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Economic aspects of efficient milk production in UkraineSvynous I.¹ , Mykytyuk D.² , Semysal A.¹ ¹*Bila Tserkva National Agrarian University*²*Scientific Research Institute Ukragropromproduktynist*

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The article considers the issues of increasing the efficiency of dairy production in agricultural enterprises and households. The main stages and their features in dairy farming development of the country and their impact on the efficiency of milk production in agricultural enterprises and households were highlighted. The reasons which cause decrease of cow livestock in both agricultural enterprises and households were identified. The inhibitory factors in the development of dairy cattle breeding were identified and the directions of its revival were outlined.

It was substantiated that considering the current state and trends of dairy farming in Ukraine, its efficiency, government support measures should be aimed at increasing production mainly in farms of the corporate sector of the agricultural economy, which in the nearest future will become major producers of raw milk.

It was determined that without the introduction of an effective system of government support for milk producers, which firstly will include the restoration of the special VAT regime, financing of dairy breeding revival at the state and regional level, it is impossible to have positive changes in increasing cows amount and increasing production efficiency, in addition the population of cows will continue to fall in the households.

It is proved that today the system of breeding service, which was previously in Ukraine and allowed to conduct breeding at the appropriate level, is destroyed and does not work. It was concluded that further productivity growth and reproduction of animal's livestock is extremely problematic due to the lack of a modern selection system in animal husbandry.

It was established that the current level of profitability allows to ensure only simple reproduction in independent agricultural enterprises, mostly small and medium. It is true that in this situation, most farms in the corporate sector of the agricultural economy are trying to become part of vertically integrated structures of preserving and expanding their production activities on a qualitatively new material and technical base in the future. It was proved that the innovative type of dairy cattle breeding development will ensure the profitability of production and, accordingly, the growth of the income level of rural residents who are the employees of an agricultural enterprise.

Measures of state and regional support of milk production in Ukraine were offered.

Key words: dairy cattle breeding, agricultural enterprises, households, government support, milk processing plant.

Problem statement and analysis of recent research. Dairy farming, as the leading livestock industry provides the population with high-quality food (milk, meat) and industries (processing, food, pharmaceutical and some other) with valuable raw materials, which define its important role in ensuring food and economic security. Dairy farming has certain specific features.

Firstly, milk is a unique natural product in terms of nutritional value and importance for the human body. It contains easily digestible nu-

trients which are very necessary for life and normal development. Milk contains more than 250 most valuable components, including more than 20 favorably balanced amino acids, more than 147 fatty acids, 25 vitamins, casein and whey protein fractions, 30 macro- and microelements, 4 types of sugar, pigments, enzymes and others. Many of them are not reproduced by nature in any of other products, and the role of these components in human nutrition is extremely important [1].

Considering that milk and dairy products are essential products, the demand for it may not decrease with increasing prices for it, regardless of the social and economic situation.

Secondly, dairy products are produced and sold during all the year. This allows to receive benefits immediately, without waiting for money depreciating due to destructive phenomenon in the country's economy, which is not typical for other sectors of agriculture. Considering aforesaid, production rhythm in dairy farming should be considered as an economic advantage over other industries.

Thirdly, dairy farming economy is based on separate permanent expenses, the level of which does not change depending on the volume of the output, as well as on variable expenses that are closely correlated with the scale of production. Rational balance of permanent and variable expenses is an obligatory condition to determine the optimal number of livestock in each dairy farm. Unit production cost grows significantly in case of reduction animals' quantity, as a consequence of permanent cost increasing per each kilogram of milk. Bringing cow population to the optimal level makes it possible to reduce unit production costs, and thus increase the profitability of its production [2].

Aforesaid leads to the conclusion that an important task at both micro and macro levels is to ensure the effective development of dairy farming through innovative developments, which allows to create additional workplaces, replenish the budgets of rural communities and has positive impact on the dynamics of social and economic development of rural settlements and their development [3]. So, in the context of intensifying crisis, it is a necessity for the future research to justify measures for the effective development of the dairy industry.

The aim of the study is the assessment of development effectiveness of dairy farming in Ukraine and developing justification for the state and regional support and practical measures for the increasing efficiency of milk production in agricultural enterprises and households.

Material and research methods. For the theoretical basis we used scientific works of the classical economists, laws and regulations, fundamental works of national and foreign scientists who worked with this subject. The following basic techniques and methods were used in the research: dialectical; abstract and logical (theoretical generalization and formulation of conclusions); calculation and constructive, comparison (analysis of the current situation and the level of milk production efficiency in Ukraine); statistical grouping (studying of the influence of a number of factors on the level of milk production efficiency in agricultural enterprises of various forms and

households); monographic (creation of the purpose, implementation of scientists generalization on the problems of milk production in agricultural enterprises and households as well as the conclusions) and others.

The information base of the research was the data of the State Statistics Service of Ukraine.

Research results and discussion. Dairy cattle breeding is traditionally important and is integral part of agriculture. The level of dairy farming is one of the indications of agricultural sector development progress. In 2018, percentage of dairy farming in the value of gross livestock production was 37,9 % and total Ukrainian agricultural production in constant prices of 2010 – 11,2 %.

Since 1990, dairy farming has declined, there has been a spontaneous breakup of existing collective farms (which accumulated experience for over several decades). Downsizing of large collective and state farms has led to growing number of farms, dispersion of main production assets, massive sale of cows, disruption of the feeding system, physical and moral aging of material and technical base, and impoverishment of previously successful enterprises [4]. The speed of increasing the prices of material and technical resources was far ahead than the milk purchase prices.

One of the reasons which led to the decrease of the number of cows in agricultural enterprises was accepting an unreasonable decision to export livestock outside Ukraine in 1995–1997. It actually destroyed the base of dairy herd reproduction in Ukraine due to a sudden reduction of the number of breeding stock. Consequences of such unconsidered solutions have the effects nowadays, when the demand exceeds supply on dairy breeding cattle market in the world. Domestic breeding farms were not able to meet the demand due to limited number and low quality of breeding stock and lack of targeted financial support of breeding subjects in animal husbandry [5]. All this is the result of destruction in current state tribal service, instead of creating a new structure of European type.

