ISSN 2224-526X

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ

Х А Б А Р Л А Р Ы

ИЗВЕСТИЯ

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК
РЕСПУБЛИКИ КАЗАХСТАН

N E W S

OF THE NATIONAL ACADEMY OF SCIENCES
OF THE REPUBLIC OF KAZAKHSTAN

АГРАРЛЫҚ ҒЫЛЫМДАР СЕРИЯСЫ

♦

СЕРИЯ АГРАРНЫХ НАУК

♦

SERIES OF AGRICULTURAL SCIENCES

3 (39)

МАМЫР – МАУСЫМ 2017 ж.
МАЙ – ИЮНЬ 2017 г.
MAY – JUNE 2017

2011 ЖЫЛДЫҢ ҚАҢТАР АЙЫНАН ШЫҒА БАСТАҒАН
ИЗДАЕТСЯ С ЯНВАРЯ 2011 ГОДА
PUBLISHED SINCE JANUARY 2011

ЖЫЛЫНА 6 РЕТ ШЫҒАДЫ
ВЫХОДИТ 6 РАЗ В ГОД
PUBLISHED 6 TIMES A YEAR

АЛМАТЫ, ҚР ҰҒА
АЛМАТЫ, НАН РК
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 корр-мүшесі (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 корр-мүшесі.; **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 корр-мүшесі; **Садыкулов Т.,** 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 корр-мүшесі; **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 **АШҒА** академигі; **Омбаев А.М.,** а.ш.ғ.д., проф.; **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; **Жамбакин К.Ж.,** б.ғ.д., проф., ҚР ҰҒА корр-мүшесі; **Алимкулов Ж.С.,** т.ғ.д., проф., ҚР АШҒА академигі; **Саданов А.К.,** б.ғ.д., проф.; **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., проф., Молдова Республикасы.

© Қазақстан Республикасы Ұлттық ғылым академиясы, 2017 ж.

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., член-корр. 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., член-корр. 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., член-корр. НАН РК; **Садыкулов Т.,** 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., член-корр. 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., академик АСХН РК**; Омбаев А.М.,** доктор сельхоз. наук, проф.; **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; **Жамбакин К.Ж.,** доктор биол. наук, проф., член-корр. НАН РК; **Алимкулов Ж.С.,** доктор техн. наук, проф., академик АСХН РК; **Саданов А.К.,** доктор биол. наук, проф.; **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.

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://nauka-nanrk.kz/agricultural.kz

© Национальная академия наук Республики Казахстан, 2017

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

Chief Editor

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

Editorial Board:

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

Editorial Board:

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.

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, 2017

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 3, Number 39 (2017), 5 – 9

UDC 637.521.2

S. M. Weqar, U. Ch. Chomanov, B. T. Kulataev, G. S. Kenenbay, Zhumalieva T.M.

«The Kazakh research institute of processing and food industry» LTD, Almaty, Kazakhstan,
Kazakh national agrarian university, Almaty, Kazakhstan.
E-mail: gkenenbay@mail.ru, torgyn-zh@mail.ru

GOAT MEAT QUALITY FEATURES ACCORDING TO THE AGE DYNAMICS OF KAZAKH GRUBO SHERSTNAYAGOAT BREEDS

Abstract. The goat meat's total characteristic productivity for the efficiency of meat and features of its formation obtained from the quantity and quality of meat products. The purpose of slaughters control obtained the goat meat efficiency and Quality [1, 2]. Based on the research which studied in the farm of «Ikram» Almaty region has shown the result objectives of growth and development of animal.The factors which affect on the quality of goat meat according to the age dynamicsare peculiarities of the formation of muscle, adipose tissue andinternal organs , estimated food (biological value), consumption value of the goat meat and slaughter products. The above considering things arebasis for the age dynamics.

Keywords: varietal Composition of the carcasses, young goat, nutritional value of meat, fatty acid composition of the fat, chemical composition of the carcass meat.

