



Issues of Efficient Usage of Pastures in the Development of the Cattle Farming Network

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

In the article, the issues of effective use of pastures in the economically stable development of cattle breeding are described from a scientific and theoretical point of view. In particular, as a result of the institutional reforms, structural changes, as well as production modernization measures implemented in Uzbekistan, relatively stable growth of production volume in the field of cattle breeding was highlighted. According to the authors, the effective management of the cattle breeding sector depends first of all on the scientifically based breeding and feeding of the cattle sheep with food based on the ration, and the idea of economic sustainable development based on the introduction of innovative technologies and resource-efficient developments in the management of the field was put forward. In the pastures network, innovative ideas were expressed on the natural preservation of desert-pasture areas and their natural environment, restoration and development of biodiversity.

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1. INTRODUCTION

Inefficient and unsystematic use of pastures, reduction of pasture productivity, non-use of resource-efficient technologies in livestock feeding, low level of development of the service and supply system of the livestock network are the main factors that have a negative impact on biological diversity in the desert regions of the Republic of Uzbekistan.

In order to deepen the reforms in the field of cattle breeding, to develop breeding limited liability companies (LLCs), personal assistants, farmers and farms engaged in pasture cattle breeding, to ensure their economically stable operation, and to financially encourage the work of cattle breeders, on March 28, 2019, the President of the Republic of Uzbekistan "Veterinary and Livestock Breeding" Decree No. PF-5696 [1] on measures to fundamentally improve the state administration system in the field of piracy [1], on March 14, 2018, No. PQ-3603 [2] on measures for the rapid development of the piracy sector and on August 18, 2019 Decisions No. 4420 [3] on comprehensive development measures of the Karakollik network" were adopted.

2. LITERATURE REVIEW

It is worth noting that foreign scientists M.A. Vinogradova, Sh.R. Kherremov [4], O. Annageldyev, O. Annamukhammedov [5], H. Ukibayev [6], T.J. Nurumbetov [7], N.Z. Shamsutdinov [8] and Uzbek scientists T.S. Mallaboyev [9], R.Kh. Khusanov [10], F.K. Qayumov [11], F.J. Zorayev [12], T.Kh. Farmanov [13], A.J. Musagaliev [14,15] as well as the others have conducted scientific research on the management of the karakol industry taking into account its specific characteristics, the storage, feeding, maintenance and other issues of karakol breeding in pasture-desert areas.

3. MATERIALS AND METHODS

A number of government decrees and decisions on the development of agriculture in Uzbekistan based on theoretical analysis and monographic observations, and in the "Roadmap" for the implementation of the specified tasks in the "Strategy of the Development of Agriculture of the Republic of Uzbekistan for 2020-2030", adopted on the basis of the Decree of the

President of the Republic of Uzbekistan No. PF-5853 of October 23, 2019 [16] aimed at highlighting the importance of network programs developed to increase agricultural efficiency and intensify the production of socially important products.

4. RESULTS AND DISCUSSION

As a result of the implemented institutional reforms, structural changes, production modernization activities, the volume of production in the livestock sector is growing relatively steadily. As a result of the reforms, the activities of 103 cattle-breeding joint-stock farms in Uzbekistan were restructured, and 36 of them were left as breeding limited liability companies.

It is known that the effective management of the cattle breeding industry depends first of all on keeping the breed of the cattle sheep on a scientific basis and feeding them with feed based on the ration.

In recent years, the main reason for the production and financial condition of the farms specializing in pasture cattle breeding is the loss of the breeding work, the fact that the farms have not been able to raise the female sheep and rams separately on a scientific basis, the measures to improve the biodiversity of the pastures have not been carried out continuously and sustainably, and other such urgent issues. is considered.

