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INTERNATIONAL EXPERIENCE OF INCREASING THE ECONOMIC POTENTIAL OF FOOD INDUSTRY (ON THE EXAMPLE OF THE DAIRY INDUSTRY)

Abstract. In all regions of the world, the requirements for the management of dairy farming are increasing, taking into account the need to protect ecosystems. The dairy industry is increasingly moving to farming without the use of fertilizers and pesticides (organic farming) or using them in small quantities (integrated farming). This is due to the growing popularity of whole milk consumption among the population. Growing demand in less developed markets stimulates dairy producers to increase their own production. At the same time, a situation of tightening the struggle for high-quality raw materials (raw milk) with countries - exporters of raw materials. States whose dairy industry is in high demand to achieve a level of product self-sufficiency are investing in the development of production, improving assortment policy, and entering into contracts for the supply of quality raw materials.

Keywords: international experience, productivity increase, dairy industry, competitiveness.

INTRODUCTION

World consumption of dairy products, including milk, cheese and oils, according to experts, will grow by 36% by 2024 and reach level of 710 million tons. The growth in demand for milk in the next decade will be due to the growth of population and its welfare in Asia, Africa and Latin America that will lead to a shortage of dairy products on world market and, consequently, to the inevitable increase in prices for this type goods. In the camps of Europe and North America, on the contrary, occurs decrease in demand for dairy products, more precisely, for traditional goods. In the European and North American market, manufacturers for attracting the attention of consumers are forced to offer more and more perfect dairy products with improved nutrition properties that include additional nutrients [26].

MAIN PART

For the developed market of milk and dairy products in Kazakhstan, the experience of its organization and regulation in economically developed foreign countries.

It should be noted that dairy cattle in foreign countries is a specialized industry with well-developed meat cattle breeding. Milk production in foreign countries is carried out in mainly on specialized dairy farms. General trend recent years for all economically developed countries is their consolidation and reduction of the number. Particularly sharp reduction in the number of farms occurred in Belgium, Denmark, France, Italy, Spain and Sweden, where in 1995 there were 44-55% less than in 1985 the number of farms was less sharp than in Europe, but the increase in size herds were more significant. On average, the herd has grown from 40 to 62 heads. Currently, dairy farms with a population of 100 animals give 50% of milk produced in the United States. In 2013, the ten largest importers of whole and dry milk included: Russia (28.4% of all imported milk), China (21.5%), Venezuela (15.8%), Egypt (15.8%), Croatia (15.6%), Brazil (14.4%), Bangladesh (10.3%), United Arab Emirates (6.7%). In Canada, over the past 20 years, the number dairy farms decreased by more than 3 times, and the average livestock in per farm reached 49 heads [23]. What is presented in the table one, below.

Table 1 - Forecast balance of milk and dairy products

Years	Developing countries		Industrial countries		Transition countries economy	
	Overall	Production	Overall	Production	Overall	Production
1979-1981	129,5	112,3	207,5	224,9	126,5	127,3
1997-1999	239,1	219,3	225,8	245,8	94,5	96,6
2015	375,8	346,2	240,4	268,5	96,9	100,4
2030	523,1	484,0	250,5	286,3	98,6	103,8

The dynamics of milk production is characterized by long-term growth trend. According to the forecast of production and consumption of dairy products by 2030, an increase of more than 2 times will occur in developing countries.

The enlargement of dairy farms is accompanied by an increase in productivity.

cows, which is achieved by proper feeding and genetic improvement of livestock. Only in the period from 1997 to 1999, the yield per cow per year increased in the United States from 7653 to 8043 kg, in Canada from 6464 to 6830, Great Britain - from 6674 to 6565 kg. In recent years, he has compiled France 5627 kg, Finland - 6435, Australia - 4906, New Zealand - 3462 kg [24].

