the breeding base of domestic pig breeding and the replacement of foreign genetic resources in the domestic market requires the development of new approaches to the intensification of the breeding process in the industry and the construction of an effective model of management of the genetic resources of the pig enterprise,

taking into account the organizational, economic and technological factors of selection.

3. THE PURPOSE

The purpose of the research is to evaluate the current state of development of the market of pig products, to reveal the problematic aspects of the development of breeding pig breeding and to substantiate the directions of increasing the economic efficiency of production and sale of pig production in agricultural enterprises of different forms of farming.

The main objectives of the study are:

- 1. To evaluate the foreign experience of the organization and functioning of breeding farms and to substantiate directions of its possible adaptation to domestic practice;
- 2. To analyze the current state of development of breeding pig production through the definition of the turnover of pigs in breeding plants and reproducers, depending on sexual characteristics;
- 3. To generalize, systematize and identify the containment and stimulating factors of the impact on the development of the pig breeding industry;
- 4. To propose effective measures and tools of a general economic and internal organizational nature that will promote the intensive development of breeding pigs, namely the increase of genetic potential, preservation and improvement of the gene pool of valuable breeds of pigs.

4. MATERIALS AND METHODS

In the process of scientific research, the following research methods were applied: abstract-logical - in developing the working hypothesis of research and substantiation of the areas of improvement of breeding and breeding work in pig breeding; calculation-constructive - at carrying out of analytical calculations for an estimation of a modern state of domestic

breeding pigs; economic-statistical - when processing and analyzing statistical information.

The research used the normative basis of the state economic regulation of the market for pig products, statistical and analytical information from the Ministry of Agrarian Policy and Food of Ukraine, publications of domestic and foreign scientists and practitioners, the results of their own studies of authors regarding the state and trends of the development of the world market of pig products and its features in the leading countries. The world, as well as scientific information posted on the World Wide Web.

5. RESULTS AND DISCUSSION

A generalization of the research of foreign scientists has revealed that the development of breeding pig breeding is at the center of attention in most countries of the world. Thus, the characteristic feature of the development of American pig breeding is to increase the efficiency of the industry through the use of improved breeding aspects of animals. There are tendencies in the country to replace the fatty and meat-fat pigs with meat-type animals, usually hybrids. The intensive development of breeding pigs in the United States has led to the formation of eight different industry unions and associations. In 1994, four of them, Yorkshire, Duroc, Hampshire and Landras, were united into the National Register of Pigs (NSR), to which independent producers of breeding material enter the farmers. Members of the NSR are required to register pure breed pigs, and the certificate they receive is not only a confirmation of pure breeding and origin of animals, but also as a tool for selecting breeding pigs and selecting parental pairs [1].

We consider it expedient to consider the experience of organizational support for the functioning of breeding pig breeding in France, which today has formed the most developed systems of breeding and breeding work in pig breeding. It should be noted that this system is based on the pyramid structure of pig farms and consists of the following interrelated parts: selection (genetic enhancement); reproduction; production of breeding stock. The breeding businesses of France are part of a single pig system for breeding pigs called "Pig Breeding Organization". These farms are closely interconnected with associations of pork producers and meat processors, which allows French pigs to implement unified breeding programs and produce breeding improvements in accordance with the requirements of the market [2].

important feature of development of breeding pigs in France is the availability of centers for artificial insemination, which allows breeders and commodity farms to receive short-term purebred and hybrid boars. In addition, in the country today, more than 75% of fertilization is carried out by artificial insemination on the basis of the delivery of semen products in such centers. We believe that the peculiarity of the French pig system for breeding pigs is also a positive influence on the development of breeding pigs, as the Ministry of Agriculture maintains a list of recognized breeds of animals. The main such breeds are large white, landraces and, to a lesser extent, Duroc. In addition, a number of rocks (Hampshire and Chinese rocks) are used as component breeds of individual lines [3].

At the same time, for Hungary, where the characteristic features of the development of breeding pigs are the reduction of the number of pigs and the increase in the size of farms, the lack of state support instruments, the number of test stations from 7 to 2 was reduced. As a result, in the country, the main purpose of development of breeding pigs is the breeding of productive sows with high reproductive qualities, which allows producing livestock with high growth potential and high qualitative parameters of products [4].