As a result of the research, it is necessary to constantly change pastures in cattle breeding, that is, to create conditions for the natural regeneration of pastures, it is required not to graze livestock in these areas for a while. The increase in the number of livestock under the management of Karakolchik breeding LLCs is relatively stable, at a low rate, and it is possible to practice alternating feeding of livestock on pastures. However, chronic grazing of unaccounted sheep by shepherds and other citizens in desert pastures together with LLC sheep causes non-observance of the system of grazing from pastures.

As a result of monographic observations, due to the fact that the population lives in the villages, the number of livestock belonging to the local, meat-oriented breeds with relatively high productivity is increasing. As a result, there is an

increase in the size of degraded pastures around villages, wells and wells, the loss of existing desert forage plants, the number of harmful, non-livestock-eating plants and the expansion of the areas they occupy are increasing.

According to the results of our scientific observations, local residents in many cases work in the manner of "the more the number of goods, the higher the income" in order to fully satisfy their family needs. As a result, they use pastures around villages for chronic livestock grazing without considering the productivity of available fodder plants [17,18]. This situation ultimately causes an increase in the size of degraded areas in these pastures.

In recent years, it has been demanded to introduce modern methods aimed at diversifying production in cattle breeding, ensuring product production in accordance with market requirements, and increasing the income of farms.

In the process of research, the factors affecting the activity of cattle breeding LLC and effective use of pastures were brought into a single system and described.

The complex of factors affecting the activity of livestock farms and the effective use of pastures is as follows:

Institutional factors:

- lack of development of short-term and long-term development programs in district administrations and farms specializing in pasture livestock;
- non-implementation of coordinated planning and coordination activities in managing the activities of pasture livestock subjects by relevant ministries and agencies at the regional level using stable mechanisms;
- non-compliance with local state bodies, cattle breeding LLC, ecosystem protection, prevention of desertification and other applicable legal requirements in economic entities specializing in livestock breeding;
- shortage of working capital, low efficiency of use of natural resources;
- lack of financial opportunities for the development of the cattle breeding network in local self-government bodies, cattle breeding LLC, line ministries and agencies.

Social, cultural and economic factors:

- limitation of opportunities to establish new permanent workplaces in pasture livestock areas;
- the socio-economic development measures of the pastoral areas are behind compared to other areas;
- low level of attractiveness of attracting innovative developments and investments to the pasture livestock industry;
- as a result of non-implementation of internal-external economic-contractual relations on farms at the required level, limited opportunities for full employment of able-bodied population;
- low level of professional qualifications and skills of managers and specialists in the implementation of modern resource-saving best practices in pasture livestock farms;
- the low rate of financial and economic development of livestock breeding LLC ultimately has a negative impact on the economic situation of local citizens.

Standard of living of the population:

- lack of necessities for the living and daily life of the local population;
- the high rate of migration of able-bodied citizens, especially young people, to other regions among the population;
- lack of social infrastructure branches and qualified professionals to improve the health of the local population;
- existence of a state of imbalance in the socio-demographic composition (emigration of young people capable of work to other regions, increase in the number of women and elderly people in villages).

Infrastructure, service and land use factor:

- relative deterioration of water supply and environmental conditions in rural areas;
- slow development of infrastructure subjects in villages, including road construction, irrigation, social, service and supply sectors;
- slow development of services in the socio-economic spheres in rural areas, including rural medical centers, preschool educational institutions, family businesses, small and private business branches;

- limited use of information and communication technologies, modern means of communication in villages;
- low efficiency of use of pasture plots, natural and other resources in cattle breeding LLC;
- lack of coordinated planning measures to manage the use of pasture land and increase its efficiency in cattle breeding LLC.
- the increase in the size of degraded areas in inhabited rural areas and pastures;
- increasing level of environmental pollution due to inefficient use of renewable and non-renewable natural resources;
- due to the destruction of biodiversity and the ecosystem, the situation of plant death is increasing;
- increasing negative impact and pressure on natural resources as a result of the human factor.

