

С.Сейфуллин атындағы Қазақ агротехникалық университетінің Ғылым жаршысы (пәнаралық) = Вестник науки Казахского агротехнического университета им. С.Сейфуллина (междисциплинарный). - 2022. - №3 (114). –Ч.2. – Р.120-126

MONITORING THE CONDITION OF THE HORSES OF THE KOSTANAYBREEDS IN NORTHERN KAZAKHSTAN

Amandykova Aigul Bakhylkhanovna
Candidate of Agricultural Sciences
«Kazak Tulpary» LLP
Kostanay, Kazakhstan
E-mail: amandykova_1983@mail.ru

Marszalek Miroslav
Professor, Doctor PhD
Mendel University
Vice President of the Association of Horse Breeders' Unions of the
Czech Republic
Brno, Czech Republic
E-mail: marsalek@zf.jcu.cz

Safronova Olga Stanislavovna
Candidate of Agricultural Sciences
«SHOS-Zarechnoye»LLP
Kostanay, Kazakhstan
E-mail: olga_safronova73@mail.ru

Brel-Kiselyova Inna Mikhailovna
Candidate of Agricultural Sciences
Kostanay Regional University A. Baitursynov
Kostanay, Kazakhstan
E-mail: innessab7@mail.ru

Abstract

The article provides an analysis of the current state of Kustanay breed of horses in the Northern region of Kazakhstan. More than 100 heads of breeding horses of Kustanay breed were recorded and described, incl. 9 breeders, 44 broodmare and 79 heads of young animals of different ages in three regions of Kazakhstan. 60% of the horse population of chestnut, 40% of bay. The height at the shoulder of the broodmares is 156 cm, the oblique body length is 155 cm, the chest girth is 180 cm, the girth of the metacarpus is 19.5 cm. Studhorses are 150-153-180-20.2 cm, respectively. 38% of studhorses are linear - belong to lines 464 Neon and 494 Fort. Average, measurements are somewhat lower than those of horses recorded in the IV volume of the State Book of breeding horses of Kustanay

breed (2009), while they correspond to the standard. The probable reason is the evasion of selection and breeding work in the direction of improving the remote characteristics of the massif - orientation to the so-called "baiga" distances. An increase in the index of stretching was revealed against the background of a decrease in flattening and massiveness, with a stable bone index. These characteristics contribute to ensuring endurance when used at "baiga" distances, which is confirmed by the performance results presented in the article.

Key words: breed; line; horse; ancestor; generation; major races; studhorse.

Introduction

Kustanay breed of horses enjoys well-deserved fame due to its breeding and user qualities. The significant progress of the gene pool of the breed, the manifestation of its most valuable qualities, was facilitated by directed breeding work using universal effective breeding techniques used in other breeds [1, p.558, 2 p.7, 3 p.118, 4 p.135].

The breed was on the verge of existence in the late 90s of the last century, due to the economic and political crisis caused by the collapse of the USSR and the subsequent general stagnation. The sharp decline in the number of livestock and the breeding core, the lack of centralized accounting, control and coordination has led to a critical level of presence of Kustanay breed in Kazakhstan. With the help of significant efforts of the State, the development of animal husbandry and the gradual restoration of Kustanay breed began at the beginning of 2000. The main breeding core was concentrated in the State

Kostanay stud farm "Kazakh tulpary" LLP, the number of which gradually reached 300 heads. Considering that a significant number of horses were also privately owned, the prospects for not only the preservation, but also the intensive development of Kustanay breed were very favorable.

However, since 2010, state support for programs for the conservation and development of Kustanay horses has been sharply reduced, the number of breeding animals has decreased by almost eight times, which has led to the fact that today Kustanay horse breed is again at a critical level.

A Road Map was developed to restore, preserve and further improve the domestic horse breed in 2021, which was approved by the Deputy Prime Minister of the Republic of Kazakhstan Ye. Tugzhanov. Also, research work has begun on promising developments in the development of the breed.

