ISSN 2224-526X

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ
Қазақ ұлттық аграрлық университеті

Х А Б А Р Л А Р Ы

ИЗВЕСТИЯ

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК
РЕСПУБЛИКИ КАЗАХСТАН
Казахский национальный
аграрный университет

IZVESTIÂ

NATIONAL'NOJ AKADEMII NAUK
RESPUBLIKI KAZAHSTAN
Kazakh national
agrarian university

SERIÂ AGRARNYH NAUK

5 (53)

SEPTEMBER – OCTOBER 2019

PUBLISHED SINCE JANUARY 2011

PUBLISHED 6 TIMES A YEAR

ALMATY, NAS RK

Б а с р е д а к т о р

Есполов Т.И.,
э.ғ.д, профессор,
ҚР ҰҒА академигі және вице-президенті

Р е д а к ц и я а л қ а с ы:

Байзаков С.Б., э.ғ.д, проф., ҚР ҰҒА академигі (бас редактордың орынбасары); **Тиреуов К.М.,** э.ғ.д, проф., ҚР ҰҒА академигі (бас редактордың орынбасары); **Елешев Р.Е.,** т.ғ.д., проф., ҚР ҰҒА академигі; **Рау А.Г.,** т.ғ.д., проф., ҚР ҰҒА академигі; **Иванов Н.П.,** в.ғ.д, проф., ҚР ҰҒА академигі; **Кешуов С.А.,** т.ғ.д., проф., ҚР ҰҒА академигі; **Мелдебеков А.,** а.ш.ғ.д., проф., ҚР ҰҒА академигі; **Чоманов У.Ч.,** т.ғ.д., проф., ҚР ҰҒА академигі; **Елюбаев С.З.,** а.ш.ғ.д., проф., ҚР ҰҒА академигі; **Садыкулов Т.,** а.ш.ғ.д., проф., академигі; **Баймұқанов Д.А.,** а.ш.ғ.д., проф., ҚР ҰҒА корр-мүшесі; **Сансызбай А.Р.,** а.ш.ғ.д., проф., ҚР ҰҒА корр-мүшесі; **Умбетаев И.,** а.ш.ғ.д., проф., ҚР ҰҒА академигі; **Оспанов С.Р.,** а.ш.ғ.д., проф., ҚР ҰҒА құрметті мүшесі; **Олейченко С.И.,** а.ш.ғ.д., проф.; **Кененбаев С.Б.,** а.ш.ғ.д., проф., ҚР ҰҒА корр-мүшесі; **Омбаев А.М.,** а.ш.ғ.д., проф. ҚР ҰҒА корр-мүшесі; **Молдашев А.Б.,** э.ғ.д., проф., ҚР ҰҒА құрметті мүшесі; **Сагитов А.О.,** б.ғ.д., ҚР ҰҒА академигі; **Сапаров А.С.,** а.ш.ғ.д., проф., ҚР АШҒА академигі; **Балгабаев Н.Н.,** а.ш.ғ.д., проф.; **Умирзаков С.И.,** т.ғ.д, проф.; **Султанов А.А.,** в.ғ.д., проф., ҚР АШҒА академигі; **Алимкулов Ж.С.,** т.ғ.д., проф., ҚР АШҒА академигі; **Сарсембаева Н.Б.,** в.ғ.д., проф.

Р е д а к ц и я к е ң е с і:

Fasler-Kan Elizaveta, Dr., University of asel Switzeland; **Koolmees Petrus Adrianus**, Prof. Dr., Utrecht University, The Netherlands; **Babadoost-Kondri Mohammad,** Prof., University of Illinois, USA; **Yus Aniza Binti Yusof,** Dr., University Putra, Malayzia; **Hesseln Hayley Fawn**, As. Prof., University of Saskatchewan, Canada; **Alex Morgounov,** Pr., International Maize and Wheat Improvement Center Turkey; **Андреш С.,** Молдова Республикасы ҰҒА академигі; **Гаврилюк Н.Н.,** Украина ҰҒА академигі; **Герасимович Л.С.,** Беларусь Республикасының ҰҒА академигі; **Мамедов Г.,** Азербайджан Республикасының ҰҒА академигі; **Шейко И.П.,** Беларусь Республикасының ҰҒА академигі; **Жалнин Э.В.,** т.ғ.д., проф., Ресей; **Боинчан Б.,** а.ш.ғ.д, проф., Молдова Республикасы; **Юлдашбаев Ю.А.,** а.ш.ғ.д, проф., РҒА корр-мүшесі, Ресей.