Relevance (Activities) of the topic: today in the world we have seen the Reducing of organic food in human diet which is a big problem for human societies and specially a risk for the economy. Thereforethe qualityof foods (vegetableand animal)origin is highhygienicdemands. gruboshërstnaya goats are the largest of the goat meat breeds. gruboshërstnaya are Black goat. The gradual increase seen in demand for goat products in the world in recent years has also shown its impact in Kazakhstan, especially Almaty Province. Goat breedingis a traditionalsector of animal husbandry in Kazakhstan. Many private enterprisesinvolved to keep variousbreeds of goats for different productivitytrends in Kazakhstan. Natural andeconomic conditionsof some areas of south-east Kazakhstan, particularlythe Almaty region, alsofavor totheirbreeding, which makes goat a rearing livestocksector perspective.Currently, more than half of the total number of goats in Almaty region is rearing in private farms.The negative impact on the safety and productivity of goats, as well as other farm animals, has their conditions of detention, to a greater extent determined by the environmental conditions in the region of their breeding. The consequence of human economic activity is usually the changes in natural composition of the environment [1].

Aims and objectives of the research. The purpose of this study is to know the possible ecological safety factors of goat's raw meat.

Material and method of the study. Experimental part of the work is carried out in the private sector, "Ikram" Almaty region, where it was established, and focused for the most highly productive breeding herd of Kazakh grubosherstnoi goats.Growth & Development of young animals, and studied the

results of weighing at birth, 4, 8 and 12 months. In addition, we measured the following eight characteristics the goat for exterior body measurements.Meat productivity was studied through the control of slaughter animals. At the same time determined slaughter live weight of an individual weighing after 24-hour exposure hungry. The economic effectiveness of breeding determined by comparing the proceeds of realized production.Maintenance and feeding of goats at the farm is organized according to the year-round grazing system, which allows maximum use of the natural forage lands.

Our scientific and economic experience was conducted: 1 – goats 4 months of experimental group; 2 – control group 8 months; 3 – the control group 12 months.

Research results. The goat meat's total characteristic productivity for the efficiency of meat and features of its formation obtained from the quantity and quality of meat products. The purpose of slaughters control obtained the goat meat efficiency and Quality [1,2].Slaughter results showed that goats can be referred to quite precocious animals.So, the slaughter weight of the goat meat during the period from 4 months to one year old increased 23.83 kg, or 44.37%, and the buck carcass weight were 11.15 kg, or 39.57%. Slaughter output at the age of 4 months was 41.59%, when during the 12 months increased to 44.59%. Crude fat content in the carcasses of goats were also 0.74 kg or 85.06%, increased during 4 to 12 months, and the fat output - from 0.75 to 2.11%. Meat carcasses can be judged by cross sectional area of the longissimus dorsal muscle. Our data clearly shows that, the figure of 8 months reached to 46.92% and the 12 months raised up to -62.83%. For the most complete characteristic meat quality of goats in the age dynamics need to analyze the morphological composition of carcasses. Increase in mass cuts of the first grade depends directly on the intensive development of muscle tissue and intramuscular fat [3,7]. The research results varietal composition of carcasses is summarized in Table 1.

Table 1 – Varietal Composition of the Goat carcasses (n = 3)

Chop off loin (cuts)	4 months					
	Flesh meat		Bone and cartilage		Cut (loin)	
	mass, kg	% of weight cuts	mass, kg	% of weight loin (cuts)	mass, kg	% of weight carcass (mascara)
1 grade	4,392±0,21	73,510±2,71	1,501±0,07	25,140±1,71	5,973±0,11	81,830±0,40
2 grade	0,892±0,05	67,190±0,97	0,435±0,01	32,810±0,97	1,327±0,61	18,170±8,50
8 months						
1 grade	8,751±0,63	74,56±3,79	2,978±0,39	25,440±3,79	11,730±0,25	83,580±0,70
2 grade	1,150±0,20	50,940±8,68	1,107±0,19	49,060±0,87	2,257±0,02	16,090±0,34
12 months						
1 grade	11,894±0,06	74,020±0,72	4,176±0,14	25,980±0,72	16,070±0,10	87,090±0,34
2 grade	1,195±0,75	50,130±2,18	1,188±0,05	49,870±2,18	2,383±0,08	12,910±0,34