In our opinion, taking into account the current state and trends in the dairy farming development in Ukraine, government support measures should be aimed at increasing volumes of production, mainly in the farms of the corporate sector of the agricultural economy, which in the nearest future will become major producers of raw milk.

However, as we review the current state of milk production, it can be seen that a larger part of milk production belongs to households, but they remain ignored by the government. In addition, the innovations, which are reflected in the Tax and Budget Codes, weren't taken into account: the financing activities of transformation PPE (Personal

peasant economies), which have 3 or more cows, into small agribusiness entities; the creation of cooperatives; improving the program of livestock identification and creating information databases and the development of a legal framework that would regulate the activities of milk producers in accordance with EU requirements [6].

Nowadays the segment of milk production by agricultural enterprises decreased from 76 % in 1990 to 27 % in 2018, meanwhile the part of household's milk was increased what is due to the transformation processes in agriculture. In 2018 by comparison with 1990, the percentage of gross dairy production by households increased from 24 % to 73 %.

It is worth noting that the dynamics of cow's amount both in agricultural enterprises and households is a mirror representation of the attitude of state and local authorities to the dairy farming development in a particular category of agricultural producers (fig. 1).

As we can see, in addition to the cows reduction, which occurred within the norms of their natural decline, in the period of 2015–2019 (from 529 to 468 heads) the high decline rates of cows in corporate sector farms was caused by the abolition of special VAT regime, that was in force until 2015 and low profitability of milk production. The change in the mechanism of government support for milk producers led them to reduction of the cow amount in small and medium-sized businesses.

Here are the main economic reasons why agricultural enterprises have the reduction of cow's amount:

- disparity between milk purchase and production prices, which complicates managing the prof-

itability of the industry and makes it unattractive to investors;

- unstable purchase prices;
- outdated technological conditions of the production, especially in small and medium agricultural enterprises, which cause a high cost price;
- lack of favorable credit policy for commodity producers aimed to upgrade means of production;
- weak integration of production, processing and distribution of dairy products, which increases the uneven receipt and distribution of profits;
- lack of financial effectiveness and economic mechanism of government support for dairy farming.

Several downward trends in cow amount in households should be interpreted as:

- unwillingness to keep livestock in personal peasant economies (PPE) of commodity trend was caused by the diversification process of production activities due to unprofitable production;
- the intensification process of milk production in PPE is also accompanied with a reduction of the number of cows in order to fully provide feeding;
- fall in livestock amount of cow in PPE is a result of complex socially-demographic processes which are taking place in rural areas.

It should be noted that without an effective government support system of milk producers, which will include first of all special VAT regime restoration, financing at the state and regional levels of breeding revival in dairy farming – there will not be any major increase of the amount of cows of the corporate farming sector and households will have a reduce tendency.

According to our research, households are the main producers of milk in Ukraine in the upcoming

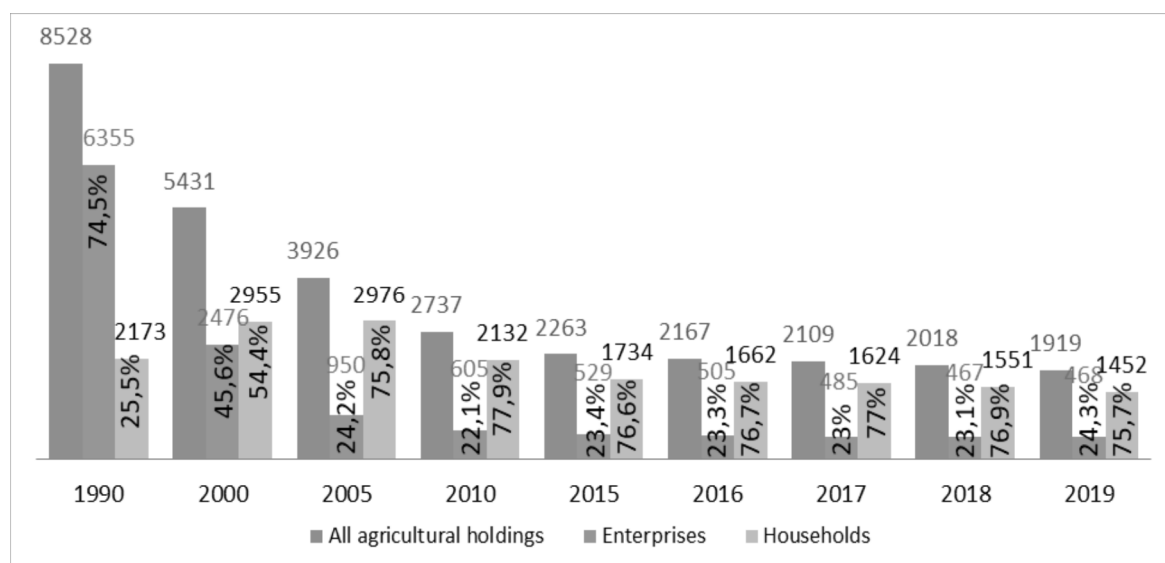


Fig. 1. Number of cows at beginning of year, thsd. heads.

Source: composed and estimated according to the data of the State Statistics Service of Ukraine.

years. The reason is that the basis for cow reproduction in agricultural enterprises with internal resources is actually lost. So, without acquiring of breeding products abroad it is impossible to increase rapidly the number of cows in the corporate sector [7].

Due to large decrease in the number of cows, gross milk production could have had much larger decline. And only due to the stable increase in the dairy productivity since 1995, in 2018 this index increased in all farm categories in 2,2 times. Notably, yield of milk per cow in agricultural enterprises increased in 3,2 times, in households in 1,8 times. This has made possible to keep annual milk production stable for the last four years within 10 million tons (fig. 2).