Materials and methods

Studies on the analysis of the state of Kustanay breed were carried out in 10 farms of three regions of Kazakhstan. For each farm, the following information was taken into account - Head of farm, name, address,

GPS coordinates, cell phone, email pasture area, head count and livestock structure. Animals were described according to the following scheme - Nickname, photo, age, brand, copy of breeding certificate (if available),

color, measurements, data on descendants. All considered animals were divided into factory,

Results

During the testing period, there were five main lines in Kustanay breed - 30 Burelom, 45 Zaboy, 84 Zeus, 56 Diktor and 162 Trostinka. The line 84 Zeus (the main type) had the greatest distribution, 23% of the livestock belonged to it; it was followed by the line of Zaboy with an indicator of 15%; representatives of the lines 30 Burelom (riding type), 162 Trostinka (basic type) and 56 Diktor (riding type) had 7.8 and 9%, respectively. In the 60-70s. the line of Slaughter became the leader (33%), in the 80-90s. there is a change in the situation - line 30 Bureloma almost doubles its representation (from 7-11% to 23%), the influence of lines 75 Zaboy and 84 Zeus drops sharply (to 5-12%). In the 2000s, three lines - 56 Announcers, 162 Reeds and 75 Zaboy practically ceased to exist. Line 30 Burelom moved into the leading group - 21%. Retained their presence and formed in the 80-90s. two genealogical lines - 486 Triumph and 494 Fort (tested in the 2000s) - 8% and 13%, respectively. The 464 Neon line had absolute numerical and qualitative superiority [5, p. 127].

The absence of a permanent leader testified to changes in the

genealogical lines and individual producers (non-linear).

direction of breeding work, i.e. a change in priorities in determining the type of horse desired for breeding leads to a change in the leadership of the lines in the breed. If during the period of approbation of Kustanay breed, the sectioned features were horse-drawn qualities (including draft power), which were shown by representatives of the line 84 of Zeus (the main type), partly 75 Zaboy, then after the 70s. only agility received the prevailing direction. This led to a focus on the riding type line - 30 Burelom. In the same period, a new line was laid in the rock - 464 Neon, also of the riding type. In the 90s the formation of another line of riding type was carried out - line 494 Fort.

Of the total array (132) of the studied horses of Kustanay breed, studhorses (9 heads) and mares (44) belong to the elite class and the first, are typical of Kustanay breed, have distinctive constitutional and exterior features (table 1,2,3). Age of mares within 3-15 years (full age). Most of the mares, according to the development of the skeleton, have a strong type of constitution and are typical representatives of their breed.

Table 1 - Measurements, live weight and indices of studhorses of Kustanay breed

Indicators/indices	Studhorses, n=9		
	M±m	δ	Cv
Height at the withers, cm	155.0+0.99	2.83	1.82
Oblique body length, cm	153.6+0.79	2.23	1.45
Bust, cm	180.6+1.24	3.51	1.94
Pastern girth, cm	20.2+0.25	0.70	3.46

Live weight, kg	415.4+8.90	25.16	6.06
Stretch/Format	100.1+0.62	1.24	1.24
Brokenness/Compactness	117.6+0.85	2.41	2.05
massiveness	116.5+0.70	1.98	1.70
Bonyness	13.0+0.16	0.44	3.37

Table 2 - Measurements and live weight of mares of Kustanay breed

Indicators	Mares n= 44			Measurements of mares recorded in the 4th volume of the State book of breeding animals n= 245		
	M±m	δ	Cv	M±m	δ	Cv
Height at the withers, cm	156.3+0.74	4.60	2.94	159.5+0.22	*	*
Oblique body length, cm	155.2+0.74	4.63	2.99	156.3+0.30	*	*
Bust, cm	180.3+1.04	6.49	3.60	186.8+0.47	*	*
Pastern girth, cm	19.5+0.13	0.78	4.02	19.9+0.04	*	*
Live weight, kg	406.2+4.32	26.95	6.63	*	*	*

The data in Table 3 confirm the changes in the direction of breeding selection. There is an increase in the index of stretching against the background of a decrease in flattening and massiveness, with a stable bone index. These characteristics (decrease in growth parameters, weight, dry muscles, etc.) provide endurance when used at so-called long “baiga” distances. 13% of the studied number of mares belong to lines 464 Neon and 494 Fort, the rest are non-linear.

Table 3 - Indices of body build of mares of Kustanay breed

Indices physique	Mares n=44			Measurements of mares recorded in the 4th volume of the State book of breeding animals n= 245
	M±m	δ	Cv	
Stretch/Format	99.3+0.23	1.47	1.48	97.9
Brokenness/Compactness	116.2+0.63	3.91	3.36	119.5
massiveness	115.4+0.58	3.59	3.12	117.0
Bonyness	12.5+0.06	0.40	3.24	12.5

Of the young, the most promising are the representatives of the line of Fort and Neon. At the age of 1.5 years, the young of line 494 Fort has average growth characteristics, height at the withers - 136.8±2.62 cm, oblique body length - 121.3±5.36 cm, chest girth - 141.0±3.06 cm, metacarpus girth 16.2±0.17 cm. Young growth of the

Neon line at the age of 2 years has a height at the withers - 148.1±2.10, oblique body length - 139.9±3.92 cm, chest girth - 162 .9±2.36 cm, metacarpal girth - 18.4±0.32 cm.