Biophysical and environmental factors:

- shortage or non-supply of drinking water in the rural areas where there are flocks and pasture livestock in the livestock breeding LLC;
- Degradation of pasture land in cattle breeding LLC, negative impact on the development of biodiversity;

As a result of the conducted researches, the condition of the pastures necessary for the activity of this sector, the vegetation, especially bushes, semi-bushes and other types of plants, including fodder crops for livestock, medicinal herbs, preservation of plants included in the Red Book, covering the pastures it was determined that it depends on the level (Fig. 1).

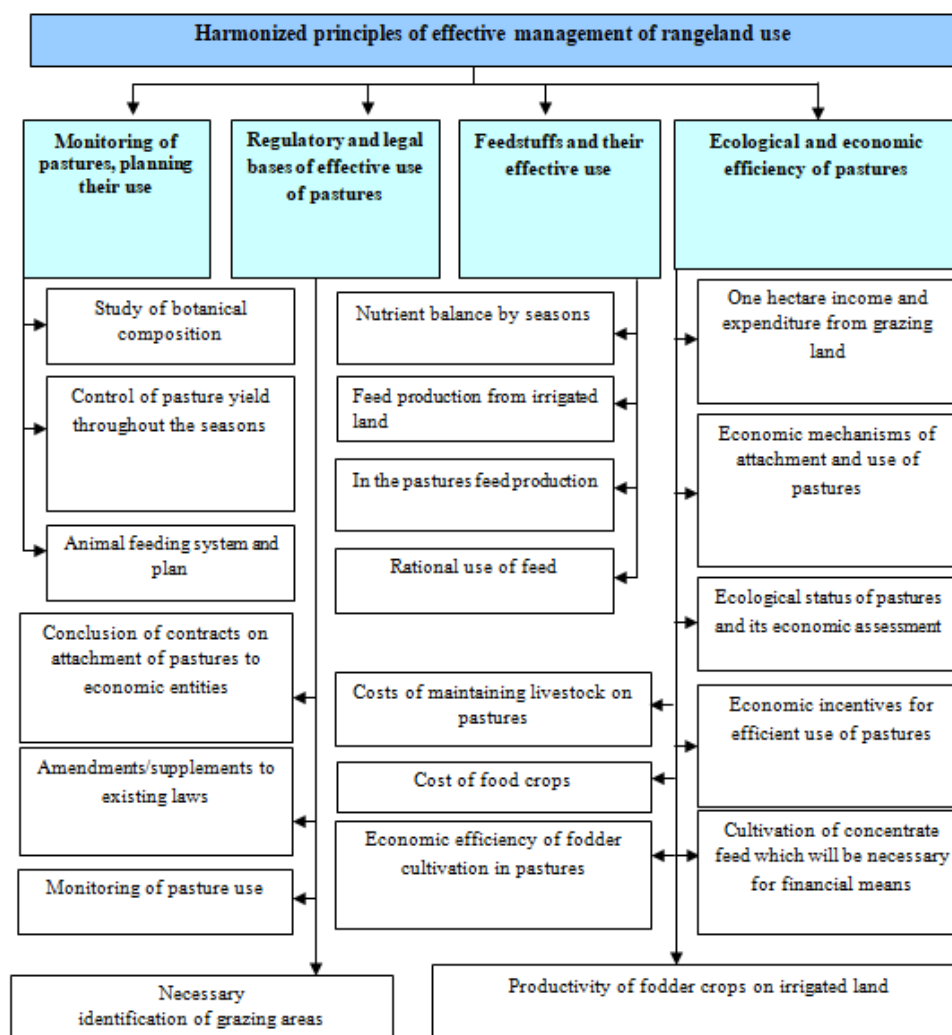


Fig. 1. Harmonized principles for effective rangeland management (recommended)

Effective management of cattle breeding requires orderly and systematic use of available pastures. In this direction, a group of scientists of the Scientific Research Institute of Cattle Breeding and Desert Ecology of Uzbekistan (Prof. S. Yusupov, candidates of science A. Rabbimov, T. Muqimov), Chief Researcher of the Scientific Research Institute of Agricultural Economics i.f.d. In collaboration with T. Farmanov, "Harmonized principles of effective management of pasture use" were developed in livestock farms [19].