High productivity of cows in the most farms is provided by using intensive technologies, what decreases their profiting period in the cow's life. The cattle breeding efficiency and achievement the targets in milk production depends largely on the intensity of breeding stock and calf crop per 100 cows – provides an opportunity to draw conclusions about the reproduction in the farms [8]. In this regard, the adoption of appropriate measures to eliminate repeat breeding of cows and heifers and their infertility is an important source of increasing milk production and meat resources of the country, as well as the basis for reducing production costs.

Calf crop per 100 cows in agricultural enterprises in 2018 was only 67 heads against 88 heads in 1990, which indicates the lack of organizational

work in governmental tribal service. In addition, the intensive use of cows as a means of milk production leads to a significant reduction in the productive lifetime period (2–3 lactations) and an increase the rate of their infertility [9]. In this regard, we believe that it is very important to pay attention to the governmental and regional levels to develop breeding farms, which are sources of highly productive farm animals for agricultural enterprises – producers of milk. We consider that it is necessary to restore the system of targeted support of breeding farms in dairy farming for partial reimbursement of costs associated with keeping and raising breeding animals (fig. 3).

Today, the breeding service system, which existed previously in Ukraine and allowed to conduct breeding at the appropriate level, is destroyed and does not work. That's why further productivity growth and improvement of animal reproduction rates is extremely problematic due to the lack of a modern system of selection in animal husbandry.

Enterprises of Sumy, Dnipro, Rivne, Kyiv, Cherkasy and Poltava regions received a calf crop per 100 cows less than an average result in Ukraine, which is cannot be subjected to any explanation. Considering that all these regions had a strong breeding and genetic base, which have had a positive impact on the development of breeding livestock in other regions of Ukraine.

Also, most of genetic resources and modern imported equipment were purchased from the state budget.

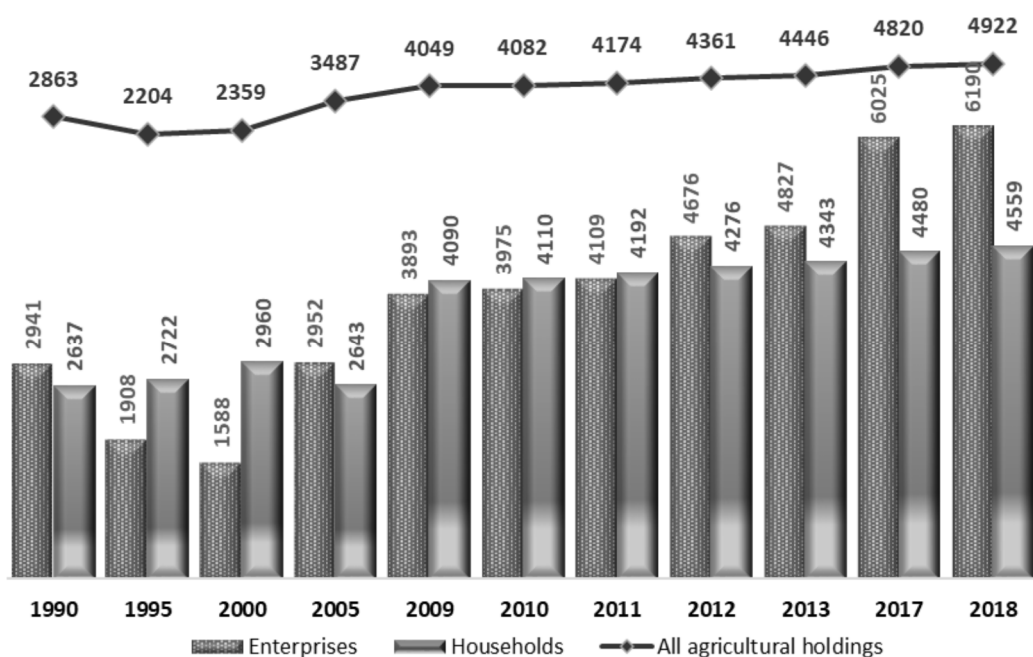


Fig. 2. Annual average milk yield per cow, as of January 1, kg.

Source: composed and estimated according to the data of the State Statistics Service of Ukraine.

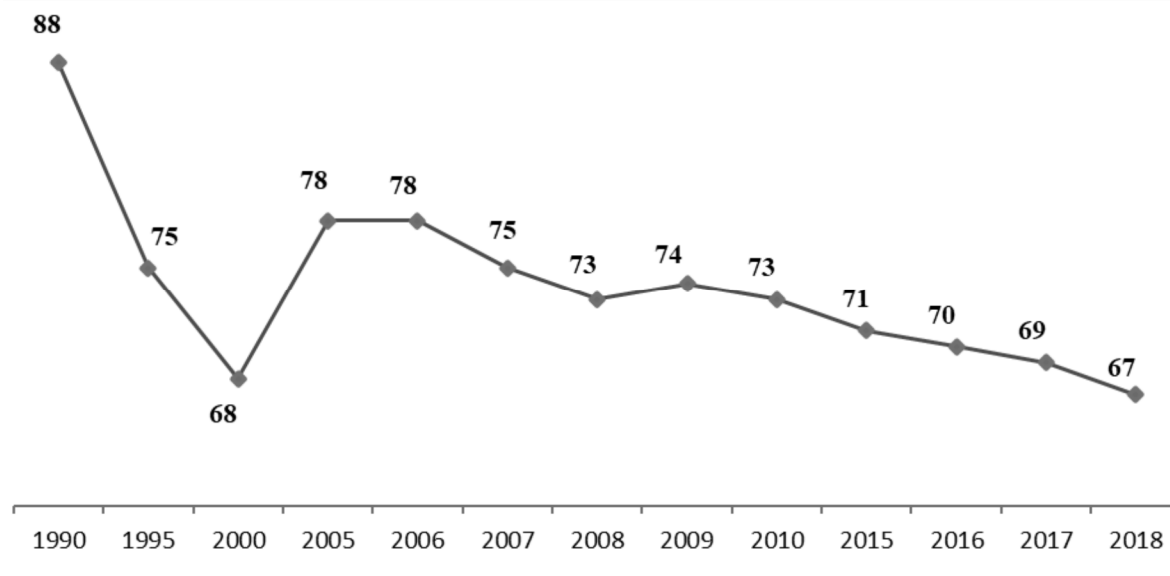


Fig. 3. Number of calves' offspring per 100 cows in enterprises, heads.

