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Specialized beef cattle husbandry as strategic branch

The purpose. To analyze state of meat cattle husbandry in Ukraine, to allocate major factors of agency and to offer directions of intensification of the branch.

Methods. Economic-statistical, monographic, comparative-computational.

Results. Basic components of the techniques of growing specialized beef cattle which ensure development of the branch are surveyed.

Conclusions. At implementation of complex of measures, in particular creation of effective system of selection, procreation of herd, application of modern resources saving techniques, development of feed processing together with incorporating of factories producing beef, processing raw material and trading meat products on corporate bases it is possible to create conditions for development of specialized beef cattle husbandry.

Key words: beef cattle husbandry, intensification, efficiency.

The specialized branch of meat cattle breeding has now become strategic and critical from the standpoint of food security of the country.

According to the Institute of Food Resources of NAAS, there are sustained unfavorable changes in the nutritional structure of the Ukrainian population. Ukraine lags behind the level of developed countries (2950 kcal against 3300 - 3800 kcal) for caloric content and qualitative composition of food supply, and for consumption of animal protein was below the level of food security (2500 kcal). The average Ukrainian now consumes 40% of animal products with less rational standards. A sharp decrease in the consumption of biologically valuable products: meat and meat products - by 37%, milk and dairy products - 35, eggs - 38, fish - 81, vegetables and fruits - 49%, at the same time stable high consumption of bakery products, animal fat, legumes, potatoes has led to the fact that the deficiency of vitamins, macro- and trace elements, animal protein has become a permanent negative factor for the health of the population.

In comparison with the physiological norm of consumption of meat and meat products (83 kg per person per year), the actual level of consumption in 1990 was 68 kg, in 2000 - 33, 2012 - 54 kg (of which 8, 8 kg - beef). According to the Ministry of Agrarian Policy, the demand for meat and meat products in 2013 is estimated at 2506 thousand tons (55.3 kg per person, including 9.2 kg - beef). According to experts of the Ministry of Economic Development, the structure of meat consumption in 2013 was as follows: poultry - 45% (rational level - 20%), pork - 42% (rational level - 3%), beef - 13% (rational level - 39%) [4].

Consequently, without taking care of the development of the specialized industry, we thereby increase the distance between the real and the required volumes of beef production and maintain the conditions of import dependence of this food segment. Due to the stable unfavorable weather conditions, the specifics of the organization of production processes and the use of biological objects, specialized beef cattle breeding is the most risky and extensive industry, since it is characterized by a long-term (42 to 45 months) period of incomplete production, and the basis of production in meat cattle is the cow with calves.

In Ukraine, beef is mainly obtained by using for slaughter the number of rearing young animals and abandoned livestock of dairy and dairy-meat breeds. For 100 dairy cows there is 1.1 meat, while in the USA,

Canada, France - 200-300. If the world share of beef from beef cattle is 54%, then in Ukraine - 1.8% [12]. A decrease in the number of cattle is also indicative of a critical state of cattle breeding in Ukraine. According to the State Statistics Service of Ukraine, starting from 2000, every 5 years the number of all livestock groups decreased by almost a third (31%), in particular cows - by 26.7% and 27.6% respectively. Only in the period of 2010 - 2014 some stabilization was detected, even a slight increase in the number of animals - from 4.5 to 4.8 million head. (+ 6.7%), but due to the development of the dairy industry. Despite the small amount of beef in the country, its number from 2005 to 2010 decreased from 133 to 91.7 thousand goals. (by 31.1%), including from 56.8 to 40.9 thousand cows (by 28%). In addition, also from 655 to 403 the number of enterprises of various organizational and legal forms of management, engaged in the cultivation of cattle meat production direction of meat [3, 5] also decreased. Currently, the livestock population remains at the same level. Regarding the entry into the external markets of livestock products - it is not necessary to consider meat products as the basic export, according to the decision of the European Commission, Ukraine's tariff quotas for the sale of beef by December 31, 2015 are determined at the level of 12 thousand tons [7], it is mainly raw materials for recycling. The state policy of ensuring food security of the country, in particular the increase of production of high quality beef, which is able to compete both on the domestic and foreign markets, provided for the implementation of a number of programs.