The practice of developing breeding pig breeding in Denmark is worthy of Ukrainian practice, where the reproduction of a herd must be followed by a special agreement, according to which the breeding results must be recorded in a centralized pig data bank. In addition, there are fixed requirements for the size of the herd: since 2007, the herds of Landras and Yorkshire must produce at least 300 and Duroc herds of at least 200 purebred animals a year. Also, an individual breeder can not own more than 10% of a particular species of Landrace, Yorkshire and Durok. It should be noted that the reason for establishing the minimum size of individual herds is that it is impossible to conduct effective testing or environmental assessment of animal evaluation properly in small herds. Establishing the upper limit of the size of the herd is to avoid monopolization and minimize the risks of the outbreak of various diseases. Breed breeding pigs in Denmark must have a health certificate and each herd is inspected once a month by the vet [5].

It should be noted that the breeding program of pig breeding in Denmark, called DanBred, is organized by the National Pig Production Committee in cooperation with the Federation of Danish Pig Producers and Processors. DanBred's selection objectives are determined by the National Pig Production Committee and are based on close cooperation between pork producers and meat processing enterprises. Such cooperation provides a balance between the quality of raw materials and economically significant productive indicators [6-7].

Intensive breeding and breeding work in Canadian pig breeding and a developed breeding network of large genetic centers, breeding breeders and commodity farms have allowed Canada to become the world leader in the pork market, and breeding corporations reach a transnational level. Ukraine has the Canadian National Improvement Program (CSIP), which includes the National Pig Identification and Registration System, controlled by the Canadian Association of Pigs (CSBA) and the Canadian Pedigree

Livestock Incorporation (CLRC), and the National Genetic Evaluation System developed and is controlled by the Canadian Pig Production Development Center (CCSI), which allows coordinating work on all areas in the development of breeding pigs [8].

Another feature of the Canadian system for genetic evaluation of pigs is that the Canadian Pig Production Center (CCSI) coordinates sectoral research programs, and the Canadian Pig Bank established by the Bank makes it possible to carry out various studies that can predict the productivity of pigs [9]. The generalization of foreign breeding systems testifies to the high economic efficiency of modern breeding programs based on innovative genetics, selection and biotechnology of reproduction of the herd and requires systematization of organizational and economic foundations of the Ukrainian system of breeding pigs.

Consequently, in today's economic conditions, only a competitive production based on industrial resource-saving technologies and using the latest breeding achievements can successfully function and develop. The introduction of innovative breeding methods allows pig farmers to significantly reduce their costs and increase the economic efficiency of pig production. The economic effect of selection is expressed in the increase of proceeds from the sale of additional production, obtained during the implementation of breeding programs.

The efficiency of selection and breeding work in pig breeding in turn depends on the complex interaction of a number of organizational, economic and technological factors. Efficient use of genetic resources of the enterprise, aimed at maximizing the productive potential of animals, leads to increased profitability of pork production, reduces the term-purchase (quick-return) of investment investments and makes the industry more resistant to various crisis phenomena in the economy. Therefore, the improvement of the

organizational and economic mechanism for the intensification of the selective work in pig breeding gives the national economic effect.

As evidenced by the experience of the effective development of the pig breeding industry in the countries of Western Europe, as well as America (USA, Canada, Brazil), one of the factors behind its provision is the creation of a reliable breeding base with intensive breeding activities to improve pig production, especially meat qualities [10] These countries in the breeding process introduce the latest methods of assessing the breeding and productive qualities of animals, including the use of DNA technologies, as well as innovative approaches to feeding and keeping their pigs, which enables them to meet the growing needs of the population in meat products (in the leading the countries of the population consume 100 kg of meat and more per person, including about 40% only pork) and form export potential [11].

