

СЕКЦІЯ 6 ГРОШІ, ФІНАНСИ І КРЕДИТ

DOI: 10.32999/ksu2307-8030/2021-42-10

UDC 338.432

Zharikova Olena

*Candidate of Economic Sciences, Associate Professor,
Associate Professor of the Department of Banking and Insurance
National University of Life and Environmental Science of Ukraine
ORCID: <https://orcid.org/0000-0002-1259-1712>
E-mail: ele0309@ukr.net*

Pashchenko Oksana

*Candidate of Economic Sciences, Associate Professor,
Associate Professor of the Department of Economic Theory
National University of Life and Environmental Science of Ukraine
ORCID: <https://orcid.org/0000-0002-0603-8072>
E-mail: opashchenko26@gmail.com*

FINANCIAL AND ECONOMIC ACTIVITY OF AGRIBUSINESS ACCORDING TO INTERNATIONAL STANDARDS

This article reveals the essence of financial and economic activity of agribusiness according to international standards. The activity of small enterprises, which produce 60-80% of GDP and employ about 70% of the working population, are the main producers in many countries, and it is proved that small business contributes to a fair competitive market by producing a wide range of high quality goods and services. Its importance in the agricultural sector requires the attention of public authorities, as well as scientific and public organizations. According to the financial and economic analysis, it is proved that small farms must be provided with the necessary socio-economic conditions for commodity production. Thus, small businesses need to create dairy farms in the livestock sector, and their activities must meet the requirements of European standards, comply with environmental standards and safety of dairy consumption. Despite the fact that the share of households was 76% of all categories of farms in total milk production, its production requires capital investment in Ukraine. Cooperation is an important way to increase the efficiency of small farms. Service cooperatives can organize the sale and processing of products, provide the farm with feed, equipment and advanced technologies, which will help increase the productivity and economic efficiency of each member of the service cooperative. As a result of the study, it was found that in terms of efficiency and quality, large agricultural enterprises are of great importance in milk production. However, public policy should promote milk production in households and small farms, as they concentrate almost 76% of milk production. Based on the study, we can conclude that currently the problem of the economy is to provide competitive and high-quality marketable dairy products and obtain a large amount of raw milk, and for this it is necessary to keep highly productive breeds of animals, introduce high-performance equipment and new production technologies. milk and quality control of raw milk at all stages of its production and sale to dairy enterprises. It is not possible for households and small farms to carry out these measures on their own. This is possible through the cooperation of small businesses, which will promote the production of quality dairy products, increase productivity and economic efficiency of each member of the cooperative, as well as government support.

Keywords: agricultural enterprises, households, farms, milk production, production competitiveness, servicing cooperatives.

Жарікова О.Б., Пащенко О.В. ФІНАНСОВО-ЕКОНОМІЧНА ДІЯЛЬНІСТЬ АГРОБІЗНЕСУ ЗА МІЖНАРОДНИМИ СТАНДАРТАМИ

У даній статті розкрито сутність фінансово-економічної діяльності агробізнесу за міжнародними стандартами. На основі власних досліджень практично та теоретично обґрунтовано діяльність малих підприємств, що виробляють 60-80% ВВП і зайняті близько 70% працездатного населення, є основними виробниками в багатьох країнах, а також доведено, що малий бізнес сприяє формуванню справедливого конкурентного ринку, виробляючи широкий асортимент високоякісних товарів та послуг. Його значення в аграрному секторі вимагає уваги державних органів влади, а також наукових та громадських організацій. За здійсненим фінансово-економічним аналізом доведено, що маленькі фермерські господарства повинні бути забезпечені необхідними соціально-економічними умовами для товарного виробництва. Охарактеризовано, малому бізнесу потрібно створити молочні ферми у галузі тваринництва, а їх діяльність повинна відповідати вимогам європейських стандартів, дотримуватися норм щодо охорони навколишнього середовища та безпеки споживання молочних продуктів. Незважаючи на те, що частка домогосподарств становила 76% усіх категорій ферм у загальному виробництві молока, його виробництво вимагає капітальних вкладень в Україну. Співпраця є важливим способом підвищення ефективності діяльності малих фермерських господарств. Обслуговуючі кооперативи можуть організовувати збут та переробку продукції, забезпечувати ферму кормами, технічними засобами та передовими технологіями, що допоможе підвищити продуктивність та економічну ефективність кожного члена обслуговуючого кооперативу. В результаті проведеного дослідження виявлено, що з точки зору ефективності та якості, великі аграрні підприємства мають велике значення у виробництві молока. Однак державна політика повинна сприяти виробництву молока в домашніх господарствах та невеликих фермерських господарствах, оскільки вони концентрують майже 76% виробництва молока. На основі проведених розрахунків доведено, що в даний час проблема економіки полягає у забезпеченні конкурентоспроможної та якісної товарної молочної продукції та отриманні великої кількості молочної сировини, а для цього необхідно утримувати високопродуктивні породи тварин,