Source: composed and estimated according to the data of the State Statistics Service of Ukraine.

The situation at the 1st January 2019 shows that in Ukraine there are only 2130 enterprises that keep cows, it is just 5,2 % of all agricultural enterprises (40 735 units) against 8,7 % (50 648 units) in 2008. Compared to 2008, the amount of enterprises has catastrophically decreased by 2294 units (twice) that was the result of dairy farms destruction in agricultural enterprises.

The most significant decline is observed in enterprises with livestock: 50 heads – by 1167 units (2,6 times); from 5 to 99 heads – by 389 units (2,6 times); from 100 to 499 heads – by 748 units (1,9 times).

It is worth noting a slight decrease in the number of enterprises with livestock from 500 to 999 heads – by 22 units (11 %).

At the same time, there is an increase in farms by 32 units (86 %) with more than 1000 cows. This is a positive message of the dairy farming development, which indicates the development of local producers and the use of the latest technologies in the field of animal husbandry and using the highly productive livestock for high-quality production of dairy products that meet EU standards. Furthermore, this category of farms is the most stable in the conditions of underproduction of raw milk (fig. 4). It is therefore necessary to make emphasize on the central state and local executive branches in the dairy farming development of small and medium enterprises with up to 500 cows. At the same time, it is very important to focus on intensive (with a population of more than 3 heads) personal peasant economies (PPE). This farm category should become the basis for future family live-

stock farms, in case of appropriate measures of state and regional support.

We believe that companies that keep less than 50 cows should be considered as small and their profitable milk production have no prospects; small enterprises which keep from 50 to 200 cows only in short terms can provide management of the industry without loss; the basis for competitive milk production can be medium-sized enterprises, which keep from 200 to 500 cows and, most likely, even more (500 and more), because they not only compete, but also win the competition in the milk market.

Analyzing the trend of the reduction of the number of agricultural enterprises – milk producers, it should be noted that since 2008 the largest decrease of the number of enterprises, which kept cows, occurred in 2014 (399 units). Based on this information, we can conclude that mainly small and medium-sized farms of the corporate sector of economy, with number of cows under 500 heads, have closed down the milk production. One of the main factors which caused negative affect at the reduction of enterprises, which kept cows, was the abolition of the special VAT regime that had functioned until 2015 [11]. Today only economically durable and profitable agricultural enterprises producers of milk survived.

Accordingly, the number of cows has similar trend of declining in such categories of farms, apart from the category of farms with more than 1000 cows – the amount of livestock increased by 57,8 thsd. heads (in 2,1 times). The main factor of livestock growing is the high level of their profitability.

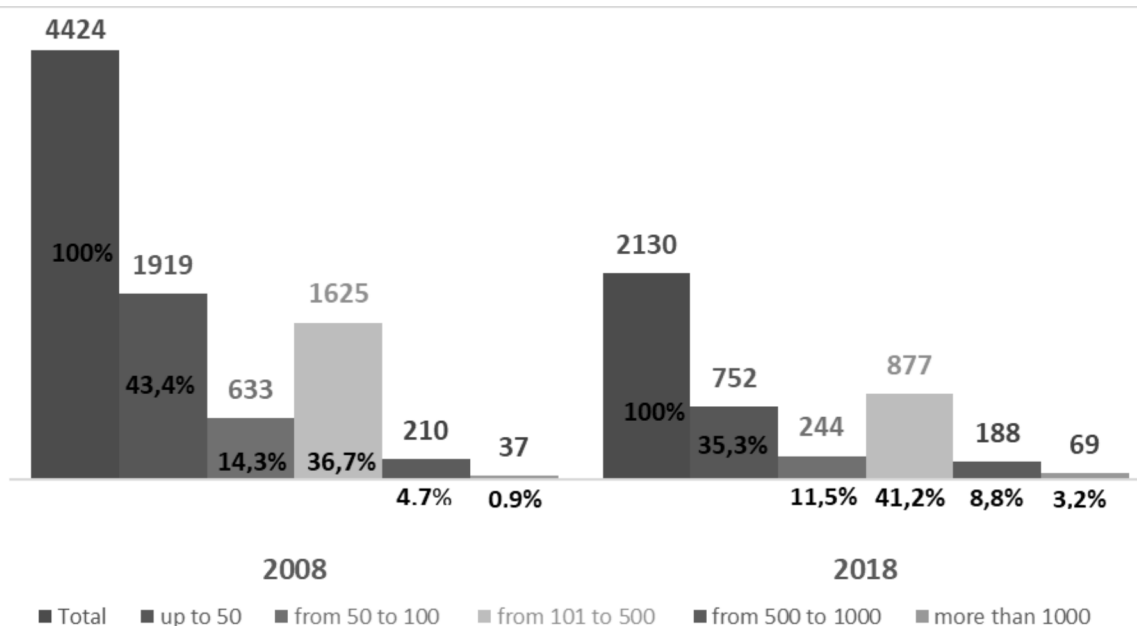


Fig. 4. Groupings of enterprises by number of cows at the end of year, units.

Source: composed and estimated according to the data of the State Statistics Service of Ukraine.

The number of enterprises with a population of 500 cows and more is 257 units (12,1 % of the total number of enterprises that kept cows in 2018). It is worth noting that there is a certain stabilization in farms amount with 500 cows and more, which are the main producers of quality raw milk for dairy enterprises. In thirteen regions the amount of farms in this category is from 40 units in Poltava, up to 7 units in Dnipro. At the same time Zakarpattia region doesn't have such enterprise, Ivano-Frankivsk and Lviv – each has just one, Luhansk, Odesa and Chernivtsi – each has two, Kirovohrad, Odesa and Ternopil regions – three enterprises in each region.