In Ukraine, up to 2000, breed fifteen breeds of pigs. It was believed that such a large number of different populations ensure the effective development of the industry and increase production in the natural and economic zones. However, the practice of domestic and world livestock shows that the change in socio-economic conditions affects the structural units of the breed, and therefore, they as a whole undergo constant changes in the number and location of their distribution [12]. In Ukraine, by the end of the 1990s, a large Ukrainian steppe white white. Mirgorod breed dominated among the ten rocks at the pace of growth. Since 2000, market relations in the country have developed in such a way that all breeds have decreased quantitatively, and some of them are now classified as local and disappearing. Doubtfully rational in market conditions was the decision of the Council on the solution of the issues of conservation of local breeds at the Institute of pig breeding of the UAAS on state subsidies for the preservation of endangered genotypes in all farms. The subsidy is mainly obtained by the breeding plant (98 units) and breeding reproducers (225 units), but the gene pool is concentrated not only there. In accordance with the order No. 124/27/244 of the Ministry of Agrarian Policy, the UAAS and the Ministry of Finance of Ukraine, the procedure for using the funds of the State Budget of Ukraine to implement selection programs in livestock breeding is provided. It is planned to allocate funds for full or partial reimbursement of expenses for the purchase or sale of tribal resources.

Now in Ukraine there are mainly 11 domestic and foreign breeds, two of which are universal in terms of productivity (large white and Ukrainian steppe white), three seals (Mirgorod, Ukrainian steppe ridge and large black) and six meat (land races, Poltava meat, Ukrainian meat, Durok, Wales and red white belt). Main breeds of foreign breeding: Landras, Duroc, Hampshire, Pietren, Chester White.

It should be noted that as a result of economic reforms in the direction of market transformation as a result of the violation of the production-technological chain, the existing system of harvesting the herd of herds of commodity farms and complexes by breeding young animals from the breeding plant and the reproducer to the farm was changed, resulting in a significant reduction in the use of genetic potential. Accordingly, there was a need for the import of animals of different breeds from abroad, as well as the importation of hybrids. This state of affairs in domestic breeding pigs is conditioned, on the one hand, by organizational and economic factors, and on the other hand, the lagging of the breeding base on the basic parameters of productivity due to the imperfect organization of the tribal affair, the unwavering approach to improving the genetic potential and obtaining new breeding achievements.

One of the main conditions for the stable functioning of the pig market is the effective management of selection and breeding work in livestock based on the clear interaction of all structural elements of the breeding scheme. Organizations that coordinate, serve, and directly engage in the reproduction of tribal genetic resources must be identified, indicating their functions and working principles. Today, the breeding service in Ukraine operates on two levels: state and production. Organizations and departments that are subordinated to various authorities and financed from budgets of all levels are government entities.

At the national level, the central body of state management in the field of breeding livestock is the Livestock Department with the breeding inspection of the Ministry of Agrarian Policy and Food of Ukraine, which partially controls the state of breeding livestock, coordinates the activities of all services and breeding farms. In addition, he must consolidate the work of associations, associations and other tribal organizations that function at the national level (Fig. 1).

It is established that nowadays the state management of the tribal affairs is in a critical condition, since a number of bureaucratic restrictions have been adopted, the processes of optimizing the staffing of civil servants are constantly being carried out, as well as unsatisfactory financing, they have not been able to create fully qualified tribal divisions with all the functions provided for by the legislative documents.