According to the data Table 1 shows that older observed stable increasing proportion of the 1st grade (loin) cuts and 2nd grade output of (loin) cuts decreased more than 5%. Also we presented Bone and connective tissue masses output in Table 2.Carcasses of 8 and 12-month-old animals have nearly the same ratio of flesh (pulp) with little difference of 0.4% and the 4-month-old animals difference was 2.56 or 2.96%, in the yield of bone and cartilage were 0.39, respectively, 2.53 to 2.92%.Nutritional value of the meat main part is flesh, which includes muscle and fat tissue. Therefore, special important study of the chemical composition of meat carcass is one of the main indicators for the quality of meat products (Table 2).

Table2 – Chemical composition and nutritional value of meat carcasses of experimental goats (n = 3)

Age of animal by months	Content, %					pH of the meat	The energy value 100 grams of meat, kcal
	moisture	drymatter	Comprise or contain as part of a whole				
			fat	protein	ash		
4	76,67± 0,26	23,33	2,68± 0,21	19,53± 0,06	1,12 ±0,01	5,6	105,0
8	74,54± 0,25	25,46	4,12± 0,06	20,21± 0,18	1,13 ±0,01	5,7	121,2
12	71,36± 0,11	28,64	5,19± 0,15	22,31 ±0,26	1,14 ±0,01	5,9	139,7

Chemical composition analysis results of the experimental goats flesh carcasses medium samples indicate physiological maturity of the meat.

Table 3 – Morphological composition of the carcasses of experimental Goats (n = 3)

4 months						
Loin (cut)	Flesh (pulp)		Bones and cartilages		The loin (cuts)	
	weight, kg	% of the loin (cut) weight	weight, kg	% of the loin (cut) weight	weight, kg	% of the loin (cut) carcasses
spinal scapular	1,972 ± 0,115	73,62 ± 0,800	0,706 ± 0,015	26,38 ± 0,800	2,714 ± 0,129	36,68 ± 0,41
hip (coxofemoral)	1,843 ± 0,028	77,52 ± 2,577	0,535 ± 0,073	22,48 ± 2,577	2,378 ± 0,058	32,60 ± 0,21
lumbar	0,657 ± 0,047	71,66 ± 2,744	0,259 ± 0,016	28,34 ± 2,744	0,905 ± 0,032	12,55 ± 1,23
fore shank	0,132 ± 0,012	57,91 ± 2,380	0,096 ± 0,001	42,09 ± 2,380	0,228 ± 0,011	3,12 ± 0,09
forearm	0,682 ± 0,024	72,78 ± 1,278	0,255 ± 0,008	27,22 ± 1,278	0,912 ± 0,017	12,83 ± 0,20
shank	0,078 ± 0,017	47,98 ± 0,629	0,084 ± 0,016	52,02 ± 0,629	0,163 ± 0,033	2,22 ± 0,47
whole carcass	5,364 ± 0,235	73,46 ± 1,544	1,936 ± 0,068	26,54 ± 1,544	7,300 ± 0,167	100,00 ± 0,00
8 months						
spinal scapular	4,299 ± 0,298	69,9 ± 0,88	1,626 ± 0,256	30,06 ± 0,88	5,925 ± 0,065	42,22 ± 0,41
hip (coxofemoral)	3,423 ± 0,276	75,3 ± 1,14	0,937 ± 0,239	24,66 ± 1,14	4,360 ± 0,037	31,07 ± 0,21
lumbar	1,029 ± 0,076	73,9 ± 0,30	0,416 ± 0,116	26,09 ± 0,30	1,445 ± 0,191	10,29 ± 1,23
fore shank	0,299 ± 0,019	63,4 ± 0,42	0,192 ± 0,022	36,62 ± 0,42	0,491 ± 0,016	3,50 ± 0,09
forearm	0,717 ± 0,223	65,1 ± 0,59	0,584 ± 0,231	34,86 ± 0,59	1,301 ± 0,034	9,27 ± 0,20
shank	0,134 ± 0,039	23,4 ± 2,34	0,330 ± 0,084	76,58 ± 2,34	0,464 ± 0,061	3,31 ± 0,47
whole carcass	9,902 ± 0,445	70,5 ± 2,10	4,085 ± 0,226	29,46 ± 2,10	14,033 ± 0,212	100,00 ± 0,00
12 months						
spinal scapular	6,229 ± 0,130	70,7 ± 1,07	2,587 ± 0,079	29,35 ± 1,07	8,816 ± 0,051	47,78 ± 0,65
hip (coxofemoral)	4,286 ± 0,050	77,9 ± 0,36	1,217 ± 0,039	22,11 ± 0,36	5,502 ± 0,088	29,82 ± 0,25
lumbar	1,379 ± 0,043	78,8 ± 0,57	0,372 ± 0,023	21,24 ± 0,57	1,751 ± 0,066	9,49 ± 0,30
fore shank	0,396 ± 0,008	57,6 ± 0,65	0,292 ± 0,013	42,45 ± 0,65	0,688 ± 0,021	3,73 ± 0,09
forearm	0,587 ± 0,025	64,2 ± 0,43	0,326 ± 0,008	35,77 ± 0,43	0,913 ± 0,033	4,95 ± 0,14
shank	0,213 ± 0,043	27,2 ± 5,51	0,570 ± 0,062	72,75 ± 5,51	0,782 ± 0,046	4,24 ± 0,25
whole carcass	13,089 ± 0,044	70,9 ± 0,48	5,364 ± 0,129	29,07 ± 0,48	18,453 ± 0,147	100,00 ± 0,00