According to the International Dairy Federation (IDF), in 2013 in the world produced 473.2 million tons of cow milk. Largest milk producers are European Union countries (144 million tons), the USA (91 million tons), India (58 million tons), China (35 million tons), Russia (31 million tons) (table 2). These countries provide 2/3 of total world milk production.

Table 2 - World milk production

Country	Milk production, thousand tons			
	2016	2017	2018	2018 % to 2016
EU countries	142920	143750	143850	100,7
USA	88978	90824	91444	102,8
India	53500	55500	57500	107,5
China	30700	32600	34500	112,4
Russia	31646	31917	31400	99,2
Brazil	30715	31490	32380	105,3
New Zealand	18965	20567	19678	103,8
Argentina	11470	11679	11796	104,4
Ukraine	10804	11080	11160	103,3
Mexico	11046	11274	11270	101,8

Table 3 - the ratio of population and livestock cattle in selected countries

Countries	Ratio	Countries	Ratio	Countries	Ratio
New Zealand	1:2,3	France	3,3:1	Hungary	14,3:1
Ireland	1:1,5	USA	3,3:1	Korea	14,7:1
Australia	1:1,2	Mexico	3,4:1	Indonesia	15,2:1
Argentina	1:1,2	India	3,7:1	Philippines	16,2:1
Sudan	1:1,2	Germany	6,4:1	Greece	18,8:1
Brazil	1:1,1	Russia	7:1	Algeria	21,5:1
Bolivia	1:1	Spain	7,6:1	Japan	29:1

In the world milk production by 2018, there was a tendency to increase production from 0.7 in the EU countries to 12.4% in China, while in Russia in the period from 2016 to 2018 milk production decreased by 0.8%. Growth milk production is also observed in Iran, Indonesia, Argentina, Brazil, which provides increased productivity milking herds and an increase in the number of cows. In the US, an increase in the number livestock occurred in the past 5 years by 2.4%, or 2.3 million heads. The greatest reduction of cattle livestock is observed in Ukraine - 27.9%, or 1.2 million heads. The total consumption of milk

increases every year in an average of 15 million tons [25]. Currently, the planet is inhabited by about 7 billion people, and the cattle population is 1.3 billion heads, i.e., on average, for every 5 people there are approximately 1 cow.

From table 3 it follows that there are countries where the livestock of cows exceeds the number of inhabitants. For example, in New Zealand, cows double more than people. The largest amount of milk per person produced in New Zealand - 3814 kg. In this country, dairy products mainly go to export - about 13 million tons is shipped to other countries. In addition to New Zealand, such countries as Ireland — 1390 kg, Australia — 526, Belarus — 490, France — 419 kg, etc., most successfully solve the problem of milk production [37, 21]. In order to fully provide the inhabitants of the planet with milk (at the rate of 360 kg of dairy products per year per person, according to the norms of the World Health Organization of the United Nations), it is necessary to produce 2.5 billion tons of milk annually, which is three times more than is currently produced.

Milk production in the Member States of the Customs Union in 2013 was distributed as follows: Russia - 31 million tons, Kazakhstan - 4.9, Belarus - 6.7 million tons, however, an analysis of production showed that in per capita Belarus occupies a leading position - 704.1 liters milk per person (in Russia - 219.3 liters, in Kazakhstan - 299.4 liters).

The Belarusian dairy market is export-oriented: export revenues from the supply of dairy products to the foreign market in 2010 amounted to $ 1.5 billion. USA. Today Belarus is a major participant in the global food market [26].

According to the Food and Agriculture Organization UN (FAO), in the TOP-20 of Belarus is included in 10 export positions, and in the main 5 - in the top five of the world's leading food exporters. The export structure of dairy products is as follows: milk and cream, condensed and dry - 37.65% of total exports, cheeses and cottage cheese - 23,73, milk and cream not condensed - 15.22, butter - 14.3, other products - 9.09%. Strategic foreign market for Belarusian dairy products is Russia. Thus, about 92% of the total dairy products, among export markets outside the CIS should be highlighted Venezuela, Iran, African countries and the European Union. However for the last 10 years, exports of dairy products to the CIS countries increased by 30.5 times, while to non-CIS countries (namely, to Western Europe) decreased almost 10 times. This circumstance is a significant threat to the Belarusian dairy market. Difficulties in expanding the geography of supplies are due to lower quality of raw materials compared to EU countries and lower levels of fat and protein [26].