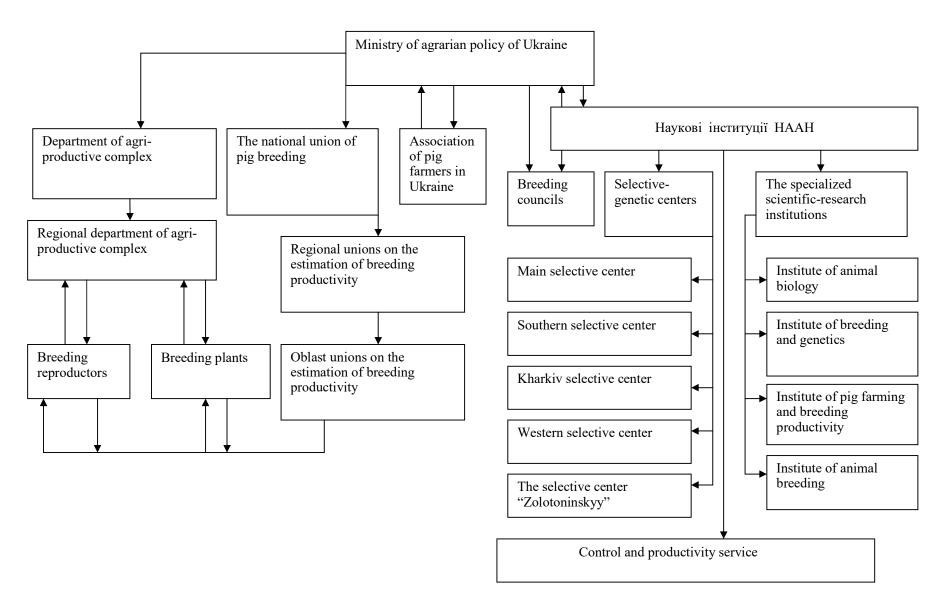


Fig. 1. Organizational structure of state regulation of breeding pig production in Ukraine (Source Compiled by *AUTHOR)

In this regard, some of these powers were transferred to state unitary tribal enterprises, which are widely represented in the regions of the country.

In addition, too small amounts of financial support for research institutes of the National Academy of Agrarian Sciences of Ukraine make it impossible to conduct scientific research on the genotypes and breeds of pigs in Ukraine. As you know, genetic centers of selection, which function as a separate structural subdivision of specialized research institutes, also have a low level of material and technical and financial support and in fact have not been effective for 3-4 years. The main focal point of the tribal affairs is the National Association for Tribal Affairs, which is currently in the stage of liquidation. Thus, the activity of the vertical organizational structure in the country is suspended, which should provide high-quality breeding material to agricultural enterprises and households - producers of pig products and to monitor the quality of breeding products and compliance with the requirements of the functioning of breeding plants and breeding breeders.

We will conduct a comprehensive analysis of the development of tribal plants and reproducers in Ukraine. Thus, in the development of breeding pigs during 2001-2017 two periods of operation of economic entities can be distinguished: the period of intensive development (2001-2007) and the crisis period (2008 - present time). Thus, in the first period there was an increase in the number of breeding plants by 39.8%, and breeding reproducers - by 64.5%.

It should be noted that during the period of intensive development there was a slight increase in the number of pigs in farms of all categories, but funding for scientific research in the field of pig breeding was increased.

As for the second stage, during this period, 42 breeding plants and 248 breeding breeders were discontinued. One of the reasons for this situation was the reduction in funding for livestock breeding.

Obviously, a rapid decrease in the number of breeding reproducers leads to a decrease in the number of pigs. Thus, during 2004-2017 the number of pigs decreased by almost 82 thousand head.

However, despite the decrease in the number of breeding plants, the number of farm animals increased during this period by almost 90 thousand head. This situation can be explained by the fact that the status of breeding plant was given to separate legal entities of vertically integrated structures specializing in the production, processing and marketing of pig products.

It is obvious that ensuring the intensive development of breeding pigs on the basis of increasing the number of breeding youngsters and increasing its productivity is possible through the organization of an efficient reproduction system of the herd. That is why an important trend in the study of the development of the breeding base is the study of the turnover of pigs in the subjects of breeding pigs, depending on sex (Table 1).

Table 1

DYNAMICS OF PIG POPULATION IN BREEDING PLANTS AND REPRODUCERS

					Pleasant reproducers		
Year	Gene	erally	Pla	nts			
Tribal							
	the main	sows basic	the main	sows basic	the main	sows basic	
	bones	sows basic	bones		bones	sows basic	