© Қазақстан Республикасы Ұлттық ғылым академиясы, 2019

Главный редактор

Есполов Т.И.,
доктор эконом. наук, проф.,
вице-президент и академик НАН РК

Редакционная коллегия:

Байзаков С.Б., доктор эконом. наук, проф., академик НАН РК (заместитель главного редактора); **Тиреуов К.М.,** доктор эконом. наук., проф., академик НАН РК (заместитель главного редактора); **Елешев Р.Е.**, доктор техн. наук, проф., академик НАН РК; **Рау А.Г.,** доктор техн. наук, проф., академик НАН РК; **Иванов Н.П.,** доктор ветеринар. наук, проф., академик НАН РК; **Кешуов С.А.,** доктор техн. наук, проф., академик НАН РК; **Мелдебеков А.,** доктор сельхоз. наук, проф., академик НАН РК; **Чоманов У.Ч.,** доктор техн. наук, проф., академик НАН РК; **Елюбаев С.З.,** доктор сельхоз. наук, проф., академик НАН РК; **Садыкулов Т.,** доктор сельхоз. наук, проф., академик НАН РК; **Баймуканов Д.А.,** доктор сельхоз. наук, проф., член-корр. НАН РК; **Сансызбай А.Р.,** доктор сельхоз. наук, проф., член-корр. НАН РК; **Умбетаев И.,** доктор сельхоз. наук, проф., академик НАН РК; **Оспанов С.Р.,** доктор сельхоз. наук, проф., Почетный член НАН РК; **Олейченко С.И.,** доктор сельхоз. наук, проф.; **Кененбаев С.Б.,** доктор сельхоз. наук, проф., член-корр. НАН РК**; Омбаев А.М.,** доктор сельхоз. наук, проф член-корр. НАН РК.; **Молдашев А.Б.,** доктор эконом. наук, проф., Почетный член НАН РК; **Сагитов А.О.,** доктор биол. наук, академик НАН РК; **Сапаров А.С.,** доктор сельхоз. наук, проф., академик АСХН РК; **Балгабаев Н.Н.,** доктор сельхоз. наук, проф.; **Умирзаков С.И.,** доктор техн. наук, проф.; **Султанов А.А.,** доктор ветеринар. наук, проф., академик АСХН РК; **Алимкулов Ж.С.,** доктор техн. наук, проф., академик АСХН РК; **Сарсембаева Н.Б.,** доктор ветеринар. наук, проф.

Редакционный совет:

Fasler-Kan Elizaveta, Dr., University of asel Switzeland; **Koolmees Petrus Adrianus**, Prof. Dr., Utrecht University, The Netherlands; **Babadoost-Kondri Mohammad,** Prof., University of Illinois, USA; **Yus Aniza Binti Yusof,** Dr., University Putra, Malayzia; **Hesseln Hayley Fawn**, As.Prof., University of Saskatchewan, Canada; **Alex Morgounov,** Pr., International Maize and Wheat Improvement Center Turkey; **Андреш С.,** академик НАН Республики Молдова; **Гаврилюк Н.Н.,** академик НАН Украины; **Герасимович Л.С.,** академик НАН Республики Беларусь; **Мамедов Г.,** академик НАН Республики Азербайджан; **Шейко И.П.,** академик НАН Республики Беларусь; **Жалнин Э.В.,** доктор техн. наук, проф., Россия; **Боинчан Б.,** доктор сельхоз. наук, проф., Республика Молдова; **Юлдашбаев Ю.А.,** доктор сельхоз. наук, проф., член-корр. РАН, Россия.