According to the authors, these principles are: pasture monitoring, planning their use; normative and legal bases of efficient use of pastures; It is described as consisting of principles such as nutrients and their effective use.

The implementation of the principles prepared by these scientists in the activities of economic entities will definitely contribute to the improvement of the condition of pastures in the regions and the development of animal husbandry [20,21].

Based on the results of our research, it is appropriate to include the principle of "ecological-economic efficiency of pastures" in the "Harmonized principles of efficient management of pasture use". Because we believe that it is necessary to analyze the achievements or shortcomings achieved as a result of the implementation of the above-mentioned principles, to evaluate them from an ecological and economic point of view, and to show the level of efficiency.

On May 20, 2019, the law "On Pastures" was adopted in our republic. Adoption of this law will also impose huge tasks and demands on livestock breeding limited liability companies, farms specializing in pasture livestock, and residents engaged in livestock breeding in pasture areas. In order to carry out the activities specified in this law, it is considered necessary for relevant line ministries and agencies, local governments, and economic entities specializing in animal husbandry to perform the tasks specified in the above principles.

As a result of the conducted scientific research, the fulfillment of the tasks set out in the "Harmonized principles of effective management of the livestock network" and "Harmonized principles of effective management of pastures" in livestock farms ultimately ensures the

fulfillment of the requirements and measures specified in the law "On Pastures".

Cattle breeding farms occupy very large pasture-desert areas in our country, and it is somewhat difficult to observe, monitor or control events/processes and changes occurring in this area from a distance.

5. CONCLUSIONS AND SUGGESTIONS

In our opinion, in accordance with Article 12 of the Law of the Republic of Uzbekistan "On Pastures", the ministries and agencies authorized to control the use of pasture lands, in cooperation with scientists of higher educational institutions and scientific research institutes, cattle breeding limited liability companies, farms specializing in pasture livestock, as well as It is advisable for the district administration to provide practical support for the establishment of the "Association of Pasture Users" by uniting the citizens who are unorganized in the reserve pasture areas around the villages and in the reserve pasture areas.

Due to the fact that this modern form of cooperative use of pastures by the local population was organized on an effective, scientific basis in the neighboring Republics of Kyrgyzstan and Kazakhstan, the use of pasture lands by the local community is gradually controlled, and their orderly and systematic use is achieved.

In our opinion, first of all, it is appropriate to hold seminars and trainings on the current and future condition of pasture lands, connecting the citizens who keep livestock in the pastures in the districts with large pasture areas.

In these seminars, it is possible to introduce the activities that are considered necessary to be implemented in cooperation with the local community in order to find a positive solution to the existing problem situations in the pastures, and to positively change the views and attitudes of citizens about the ways of increasing the efficiency of the use of pastures and their results.

Newly established "Association of Pasture Users" in rural areas can be organized independently in non-state and non-profit form.

At the next stage, it will be possible to organize these associations in neighboring villages and to

organize the council of the "Association of Pasture Users" at the district level.

At the next stage, it will be possible to implement this action at the level of neighboring districts and to organize a council of regional associations at the regional level.

As a result, within a period of 3-4 years, as a result of effective measures, we can achieve the establishment of the "Association of Pasture Users" on the scale of the Republic.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