впроваджувати високопродуктивні технічні засоби та нові технології виробництва, зберігання сирого молока та контролю якості молочного сировини на всіх етапах його виробництва та реалізації молочним підприємствам. Встановлено, що домогосподарства та дрібним фермерським господарствам неможливо здійснити ці заходи самостійно, лише можливо завдяки співпраці малих підприємств, що сприятиме виробництву якісної молочної продукції, підвищенню продуктивності та економічної ефективності кожного члена кооперативу, а також державній підтримці.

Ключові слова: аграрні підприємства, домогосподарства, ферми, виробництво молока, конкурентоспроможність виробництва, обслуговування кооперативів.

Жарикова О.Б., Пащенко О.В. ФИНАНСОВО-ЭКОНОМИЧЕСКАЯ ДЕЯТЕЛЬНОСТЬ АГРОБИЗНЕСА ПО МЕЖДУНАРОДНЫМ СТАНДАРТАМ

В данной статье раскрыта сущность финансово-экономической деятельности агробизнеса по международным стандартам. Теоретически обосновано деятельность малых предприятий, производящих 60-80% ВВП и занято около 70% трудоспособного населения, являются основными производителями во многих странах, а также доказано, что малый бизнес способствует формированию справедливого конкурентного рынка, производя широкий ассортимент высококачественных товаров и услуг. Его значение в аграрном секторе требует внимания государственных органов власти, а также научных и общественных организаций. По осуществленным финансово-экономическим анализом доказано, что маленькие фермерские хозяйства должны быть обеспечены необходимыми социально-экономическими условиями для товарного производства. Таким образом, малому бизнесу нужно создать молочные фермы в области животноводства, а их деятельность должна соответствовать требованиям европейских стандартов, соблюдать нормы по охране окружающей среды и безопасности потребления молочных продуктов. Несмотря на то, что доля домохозяйств составляла 76% всех категорий ферм в общем производстве молока, его производство требует капитальных вложений в Украину. Сотрудничество является важным способом повышения эффективности деятельности малых фермерских хозяйств. Обслуживающие кооперативы могут организовывать сбыт и переработку продукции, обеспечивать ферму кормами, техническими средствами и передовыми технологиями, поможет повысить производительность и экономическую эффективность каждого члена обслуживающего кооператива. В результате проведенного исследования выявлено, что с точки зрения эффективности и качества, крупные аграрные предприятия имеют большое значение в производстве молока. Однако государственная политика должна способствовать производству молока в домашних хозяйствах и небольших фермерских хозяйствах, поскольку они концентрируют почти 76% производства молока. На основе проведенного исследования можно сделать выводы, что в настоящее время проблема экономики состоит в обеспечении конкурентоспособной и качественной товарной молочной продукции и получении большого количества молочного сырья, а для этого необходимо удерживать высокопродуктивные породы животных, внедрять высокопроизводительные технические средства и новые технологии производства, хранения сырого молока и контроля качества молочного сырья на всех этапах его производства и реализации молочным предприятиям. Домохозяйствам и мелким фермерским хозяйствам невозможно осуществить эти меры самостоятельно. Это возможно благодаря сотрудничеству малых предприятий, что будет способствовать производству качественной молочной продукции, повышению производительности и экономической эффективности каждого члена кооператива, а также государственной поддержке.

Ключевые слова: аграрные предприятия, домохозяйства, фермы, производство молока, конкурентоспособность производства, обслуживания кооперативов.