Известия Национальной академии наук Республики Казахстан. Серия аграрных наук.
ISSN 2224-526X
Собственник: РОО «Национальная академия наук Республики Казахстан» (г. Алматы)
Свидетельство о постановке на учет периодического печатного издания в Комитете информации и архивов Министерства культуры и информации Республики Казахстан **№ 10895-Ж**, выданное 30.04.2010 г.

Периодичность 6 раз в год
Тираж: 300 экземпляров

Адрес редакции: 050010, г. Алматы, ул. Шевченко, 28, ком. 219-220, тел. 272-13-19, 272-13-18
http://agricultural.kz/index.php/en/

© Национальная академия наук Республики Казахстан, 2019

Адрес типографии: ИП «Аруна», г. Алматы, ул. Муратбаева, 75

C h i e f E d i t o r

Espolov T.I.,
Dr. economy. Sciences, prof.,
Vice President and academician of the NAS RK

E d i t o r i a l B o a r d:

Baizakov S.B., Dr. of economy sciences, prof., academician of NAS RK (deputy editor); **Tireuov K.M.,** Doctor of Economy Sciences., prof., academician of NAS RK (deputy editor); **Eleshev R.E.,** Dr. Of agricultural sciences, prof., academician of NAS RK; **Rau A.G.,** Dr. sciences, prof., academician of NAS RK; **Ivanov N.P.,** Dr. of veterinary sciences, prof., academician of NAS RK**; Keshuov S.A.,** Dr. sciences, prof., academician of NAS RK; **Meldebekov A.,** doctor of agricultural sciences, prof., academician of NAS RK; **Chomanov U.Ch.,** Dr. sciences, prof., academician of NAS RK; **Yelyubayev S.Z.,** Dr. of agricultural sciences, prof., academician of NAS RK; **Sadykulov T.,** Dr. Farm. Sciences, prof., academician of NAS RK; **Baimukanov D.A.,** doctor of agricultural sciences, prof., corresponding member NAS RK; **Sansyzbai A.R.,** doctor of agricultural sciences, prof., corresponding member NAS RK; **Umbetaev I.,** Dr. Farm. Sciences, prof., academician of NAS RK; **Ospanov S.R.,** Dr. agricultural sciences, prof., Honorary Member of NAS RK; **Oleychenko S.N.,** Dr. Of agricultural sciences, prof.; **Kenenbayev S.B.,** Dr. Agricultural sciences, prof., corresponding member NAS RK; **Ombayev A.M.,** Dr. Agricultural sciences, Prof. corresponding member NAS RK; **Moldashev A.B.,** Doctor of Economy sciences, prof., Honorary Member of NAS RK; **Sagitov A.O.,** Dr. biol. sciences, academician of NAS RK; **Saparov A.S.,** Doctor of agricultural sciences, prof., academician of NAS RK; **Balgabaev N.N.,** the doctor agricultural sciences, Prof.; **Umirzakov S.I.,** Dr. Sci. Sciences, Prof.; **Sultanov A.A.,** Dr. of veterinary sciences, prof., academician of the Academy of Agricultural Sciences of Kazakhstan; **Alimkulov J.C.**, Dr. of tekhnical sciences, prof., academician of the Academy of Agricultural sciences of Kazakhstan; **Sarsembayeva N.B.,** Dr. veterinary sciences, prof.