A very important feature of meat indicator is its biological value. Because protein is evaluative and qualitative index (BCP), of muscle tissue (Table 4).

Table 4 – Biological value of the meat (n = 3)

Age of animal by months	Amino acid content, mg%		Protein quality indicator
	tryptophan	hydroxyproline	
4	229,58±1,53	61,14±0,19	3,75
8	247,09±0,33	60,52±0,15	4,08
12	253,33±0,46	60,11±0,05	4,21

We observed tryptophan levels increase 7,9% in the carcass of animal, which had 4 to 8 months of age and from 8 to 12 months of age animals carcass' tryptophan level was 2.6%. Hydroxyproline content from 4 to 8 months was reduced 1.01%, and from 8 to 12 months was 0.68%. Physical-chemical examination and fatty acid composition of fat in the experimental goats, study of physical-chemical parameters of carcass fat of experimental goats showed that the amount of moisture in their fat decreases with aging. Thus, in the animals in age of 4 months it was 1.44 times greater than that of 8-month animals, and

1.65 times than that of the 12-month-old. The content of total lipids in the fat on contrary was the least at 4-month-old goats, has significantly increased to 8 and 12 months. Fluctuations in the melting point and iodine value of the fat in the experimental animals were minor under one year old. Nutritional value of fat which contained in the body of goats under study is determined by its composition. Farm animal tissues contain fatty acids mainly of various lipids and only 1-3% of them are in Free State, in the animal tissue fatty acid composition is closely related to their structure and functional metabolic activity. Due to the fact that fatty acids play an important role in the formation of tissues, growth of young goats, intermediate metabolism, reproduction, there was an urgent necessity to study their maintenance in the lipids of muscle and adipose tissues of goats from different age groups [3, 4].