Formulation on the problem. Ukraine has created conditions for running agricultural enterprises of various forms and sizes. Agricultural enterprises and small farms are the principal commodity producers of agricultural products, including milk products. Small businesses in agriculture include households and farms based on the farmer and his family members labor, with the possible involvement of several hired workers [1]. Recently, their importance in the agrarian sector has been growing and, despite some problems, they are important commodity producers of agricultural products, including milk products. Small businesses in agricultural production act as an effective regulator of economics, which forms a high level of competition and prevents uncontrolled growth of market prices, has a high creative potential, supplies the market with a new range of products through instant reacting to various individual consumer needs, as well as reduces the level of existing unemployment due to being the main source of employment [2]. Therefore, the state should pay special attention to small business.

An analysis of recent research and publications. The issue of milk production in various organizational and legal forms, especially in households and farms, is discussed in scientific works by M.I. Malik, O.M. Shpychak, P.T. Sabluk,

M.V. Kalinchyk as well as in the papers of scientific staff of Educational Research Centre "Institute of Agrarian Economics".

Setting objectives is to evaluate the activity of all business structures and producers engaged with milk production in order to increase the competitiveness of dairy raw materials production under the condition of service cooperatives development. This article establishes that there is cooperation to improve the efficient operation of small businesses. It has been proven that Service Cooperatives can organize the sale and processing of products, as well as provide farms with feed, equipment and the latest technologies, which will increase productivity and economic efficiency of each member of the service cooperative.

The main research material. In recent years, the overall level of dairy production in Ukraine has declined significantly. The volume of production in all categories of farms varied from 11.2 million tons in 2010 to 11.1 million tons in 2014 and has a clearly defined tendency to decrease. The level of milk production in agricultural enterprises grew by 19.4% during 2010–2014 and by 2.5% compared to 2013. At the same time, in the households, on the contrary, a 6.1% and 4.7% decrease in production was observed. However, even under the production decrease, the farms remains the principal milk producers, and their

Table 1

Milk production in Ukrainian farms of different organizational and legal forms of management

| Index | Year | | | | |
|---------------------------------|---------|--------|---------|---------|---------|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Cows stock, total ths animals | 2631.2 | 2582.2 | 2554.3 | 2508.8 | 2262.7 |
| Including: | | | | | |
| Agricultural enterprises | 589.1 | 583.7 | 575.2 | 565.4 | 529.2 |
| Households | 2042.1 | 1998.5 | 1979.1 | 1943.4 | 1733.5 |
| Average milk yield per cow, kg: | 4082 | 4174 | 4361 | 4446 | 4508 |
| Including: | | | | | |
| Agricultural enterprises | 3975 | 4109 | 4676 | 4827 | 5027 |
| Households | 4110 | 4192 | 4276 | 4343 | 4363 |
| Total milk output, ths tons: | 11248.5 | 11086 | 11377.6 | 11488.2 | 11132.8 |
| Including: | | | | | |
| Agricultural enterprises | 2216.6 | 2245.9 | 2535.3 | 2582.5 | 2647.5 |
| Households | 9031.9 | 8840.1 | 8842.3 | 8905.7 | 8485.3 |

Source: formed according to the State Statistics Service of Ukraine data [3]

share in the total volume of milk produced by all categories of farms was 76.2% (Table 1).

Positive trends in the dairy cattle development are also observed in the Kyiv region. Milk production in the Kyiv region increased by 3.5% in all categories of farms (from 451 thousand tons to 467 thousand tons) during 2010–2014 and decreased by 1.9% compared to 2013. The level of milk production in agricultural the enterprises during 2010–2014 increased by 10.7% (from 196.7 thousand tons to 217.8 thousand tons) and by 1.3% compared to 2013. On the other hand, milk production decreased by 2.0% (from 254.4 thousand tons to 249.2 thousand tons) and 4.5%, respectively, in the households. The principal producers of milk in the Kyivregion are the households – their share in the total volume is 53.4%.

The existing livestock of the dairy herd and its productivity are the main factors indicating a decrease in the milk production volume. In Ukraine, cows livestock in all categories of farms decreased during 2010–2014. However, milk production profitability level in Ukraine reached 18% during 2010–2011 and in 2014 it was 13.7%. Even at such a level of profitability, the reduction in the number of cows did not stop and made 2262.7 thousand in 2014, or 14% less compared with 2010 when the livestock amounted 2.631.2 thousand animals. (Table 1). Instability of export markets and the famine prices for dairy products are the reason for cows number reduction in Ukraine [4].