Rapid economic growth in China, high demand for dairy products is a big opportunity manufacturers of dairy products operating in the country. The Chinese government encourages the creation of large dairy farms. This influenced the growth of self-sufficiency in dairy products, the level of which in 2019 was 86%. Abroad Chinese government encourages expansion of its dairy companies through the acquisition of foreign and building partnerships. Chinese industrialists rely on product diversification, product line expansion. Growing demand and consumption evolution predetermined the demand for environmentally friendly products of premium class.

Government creates incentives to invest in dairy animal husbandry, the industry is growing from family farms to professional managed large dairy farms. Growing demand for dairy products are satisfied by the importers with whom China concludes contracts and is in partnerships.

In all regions of the world, the requirements for the management of dairy farms, taking into account the need to protect ecosystems. Increasingly the number of farmers switches to housekeeping without using fertilizers and pesticides (organic farming) or using in small numbers (integrated farming). This is due increasing popularity of whole milk consumption among the population. World consumption of dairy products, including milk, cheese and oils, according to experts, will grow by 36% by 2024 and reach level of 710 million tons. The growth in demand for milk in the next decade will be due to the growth of population and its welfare in Asia, Africa and Latin America that will lead to a shortage of dairy products on world market and, consequently, to the inevitable increase in prices for this type goods. In the camps of Europe and North America, on the contrary, occurs decrease in demand for dairy products, more precisely, for traditional goods. In the European and North American market, manufacturers for attracting the attention of consumers are forced to offer more and more perfect dairy products with improved nutrition properties that include additional nutrients [26].

CONCLUSION

Kazakhstan needs to introduce all advanced technologies used in developed countries, first of all, the reconstruction of feed rooms must be accompanied by significant changes in production capacity, which is often not technically acceptable. In dairy cattle breeding, there are opportunities to reduce production costs through the introduction of innovative resource-saving technologies in feed production. It is advisable to invest in the improvement of technological processes that will allow producers to reduce unit production costs, improve the quality of milk, and thereby ensure the growth of profitability. The most important direction for improving the quality of feed for dairy cattle is the construction of new ones, as well as the reconstruction and modernization of existing feed mills and workshops.

The feed mill will allow to produce feed for each age-sex group of dairy cattle using modern technologies in an automatic mode. The planned economic effect can be obtained on the basis of the introduction of modern resource and energy saving technologies, which allow to reduce the average consumption of labor costs and electricity. Energy efficiency is the main reserve for the growth of competitiveness of feed production, as well as the release of high-quality feed products for dairy cattle.

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ТАМАҚ ӨНЕРКӘСІБІНІҢ ЭКОНОМИКАЛЫҚ ӘЛЕУЕТІН КӨТЕРУДІҢ ХАЛЫҚАРАЛЫҚ ТӘЖІРИБЕСІ (СҮТ ӨНЕРКӘСІБІНІҢ ҮЛГІСІ)

Аннотация. Экожүйелерді қорғау қажеттілігін ескере отырып, әлемнің барлық өңірлерінде сүтті фермерлік шаруашылықты басқару талаптары өсіп келеді. Сүт өнеркәсібі тыңайтқыштар мен пестицидтерді (органикалық фермерлерді) пайдаланбастан ауыл шаруашылығына жиі ауысады немесе оларды аз мөлшерде (кешенді егіншілікпен) пайдаланады. Бұл тұрғындар арасында сүт тұтынудың артуының артуына байланысты. Аз дамыған нарықтарда сұраныстың өсуі ынталандырады сүт өндірушілер өздерінің үлесін арттырады өндіріс. Сонымен қатар, күресті қатаңдату жағдайы Шикізат экспорттаушы елдермен жоғары сапалы шикізат (шикі сүт). Сүт өнеркәсібі өнімнің өздігінен қамтамасыз етілу деңгейіне жетуді талап ететін елдер өндірісті дамытуға, ассортимент саясатын жетілдіруге, жоғары сапалы шикізат жеткізуге келісім-шарттар жасауға инвестиция салады.