	heads of cattle	% to 2004	heads of cattle	% до 2004	heads of cattle	% to 2004						
2004	3107	100,00	2857	100,00	1241	100,00	1207	100,00	1866	100,00	1650	100,00
2005	3128	100,68	2939	102,87	1225	98,71	1181	97,85	1903	101,98	1758	106,55
2006	2816	90,63	2522	88,27	1012	81,55	925	76,64	1804	96,68	1597	96,79
2007	2971	95,62	2650	92,75	1018	82,03	974	80,70	1953	104,66	1676	101,58
2008	3718	119,67	3425	119,88	1211	97,58	1180	97,76	2507	134,35	2245	136,06
2009	4206	135,37	3876	135,67	1532	123,45	1458	120,80	2674	143,30	2418	146,55
2010	3700	119,09	3414	119,50	1289	103,87	1228	101,74	2411	129,21	2186	132,48
2011	3362	108,21	3125	109,38	1213	97,74	1172	97,10	2149	115,17	1953	118,36
2012	2965	95,43	2808	98,28	1126	90,73	1069	88,57	1839	98,55	1739	105,39
2013	2553	82,17	2532	88,62	1092	87,99	1073	88,90	1461	78,30	1459	88,42
2014	1898	61,09	1784	62,44	869	70,02	836	69,26	1029	55,14	948	57,45
2015	1647	53,01	1580	55,30	801	64,54	795	65,87	846	45,34	785	47,58
2016	1301	41,87	1257	44,00	640	51,57	624	51,70	661	35,42	633	38,36
2017	1203	38,72	1173	41,06	689	55,52	673	55,76	514	27,55	500	30,30

*Source: compiled and calculated according to the data of the Ministry of Agrarian Policy of Ukraine.

According to Table 1, the rate of reduction in the number of horses is greater than the value of this indicator for sows. This is due to the fact that most tribal plants and reproducers reoriented their activities on the production of pig meat products.

Consequently, the presence of a negative tendency to reduce the stock of livestock will lead to problems in ensuring a balanced development of the market for pig products. Domestic pig breeding suffers from a shortage of breeding resources and specialized breeds of meat and bacon productivity, and the quality of genetic resources of domestic production remains unresolved.

Meanwhile, as a result of economic changes in the country, which led to the breakdown of most production and technological units, the inadequate acquisition of commodity enterprises by cross-breeding young animals and the

absence of more than 20 years of significant breeding achievements in pig breeding, domestic breeds began to significantly outperform the breeding stock of the best foreign breeding companies. It is known that most large-scale farms of the corporate sector of the agrarian economy are oriented towards the purchase of breeding pigs of foreign selection, since 100% compensation was applied for the purchase of animals for breeding farms and 50% for non-tribal, which stimulated the import of genetic resources.

The largest suppliers of live pigs to Ukraine in 2017 were Germany (71% in the overall structure), Denmark (8.2%) and France (8.2%). The largest share is large white breed - 48%, landrace - 19, yorkshire - 10, large white import breeding - 15, duroc - 6, and other breeds account for 2%. Consequently, in the market of pig products, there is a steady tendency towards

the disposal of a number of breeds of domestic breeding with subsequent replacement by imported genetic resources.

Currently, there are a large number of world-known genetic companies on the domestic market, however, it is fairly reliable to determine how much breeding stock is imported into Ukraine. After all, often for the reduction of the cost of all related procedures, repair young animals are transported under the guise of piglets for fattening [13]. This precludes an objective assessment of the real situation regarding the import dependence of Ukraine's pigs on foreign genetic resources.

According to the results of our research, we have systematized the factors of the crisis situation in the development of breeding pigs, namely: the low demand of agricultural producers for breeding production; price disparity between pig production and means of production, feed, medicine and other products, as well as services; violation of integration ties in the production and sale of breeding products; reducing the level of state support for the development of scientific and technological progress of the industry; deterioration of the system of organizational and economic conditions in agricultural enterprises, etc.

We believe that one of the factors supporting the revival of breeding pig production in Ukraine should be the effective economic regulation of the product market. However, measures of state support for the agricultural sector and levers economic regulation are often controversial and inconsistent with real practice [14]. The limitations of the state budget led to a sharp reduction in centralized investments. which were counted late, which, in turn, affected the accumulation of public debt and devalued payments. Meanwhile, these inaccessibility of loan funds and the decline in the profitability of pig enterprises have deprived them of the opportunity to upgrade their technological equipment, complete construction of started facilities, carry out reconstruction and technical re-equipment.

The results of the research on the development of breeding pig breeding allowed us to systematize measures and tools of a general economic and internal organizational nature, which can provide for its intensive development (Fig. 2).