The analysis of the livestock distribution by the type of economy showed that in 2014, 76.6% of its total number was owned in households. During the studied period, the number of cows in these farms decreased by 15.1%, and in agricultural enterprises it decreased by 10.2%. In 2014, the number of cows amounted to 4.8 million in Ukraine, of which 1.2 million or 25.9% were raised in farms, and 16.4% were raised in the Kyiv region. In 2014 the farmers

usually raised 1–2 cows in their households. The number of cows in all farms of the Kyiv region decreased from 80.9 thousand animals in 2010 to 73.2 thousand animals in 2014, or by 9.5%. The reasons for this reduction included a decrease in the number of cows in households during the mentioned period by 11.9%, and 6.1% decrease in agricultural enterprises. Such a rapid decline of cows' livestock in households in recent years is a direct consequence of integration economic ties imbalance in the system of territorial organization of production, poor use of local agro-climatic and economic conditions, as well as the critical demographic situation in the countryside, that is the population aging. [5]. However, even in this situation milk production remained at the level of 11 million tons in 2010–2014.

Cows productivity varies over the years in all categories of farms in Ukraine and in the Kiev region. Thus, the cows productivity increased by 10.4% (from 4,082 kg to 4,508 kg) in all categories of farms in Ukraine during the study period. In agricultural enterprises it increased by 26.5% (from 3975 kg to 5027 kg), in households – by 6.2% (from 4110 kg to 4363 kg). In the Kyiv region the cows productivity increased by 14.8% (from 5248 kg to 6023 kg) during 2010–2014. In agricultural enterprises it increased by 16.6% (from 5112 kg to 5961 kg), in the households – by 13.4% (from 5,363 kg to 6,081 kg). The herd provision with sufficient quantity of high quality feeds, improving the reproductive capacity of the livestock, increasing the genetic potential of the breeds, improving their structure, hereditary features of the livestock, age of cattle, time from calving to fertilization, organization of the proper milking etc. are the factors for raising the productivity level of dairy cattle.

The situation in the economy regarding milk production and sale in Ukraine has affected its marketability, which characterizes the value of production and its market orientation. In 2010, the marketability of milk in agricultural

enterprises was about 88.86%, and in 2013 – 91.56%, that is, it increased by 2.7%. In the households, this indicator was 43.84% and 38.87, respectively, and decreased by 4.97 points. The growth of milk marketability in agricultural enterprises is a positive factor. The low marketability in households producing 77.5% of milk in 2013, and 76.2% in 2014 is explained by the fact that farmers consumed the produced milk, fed it to the animals, and by partial loss. A significant quantity of milk remains outside the market. At present, all categories of farms, both agricultural enterprises and households, sell the milk produced mainly through the following channels: processing enterprises and procurement organizations, in the market, etc. The right choice of the milk distribution channel on the market predetermines its success or failure. Total milk sales in Ukraine has declined. Thus, in 2013, it amounted to 5,826 thousand tons, i.e. it decreased by 189 thousand tons as compared to 2010 (Table 2). In the Kyiv region, the milk sale has decreased from 375 thousand tons in 2010 to 315 thousand tons in 2013, i.e. by 60 thousand tons.

In 2013, the share of agricultural enterprises in the total volume of sales made 40.6%, and the share of households made 59.4%. Despite the fact that households produce more than 77.5% of the total milk production in Ukraine, only 52.7% of dairy raw materials is supplied to processing enterprises. The same situation is observed in the Kyiv region. The share of

agricultural enterprises in total sales is 61%, and households make 39% of this volume. In 2013, the households accounted for 54.8% in total milk production. But this category of farms does not supply enough dairy raw materials to processing enterprises – they supply 27.4% of households gross milk production. During 2010–2013 in Ukraine, the volume of dairy raw materials sold by households to processing enterprises decreased from 59.7% to 52.7%, and in the Kyiv region it decreased from 34.1% to 27.4%. The population is not interested in selling dairy raw materials to dairy processing enterprises, since the sales price for milk on the markets are higher than the procurement prices. Thus, in 2014 in Ukraine the average procurement price for milk at agricultural enterprises amounted to 3,588 UAH/tonne, and at households – 2,961 UAH/tonne; in the Kyiv region it was 3,521 UAH/tonne and 2,378 UAH/tonne, respectively, that is, it was 627 UAH/tonne and 1,143 UAH/tonne lower than the price paid by agricultural enterprises. Therefore, farms use most of their milk for their own needs and sell a small amount of it in marketplaces.