The subcutaneous fat and muscle tissue fat of goats at the age of 4 and 8 months, contents of unsaturated fatty acids ranged from 40-43% up to 52, saturated from 47 to 56-59,4%. The factors of correlation amounted to 1,1-0,88 units. Subcutaneous fat in animals of all ages contains palmitoleic and oleic acid larger amount than other types of fat. The ratio of unsaturated to saturated fatty acids in the internal fat significantly decreased by lowering proportion of the monounsaturated and polyunsaturated acids, and increasing the proportion of saturated. difference between subcutaneous and internal fat are that the internal fat contains more saturated fatty acids, especially stearic and palmitic, and somewhat less unsaturated. Especially low proportion (0,52-1,626%) of polyunsaturated fatty acids, for example essential linoleic acid which 4.3-4.5 times less than saturated fat.The content of saturated fatty acids at the fat of domestic goats of all the three age groups was approximately at the same level.The maximum divergence ranged from 3.77 to 8% in favor of 12 month age compared with the 4-month-old.In the muscle tissue fat percentage of saturated fatty acids was significantly less.But Majority was mono- and polyunsaturated. The main fatty acids of muscle tissue lipids of the goats are: oleic, palmitic, stearic, palmitoleic. Fatty acid spectrum of muscle tissue is highly variable to animal’s age.When we 12 month age goats compared with 4-months age the 12 month age goat saturated fatty acids concentration were significantly (capric - 1.45 times, lauric - 4.18 times, palmitic - 1.26 times, stearic - 1.2 times, arachidic - 4.08 times), higher, and unsaturated, conversely (palmitoleic - 1.52 times, oleic - 1.18 times, linoleic - 1.88 times, linolenic - 2.65 times. specific content of oleic acid 36,15-42,99% and palmitic - 1,71-2,61%.) was less. The amount of saturated fatty acids significantly decreases in the goats muscle tissue fats which concern to the age. In the muscle tissue lipids of four months old goats indispensable (essential) linolenic acid was 1.5 times greater than in the meat of 8-months goats and 2.6 times higher from the meat of 12-months goats [5].

During all period of age goat have better ratio of unsaturated acids distinguished with saturated acids: in the 4 months of age, it was 1.1 also at the 8-months - 0.95, and at 12 months - 0.68, which is an advantage for this type of indication and its meat quality. Obtained data on the study of meat efficiency of young goats, show that the goat carcasses fatty acid composition are well balanced. Monitoring the growth and development of young Russian breed goats showed that the animal organism develops most intensively up to 4 month age; during this time absolute growth rate received maximum 117 grams per day. Age effect of the young Russian goat breeds founded after the quality products of slaughter by complex indicators and compared 8monts animals with the 4 months optimal slaughter yield (from 41.59 to 43.17%) , increasing output cuts (loin) of the 1 grade (from 81.83 up to 83.58%) and the eye muscular area (from 11.06 to 16.25 cm2).Study on the chemical composition of muscle tissue shown that the increasing of the animals age reduce the moisture content in meat (from 76.67 up to 71.36%) and increased the mass fraction of solids (from 23.33 up to 28.64%) [6].

Character of adipose tissue synthesis is due to the age of goats. According to increasing the animal’s age from 4 to 12 months, that increase the amount of extractable mentioned fat 19, 24%, and melting temperature 1, 5 ° C and reduce the iodine value to 2.15.for the rearing of Russian goat herds evidence of the environment are necessary, and regular monitor “the air - soil - water - food - biological material - products" for the purpose of biotechnological chain, andto determine the level of contamination of feed and production of heavy metals.In order to generate high quality and environmentally safe products in the influence zones the major industrial centers should be sell Russian advisable young goats breed for meat not older than 8 months.

REFERENCES

[1] Mandakh B., Nadmid N. (1996) Effects of genotype, sex and age on the fibre quality of Mongolian goats, Newsletter of the European Fine fibre Network. 6: 26-28.

[2] Laker J. (1996)Production systems for goat fibre in Europe, Africa and the Americas. VI International Conference on goats. Beijing, China, P. 29-30.