However, in order to overcome the negative processes of reducing the livestock population and curtailment of beef production, the National Project "Revived Livestock" [13], which largely stakes on state support for the development of the industry and increasing its investment attractiveness, insufficient attention has been paid to the development of specialized meat livestock breeding. The target program "Meat Livestock" [12] is to increase the productivity of livestock (average daily gain of live stock of all sex-age groups to 775-800 g, calving out for 100 average-year-old cows - 85-87 goals, feed costs per 1 cc of live weight production, including feeding cows, - up to 14 - 14.2 centigrade units). In numerous recommendations on the rational use of productive resources and improving the quality of manufactured products, an emphasis has been placed on the implementation of a set of measures. This includes, in particular, the creation of an efficient selection system, the annual reception from each cow of a calf and fattening of the rehabilitation young to high weight conditions - 500-550 kg at the age of 18-24 months, taking into account the zonal features of livestock keeping, the use of modern resource-saving technologies, the main elements of which is: non-binding content of all sex-age groups of animals during the year, seasonal calving of cows in January-March, and the use of cheap feeds of own production, in particular, rational use of pastures for 220 - 270 days, as well as development of feed production and feed industry. According to the National Science Center "Institute of Agrarian Economics" [11], normative expenditures of resources per one average annual head of the young should be as follows: labor - 66.6 - 71 man-hours, electricity - 321 - 336 kW • h, Pneumatic materials - 141 - 146 kg.

Specialized meat cattle breeding may be a competitive industry, provided that the specialization of farms on the production of beef is deepened, the size of farms from fattening cattle is increased to at least 2 to 3 thousand heads, and complexes - from 3 to 6 thousand heads, as well improvement of the relationship between meat producers and processing enterprises. In addition, the purchase price for meat from livestock sold to processing enterprises should be set 25% higher compared to dairy cattle, taking into account the quality of products [11]. Potential productivity and reproductive capacity of Ukrainian meat breeds are at the level of the best intensive cattle breeds of cattle in the EU. Domestic breeds are competitive in the European and world markets [2]. It should also be taken into account that the genetic potential of imported breeds in the natural and climatic and economic conditions of Ukraine can not be fully realized, as the processes of selection of cattle and the formation of its economically useful features occur under the influence of a

number of specific external factors - climate, temperature, feeding animals, conditions of detention. That is why importation of imported livestock for pure breeding will not ensure the development of a specialized branch of meat cattle breeding in Ukraine.

Concept of development of meat cattle breeding in Ukraine at the beginning of the XXI century. provided for the use of the resource of 116 breeding farms [8]. The domestic breeding base of meat cattle breeding has changed. In 2005, there were 134 breeding producers, in 2008 their number increased to 161, but in the last 5 years (in 2013) - it decreased to 83. The tendency to increase the highest category of enterprises in the tribal cause, which are called essentially to influence the improvement of breeds - the breeding yards, the number of which has increased from 27 in 2005 to 61 in 2008 and 70 in 2013. However, the number of basic breeding cattle for breeding cattle has increased from 19,000 years (2005) to 24 thousand (2008) [3, 5]. The share of cows in the breeding stock of the country is 45.6%, while the productive potential is ineffective - the output of calves for 100 cows is 77, the average daily increments range from 330 to 520 g, while the implementation of bulls per 100 cows is only 3.7 goals. [21].

In Ukraine, mainly breed 12 breeds, in the structure of the population is 70% of the domestic - Volyn, Ukrainian, Polissya, Southern and Simmental breeds. Among the imported breeds (haverford, limousine, scarole, etc.) the most numerous are the breed of aberdeen-angus [5, 21].

One of the aspects of the expediency of raising cattle of specialized breeds of meat is the use of it as a carrier of hereditary qualities and gene complexes for the development of the genetic potential of livestock breeding in Ukraine. In addition to carrying out research programs for preserving the gene pool of local and endangered breeds of cattle, it is also necessary to improve the Law of Ukraine "On Tribal Affairs in Livestock" and the restoration of the systematic work of plots of enterprises that are part of Ukrainian tribal association.

The increase in beef production in the country can not fully ensure specialized livestock breeding due to the limited livestock population, technological features and high production costs. However, beef may be a genetic material for the use of the existing dairy stock at enterprises for industrial crossbreeding and the formation of crossbred herds. In addition, during the increase in the productivity of dairy cows and the relative reduction of their livelihood, the deficit of beef will be sharply increased, which can be eliminated only due to the increase in the number of beef cattle.