The assessment of the quality of milk delivered to dairy enterprises in the Kyiv region was carried out according to DSTU 3662-97, which met the requirements of European standards and applies to cow whole milk when purchased in dairy farms of agricultural enterprises and private farms specialized in milk processing. In the standard, special attention is given to the regulatory requirements for milk purchased. In 2014, the

Table 2

Milk sale channels in Ukrainian enterprises of various organizational and legal forms of management

| Indices | Year | | | |
|--|--------|------|------|------|
| | 2010 | 2011 | 2012 | 2013 |
| All categories of suppliers | | | | |
| Quantity sold, ths tons | 6015 | 5921 | 5977 | 5826 |
| Including: | | | | |
| Sold to processing / procurement enterprises | 4787 | 4794 | 4949 | 4918 |
| Sold in the markets | 1121 | 1085 | 968 | 908 |
| Agricultural enterprises | | | | |
| Quantity sold, ths tons | 1970 | 2039 | 2342 | 2365 |
| Including: | | | | |
| Sold to processing / procurement enterprises | 1930 | 2001 | 2300 | 2325 |
| Sold in the markets | 39,8 | 38,0 | 41,8 | 39,5 |
| Households | | | | |
| Quantity sold, ths tons | 3960 | 3841 | 3594 | 3462 |
| Including: | | | | |
| Sold to processing / procurement enterprises | 2856.7 | 2793 | 2649 | 2593 |
| Sold in the markets | 1081 | 1047 | 926 | 869 |
| Households share, %: | | | | |
| In milk production | 80.3 | 79.7 | 77.7 | 77,5 |
| In sales volume (total) | 65.8 | 64.9 | 60.1 | 59,4 |
| Volumes supplied to processing / procurement enterprises | 59.7 | 58.3 | 53.5 | 52,7 |
| Volumes sold at the market | 96.4 | 96.5 | 95.7 | 95,7 |

Source: Formed according to the State Statistics Service of Ukraine data [6]

share of Extra grade milk sold by agricultural enterprises to processing enterprises amounted to 24.5%, the share of high grade milk was 38.4%, first grade – 34.7%, second grade – 2.4%. 4% of milk supplied by households was first grade, 95.9% – second grade, 0.1% – substandard. The sharp decrease in the sales volume of high-grade milk is caused by an increase in the share of commercial quality milk produced by private sector (76.2%), which makes it practically impossible to conduct a quality analysis. This milk is graded second grade because it does not meet the standards of the highest and the first grade, due to the technological features. Manual labor in private households leads to an increase in the total bacterial contamination of the product. The milk yielded from different cows is often substandard which reduces the quality of the final dairy product. In the main, milk raw materials of private households are intended for dry milk and casein production. The issue of milk production efficiency definition in Ukrainian enterprises of various organizational and legal forms of management is very topical (Table 3).

The analysis of milk production cost indicators in small farms in 2014 shows that its level is lower compared to that of agricultural enterprises by 27.3% (Table 3). At the same time, prices for milk sales in small farms are lower than those in agricultural enterprises by 15.2%. Since the price of milk sales exceeds the full cost of 1 centner of milk in all organizational and legal forms of management, the financial performance of farms engaged in milk sale improved. In 2014, agricultural enterprises received a profit of UAH 945.5 million for selling milk to processing enterprises, and small farms profited UAH 16.5 million. The level of profitability in small farms is 3.1% higher compared to agricultural enterprises. The optimal level of profitability, which is 30–50%, provides enhanced reproduction and growth of material incentives funds, it characterizes the cost effectiveness and justifies the sector structure and profit gaining [7].

In 2013 there were 33 thousand farms in Ukraine, of which only 1.4% were engaged in milk production. The reason for the refusal of small farms to be engaged in milk production is

high investment needs and the possible risk of loss of the market. After all, the attraction of investment capital will contribute to the growth of competitive capacity in farms [8]. According to V. Lebid, it is a big mistake to expect to attract the investments after the introduction of the land market and its collateral for bank loans. Due to speculative corrupt schemes, farmers lose their land parcels. After the introduction of the land market, their impoverishment will accelerate along with the loss of any prospects and hopes to purchase them. No peasant will be able to buy land as well as to run successfully a farm specializing in crop or livestock production in a market economy, since it is difficult to establish a competitive environment in a few months with the corresponding consequences of land loss [8].