The proof of decreasing trends in the amount of cows in farms of all categories are the researches in personal peasant economies. With the decrease of personal peasant economies, which keep cows, we can notice the reduction of dairy herd (tabl. 1).

It is important to note that during 2016–2018 there was a decrease in the number of households that kept cows. According to the State Statistics Service of Ukraine, the number of cows per 10 farms decreased from 3,1 heads in 2016 to 2,9 heads in 2018 (by 6,5 %).

The largest part in the structure of rural households, which have cows, form the households with 1 head. This category of rural households has the main livestock of cows which are kept in rural households. These agricultural producers are primarily focused on meeting their own needs in milk and dairy products.

In our opinion, the production of milk in PPE, which keep 3 cows and more, forms a new type of producers – a small-scale family business. Germany shows the efficiency of milk production in family farms, which produces almost 20 % of EU milk. These private farms should be the main subject of governmental support in the future, and this can ultimately lead to the formation of small entities in agribusiness [12]. The current mechanism of governmental support does not facilitate the process of transformation of highly-marketable personal peasant economies into livestock family farms. Currently, there should be developed some criterion at the legislative level for livestock family farm, mechanisms for government support, tax and credit terms of their activities, as well as a set of measures to encourage them to participate in regional programs, such as "School Milk".

An important prerequisite for the development of the dairy subcomplex is the formation of long-term partnerships between entities engaged in milk production, processing and sale. Integration processes include the elimination of today's price disparity and have the purpose to obtain equivalent incomes per unit of capital expenditures [13].

However, now the relationship between milk producers and milk processing enterprises became strained. It is due to the expense of milk producers constitutes about 40,0 % of total input for final products and from the realization of final goods, by processing enterprises, they have only 25,0 % of proceeds in cash. Everyone works for themselves: the producer tries to produce more milk

Table 1 – Distribution of rural households by number of cows, over the years

	Year									2018 to 2016, %	
	2016			2017			2018				
	Households, million units	%	Numbers of cows, million heads	Households, million units	%	Numbers of cows, million heads	Households, million units	%	Numbers of cows, million heads	Households, million units	Numbers of cows, million heads
Households which do not keep cows	3,61	76,8		3,64	79,1		3,61	78,5		100,0	
Households, which keeping cows in total Including:	1,09	<u>23,2</u> 100	<u>1,43</u> 100	0,96	<u>20,9</u> 100	<u>1,27</u> 100	0,99	<u>21,5</u> 100	<u>1,33</u> 100	90,8	93
1 head	0,81	<u>17,3</u> 74,3	<u>0,81</u> 56,6	0,72	<u>15,6</u> 75	<u>0,72</u> 58,5	0,73	<u>15,8</u> 73,7	<u>0,73</u> <u>54,9</u>	90,1	90,1
2 heads	0,21	<u>4,5</u> 19,3	<u>0,42</u> 29,4	0,19	<u>4,2</u> 19,8	<u>0,38</u> 30,9	0,20	<u>4,3</u> 20,2	<u>0,4</u> 30	95,2	95,2
3 heads	0,04	<u>0,9</u> 3,7	<u>0,12</u> 3,7	0,03	<u>0,7</u> 3,1	<u>0,09</u> 7,3	0,05	<u>1,0</u> 5	<u>0,15</u> 11,2	125,0	125
4 heads and more	0,02	<u>0,5</u> 1,8	<u>0,08</u> 1,8	0,02	<u>0,4</u> 2,1	<u>0,08</u> 3,3	0,01	<u>0,4</u> 1	<u>0,05</u> 3,9	50,0	62,5
Total	4,7	-		4,6			4,6			97,9	

Source: composed and estimated according to the data of the State Statistics Service of Ukraine.

and sale it at the most expensive price. Milk processing enterprises in its term tries to buy milk for processing at the lowest price to also have the benefit. And as a result, there is a misunderstanding between two dairy subcomplex participants and it worsens their economic situation.

The disparity between the output of milk and the power of milk processing enterprises has a negative impact on their efficiency. Some types of products have the rate of capacity utilization from 25,0 % to 35,0 % [14]. A huge percentage of milk (about 70 %) is recycled at enterprises which produce more than 100 tons per day. Small enterprises (10 tons per day) recycle only 1 % of milk.

Dairy enterprises want to expand their influence through increasing the number of raw materials suppliers. Logistics has to deal with larger distances and due to this the transport costs significantly increase and it enhances the cost of final products and raises the retail price, which has negative effect on the milk product market [15].

In general, the decreasing of the prime cost of sold production and the increasing of the profitability level could be accomplished by increasing the production of competitive products which are based on the new technologies, reduction expense where level of material and human resources are reflected, fixed assets, upgrading of equipment, organization of production and workforce, as well as the elimination of unproductive expenditure

and unjustified overspending on the elements and calculation items. And this will increase the profits of enterprises.

In the current economic climate, which is characterized by a high level of competition and environmental dynamic, the industrial enterprise efficiency depends on many factors. One of such factors for dairy enterprises is the effective management of non-current assets. In this case, more attention should be given to the policy of fixed assets management, because they are the most important component of the enterprise and provide its production process [16]. In addition, effective fixed assets management helps to increase production and the level of profitability and economic viability. Recently, dairy industry products are in high demand, which encourages producers to increase capacity. At the same time, little support from the government, reduction of their own resources for production equipment, lack of willingness to invest their own funds in the reproduction has led to the fact that a significant part of businesses has almost physically and morally worn out fixed assets. According to the available Ukrainian State Statistics Service, the depreciation of processing enterprises fixed assets in 2017 was 64,6%, in the field of food production – 48,0 %, in the field of dairy production 50,0–60,0%. Under such circumstances, the issues related to the research of the ways to improve the

efficiency of use and reproduction of fixed assets for dairy enterprises become important.