In pastoralism there is no definitive solution to the question of the size and form of organization of enterprises. As the conceptual basis for the successful development of specialized meat cattle, which form the level of production and directly affect the effective utilization of the genetic potential of meat cattle productivity, distinguish the creation of a full fodder base, the development of resource-saving technologies and the exploitation of the material and technical base, productive assets, the organization of labor resources that need development as a separate industry and solving major problems. The technology and organization of meat cattle breeding under intensive farming in the farms of all natural and climatic zones of Ukraine is largely worked out. Regarding the assessment of fodder resources, the natural and climatic conditions of all regions of Ukraine are favorable for the accelerated development of meat cattle breeding. In the structure of fodder production, over 75% are rough, juicy and green fodder, natural grasslands and pastures - over 17% of agricultural land (about 10 million hectares) [3]. According to many scientists, pastures must be an integral part of the meat industry. According to the experience of advanced farms, thanks to the use of coarse and succulent feeds of its own production in the winter and green fodder of two summer grazing periods, the young at the age of 20 months reaches a living weight of 445 kg, 75% of which (305 - 320 kg) was formed during the period of cheap pastures feed Consumption of concentrates for the cultivation of animals from birth to slaughter for meat does not exceed 10% of the total nutrition of feed, and

their share in the structure of the cost is not more than 30%, the average daily increments for the entire period of cultivation are 700 grams for costs 8.15 k.od. per 1 kg of live weight gain [3].

However, the implementation of one of the main components of "cheap" technologies - the use of pasture - has not received proper development, since the withdrawal of large areas of arable land from agricultural production was not accompanied by the implementation of conservation measures or changes in their intended use. As a result, in many regions of the country there are land that, for one reason or another, are not processed, and their conversion to create cultural and improvement of existing pastures requires significant investment. In general, the feed base, which should take into account the physiological features of cattle as ruminants, entirely depends on the development of intensive grain farming. In the last 2 years in Ukraine, more than 60 million tons of grain, 10 million tons of sunflower seeds, and about 3 million tons of soybeans are harvested. These achievements testify to the possibility of increasing grain production in Ukraine in the long run to 70-80 million tons and, meeting its own needs, exporting it to world markets. The most important factors of the positive balance of agricultural products, which in 2013 amounted to 8.8 billion dollars. In the United States, export volumes of grain crops - 38%, oils - 23.2 and seeds of oilseeds - 7.8%. Consequently, in the development of these industries, the country will show the greatest interest in the near future in order to expand foreign exchange earnings. The demand of the external market, domestic needs and the country's pricing policy led to the development of a specialized grain economy, the cultivation of sunflower, corn and rape as a monoculture, although the monofunctionality of the agrarian sector would not contribute to its development. Such a trend can be considered a gross violation of balanced nature management, which will sooner or later lead to soil depletion, disease outbreaks, yield loss, agroecosystem resistance and, consequently, a significant reduction in the potential of meeting the needs of food and energy.

Due to extensive land use and land use, which is the basis of agricultural production, every year in the country about 600 million tons of soil is lost, in particular more than 20 million tons of humus, 16 billion cubic meters of water. The area of degraded soils grows annually by 90 thousand hectares. Almost every 3 hectare is eroded, and the second one is deflationally dangerous [6, 9, 26]. If on average per capita in Europe there are 0.44 hectares of agricultural land, in particular 0.25 hectares of arable land, then in Ukraine these figures are, respectively, 0.82 and 0.65 hectares, indicating a violation of the ecologically acceptable ratio of arable land, natural forage land, perennial plantations and forest ecosystems, which led to a decrease in the productivity of agro-landscapes [23]. The founders of the theory of physical economy, considering the grain as the key bioenergy component of the energy model of our civilization, determine that the deterioration of the fertility of the land is an unacceptable catastrophe, and to the totality of the inalienable absolute wealth of each other include land, straw, livestock and manure - as non-alternative and indispensable [17]. A prerequisite for the organization of competitive meat cattle breeding and agricultural production in general is an integrated approach to the development of husbandry and cattle breeding.

According to the results of the research carried out at the Institute of Water Problems and Melioration of the National Academy of Sciences of Ukraine [20], it was found that for the Polissya area the most effective way to improve the profitability of farming is to develop livestock farming in the maximum area of forage crops, even for the use of purchased concentrated feed. Significant start-up investments provide a fairly high level of profitability and short payback periods. Regarding the material and technical base, which directly affects the level of production, equipment equipment does not even reach 50% of technological needs in Ukraine, the depreciation of machinery used in meat cattle, reaches 80%, and the use of most fixed assets in 2 - 2,5 times the norm. In addition, the lack of profitability of the industry and funds for the reproduction of production leads to the destruction and loss of major productive assets. Due to the

curtailment of production and non-use of farm equipment and forage harvesting equipment, they become unsuitable for use in the industry. There is no definite opinion on the expediency of keeping meat cattle on an intensive basis with high costs for complex technological equipment and capital construction, which determines their high energy intensity and production cost.