E d i t o r i a l B o a r d:

Fasler-Kan Elizaveta, Dr., University of Basel Switzeland; **Koolmees Petrus Adrianus**, Prof. Dr., Utrecht University, The Netherlands; **Babadoost-Kondri Mohammad,** Prof., University of Illinois, USA; **Yus Aniza Binti Yusof,** Dr., University Putra, Malayzia; **Hesseln Hayley Fawn**, As. Prof., University of Saskatchewan, Canada; **Alex Morgounov,** candidate of agricultural sciences, International Maize and Wheat Improvement Center Turkey; **Andresh S.,** academician of NAS of Moldova; **Gavriluk N.N.,** academician of NAS of Ucraine; **Gerasimovich L.S.,** academician of NAS of Belorassia; **Mamadov G.,** academician of NAS of Azerbaijan; **Sheiko I.P.,** academician of NAS of Belorassia; **Zhalnin E.V.,** Dr. of technical sciences, professor, Russia, **Boinchan B.,** doctor of agricultural sciences, prof., Moldova; **Yuldashbayev Y.A.,** doctor of agricultural sciences, prof., corresponding member of RAS, Russia.

News of the National Academy of Sciences of the Republic of Kazakhstan. Series of Agrarian Sciences.
ISSN 2224-526X
Owner: RPA "National Academy of Sciences of the Republic of Kazakhstan" (Almaty)
The certificate of registration of a periodic printed publication in the Committee of Information and Archives of the Ministry of Culture and Information of the Republic of Kazakhstan N 10895-Ж, issued 30.04.2010

Periodicity: 6 times a year
Circulation: 300 copies

Editorial address: 28, Shevchenko str., of.219-220, Almaty, 050010, tel. 272-13-19, 272-13-18,
http://nauka-nanrk.kz / agricultural.kz

© National Academy of Sciences of the Republic of Kazakhstan, 2019

Address of printing house: ST "Aruna", 75, Muratbayev str, Almaty

N E W S
OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN
SERIES OF AGRICULTURAL SCIENCES
ISSN 2224-526X
Volume 5, Number 53 (2019), 54 – 57 **https://doi.org/10.32014/2019.2224-526X.60**

UDC636.084/.087

A. S. Kalimoldinova[1], G. K. Zhaksylykova[1],
A. E. Chindaliyev[1], K. Baigabylov[1], A. D. Baimukanov[2]

[1]Educational Scientific and Production Center Bayserke-Agro LLP, Talgar district, Almaty region, Kazakhstan,
[2]Russian State Agrarian University – Moscow Agricultural Academy named after K. A. Timiryazev,
Moscow, Russia.
E-mail: kalimoldinova_assel@mail.ru, gulnurzh@ro.ru, achindaliyev@rambler.ru,
unpcbayserke-agro@mail.ru, aidartaidar98@mail.ru

GROWTH AND DEVELOPMENT OF CALVES OF HOLSTEIN BREED IN THE DAIRY COMPLEX OF THE BAYSERKE-AGRO LLP

Abstract. Advance in genetic potential and nutritional needs of animals has accelerated growth rates. Genetic selection for high dairy productivity implies a higher ability to grow and, therefore, requires an increase in nutrients. Nutrition management from birth is crucial for growth and development, as well as a formation of physiological characteristics of young animals affecting their health.

The article focuses on the influence of feeding and nutrition from birth to 6 months of age on the growth and development of calves of the Holstein breed, as well as monitoring and determining the average daily gain in the preweaning period of young animals of different age groups (n = 96 goals) in the dairy complex of Bayserke-Agro LLP.

Keywords: cattle, heifer, growth, development of mammary glands, feeding, diet, calf management, colostrum, milk yield.

Relevance. It is known that the growth and development of the body of young animals in the womb and after birth occurs according to certain biological laws. It was found that the formation and growth of bone tissue are more pronounced in the uterine period of fetal development, and growth of muscle tissue - at the age of 9-14 months, adipose tissue begins to be deposited at a later date. Taking into account these patterns of growth and development, in addition to high-grade diets, In dairy cattle breeding rational feeding and keeping regimes of both mothers and offspring are used, which affect the enhanced development of those tissues, individual systems and organs that influence the subsequent dairy productivity of cattle [1-3].

For example, stimulation of the enhanced development of the digestive organs, starting from the early training of calves and eating more plant forage, and development of the mammary gland - from the organization of proper feeding during the period of intensive development, that is, from the time of sexual growth and in the second half of pregnancy [4].