Considering the current market trends and taking into account the Ukraine's integration into the EU, it is necessary to understand that the domestic market of milk and dairy products face with structural changes. The opening of borders and limiting state support for domestic producers implies an import increase to Ukraine, which would significantly raise competition for milk consumers. Under such conditions, it will be difficult for domestic enterprises to compete with foreign producers because the requirements for the quality of raw milk and dairy products in the EU are stronger and therefore dairy products have higher quality standards and are environmentally friendly [17]. All these problems have negative impact on the dairy enterprise's efficiency in nowadays and, accordingly, increase the risks of management.

Among major micro-level risks, there should be identified the resource risk, which means delay in the delivery of raw milk or its insufficient quantity, improper quality, etc. Choosing the milk suppliers, entrepreneurs should focus on the following key factors: keeping cows, their feeding, the collecting of raw materials system and its storage, the conditions of raw milk transportation to dairy plants, etc [18].

According to the official statistics for the period of 2005–2018, milk supplying at processing enterprises was decreased by 26,7 %. In 2018 compared to 2017 the volume of milk supplying at processing enterprises decreased by 3,9 % (from 4348,3 to 4179,2 thsd. tonnes), and the average purchase price increased by 3,9 % (from 6388,3 up to 6634,8 UAH per t). In addition, the sale price of agricultural enterprises is seasonal: in summer

they are lower, in winter – higher, it means that not only the quality characteristics have effect on milk price formation. At the same time, it should be noted that the households milk price decreased by 3,5 % and is 4758 UAH/t, while the agricultural enterprises milk price increased by 4,6 % to 7385,9 UAH/t.

Since 2011, the milk and dairy product supply at processing enterprises from agricultural enterprises exceeds the income from households. Thus, in 2018, the processing plants received 2719,9 thsd. tons of milk (65 %) from agricultural enterprises and 1088,6 thsd tons (26 %) from households (fig. 5). It is a very positive factor in providing the processing enterprises with quality raw milk and the population with quality dairy products. This trend will increase the export potential of dairy products that meet EU standards.

One of the actions to increase the volume of milk revenues for processing enterprises is to increase the milk marketability in households. Starting from 2010, this figure decreased from 34,8 to 14,9 % in 2018 (2,3 times). This situation was caused by the lack of appropriate purchase conditions of quality raw milk from dairy processing enterprises by the households (fig. 6).

The production of necessary amount of raw milk for dairy processing enterprises, first of all, depends on the interest of agricultural producers of high-quality milk supply for processing. The basis in determining the cost of raw milk is considering its fat and protein contents. This approach will help to improve dairy farming technologies, the coordination of the interests of each participant in the production and processing chain, which will provide effective work of the dairy subcomplex in Ukraine [19].

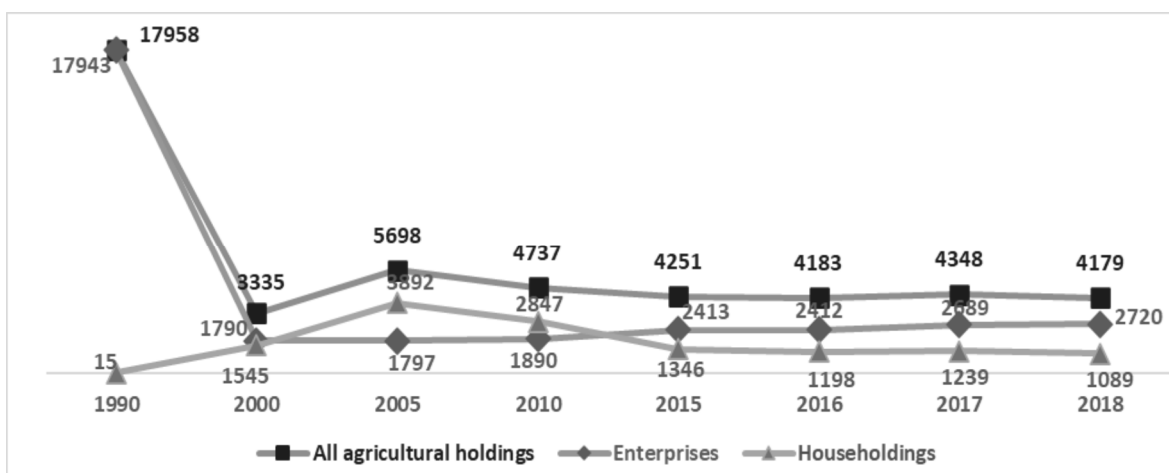


Fig. 5. Dynamics of milk supplying from all kinds of farm to processing enterprises over the period 1990-2018, thsd.t.

Source: composed and estimated according to the data of the State Statistics Service of Ukraine

