

## The Importance of Enriching Natural Pastures with Nutritious Food Plants

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**Abstract:** The article describes the role of promising pasture forage crops in increasing pasture productivity and livestock production.

**Keywords:** desert, hill, natural pasture, artificial pasture, promising pasture forage plants, phytomelioration, livestock products.

**Relevance of the topic.** It is important to increase the productivity of livestock and improve the quality of livestock products to meet the needs of the population in food products. Nutrition plays a very important role in achieving quality and productivity in animal husbandry. The importance of natural pastures in feeding livestock is immeasurable.

Natural pastures are the main source of fodder for the country's pastoral livestock, they are used throughout the year, and pasture fodder is the cheapest source of fodder. However, the current state of pastures does not meet the requirements of sustainable development of the sector. Also, in recent years, due to the erratic grazing of livestock, the unsustainable use of shrubs and semi-shrubs for economic needs, as well as various man-made factors, the productivity of pastures is declining sharply. According to the data, currently 40.7% of pastures in the country are in crisis due to the negative impact of human activities.

Adverse events in pasture management require immediate and rational use, conservation and enrichment of plant biodiversity, restoration and increase of productivity of vegetated cover of disturbed pastures through phytomelioration.

Improving the condition of pastures, sustainable development of livestock and pastures on the basis of an integrated and harmonized system, preservation and enrichment of plant biodiversity are crucial in improving the living standards of the population and

achieving food security [2]. Also, the main factors in the effective use of natural resources are the need to further improve the management system of natural pasture use in the livestock sector, first of all, the development of normative and legal documents on the formation of science-based management system [3].

One of the most pressing issues today is to improve the condition of pastures, to create artificial pastures from promising species of drought-tolerant pasture food plants, adapted to the soil and climatic conditions of each region to increase their productivity. There is every opportunity to do this. As a result of many years of research at the Research Institute of Karakul and Desert Ecology, promising species of pasture forage plants have been identified and technologies for the creation of artificial pastures have been developed. The introduction of these promising species into production will dramatically increase the productivity of pastures.

**Research sources and methods.** The source of the study was the species and specimens of wild forage plants found in the natural pastures of Central Asia. Planned field experiments, phenological observations, biometric measurements, the process of accumulating fodder reserves, and a range of other issues were carried out on the basis of plant introduction and the use of generally accepted methods in botany.

**Research results and their analysis.** In the experimental fields "Karnab" and "Nurata" of the Research Institute of Karakul and Desert Ecology are presented from different soil-climatic conditions of Central Asia. In addition, more than 100 species of pasture forage plants imported by various scientific organizations through mutual seed exchange were tested, and 25 of them were identified as promising. Furthermore, 18 selection varieties of pasture forage plants were created. We will focus below on the

characteristics of the most commonly used pasture forage plants in improving pasture condition.

*Black saxaul* - a woody shrub belonging to the family Shoradash, height 3-4, 5-6 m in favorable conditions. The new twigs and seeds of the black saxaul are a nutritious fodder for sheep, goats, and camels, and are consumed mainly in the autumn and winter months. Its diet contains 10-12% protein (up to 20% in seeds), 2.2-2.7% fat, 21.2-38.8 ash, 39.3% AEM and 14.9% fiber. The 100 kg dried body of the saxaul contains 20 nutrient units in spring, 46 in autumn and 37 in winter. Saxaul is an important phytomeliorant used in the construction of enclosures, pasture agrophytocenoses.

*Artemisia abrotanum* – a family of shrubs, half-shrub, height 60–120 cm. Izen is divided into 3 ecotypes: sandy, gravelly and loamy. Izen is a nutritious fodder for all types of livestock and is well-liked in all seasons of the year. The dried body contains up to 16% protein, 2.7-3.3% fat, 39.5-43.5% AEM, 15.4% ash and 26.5-30% fiber. Izen is used in all ecological conditions in the construction of izen hayfields and pasture agrophytocenoses.

*Teresken* – a semi-shrub belonging to the family Shrubs, 40-110 cm tall. Its annual twigs and leaves are consumed by livestock. Dried body contains 16% protein, 2.7% fat, 34% fiber. The nutritional value of 100 kg of hay is 40 nutrient units. Sandy gypsum is used to improve the condition of desert pastures.