Түйін сөздер: халықаралық тәжірибе, өнімділікті арттыру, сүт өнеркәсібі, бәсекеге қабілеттілік

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МЕЖДУНАРОДНЫЙ ОПЫТ ПОВЫШЕНИЯ ЭКОНОМИЧЕСКОГО ПОТЕНЦИАЛА ПИЩЕВОЙ ПРОМЫШЛЕННОСТИ (НА ПРИМЕРЕ МОЛОЧНОЙ ПРОМЫШЛЕННОСТИ)

Аннотация. Во всех регионах мира усиливаются требования к ведению молочного хозяйства с учетом необходимости охраны экосистем. Молочная промышленность все больше переходит на ведение хозяйства без использования удобрений и пестицидов (органическое фермерство) или с использованием их в небольшом количестве (интегрированное фермерство). Это объясняется ростом популярности у населения потребления цельного молока. Растущий спрос на менее развитых рынках стимулирует производителей молочной продукции к увеличению собственного производства. Одновременно возникает ситуация ужесточения борьбы за качественное сырье (сырое молоко) со странами – экспортерами сырья. Государства чья молочная промышленность пользуется высоким спросом для достижения уровня самообеспеченности продукцией инвестируют средства в развитие производства, совершенствуют ассортиментную политику, заключают договоры поставок качественного сырья.

Ключевые слова: международный опыт, повышение производительности, молочная промышленность, конкурентоспособность.

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REFERENCES

[1] Message to the people of the President of the Republic of Kazakhstan. 2018.

[2] Turyansky, A.V., Anichin, V.L. Agricultural cooperation and agro-industrial integration: Proc. allowance. 2nd ed. Belgorod: publishing house BelGSHA, 2010. 192 p.

[3] Mazur, I.I., Shapiro, V.D., Olderogge, N.G. Effective management: a textbook for universities / Pod obsch. ed. I.I. Mazur. M .: Higher School, 2003. 555 pp., Ill. (Modern business education).

[4] Alla, M. Conditions of efficiency in the economy / M .. Alla. M .: Scientific Publishing Center "Science for Society", 1998. 304 p.

[5] Omarkhanova Zh., Esbergenova L., Makisheva Zh., Kishibekova G. Trends of Kazakhstan. International Journal of Economic Perspectives. ISSN: 1307-1637 Volume 10, Issue 4 (2016) p. 206-212.

[6] Ramazanova Sh.Sh., Valiyeva M.M., Kopylova O.V. Financial security of agroindustrial complex of the Republic of Kazakhstan. ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN SERIES OF SOCIAL AND HUMAN https://doi.org/10.32014/2019.2224-5294.76

[7] Volume 2, Number 324 (2019), 241 - 245.

[8] Zadvorneva E.P., Seisenbinova.A.A., Sayabaev K.M., Zhansagimova A.E. Management of sustainable development of Kazakhstan. ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN SERIES OF SOCIAL AND HUMAN Volume 2, Number 324 (2019), 202-207. https: //doi.org/10.32014/2019.2224-5294.69

[9] Kassymova G.K., Tokar O.V., Tashcheva A.I., Slepukhina G.V., Gridneva S.V., Bazhenova N. G., Shpakovskaya E.Yu., Arpentieva M. R. Impact of stress on creative human resources and psychological counseling in crises.International journal of education and information technologies.Volume 13, 2019. Pp.: 26-32.