It should be noted that the sales prices of these products in 2014 reached 3,449 UAH per tonne (USD 381.14) or they were 21–47% higher than in the EU and the USA. The cost of milk production in Ukrainian agricultural enterprises is higher than the sales prices in the countries mentioned. It must be taken into account that domestic sales prices for milk-raw materials exceed the world prices. Therefore, in the conditions of globalization and interpenetration of economies, the business entities will be effective under the present conditions of the price environment if they reduce the production cost to the required level [7]. First of all, it is necessary to reduce the cost of milk production at the expense of increasing cows productivity, which is possible with rational feeding. Rational feeding will save feed resources and will enable the farmer to ensure the competitiveness of domestic products in the world market.

Concentrates consumption in cows feeding exceeds 30% which is unacceptable in the current productivity of animals. According to Belarusian researchers, this reduces the cows productivity, and high production costs cause the production uncompetitiveness in the world market [8]. In most countries, the average annual milk yield of up to 4–5 thousand kg is obtained without adding preservatives to the diet, their energy unit is much more expensive compared with roughage and succulent forages. Scientists argue that it is

Table 3
Efficiency of milk production in Ukrainian enterprises of various organizational and legal forms of management in 2014

| Index | All enterprises | Including | |
|---|-----------------|--------------------------|-------------|
| | | Agricultural enterprises | Small farms |
| Milk sold, ths centners | 23179 | 22784 | 395 |
| Cost value for 1 centner of milk, UAH | 303.3 | 304,3 | 251,2 |
| Cost of 1 centner milk sold, UAH | 344.9 | 345.7 | 293.2 |
| Profitability/unprofitability (-) level of milk sale, % | 13.7 | 13.6 | 16.7 |
| Profit (- loss) for milk sale, ths UAH | 962,026 | 945,468 | 16,557 |
| Per cow, UAH | – | 1849 | – |
| Per hectare of agriculture land, UAH | 45.0 | 50.5 | 6.2 |

Source: Formed according to the State Statistics Service of Ukraine data [6]

possible to provide 20-25 kg daily milk supply without using concentrates with the rations containing high quality, timely harvested feeds with above 10 MJ of exchange energy in 1 kg of dry matter concentration (dry protein concentration of 15–18%) [7; 8]. Other scientists point out that cows productivity level is related to the live weight of animals. Thus, the concentration of 10.8 MJ of energy in 1 kg of dry matter in feeding cows weighing 400 kg can provide 15 kg of milk. Cows weighing 500 kg can yield 20 kg of milk under this feeding condition, those weighing 600 – 25 kg, cows weighing 700 kg can produce 354 kg of milk [8].

The effectiveness of milk production depends on two factors – the cost of milk production and its sales price, with the production cost to be an indicator of the enterprises economic activity results as well as the established system of production management. Prices in the market conditions in Ukraine depend on the production concentration. Each small farm sells an average of 190 kg of milk, while a large one sells 1,460 kg, or 7.7 times more [4]. The major part of large farms (63%) sells no more than 500 kg of milk per day, while the capacity of dairy processing plants is 10-20 times higher. The research has shown that farms have a low concentration of milk production while 29% of agricultural enterprises specializing in its production have daily yield of 30-100 centners, or 3–10 tons. It is these volumes of milk sales that give the opportunity to get a high price milk sales of 332–366 UAH per 1 centner of milk compared with 273–312 UAH per 1 centner. Professor M.M. Ilchuk noted in 2004 that the growth of milk production concentration in agricultural enterprises would increase the sales prices by 15–25% [14], and M.V. Kalinchyk noted up to 32% growth in the next three years [8]. Consequently, farms have low daily milk production volumes compared with agricultural enterprises. Powerful dairies raise dairy raw materials sale prices for the latter. Small farms can not stand the competition with agricultural enterprises producing more than 2-10 tons of milk per day. This is explained by the fact that agricultural enterprises increase their economic efficiency through reducing the production cost of milk, and they reach the highest price for dairy raw materials at the expense of production, while farms with small sales volumes increase the efficiency of production only at the expense of milk production cost lowering. Therefore, the state faces a dilemma: to promote the concentration of milk production through investment programs or to provide subsidies to farms, and thus support sales prices at a level that provides cost-effective small-scale milk production and to develop co-operative milking rooms through one-time measures [4]. M.V. Kalinchyk, V.V. Lipchuk and other scientists engaged in investigating the organization of a farm, made calculations for the project of dairy farms establishment for 20, 50 and 1000 cows [4]. According to their calculations,