The main conditions for growing young animals for the full replacement of the dairy herd are as follows:

- organization of full and balanced feeding in all age periods of growing of young animals;
- creation of rational methods of technology for keeping with meeting zoohygienic requirements;
- obtaining and selecting for growing calves from the best animals by genotype, as well as from healthy parents;
- disease prevention by organizing and conducting appropriate veterinary actions;
- control over the growth and development of calves [5].

The most important period when growing young animals is the period of milk growing. The body of calves in the first months of life is growing vigorously. There is an intensive formation of skeleton,

muscles, a development of the gastrointestinal tract and other internal organs with the use of vital substances like protein, fat, minerals, carotene from fed colostrum feeds, milk and fodder products.Especially in the first two months after the birth of a calf, if the required conditions of keeping and inadequate feeding are not met, their body is easily susceptible to respiratory and digestive diseases; leading to reduced productivity and even death.

Aim of the research. The effect of feeding and nutrition from birth to 6 months of age on the growth and development of calves of the Holstein breed, as well as monitoring and analysis of the average daily gain of young animals of different age groups in the highly power-driven automated dairy farm of Bayserke-Agro LLP in Almaty region.

The basis for research and the source of funding. Targeted financing program of the Ministry of Agriculture of the Republic of Kazakhstan for 2018 - 2020 "Transfer and adaptation of technologies for the automation of technological processes for the production of livestock products based on a model farm of the Bayserke-Agro LLP in dairy cattle breeding from 100 cows".

Research methods. The object of the research was young stocks available at Bayserke-Agro LLP. Young animals were weighed monthly at the same time every month, in the morning – before watering and feeding the animals, on the basis of which the average daily gain was calculated [6-8].

Research results. Growing calves is necessary, first of all, for the successful obtaining of strong, healthy and highly productive animals. Therefore, it is necessary to determine the scheme (feeding rates and rearing with milk) of calf growing.

At Bayserke-Agro LLP, when raising calves during the preweaning period, the following technology for maintenance and feeding was adopted (table 1).

Table 1 – Diagram of the keeping and feeding of calves in the preweaning period

Dailyfeedration, kg								
Age, days	Themethodofkeeping	colostrum		milk		Grainmix	Hay	Monofeed
		kg	rearing rates	kg	rearing rates			
1-5	Individually in the maternity ward	5	2	–	–	–	–	–
06-30	Individuallyinhouses	–	2	6	2	0.3	0.5	–
31-45	Individuallyinhouses	–	–	7	2	0.6	0.5	–
46-50	Groupof 14 animals	–	–	7	2	1	1	–
51-100	Groupof 18animals	–	–	6.0	2	1.5	1.5	–
101-120	Groupof 18animals	–	–	4.5	2	2	3	–
121-135	Groupof 18animals	–	–	–	–	2	3	3
136-150	Groupof50animals	–	–	–	–	–	3	8
151-165	Groupof80animals	–	–	–	–	–	3	10
166-180	Groupof80animals	–	–	–	–	–	3	12

Calves at birth for 5 days stayed in the maternity ward of a cowshed. Feeding was carried out by two times of colostrum rearing from a mother in the amount of 5 liters per day (2.5 liters each).

From the age of 5 days, calves were transferred to individual houses indoors, where they stayed for 45 days.

Feeding during this period comprised 5 liters of milk (2.5 liters 2 times a day).

From the age of 15 days, they began to accustom to eating crushed grain mixture and high-quality alfalfa hay. Until the end of the period, these feeds were constantly in the feeders. Also, a prerequisite was daily drinking of clean water in an amount of 0.5-1.0 liters.

From 46 to 100 days of age, calves were transferred to group loose keeping on a deep straw litter of 14 animals in each group with water from a drinking bowl, as well as alfalfa hay on self-feeders. The diet consisted of 7 liters of milk (3.5 liters twice a day), a grain mixture of 2.0-2.5 kg and hay of 2.0-2.5 kg.