The horses of the owner Akhmetov T.B. - stallion Emperor born in 2016 (Izis - Purga) in 2018 in the North Kazakhstan region of the Volodarovskiy district at a distance of

7 km took 1st place. Mare Perizat born in 2018 (Zalimkhan - Purga) Zarechnoye village in 2020 took 1st place at a distance of 6 km. Mare Panda born in 2017 (Nurtobel-Purga) in Zhitikara in 2019 at the Regional Spartakiad for 6 km took 4th place.

On July 5, 2021, in honor of the 30th anniversary of Independence of Kazakhstan, for the first time in the last 10 years, major races were held for horses of Kustanay breed and their crosses. Distance alaman-baiga for 23 km. won the stallion Moncantour, born in 2016 (Miras - Talzhibek), owner Akhmetov T. Monkantur for the first time became the owner of the Cup of the Head of State among the horses of Kustanay breed. The 2nd place was taken by the stallion Bak Sultan, born in 2018. (Bagytur - Samal), owner BurkitbaySerikbekov from the Abay district of the

Discussion

At present, in Kustanay breed, due to a critical decrease in the number of livestock, the intensity of the use of English riding breed sires has sharply increased; this is also facilitated by the low detection of outstanding horses in Kustanay breed, due to the cessation of stationary hippodrome tests; the fragmentation and remoteness of horse owners, which does not allow for the exchange of breeders-producers of Kustanay breed of high race class and genetic potential.

Measurement indicators of Kustanay mares, recorded in the IV volume of the State Book of Breeding Animals, are the basic basis for selection in the breeding stock, however, in some cases, exceptions

Karaganda region. 3rd place stallion Tango born in 2014 (Tagdyr - Carnation) AibatKabazhayev from the village of Zarechniy, Kustanay region.

Mare Germany born in 2016 (Aikaska - Gulasy). Owner E. Baranovsky at the closing of the racing season on October 2, 2021 in the village of Zarechnoye, the Argymak hippodrome, took 3rd place at a distance of 20 km., stallion Kaskaldak born in 2015. (KronnBull - Zita), owner Ispergenov A. took 2nd place and Stallion Flint, born in 2014. (KronnBul - Gita) of the same owner, took 1st place.

In the season of 2021 in the Kokchetav region, the village of Akkol, in the races "Closing the racing season", the mare of Zanzibar, born in 2018. (Bemkur-Zamanat), owner Tasmukhambetov A.K., took 2nd place in the distance of 7 km.

can be made. Mares can be shorter in stature, but still have the right harmonious physique and good parentage. Using the experience of breeders-practitioners to improve Kustanay breed, a further increase in growth rates is undesirable. Therefore, the height at the withers in the range of 156-160 cm should be considered the ideal height for the uterine composition of the breeding core[6, p.29, 7p.171, 8p.116,9 p.529,10 p.24,11 p.77]. Kustanay breed, however, the growth characteristics correspond to the standard of Kustanay breed. The probable reason is the deviation in selection and breeding work in the direction of the remote characteristics of the rock mass (orientation to the so-called

“baiga” distances as well as a sharp decrease in numbers). Another, theoretical, reason may be nutritional

deficiencies, but they have not been identified.

Conclusion

Thus, taking into account the results of the monitoring of the current state of the Kostanay horse breed, in the Northern region of Kazakhstan there is a prospect of preserving and improving Kustanay horse breed as a valuable genetic resource of Kazakhstan.

Information about financing

The research was carried out within the framework of the scientific and technical program BR 10764999 “Development of technologies for effective management of the breeding process and conservation of the gene pool in horse breeding” 2021-2023 of the Ministry of Agriculture of the Republic of Kazakhstan.