the profitability rate per 1000 cows is 20%. In modern market conditions, in their opinion, milk production will be unprofitable in a 20 cows farm, zero profitability was determined for farm with 50 cows. This capacity can also be effective, as prices for dairy raw materials are higher for enterprises producing more than 5 tons of milk per day by 15–30% for high quality product provided that the enterprises will be located on the way of milk transportation to the dairy. According to the scientists, farms raising 20 and 50 cows, will be effective if they are provided with technical equipment and livestock facilities. For newly established farms, state support should be provided for 10 years – 99 and 44 thousand UAH, respectively, for 20 and 50 cows farms (to repay a loan and the interest taken for the livestock farms construction). Another payment support is necessary a year after the farm being constructed – 360 and 900 thousand UAH (for hifers purchase) [4].

If a farmer has to build a farm and repay the loans annually with interest (a 10-year loan on 10%), the amount of damages and depreciation will make 150–200 thousand UAH annually on such farms, according to the calculations of the scientists. If, in addition to the feed production in the enterprises under study, more than 50% of arable land will be used for crop production, the amount of losses will be reduced to 40–90 thousand UAH. According to the calculations of the scientists, if the company will have to purchase additional stock (20% more), the losses will make 19–23 thousand UAH, and for the farm for 1,000 cows it will only make 7.3 thousand UAH, that is, three times less. According to their calculations, the amount of the loan with interest for farms of 50 cows will reach almost 5 million UAH in ten years or 100 thousand UAH annually per one cow. As a rule, such loans are not granted to enterprises farming 20 and 50 cows. Under these circumstances farms can only count on state support and a higher sale price for the raw milk. It is worth considering that in Ukrainian enterprises producing more than 5 tons of milk per day, the sale price was 10% higher than that of enterprises producing up to 1 ton of milk per day. Consequently, the main factor in improving economic efficiency for small farms is reducing the cost of milk production at the expense of rational use of feed, crops sowing, harvesting and storage.

Lending is very important under limited and insufficient own resources in small farms, as well as in agricultural enterprises. Currently, there are programs involving foreign banks in Ukraine, but the cooperation of banking systems and small forms of management is low, therefore there are problems of attracting additional financial capital. The obstacles to obtaining loans by small agricultural producers are: high interest rates; lack of experience in lending money to villages by domestic banks; short loan history of the borrower; lack of a unified banking policy in

this area; overestimation of mortgaged property; underdeveloped system of legal regulation of institutions; low level of infrastructure development, etc. [2]. Therefore, the measures to improve the situation should include the following: the establishment of preferential lending; ensuring the appropriate conditions for the lending availability for all forms of management; the state must take part in long-term lending; stimulating the development of the lending system on the pledge of the future harvest; state financing for providing enterprises with means of production under leasing conditions; stimulating the organization of crediting societies and cooperatives; lending which involves alternative types of mortgaged property and commodity lending [2; 8].

In order to support the economic activity of small enterprises, the legislative base should be improved due to support programs, which should take into account the climatic conditions of the economy and the main factors influencing the increase of small enterprises efficiency. Small businesses find it difficult to solve the problems related to the search for profitable markets, lack of material and technical resources and the lack of financial resources for their acquisition and renovation, lack of necessary objects of storage and primary products processing, which adversely affects the level of economic efficiency of their activities [2]. World experience shows that having merged with service cooperatives, even with those possessing low economic potential, small farms can gain strength to overcome the above-mentioned problems.

Establishment of service cooperatives is the way to improve the efficiency of small business activities. This is one of the ways to achieve the effective operation of small businesses. The establishment of service cooperatives contributes to more rational use of available financial and material resources, the expenses for their additional involvement are reduced, the opportunity for small farms to enter the market springs up which results in producing competitive dairy products.

The development of service cooperatives can protect small dairy enterprises from unfair competition of the intermediaries, it can become a means to increase the creditworthiness of enterprises and promote the raising of the professional level of milk producers. Research has shown that small farms are less competitive compared with agricultural enterprises at a price factor, despite the fact that they have 76% of cows, which, at the expense of production concentration, provide a 22% higher price. It is only owing to establishment of service cooperatives that small farms will have a reliable prospect of effective development, which will facilitate their transition to a new level of production and will invest money in equipment.