Calves at the age of 100 to 120 days were kept in groups of 18 goals. With the same method as in the previous group. In this case, feeding was carried out by a gradual supply of milk until the end of the period, and a supply of vegetable feed increased.

From 121 to 135 days of age, calves were kept in groups of 18 animals, and from 136 to 150 days - in a group of 50 animals each. During these periods, the diet consisted of vegetable feed of grain mixture of 3 kg and hay in the amount of 4-4.5 kg.

From 151 to 180 days, calves were kept in groups of 80 animals. During this period, feeding was carried out with a mono-feed intended for cows with middle productivity (with a milk yield of 20-23 kg per day). The structure of the composition of the mono-feed in the dry matter of the diet: corn silage - 40%, alfalfa hay - 14.2%, grain mix - 30% and rape - 16.2%.

For all periods of growing calves, during housing, they were provided with dry and clean straw litter.

The weighing results of dairy calves, as well as the nature of their growth of energy in the pre-weaning period, are presented in table 2.

Table 2 – Nature of the growth energy of calves in the preweaning period

No	Bull-calves				Heifer-calves			
	Number of animals	Age, days	Live weight, kg	Average daily gain, g	Number of animals	Age, days	Live weight, kg	Average daily gain, g
1	15	76.7±2.5	89.3±3.1	837.2±287	19	74.3±3.0	82.1±2.6	771.3±30.0
2	18	138.4±5.2	156.7±4.8	1001±38.3	12	137±1.7	163±4.7	1012±42.0
3	16	160.8±6.3	180.2±7.9	962.6±15.8	16	193.7±5.9	194.2±5.9	877.1±29.2

As can be seen from table 2, under such keeping and feeding conditions, bull-calves reached 180.2 kg of live weight by the age of 161 days with an average daily gain of 933 grams over the entire growth period. Heifers by the age of 195 days reached 194 kg with an average daily gain of 887 grams.

The existing growth standard for young stock of the Holstein breed used in the republic is for bulls at the age of 6 months - 165 kg, of 12 months - 280 kg, of 15 months - 335 kg, of 18 months - 390 kg. For heifers, respectively by age - 150, 260, 305 and 350 kg.

Conclusions. The results of monitoring the development of young animals showed high growth energy during the preweaning period. Under the feeding and keeping conditions, the live weight of calves at the age of 161 days was 180.2 kg with an average daily gain of 933 grams, heifers by the age of 195 days reached 194 kg, with an average daily gain of 887 grams. While maintaining this growth energy, the live weight of calves in 12 months will be 340 kg, in 15 months - 424 kg and in 18 months - 508 kg. Heifers will have, respectively - 324, 403 and 483 kg. These data far exceed the growth standards of the young stock of the Holstein breed.

А. С. Калимолдинова, Г. К. Жаксылыкова,
А. Е. Чиндалиев, К. Байгабылов, А. Д. Баймұқанов

[1]"Байсерке-Агро" оқу ғылыми-өндірістік орталығы" ЖШС, Талғар ауданы, Алматы облысы, Қазақстан,
[2]Ресей мемлекеттік аграрлық университеті –
К. А. Тимирязев атындағы Мәскеу ауылшаруашылық академиясы, Мәскеу, Ресей

«БАЙСЕРКЕ-АГРО» ЖШС ГОЛШТИН ТҰҚЫМЫНЫҢ 6 АЙҒА ДЕЙІНГІ БҰЗАУЫНЫҢ ӨСУ ЖАҒДАЙЫ

Аннотация. Жоғары сүтті өнімді ірі қара малды өндіру үшін генетикалық сұрыптау ұсыну бойынша, олардың өнімділігін жоғары деңгейге өсуіне мүмкіндік береді, сондықтан қоректік заттардың ұлғайуын талап етеді. Бұзаулардың дұрыс деңгейде өсіп-жетілу үшін, туғаннан бастап тиімді тамақтандыру бойынша, олардың денсаулығына және физиологиялық ерекшеліктерін қалыптастыру үшін маңызы зор.