The limiting factor for the development of specialized meat cattle is the attraction of labor resources for service industry. This issue is inseparable from the development of rural areas and the efficiency and attractiveness of agricultural production in general. Unemployment, and sometimes lack of specialists, labor migration of peasants, lack of financial support of agricultural producers, insufficient investment attraction did not contribute to the socio-economic development of rural areas. Traditionally, economic substantiation of the development of intensive industry development is based on the use of state subsidies. In particular, in order to implement state livestock support programs in 2013, the peasants were given UAH 366 million in subsidies for the conservation and retention of young animals of bovine animals. Single farmers, farmers and cooperatives received more than UAH 80 million for slaughtered cattle. Also, the cost of building livestock complexes, purchases of individual milking and breeding livestock units was reimbursed, a mechanism for repayment of the cost of machinery for harvesting forages purchased in the lease was developed. Because of the economic situation, the country does not have to rely on the concentration of state resources and funds on the formation of an efficient price, financial and credit and budget policy favorable for the development of a specialized industry. In addition, the Government's economic reviews and program documents recognize that the imperfection of state policy in the agricultural sector and the financing system do not meet the current requirements and principles of the EU.

The most vulnerable factor influencing the development of the industry in the face of the limited financial capacity of the state is price policy. Analysts, studying the main causes that led to catastrophic catastrophic consequences under current economic conditions, highlighted the unstable level of purchasing prices and the related lack of integration of production, processing and marketing of meat products, which leads to sharp fluctuations in purchasing prices for beef, as well as low prices of imported products. Of course, outside the attention of price policy is the quality of products. Without overcoming these phenomena, it's hard to talk about the investment attractiveness of the industry. According to the forecast of scientists of the National Research Center "Institute of Agrarian Economics", in 2014, the production of meat from cattle will be unprofitable (-36.5%) [16]. The basic approach to pricing in meat cattle is the market price formation in conjunction with state regulation. A simple reproduction of production can be achieved by setting minimum support prices, determined on the basis of standard cost and minimum profit margin. The creation of economic conditions for the development of the sector of specialized meat cattle and production in the volume of domestic and export needs will contribute to the application of prices formed on the basis of sectoral regulatory costs and average rate of return on capital advanced to the sectors serving meat cattle. According to analysts, the average rate of return for such calculations should be 12 - 13% [11].

Considering cattle as an element of the basic means of production of beef (capital), it should be noted that the effectiveness of its use depends on the intensity of its operation and the speed of circulation. That is, one of the levers of influence on the efficiency of the industry is the use of physiological peculiarities of animals and the regulation of the period of rearing young animals before slaughter. The high technology of keeping young animals during the subsistence period, as well as the imperfect system of payments for cultivated products, without taking into account its quality and the most important consumer characteristics, conflicts with the objective need to shorten the terms of sales of young animals for meat and the intensification of the industry. The loss situation was partially saved by the additional payment to beef producers for achieving the high weight conditions of cattle, which was slaughtered, which led to a distortion

of the financial state of the industry. This measure prompted producers of beef to take fattening cattle, whose age exceeded 2 years. Thus, the physiological features of animals were ignored, because numerous experiments have shown an increase in the intensity of synthesis of fat instead of muscle tissue in an animal after 20 months of age. As a result, a significant part of the meat that should get into the consumer was replaced by fat. Consequently, it is necessary to develop a mechanism of interest of the manufacturer in the slaughter of the livestock of an earlier age in order to use high production capacity of animals.

Such an approach to the organization of intensive meat cattle provokes the search for mechanisms for combining enterprises for the production of beef, processing of raw materials and trade in meat products on a corporate basis. One of the areas of improvement of beef production technology should be the intensification and cheapening of the growth of young cattle in the milk period - up to 8 months of age. Thus, there is an experience of economically beneficial cultivation of 2 and even 3 calves under cow-nurse [1, 14], accelerated growth of young animals on the basis of regulated suckling [15], the combination of specialized and dairy cattle breeding [21, 24].

Conclusions

Overcoming crisis phenomena and stimulating the development of the industry in the face of limited financing requires extraordinary solutions. The revival of specialized meat cattle breeding should begin, objectively evaluating all factors of production. The prerequisites for the successful development of the industry are the complex application of ways to intensify the cultivation of cattle, respectively, the expansion of fodder production and the creation of high-yielding cultural pastures, the introduction of an economic mechanism for combining beef enterprises, processing raw materials and trade in meat products on a corporate basis, and attracting investment.

In addition to the economic expediency of the industry, there are still priorities for maintaining health and working capacity of the population, increasing the duration and improving the quality of life, which determine the potential and prospects for the development of the nation.

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