References

- 1 Gubareva, S. V. Hozyajstvenno-poleznye kachestva zhrebcev raznyh linij Orlovskoj rystoj porody [Tekst] / Sbornik studencheskih nauchnyh rabot: po materialam dokladov, 72-j Mezhdunarodnoj studencheskoj nauchno-prakticheskoy konferencii, posvyashchennoj 145-letiyu so dnya rozhdenii A.G. Doyarenko, Moskva, 26–29 marta 2019 goda. – Moskva: Rossijskij gosudarstvennyj agrarnyj universitet - MSKHA im. K.A. Timiryazeva, -2019. – S. 558-560.
- 2 Sulejmanov, O. I. Ispol'zovanie mezhdunarodnogo genofonda kak metod sovershenstvovaniya chistokrovnoj verhovej porody. [Tekst] / ZHurnal Konevodstvo i konnyj sport, – 2007. – № 1. – S. 7-9.
- 3 Safronova, O.S. Selekcionno-plemennaya rabota s kustanajskoj porodoj loshadej. [Tekst] / Materialy mezhdunarodnoj konferencii «Razvitie klyuchevyh napravlenij sel'skohozyajstvennyh nauk v Kazahstane: selekciya, biotekhnologiya, geneticheskie resursy».-Almaty, Bastau, -2004. -S.118-122.
- 4 Ibraeva, A.K., Asanbaev, T.SH., Atejhan, B., Smail A.S. Plemennoe sovershenstvovanie loshadej konezavoda TOO AF «AKZHAR ÖNDIRIS». [Tekst] / Materialy mezhdunarodnoj nauchno-prakticheskoy konferencii «Sostoyanie i perspektivy razvitiya produktivnogo konevodstva v Kazahstane i stranah zarubezh'ya», (5-6 noyabrya 2021 god) / NAO «Torajgyrov universitet» – Pavlodar, -2021.- S.135. ISBN 978-601-345-232-6
- 5 Safronova, O.S. Novaya liniya 464 Neona v kustanajskoj porode loshadej. [Tekst]/ ZHurnal Vestnik s.-h. nauki Kazahstana, -2004. -№12. -S.27-28.
- 6 Brel'-Kiseleva, I.M., Dosumova, A.ZH., SHaripov, V.F. Primenenie kormovoj dobavki «Al Karal» v racione kormleniya i eyo vliyanie na hozyajstvenno-poleznye kachestva loshadej kustanajskoj porody v TOO «Kazak Tulpary» [Tekst] /zhurnal № 3: intellect, idea, innovation, -2021. – № 1. – S. 7.
- 7 Arnasson T. Prediction of breeding values for multiple traits in small non-random mating (horse) populations //Acta Agriculturae Scandinavica. – 1982. – T.

32. – С. 171-176. Sel Evol 14, 115a (1982). <https://doi.org/10.1186/1297-9686-14-1-115A>

8 Holst, W.v.d. Breeding problems in the Friesian horse. Genet Sel Evol 14, 116b (1982). <https://doi.org/10.1186/1297-9686-14-1-116B>

9 Árnason T. (2012) Breeding in Horses. In: Meyers R.A. (eds) Encyclopedia of Sustainability Science and Technology. Springer, New York, NY. https://doi.org/10.1007/978-1-4419-0851-3_340

10 Albertsdóttir E. et al. An all-or-none trait to account for pre-selection in Icelandic horse breeding [Текст] / Book of Abstracts of the 45th annual meeting of the European association of animal production, -2009. – С. 24-27.

11 Koenen EPC, Aldrige LI, Philipsson J An overview of breeding objectives for warmblood sport horses. Livest Prod Sci 88: P.77–84.