[3] Ma Ning, Li Uongjun, Song Vagin, Luan Weimin. (1995) Estimates of non-genetic parameters of main traits in Liaoning cashmere goats, Newsletterof the European Fine fibre Network, 5: 19-22.

[4] Parthasarathy M. (1983) Goats in New Zealand,J. Agriculture, 147.5:30-31.

[5] Tohnson T.L. (1985) Cashmere from Australia, J. Agriculture, 26.1:3-6.

[6] Chet R.U. (1998) Fine fibre production in high Mountain and Trans-Himalayan region of Nepal / Newsletter of the European Fine fibre Network, 3: 12.

[7] Anon (1985) Refltaterfragietekontrollen, Sau Geit., 38.4:196-197.

С. М. Вегар, Ү. Ш. Шоманов, Б. Т. Құлатаев, Г. С. Кененбай, Т. М. Жұмалиева

«Қазақ қайта өңдеу және азық өнеркәсібі ғылыми зерттеу институты» ЖШС, Алматы, Қазақстан,
Қазақ ұлттық аграрлық университеті, Алматы, Қазақстан

ҚАЗАҚТЫҢ ДӨРЕКІ ЖҮНДІТҰҚЫМЫНЫҢ ӨСУ ДИНАМИКАСЫНА СӘЙКЕС ЕШКІ ЕТІ САПАСЫНЫҢ ЕРЕКШЕЛІКТЕРІ

Аннотация. Ешкі еті өнімділігінің жалпы сипаттамалары өндірілген ет өнімдері мөлшері мен сапасы негізіндегі ет құндылығы және қалыптасу ерекшеліктері. Сою үрдісін бақылаудың мақсаты – алынған ешкі етінің тиімділігі мен сапасы [1, 2]. Алматы облысындағы «Икрам»шаруа қожалығында жүргізілген зерттеулерге негізделе келе жануарлардың өсуі мен дамуы нәтижелері келтірілген. Жас динамикасына сәйкес ешкі етінің сапасына әсерін тигізетін ықпалдар қатарына бұлшықеттер қалыптасуы, май ұлпасы және ішкі ағзаларөзгешеліктері, азықты бағалау (биологиялық құндылығы), ешкі етін және сою өнімдерін тұтыну мөлшері жатады. Жоғарыда келтірілген жайттар жас динамикасына негіз болады.

Түйін сөздер: ұшалардың сұрыптық құрамы, жас ешкі малы, еттің тағамдық құндылығы, майдың май қышқылдық құрамы, балғын еттің химиялық құрамы.

С. М. Вегар, У. Ч. Чоманов, Б. Т. Кулатаев, Г. С. Кененбай, Т. М. Жумалиева

ТОО «Казахский научно-исследовательский институт перерабатывающей и пищевой промышленности»,
Алматы, Казахстан,
Казахский национальный аграрный университет, Алматы, Казахстан

ОСОБЕННОСТИ КАЧЕСТВА КОЗЬЕГО МЯСА СОГЛАСНО ДИНАМИКЕ РОСТА ПОРОДЫ «КАЗАХСКАЯ ГРУБО ШЕРСТНАЯ»

Аннотация. Общие характеристики продуктивности козьего мяса особенности формирования мясного сырья полученного количества и качества мясной продукции. Цель контроля убоя – качество полученного козьего мяса [1, 2]. На основании исследовании проведенных на крестьянском хозяйстве «Икрам» в Алматинской области изучены результаты роста и развития животных. Факторами, влияющими на качество козьего мяса соответственно динамике роста являются специфика формирования мускулов, жировой ткани и внутренних органов, оценка продукции (биологической ценности), величины потребления козьего мяса и продуктов убоя. Вышеприведенные данные являются основой для динамики роста.

Ключевые слова: сортовой состав туш, молодняк коз, пищевая ценность мяса, жирнокислотный состав жира, химический состав парного мяса.

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/

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

Подписано в печать 15.05.2017.
Формат 60x881/8. Бумага офсетная. Печать – ризограф.
14,75 п.л. Тираж 300. Заказ 3.