Мақалада «Байсерке-Агро» ЖШС-нің сүт кешеніндегі голштин тұқымындағы бұзаулардың өсуіне өсуі мен дамуына туғаннан 6 айлық жасқа дейінгі азықтандыру мен тамақтанудың әсеріне баса назар аударылды (n = 96 бас).

Түйін сөздер: ірі қара мал, бұзау, өсу, сүт бездерінің дамуы, азықтандыру, рацион, бұзау өсіру, уыз, сүт сауымы.

А. С. Калимолдинова, Г. К. Жаксылыкова,
А. Е. Чиндалиев, К. Байгабылов, А. Д. Баймуканов

[1]ТОО «Учебный научно-производственный центр «Байсерке-Агро»,
Талгарский район, Алматинская область, Казахстан,
[2]Российский государственный аграрный университет –
Московская сельскохозяйственная академия им. К. А. Тимирязева, Москва, Россия

РОСТ И РАЗВИТИЕ ТЕЛЯТ ГОЛШТИНСКОЙ ПОРОДЫ В МОЛОЧНОМ КОМПЛЕКСЕ ТОО «БАЙСЕРКЕ-АГРО»

Аннотация. Прогресс в генетическом потенциале и пищевых потребностях животных ускорил темпы роста. Генетический отбор для высокой молочной продуктивности предполагает более высокую способность к росту и, следовательно, требует увеличения питательных веществ. Управление питанием с рождения имеет решающее значение для роста и развития, а также формирования физиологических особенностей молодняка влияющих на их здоровье.

В статье основное внимание уделено влиянию кормления и питания от рождения до 6 месячного возраста на рост и развитие у телят голштинской породы, а также проведение мониторинга и определение среднесуточного привеса в молочный период молодняка разных возрастных групп (n = 96 гол.) в молочном комплексе ТОО «Байсерке-Агро».

Ключевые слова: крупный рогатый скот, телка, рост, развитие молочных желез, кормление, рацион, выращивание телят, молозиво, надои молока.

Information about authors:

Kalimoldinova Asel Sanatkyzy, Researcher, ESPC Bayserke-Agro LLP, Talgar District, Almaty Region, Kazakhstan; kalimoldinova_assel@mail.ru; https://orcid.org/0000-0002-6698-3981

Zhaksylykova Gulnur Kenesbekovna, Senior Researcher, ESPC Bayserke-Agro LLP, Talgar District, Almaty Region, Kazakhstan; gulnurzh@ro.ru; https://orcid.org/0000-0001-9020-5656

Chindaliyev Askhat Erbosynovich, Master in Agriculture, Senior Researcher, ESPC Bayserke-Agro LLP, Talgar District, Almaty Region, Kazakhstan; achindaliyev@rambler.ru; https://orcid.org/0000-0002-2468-3809

Baigabylov K. O., Senior Researcher, ESPC Bayserke-Agro LLP, Talgar District, Almaty Region, Kazakhstan; unpcbayserke-agro@mail.ru; https://orcid.org/0000-0002-5267-2031

Baimukanov Aidar Dastanbekouly, student Master of the Faculty of Zootechnics and Biology of the Russian State Agrarian University – Moscow Agricultural Academy named after K. A. Timiryazev, Moscow, Russia; aidartaidar98@mail.ru; https://orcid.org/0000-0001-9669-864X

REFERENCES

[1] Bakaeva L.N., Grigoriev V.S. (2012).Growth and biological characteristics of calves with different feeding methods // Bulletin of the Samara State Agricultural Academy. N 1. P. 103-107 (in Russ.).

[2] Levakhin V.I., Babicheva I.A., Poberukhin M.M. (2011). The productivity of young cattle, depending on the technology of cultivation and feeding // Bulletin of the Russian Academy of Agricultural Sciences. N 3. P. 62-63 (inRuss.).

[3] Babicheva I.A. (2014). The use of protein and vitamin supplements to increase the growth and development of animals // News of the Orenburg State Agrarian University. N 3(47). P. 105-107 (in Russ.).