СОЛТУСТІК ҚАЗАҚСТАНДАҒЫ ҚОСТАНАЙ ЖЫЛҚЫ ТҰҚЫМЫНЫҢ ҚАЗІРГІ ЖАҒДАЙЫ

Амандықова Айгүл Бахылханқызы

Ауылшаруашылығы ғылымдарының кандидаты

«Қазақ тұлпары» ЖШС

Қостанай қ., Қазақстан

E-mail: amandykova_1983@mail.ru

Маршалек Мирослав

Профессор, PhD докторы

Мендель университеті

Чехия жылқы өсірушілер одақтары қауымдастығының

вице-президенті

Брно, Чехия

E-mail: marsalek@zf.jcu

Сафронова Ольга Станиславовна

Ауылшаруашылығы ғылымдарының кандидаты

«ШОС-Заречное» ЖШС

Қостанай қ., Қазақстан

E-mail: olga_safronova73@mail.ru

Брел-Киселева Инна Михайловна

Ауылшаруашылығы ғылымдарының кандидаты

А. Байтұрсынов атындағы Қостанай өңірлік университеті

Қостанай қ., Қазақстан

E-mail: inessab7@mail.ru

Мақалада Қазақстанның Солтүстік өңіріндегі Қостанай жылқы тұқымының қазіргі жағдайына талдау жасалған. Қазақстанның үш облысында Қостанай тұқымының 100-ден астам асыл тұқымды жылқысы тіркеліп, сипатталған, соның ішінде әртүрлі жастағы 9 айғырлар, 44 бие және 79 бас төл. Жылқы популяциясының 60% қызыл, 40% шығанақ. Биелердің құрақ тұсындағы биіктігі 156 см, дененің қиғаш бөлігінің ұзындығы 155 см, кеуде қуысы 180 см, төбе асты ені -19,5 см. Асыл айғырлар сәйкесінше 150-153-180-20,2 см. Айғыр-өндірушілердің 38% сызықты болып табылады - 464 Неон және 494 Форт желілеріне жатады. Орташа алғанда өлшемдер Қостанай тұқымды асыл тұқымды жылқылардың мемлекеттік кітабының IV томында (2009 ж.) жазылған жылқылардан біршама төмен, бірақ олар стандартқа сәйкес келеді. Бқтимал себебі массивтің шалғай сипаттамаларын жақсарту бағытында селекциялық-асыл тұқымдық жұмыстарды жүргізуден жалтару – «байг» деп аталатын қашықтықтарға бағдарлау.

Сүйек индексі тұрақты, тегістелу мен массивтіліктің төмендеуі фоннда созылу индексінің жоғарылауы анықталды. Бұл сипаттамалар мақалада келтірілген өнімділік нәтижелерімен расталған «шығары» қашықтықта қолданған кезде төзімділікті қамтамасыз етуге ықпал етеді.

Кілт сөздер: өсіру әдісі; жылқы; ата-баба; ұрпақ; қашықтық; айғыр-жалғастырушы.

МОНИТОРИНГ СОСТОЯНИЯ ЛОШАДЕЙ КОСТАНАЙСКОЙ ПОРОДЫ В СЕВЕРНОМ КАЗАХСТАНЕ

Амандыкова Айгуль Базылхановна
Кандидат сельскохозяйственных наук
ТОО «Қазақ тұлпары»
г. Костанай, Казахстан
E-mail: amandykova_1983@mail.ru

Маршалек Мирослав
Профессор, доктор PhD
Университет Менделя
Брно, Чехия
E-mail: marsalek@zf.jcu.cz

Сафронова Ольга Станиславовна
Кандидат сельскохозяйственных наук
ТОО «СХОС-Заречное»
г. Костанай, Казахстан
E-mail: olga_safronova73@mail.ru

Брель-Киселева Инна Михайловна

*Кандидат сельскохозяйственных наук
Костанайский региональный университет имени А. Байтурсынова
г. Костанай, Казахстан
E-mail: inessab7@mail.ru*

Аннотация

В статье приведен анализ современного состояния кустанайской породы лошадей в Северном регионе Казахстана. В трех областях Казахстана было зафиксировано и описано более 100 голов племенных лошадей Кустанайской породы, в т.ч. 9 производителей, 44 конематки и 79 голов молодняка разного возраста. 60% конепоголовья рыжей масти, 40% гнедой. Высота в холке у конематок составляет 156 см, косая длина туловища 155 см, обхват груди 180 см, обхват пясти – 19,5 см. жеребцов-производителей - 150-153-180-20,2 см соответственно. 38% жеребцов-производителей являются линейными- принадлежат к линиям 464 Неона и 494 Форта. В среднем, показатели промеров несколько ниже, чем у лошадей, записанных в IV том Государственной Книги племенных лошадей Кустанайской породы (2009 г.в.), при этом, соответствуют стандарту. Вероятной причиной является уклонение ведения селекционно-племенной работы в направлении улучшения дистанционных характеристик массива - ориентирование на, так называемые, «байговые» дистанции. Выявлено повышение индекса растянутости на фоне снижения сбитости и массивности, при стабильном индексе костистости. Данные характеристики способствуют обеспечению выносливости при использовании на «байговых» дистанциях, что подтверждается представленными в статье результатами работоспособности.

Ключевые слова: порода; линия; лошадь; родоначальник; дистанция; поколение; жеребец-производитель.