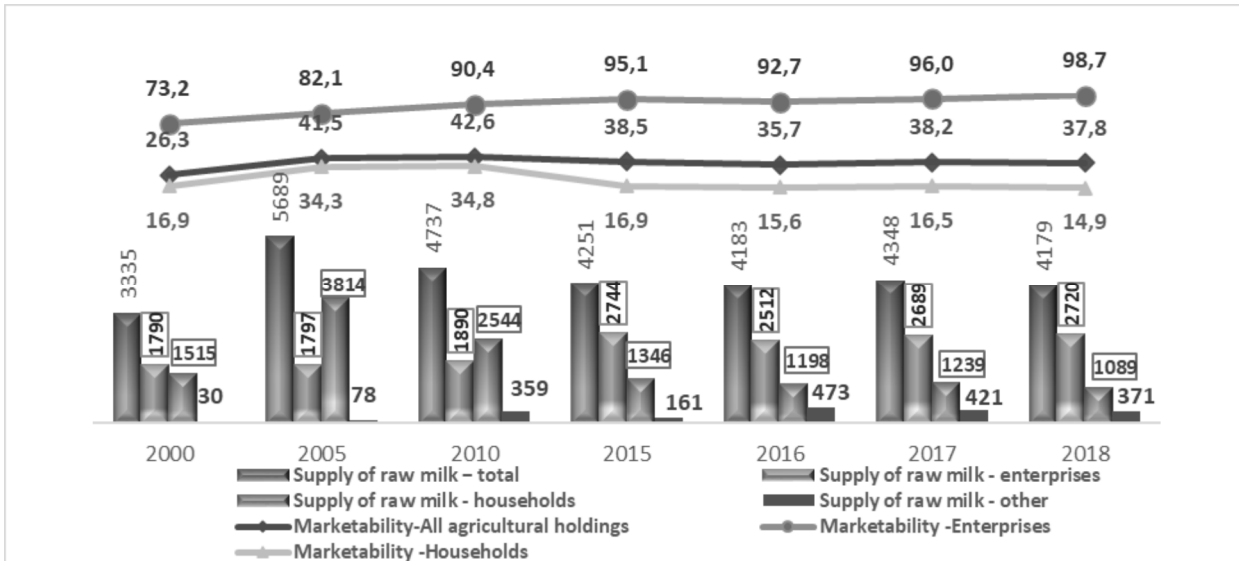


Fig. 6. Supply of milk from all kinds of farm to processing enter prises (thsd.t) and their market ability (%).

Source: composed and estimated according to the data of the State Statistics Service of Ukraine

Taking into consideration that Ukraine is on the road to EU, the issue of domestic products competitiveness is becoming particularly important. European standards for raw milk collecting and finale dairy products are much higher than domestic. It means that in Ukraine it is necessary to adjust the state standards of raw milk production and final products to international requirements, to implement a number of organizational and economic measures for improving the culture of milk production, delivery and sale to processing enterprises. In this regard, since January 1st, 2019 new milk quality standards (DSTU 3662: 2018 "Milk-raw cow's milk. Specifications") came into force what becomes very important and they contain the characteristics and specifications for the purchase and acceptance of cow's milk.

The basis for the dairy farming revival is profit. The relative indicator that characterizes earning capacity is profitability. It should be noted that the rate of milk profitability since 1990 was quite diverse and the results were positive as well as negative. The profitability indicator in 2018 was 16,1 %, which is less than 10,8 % in 2017. We should mention that in highly concentrated agricultural enterprises this index will reach 40–45 %, what allows to expand reproduction of the material and technical base of dairy farming.

High efficiency of dairy production in particular profitability is the main condition of agricultural enterprises success [20]. However, the current level of profitability helps to ensure only simple reproduction of agricultural enterprises, mostly small and medium. Now, most agrarian farms of

corporate sector are trying to become part of vertically integrated structures in order to ensure their future business activities on a qualitatively new material and technical base. And that will guarantee profitability and increase the incomes of rural residents – agricultural workers.

Despite the slight positive trends in dairy farming, the situation is critical. And one of the main reasons that continues to impede the development of dairy production is traditionally low investment attractiveness of this sector compared to other agricultural sectors, which is also significantly complicated by total systemic problems of doing business in Ukraine.

Comparing with other agricultural sectors, the decision to invest in dairy farming is the most difficult considering the following factors:

- it is characterized by high capital intensity and, as a consequence, has the highest ratio of fixed and current assets and funds;
- it has the longest cycle of current assets turnover and accordingly, the lowest annual number of their turnover;
- due to the high investment intensity, dairy production gives less proceeds per unit of investment;
- it has the longest payback periods compared to other industries.

Also, a particular feature of dairy farming is that the reduction of investment due to cheaper and less technological equipment of poor quality, undercharged and simpler farm projects, using cheaper and less productive breeds of cows and so on. All this leads to a sharp loss of economic efficiency of dairy production.

In addition to traditional economic difficulties, the investment attractiveness of this sector is complicated by factors that determine the local investment climate:

- uncertainty with land property problems;
- high interest rates of constantly changing loan terms;
- lack of effective mechanisms for investment promotion;
- support and protection of investment by the state.

Despite the aforesaid problems, this sector has investment processes aimed at upgrading and creating new production facilities for dairy farming, introducing of innovative technologies and systematic development of modern dairy production. However, in general, these processes are still exceptional and don't significantly affect the overall condition of the dairy industry.

An important prerequisite for the effective dairy farming development is the formation of long-term partnerships between entities engaged in milk production, processing and sale. Nowadays integration processes include the price disparity elimination and are intended to receive equivalent incomes per unit of capital expenditures. State support is needed for the development of integrated cooperatives with their own dairy factory which provides much lower expenditures in the production and consumption chain. The support of integrated cooperatives is a priority for developed countries.

It should be noted that the dairy row producers' expenditures are about 40.0% of the final product cost, and they receive only 25.0% of cash proceeds from processing enterprises from the sale of finished products. Agricultural producers which are at the beginning of the price chain have the less leverages of commercial influence on other their sections and they need most of all the state support.

Conclusions. Ensuring food security within the physiological norms of dairy products consumption in Ukraine can be guaranteed on the basis of high technology production, by increasing the productivity of cows and the creation of specialized dairy zones in Ukraine. At the same time, it is necessary to provide state assistance on a corporate basis in the building and reconstruction of dairy enterprises according to the world standards. This will allow to produce export-oriented products and creating added value.

The existing system of animal husbandry selection on selected parameters (data-collection system, testing system and methodology of animal breeding value, exchanging of animal productivity, control and support mechanisms from the

state, etc.) does not meet international standards and isn't practically functional. This in its turn leads to a decrease in the competitiveness of domestic breeding resources compared with foreign ones and results into increasing their imports. All that requires identifying of funding sources for the introduction of breeding systems in animal husbandry of Ukraine, which will meet international standards.