We believe that the system of taxation of breeding pig breeding companies needs to be modernized, especially as regards the application of a single tax to 4 groups of payers and the phased introduction of a profit tax on sales of products, which will enable the purchase of modern technologies for the agrarian sector, and the most important to ensure the competitiveness of pig products on the domestic market and external markets.

Consequently, the rebirth of breeding pig breeding requires improvement of the regulatory and legal framework, as well as the distribution of functions (between the state and producers). Highly productive animals provide extra profits, therefore, agricultural producers should be interested in the revival of breeding pigs [15].

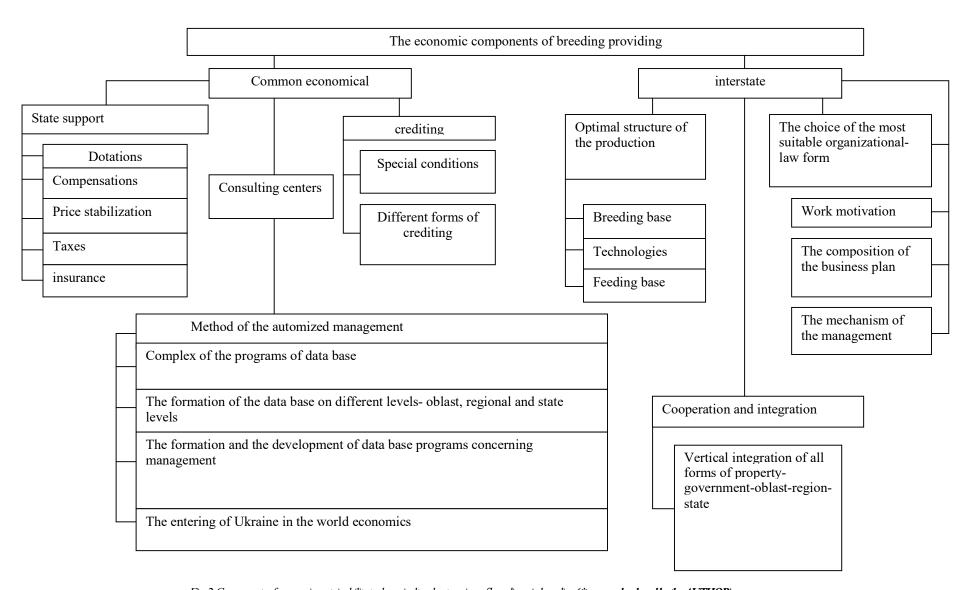


Fig. 2. Components of economic sustainability tools agricultural enterprises of breeding pig breeding (*source: developed by the AUTHOR)

However, in real terms, they are detached from such work, due to the so-called legislative elimination. Thus, in the current law among the subjects of the tribal affairs is not specified a private sector (personal peasant farms). While in Europe countries came to the conclusion that the involvement of the state in tribal work slows down the process of introducing breeding innovations, and therefore, these issues are the prerogative of commodity producers and profile associations [16]. The state has only two functions: legislative initiative and control.

At the present stage of development of domestic pig breeding, special attention should be paid to the breeding work to provide a planned supply of commodity enterprises with repairing cross-breeding young animals with high productive and adaptive qualities. Accordingly, approach to the creation of breeding and genetic centers in pig breeding is the most important condition for the implementation of programs for hybridization organization of breeding pigs based on the three-tier principle (Fig. 3).

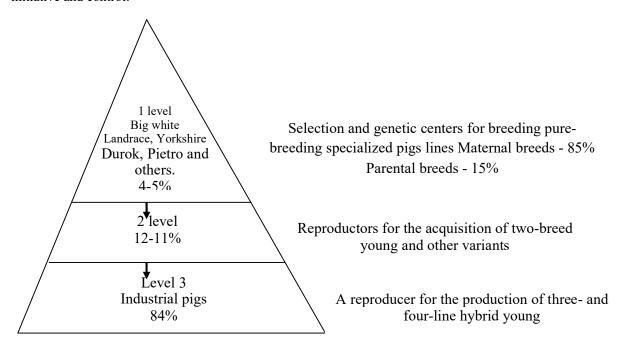


Fig. 3. Scheme for the formation of a three-tier development system breeding pig breeding of Ukraine

*Source: developed by the author.