- Decree No. PF-5696 of the President of the Republic of Uzbekistan on March 28, 2019 "On Measures to Radically Improve the State Management System in the Field of Veterinary and Animal Husbandry". Available:<http://lex.uz>
- Decision PQ-3603 of the President of the Republic of Uzbekistan on March 14, 2018 "On Measures for Rapid Development of the Piracy Sector". Available:<http://lex.uz>
- Resolution No. 4420 of the President of the Republic of Uzbekistan on August 18. "On Measures for the Comprehensive Development of the Piracy Network"; 2019. Available:<http://lex.uz>
- Vinogradova MA, Kherremov ShR, Roziev AS. Some elements of the technology of desert astrakhan breeding in Turkmenistan. Available:http://base.dnsgb.com.ua/files/journal/201111_03_077-080.pdf
- Annageldiyev O, Annamukhammedov O. First report on the state of farm animal genetic resources in Turkmenistan. Ashgabat-2004. Association of Livestock Joint-Stock Companies of Turkmenistan "Turkmenmally", Research Institute of Animal Husbandry and Veterinary Medicine, National Advisory Committee on Animal Genetic Resources (food and agriculture organization).
- Ukibaev Kh. Why did karakul breeding become a "noose" for agriculture? Available:<https://kursiv.kz/news/vlast-i-biznes/2018-08/pochemu-karakulevodstvo-stalo-udavkoy-dlya-selskogo-khozyaystva>
- Nurumbetov TJ. The increase in the production of karakul is the basis for the development of the light industry of the Republic of Kazakhstan. J: Technol Text Ind. 2019;1(379): 261-5.
- Shamsutdinov NZ. Natural food resources of the arid regions of Central Asia: Prospects for their use in phytomelioration and breeding [monograph]. Forage plants of hayfields and pastures of the USSR. 303-10.
- Mallaboev TS. Intensification in animal husbandry and its economic efficiency. - T.: Uzbekistan, 1972;45.
- Family HRH. Community contract in agricultural production - T.: Qatortol-Kamolot. 1999;56.
- Kayumov FK, Kim VI, Alibaev I. Ways to eliminate unprofitability of astrakhan farms and prospects for their transfer to self-sufficiency and self-financing [review]. T. UzNIINTI. 1988;32.
- Joraev FJ. Development of Karakol breeding in Uzbekistan – T: Uzbekistan. 1983;102.
- Farmanov TKh. Improving the efficiency of astrakhan breeding in the southern zone of Uzbekistan [dissertation] for the degree of candidate of economic sciences - T.; 1989.
- Musagaliev AJ, Shodiev BT. Methodological issues of location and effective use of wells in pastures in Uzbekistan. Partners Univers Int Res J. 2022;1(1):1-5. DOI: 10.5281/zenodo.6387977
- Musagaliev AJ. Assessment and analysis of the tax potential of the republic of Karakalpakstan. NeuroQuantology. ISSN: 1303-5150. Vol. 20, Issue 20. 2022. Page. 1203-1209.
- Decree of the President of the Republic of Uzbekistan No. PF-5853 of October 23 2019 on the Approval of the "Strategy of Agricultural Development of the Republic of Uzbekistan for 2020-2030". Available:<https://lex.uz>
- Gandasari D, Sugiarto M, Dwidienawati D, Sarwoprasodjo S, Tjahjana D. The study on the performance of beef cattle farmer groups as an Economic Institution in Indonesia: based on the communication networks. Stud Appl Econ. 2021;39(4). DOI: 10.25115/eea.v39i4.4572
- Rustinsyah R. The significance of social relations in rural development: A case study of a beef-cattle farmer group in

- Indonesia. J Co-Operative Organ Manag. 2019;7(2): 100088.
DOI: 10.1016/j.jcom.2019.100088
19. UNDP. GEJ and the government of the Republic of Uzbekistan project report, Tashkent. 2008;31.
 20. Musagaliev AJ, Shodiev BT. Ways to create and efficiently use wells on pastures in the Republic of Uzbekistan/International Journal of Academic and Applied Research (IJAAR) ISSN: 2643-9603 Vol. 6 Issue 3, March - 2022, Pages:25-29.
 21. Musagaliev AJ, Shodiev BT. Priority directions of effective use of pasture land in the Republic of Uzbekistan/International. J Discov Innov Appl Sci ISSN: 2792-3983. 2022;2(12):1-8.