In order to develop effectively dairy farming, it is desirable to introduce the following measures at the state, local and self-governments levels:

- restoration of the special VAT tax regime for agricultural enterprises – milk producers;
- introduction of a contracting system, purchasing heifers in PPE to meet the needs of agricultural enterprises and young cattle for fattening;
- providing a state program support to the establishment of livestock family farms on the basis of highly marketable personal farms (with more than 3 cows);
- development and adoption of the Ukrainian Law about national breeding program in animal husbandry until 2030;
- providing targeted governmental support for cattle breeding subjects;
- providing the subsidies amount which is not less than UAH 3000 for keeping one cow both in agricultural enterprises and households;
- improvement of the support mechanism with interest rates compensation by dividing them into state and regional level on loans taken for the building and reconstruction of farms and livestock products processing;
- improvement of integration relations contractual base in a partnership activity of the production, processing and distribution chain;
- creating preconditions for motivating recyclers to establish raw material zones by providing producers with durable concessional loans, leasing and renting equipment for milk production;
- providing state subsidies for the cow's growth in agricultural enterprises, farms and private peasant entities.

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Економічні аспекти ефективного виробництва молока в Україні

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У статті розглянуто питання підвищення ефективності виробництва молока у сільськогосподарських підприємствах та господарствах населення. Висвітлено основні етапи та їх особливості у розвитку молочного скотарства країни та їх вплив на ефективність виробництва молока у сільськогосподарських підприємствах і господарствах населення. Встановлено першопричини зниження поголів'я корів як у сільськогосподарських підприємствах так і господарствах населення. Ідентифіковано гальмівні чинники у розвитку племінного молочного скотарства та окреслено напрями його відродження.

Обґрунтовано, що враховуючи сучасний стан та тенденції розвитку молочного скотарства України, його ефективність, заходи державної підтримки мають бути спрямованими на нарощення обсягів виробництва, переважно у господарствах корпоративного сектору аграрної економіки, які в найближчій перспективі стануть основними товаровиробниками молочної сировини.

Встановлено, що без запровадження ефективної системи державної підтримки виробників молока, яка буде включати насамперед відновлення спеціального режиму ПДВ, фінансування на державному та регіональному рівні відродження племінної справи в молочному скотарстві, позитивних змін у нарощенні поголів'я корів та підвищенні ефективності виробництва в господарствах корпоративного сектору спостерігатися не буде, а в господарствах населення буде продовжуватися тенденція до зниження чисельності корів.

Доведено, що нині система племінної служби, яка існувала раніше в Україні і давала змогу вести племінну справу на належному рівні, зруйнована і не діє. Зроблено висновок про те, що подальше зростання продуктивності та покращення показників відтворення тварин є вкрай проблематичним через відсутність сучасної системи селекції у тваринництві.

Встановлено, що нинішній рівень рентабельності дозволяє забезпечити лише просте відтворення в самостійних сільськогосподарських підприємствах, здебільшого малих та середніх. Аргументовано, що саме за такої ситуації нині більшість господарств корпоративного сектору аграрної економіки намагаються ввійти до складу вертикально-інтегрованих структур зі збереження та розширення в подальшому своєї виробничо-господарської діяльності на якісно новій матеріально-технічній базі. Доведено, що інноваційний тип розвитку молочного скотарства забезпечить прибутковість виробництва і відповідно зростання рівня доходів сільських жителів – працівників сільськогосподарського підприємства.

Запропоновано заходи державної та регіональної підтримки виробництва молока в Україні.

Ключові слова: молочне скотарство, сільськогосподарське підприємство, господарство населення, державна підтримка, молокопереробне підприємство.

Экономические аспекты эффективного производства молока в Украине

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В статье рассмотрены вопросы повышения эффективности производства молока в сельскохозяйственных предприятиях и хозяйствах населения. Освещены основные этапы и их особенности в развитии молочного скотоводства страны и их влияние на эффективность произ-

водства молока в сельскохозяйственных предприятиях и хозяйствах населения. Установлено первопричины снижения поголовья коров как в сельскохозяйственных предприятиях, так и хозяйствах населения. Идентифицировано тормозные факторы в развитии племенного молочного скотоводства и намечены направления его возрождения.

Обосновано, что учитывая современное состояние и тенденции развития молочного скотоводства Украины, его эффективность, меры государственной поддержки должны быть направлены на наращивание объемов производства, преимущественно в хозяйствах корпоративного сектора аграрной экономики, которые в ближайшей перспективе станут основными товаропроизводителями молочного сырья.

Установлено, что без внедрения эффективной системы государственной поддержки производителей молока, которая будет включать прежде всего восстановление специального режима НДС, финансирование на государственном и региональном уровне возрождение племенного дела в молочном скотоводстве, позитивных изменений в наращивании поголовья коров и повышении эффективности производства в хозяйствах корпоративного сектора наблюдаться не будет, а в хозяйствах населения будет продолжаться тенденция к снижению численности коров.

Доказано, что сегодня система племенной службы, которая существовала ранее в Украине и позволяла вести племенное дело на должном уровне, разрушена и не действует. Сделан вывод о том, что дальнейший рост производительности и улучшение показателей воспроизводства животных является крайне проблематичным из-за отсутствия современной системы селекции в животноводстве.

Установлено, что нынешний уровень рентабельности позволяет обеспечить лишь простое воспроизводство в самостоятельных сельскохозяйственных предприятиях, в основном малых и средних. Аргументировано, что именно в такой ситуации сейчас большинство хозяйств корпоративного сектора аграрной экономики пытаются войти в состав вертикально-интегрированных структур для сохранения и расширения в дальнейшем своей производственно-хозяйственной деятельности на качественно новой материально-технической базе. Доказано, что инновационный тип развития молочного скотоводства обеспечит прибыльность производства и соответственно рост уровня доходов сельских жителей – работников сельскохозяйственного предприятия.

Предложены меры государственной и региональной поддержки производства молока в Украине.

Ключевые слова: молочное скотоводство, сельскохозяйственное предприятие, хозяйство населения, государственная поддержка, молокоперерабатывающее предприятие.



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