Dairy cooperatives incorporate owners of dairy raw materials purveyor and sales. Their feature is that its participants will be able to receive free

pedigree dairy cows, new ways of selling dairy raw materials at favorable prices, and the risks will be distributed among all the participants. Farms performing all technological operations at the expense of their own technical resources may disappear if cooperatives are not established.

Apart from the legislative support, state support for livestock development is necessary to create such cooperatives. Currently, the subsidies are paid per cow in order to awake small producers' interest in milk producing. In our opinion, the mechanism of such support should be changed, namely the donation are to be made not for a cattle unit, but for the quantity and quality of milk sold. Since January 1, 2012, a mixed scheme of compensation payments to milk producers was introduced for VAT: a part of the VAT paid by the milk processors is returned as a direct subsidy to the producer, and the rest – is paid in 2014. 50% of VAT is paid to the special fund of the state budget and is further distributed to the National Bank of Ukraine for financing the agricultural producer support programs.

Every private farm that sells milk to the processing enterprise should receive the VAT subsidy from the processor, in addition to the value of the products, since the processing enterprises do not pay the proper amount of VAT to the budget, but they pay it as a subsidy to suppliers of dairy raw materials. Also, partial reimbursement of expenses for the purchase of individual milking units is paid to owners of private farms, where they farm three or more cows. The amount does not exceed 5000 UAH per cow. Programs for the reimbursement of livestock farms construction or reconstruction are being extended. It is advisable that at least 15 cows should be kept in households and small farms. Under the WTO conditions, farms raising less than 15 cows and having no equipment for milking and milk purification, can not supply the milk to the dairy processing enterprises. In order to obtain high-grade milk (the number of somatic cells in 1 cm³ is less than 300 thousand), the corresponding technology of its production should be followed: machine milking with manipulators (it ensures the timely disconnection of the devices and thus prevents cows against mastitis), pipeline milking, milk filtering and cooling, which is technically, technologically and economically feasible only on large farms [8]. Also, the milk obtained from small farms, does not meet the standards of the higher and the first grade due to its technological features.

Conclusions. Thus, from the point of view of efficiency and quality, large agricultural enterprises are of a great importance in milk production. However, state policy should contribute to milk production in private households and small farms, since they account for almost 76% of milk production. Currently, providing competitive and high-quality dairy products and dairy raw materials to large dairy farms is the problem of the economy. That is

why it is necessary to keep highly productive breeds of animals at farms, to introduce highly productive technical means and new technologies for production, storage of processing and sale of dairy raw materials and to control the quality of dairy raw materials at all stages of its production and distribution to milk processing enterprises. Individual farms and small farms can not implement these activities on their own. It is the cooperation of small businesses increasing the productivity and economic efficiency of each member of the cooperative, as well as state support, that will promote the production of high quality commodity dairy products.

REFERENCES:

1. Ilchuk M.M., Konoval I.A., Melnykova I.V. et al. (2015) The competitiveness of animal husbandry and poultry produce of Ukraine in the European integration system: Monograph. Kyiv: Publ. «Agrar Media Group» Ltd., 321 p.
2. Ukrainian Agriculture in 2018: Statistics Bulletin / Ukrainian National Statistics Office: ed. N.S. Vlasenko. Kyiv, 2019. 400 p.
3. Law of Ukraine «On milk and milk products» of 24.06.2004, № 1870-IV. Available at: <http://www.rada.gov.ua>.
4. GOST 3662-97 «Cow whole milk. The requirements for procurement». Available at: <http://molsouz.org.ua>.
5. New standards for milk safety and quality. Available at: <http://milkua.info/uk/post/novi-standarti-bezpechnosti-ta-akostimoloka>.
6. Official web-site of the State Statistics Service of Ukraine: Available at: <https://www.ukrstat.gov.ua>.
7. Ilchuk M.M., Paschenko O.V., Androsovych I.I. (2016) Development of the milk and dairy market in Ukraine: Monograph. Kyiv: «Agrar Media Group» LLC, 428 p.
8. Zharikova O.B., Pashchenko O.V. (2018) Increasing the competitiveness of Ukrainian dairy products in line with European standards. *International Journal of Scientific and Technological Research*, vol. 4, no. 10. Available at: <https://www.iiste.org/Journals/index.php/JSTR/article/download/45486/46970>.

*Стаття надійшла до редакції 25.05.2021.
The article was received 25 May 2021.*