According to the above-mentioned algorithm for the establishment of a breeding pig system at the first level, pure breeding of specialized breeds of meat breeds based on large white, yorkshire, landrace, durk, pieroe, etc. should be carried out. It is obvious that in the upper part of the breeding pyramid there must be 3-4 tribal herds with a number of breeding stock of 4-5% of the breeding stock that is part of the breeding system. Growing repair young animals should be carried out on elevators with an assessment of their own

productivity based on the use of methods of population genetics.

The second level is the reproduction of maternal lines and the receipt of several lines of cross-breeding young animals for the purpose of assembling commodity herds, which should make 12-11% of the breeding stock that are part of the breeding system.

The third level is the production of a three- and four-line hybrid livestock.

The basis of the organizational structure of breeding pig breeding in Ukraine should be selective genetic centers (GHS) (Fig. 4).

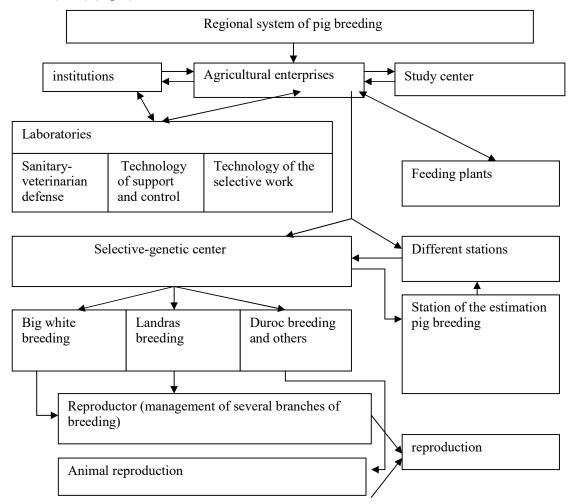


Fig. 4. Model of the functioning of the regional and interregional pig breeding system
*Source: developed by the author.

The tribal work of the SGC should be aimed primarily at the elimination and improvement of the pedigree stock of mother and father specialized combined pigs by the method of closed linear purebreeding breeding and the receipt of crossbreeding young. Provision should be made for the smooth reproduction of breeding and cross-breeding youngsters for breeding and commodity enterprises in the zone of location of the regional and interregional pig breeding system. Moreover, the obligatory conditions of activity of breeding and selection genetic centers are as follows: presence in the composition of breeding and selection genetic centers of not less than

three specialized maternal and parent lines, consolidated on reproductive, fattening, meat qualities and appearance; the number of livestock must ensure reproduction in itself in each herd to support breeding lines in a number of generations; evaluation of the repair youngsters by their own productivity; availability of automated zootechnical records with the creation of a data bank for breeding herds [17].

An important place in the development of breeding pigs is given to the forage base, whose task is not only to ensure the stock of pigs with quality feeds, but also a significant reduction in their cost.

In order to solve this problem it is necessary to provide for measures to increase the protein and energy content of forages, to increase the production of forages with protein-vitamin and functional additives, to increase the production of extruded, dry forages, fodder soy concentrate for starter fodder, integrated improvement of the preparation of liquid feed directly on pig farms, other necessary measures.

6. CONCLUSION

Priority directions of scientific support for the development of breeding and breeding work should be: provision of feed in full to the needs; conducting purposeful veterinary and protective activities, in particular, development of requirements for biosafety and creation of an all-Ukrainian identification system, which will enable to control the safety of development breeding: pig improvement of technology of breeding, industrial and small-scale raising and fattening of animals; expansion of the pedigree base of pigs by creating new farms of meat production direction; improvement of pig breeds by using the best world genetic resources, optimizing composition of the rock based on the best domestic and foreign breeds; provision of organization of testing of young pigs by their own productivity; creation of new diets and feeding technologies. We believe that the functioning of the regional and the creation of an interregional system of breeding pigs in the medium term based on the organization and operation of new types of enterprises - breeding and genetic centers - will enable the creation of a domestic competitive breeding base and production of highly productive hybrid fattening young.

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