[4] Ombayev A.M., Begaliyeva D.A., Alentayev A.S., Baimukanov D.A. (2017). Intensive technologies for the directional growing of young stock of dairy breeds in the Akmola and Almaty regions. Research, results. Almaty Publishing house of KazNAU. N 4. P. 166-170. (in Russ.).

[5] Baimukanov D.A., Abugaliyev S.K., Seidaliyev N.B., Semenov V.G., Chindaliyev A.E., Dalibayev E.K., Zhamalov B.S., Muka Sh.B. (2019). Productivity and estimated breeding valueof the dairy cattle genepoolin the Republic of Kazakhstan // Bulletin of the National academy of sciences of the Republic of Kazakhstan. 2019. Vol. 1, N 377. P. 39-53. https://doi.org/10.32014/2019.2518-1467.5 ISSN 2518-1467 (Online), ISSN 1991-3494 (Print).

[6] Ernst L.K., Kravchenko N.A., Soldatov N.P. et al. (1987). Breeding work in animal husbandry / Ed. N. A. Kravchenko. M.: Agropromizdat. 287 p. (in Russ.).

[7] Isabekov K.I., Malchevsky A.Yu. (2012). On the issue of using breeding value indices in the conditions of modern industry of beef cattle breeding // Bulletin of agricultural science of Kazakhstan. Almaty. N 4. P. 45-49 (in Russ.).

[8] Instructions for bonitation of meat cattle breeds (2000). (coll. of authors). Astana. 22 p. (in Russ.).

Publication Ethics and Publication Malpractice
in the journals of the National Academy of Sciences of the Republic of Kazakhstan

For information on Ethics in publishing and Ethical guidelines for journal publication see http://www.elsevier.com/publishingethics and http://www.elsevier.com/journal-authors/ethics.

Submission of an article to the National Academy of Sciences of the Republic of Kazakhstan implies that the described work has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see http://www.elsevier.com/postingpolicy), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. In particular, translations into English of papers already published in another language are not accepted.

No other forms of scientific misconduct are allowed, such as plagiarism, falsification, fraudulent data, incorrect interpretation of other works, incorrect citations, etc. The National Academy of Sciences of the Republic of Kazakhstan follows the Code of Conduct of the Committee on Publication Ethics (COPE), and follows the COPE Flowcharts for Resolving Cases of Suspected Misconduct (http://publicationethics.org/files/u2/New_Code.pdf). To verify originality, your article may be checked by the Cross Check originality detection service http://www.elsevier.com/editors/plagdetect.

The authors are obliged to participate in peer review process and be ready to provide corrections, clarifications, retractions and apologies when needed. All authors of a paper should have significantly contributed to the research.

The reviewers should provide objective judgments and should point out relevant published works which are not yet cited. Reviewed articles should be treated confidentially. The reviewers will be chosen in such a way that there is no conflict of interests with respect to the research, the authors and/or the research funders.

The editors have complete responsibility and authority to reject or accept a paper, and they will only accept a paper when reasonably certain. They will preserve anonymity of reviewers and promote publication of corrections, clarifications, retractions and apologies when needed. The acceptance of a paper automatically implies the copyright transfer to the National Academy of Sciences of the Republic of Kazakhstan.

The Editorial Board of the National Academy of Sciences of the Republic of Kazakhstan will monitor and safeguard publishing ethics.

Правила оформления статьи для публикации в журнале смотреть на сайте:

www:nauka-nanrk.kz

http://agricultural.kz/index.php/en/

Редактор *М. С. Ахметова, Т. М. Апендиев, Д. С. Аленов*
Верстка на компьютере *Д. Н. Калкабековой*

Подписано в печать 14.10.2019.
Формат 60x881/8. Бумага офсетная. Печать – ризограф.
8,2 п.л. Тираж 300. Заказ 5.

Национальная академия наук РК
050010, Алматы, ул. Шевченко, 28, т. 272-13-18, 272-13-19