[10]Stepanova G. A., Tashcheva A. I., Stepanova O. P., Menshikov P. V.,Kassymova G. K., Arpentieva M. R., Tokar O. V. The problem of management and implementation of innovative models of network interaction in inclusive education of persons with disabilities.International journal of education and information technologies. ISSN 2074-1316.Volume 12, 2018. P. 156-162.

[11]Kassymova G. K., Stepanova G. A., Stepanova O. P., Menshikov P.V., Arpentieva M.R., Merezhnikov A. P., Kunakovskaya L. A. Self-development management in educational globalization. International journal of education and information technologies.ISSN 2074-1316.Volume 12, 2018. P. 171-176.

[12]Stepanova O. P., Gridneva S. V., Menshikov P. V., Kassymova G. K., Tokar O. V., Merezhnikov A. P., Arpentieva M. R. Value-motivational sphere and prospects of the deviant behavior. . International journal of education and information technologies.ISSN 2074-1316.Volume 12, 2018. P. 142-148.

[13]Kassymova K. G., Tyumaseva Z. I., Valeeva G. V., Lavrinenko S. V., Arpentieva M. R.,Kenzhaliyev B. K., Kosherbayeva A. N., Kosov A. V., Duvalina O.N., Dossayeva S. K. Integrative model of student and teacher stress coping: the correction of relations in educational, professional and personal interaction. Bulletin of National Academy of Sciences of the Republic of Kazakhstan.ISSN 1991-3494. Volume 3, Number 379 (2019), p. 169-179. https://doi.org/10.32014/2019.2518-1467.83

[14]Kassymova G. K., Kosherbayeva A. N., Sangilbayev O. S., Schachl H., Cox, N. (2018). Stress management techniques for students. Proceedings of the International Conference on the Theory and Practice of Personality Formation in Modern Society (ICTPPFMS 2018).https://doi.org/10.2991/ictppfms-18.2018.10

[15]Arpentieva M. R., Kassymova G. K., Lavrinenko S. V., Tyumaseva Z. I., Valeeva G. V., Kenzhaliyev O. B., Triyono M. B., Duvalina O. N., Kosov A. V., Dossayeva S. K. Environmental educationin the system of global and additional education. Bulletin of National Academy of Sciences of the Republic of Kazakhstan.ISSN 1991-3494. Volume 3, Number 379 (2019), p. 158 – 168. https://doi.org/10.32014/2019.2518-1467.82

[16]Nailya K. Nurlanova, Anel A. Kireyeva, Rashid M. Ruzanov / Journal of Asian Finance, Economics and Business Vol 4 No2 (2017) 37-44 37 Print ISSN: 2288-4637 / Online ISSN 2288-4645 Evaluation of Economic Potential and Level of Concentration of the Regions of Kazakhstan Received: March 8, 2017. Revised: April 25, 2017. Accepted: May 2, 2017. doi:10.13106/jafeb.2017.vol4.no2.37

[17]Sagiyeva R.; Zhuparova A.; Ruzanov R.; Doszhan R.; Askerov A. 2018. Intellectual input of development by knowledge-based economy: problems of measuring in countries with developing markets, *Entrepreneurship and Sustainability Issues* 6(2): 711-728. https://doi.org/10.9770/jesi.2018.6.2(17)

[18]Azatbek T., Panzabekova A., Bekenova L., Yegizbyeva Zh. The share of drug trafficking in Kazakhstan's GDP:methods for evaluation / Economic Annals-XXI (2017), 166(7-8), C. 31-36(Scopus). DOI: https://doi.org/10.21003/ea.V166-06

[19]Khalitova M.M., Praliev G.S., Panzabekova A.Z., Andreeva Z.M., Dzhubaliyeva Z.A. Financial instruments ofstate regulation industrial and innovative development of Kazakhstan economy. Life Sci J 2014;11(10s):369-378. (ISSN:1097-8135). http://www.lifesciencesite.com.70