*Chugon* – a family of shrubs, shrubs, semi-shrub species, reaching a height of 40–110 cm. Its annual twigs (leaves) and seeds are forage and are eaten mainly in autumn and winter. The dried body contains 14% protein, 2.7% fat, 36.9% AEM 20.6% ash and 23% fiber. A 100 kg dried body stores 37-50 nutrient units throughout the seasons. A promising plant in increasing the productivity of sandy, gypsum desert pastures, the establishment of pasture agrophytocenoses.

*Koirovuk* - a semi-shrub, 30–85 cm tall, belonging to the family of shrubs. Sheep, goats and camels consume mainly in the autumn-winter months. Its dried body contains 17.5% protein, 2.9-3.2% fat, 36.5% AEM, 18.2% ash and 24.8% fiber. 100 kg of dried body contains 64.4 nutrients in spring, 48.4 in

summer, 38 in autumn and 29.6 in winter. A promising phytomeliorant in the phytomelioration of pastures with thick gypsum, sandy, loamy soils.

*Dryopteris filix-mas* – a perennial herb of the cereal family, reaching a height of 55-70 cm. Eaten by livestock throughout the year. Its dried body contains 10.7% protein, 2.8% fat and 32% fiber. There are 48.7 nutrient units in 100 kg of dried body. Male grass is a promising plant that is used as an important component in the establishment of hayfields and agrophytocenoses in adyr pastures.

It is expedient to create artificial pastures with the participation of promising species of pasture forage plants in the form of multi-component pasture agrophytocenoses (association of 6-8 plant species). In this case, the biodiversity of plants in the pastures increases, and the presence of fodder grasses eaten by livestock in all seasons of the year is also noteworthy.

**Conclusion.** Phytomelioration of natural pastures by promising species of forage plants plays an important role in increasing pasture productivity, enriching plant biodiversity, balancing the ecological situation and growing guaranteed fodder for livestock.

## References

1. Махмудов М.М. ва бошқ. Инқирозга учраган чўл яйловларини яхшилашнинг экологик асосланган технологияси. –Тошкент, 2005. -12 б.
2. Мамадов Ф.К. Яйловлардан оқилон фойдаланиш ва муҳофаза қилиш долзарб масала// “Атроф муҳит ўзгариши шароитида ер ресурсларини муҳофаза қилиш ва улардан оқилон фойдаланиш масалалари”. Тошкент, 2016. -316-318 б.
3. Тиркашев Л., Абдужабборов О. Табиий яйловлар экологиясини яхшилаш мўл-кўл озиқ-овқат маҳсулотлари етиштириш гарови// Чўл яйлов чорвачилиги ва озуқа етиштириш муаммолари. –Самарқанд, 2015. -420-422 б.
4. Ochilov, A. (2012). Education and economic growth in Uzbekistan. *Perspectives of Innovations, Economics and Business, PIEB*, 12(3), 21-33.

5. Ochilov, A. (2014). Is higher education a driving force of economic growth in Uzbekistan?. *Perspectives of Innovations, Economics and Business, PIEB*, 14(4), 160-174.
6. Jurakulovna J. G. The Necessity and Theoretical Basis of Financial Statement Analysis in Modern Management //Academic Journal of Digital Economics and Stability. – 2021. – T. 7. – C. 89-95.
7. Ochilov, A. O. (2017). The Higher Education Dynamics and Economic Growth: The Case of Uzbekistan. *Journal of Management Value & Ethics*, 7(2), 46-53.
8. Ochilov, A. O. HIGHER EDUCATION IS AN IMPORTANT FACTOR IN STIMULATING ECONOMIC GROWTH. *GWALIOR MANAGEMENT ACADEMY*, 23, 133.
9. Abitovna, K. N. (2020). Economic Mechanisms Of Formation And Use Of Intellectual Capital In The System Of Innovative Cooperation Of Education, Science And Production. *European Journal of Molecular & Clinical Medicine*, 7(7), 929-937.