



THE IMPORTANT WHITE SORGHUM IN AGRICULTURE AND LIVESTOCK FARMING

Nurilloeva Umida Kholmat kizi

1st-year Master's Student Bukhara State University

<https://doi.org/10.5281/zenodo.18017653>

ARTICLE INFO

Received: 20th December 2025

Accepted: 21st December 2025

Online: 22nd December 2025

KEYWORDS

soil salinity, cereal crops, white sorghum, agriculture, livestock farming, chemical composition, feed value, protein.

ABSTRACT

This thesis provides information on cereal crops and the importance of white sorghum in agriculture and livestock farming, as well as its chemical composition, beneficial nutrients, and productivity.

Globally, cereal crops account for the majority (about 70%) of cultivated agricultural crops. These include wheat, rice, maize, barley, white sorghum, oats, and rye. At present, the development of agriculture and livestock farming in saline and arid regions requires strengthening the fodder base. It is known that 23–25% of cultivated land worldwide and 50–55% of agricultural land in Uzbekistan are affected by salinity to varying degrees. This situation creates significant challenges for the development of agriculture and livestock production. Therefore, salt- and drought-tolerant fodder crops, including white sorghum (*Sorghum vulgare* (Pers.)), are of great importance.

The green biomass of white sorghum is widely used for silage, hay, and other feed products. Its grain contains about 70% starch, 12% protein, 3.5% fat, and various mineral salts. The feed value of one kilogram of grain is equal to 1.22 feed units. This crop also has significant agrotechnical importance, as it is resistant to drought and soil salinity and possesses phytomeliorative properties.

White sorghum is a high-yielding crop. It has been determined that two harvests of white sorghum can produce 800–1000 centners per hectare of green biomass. On saline lands, yields of up to 640 centners per hectare of green biomass and 38 centners per hectare of grain have been obtained. In addition, white sorghum provides good yields when grown as a secondary crop. Thus, the role of white sorghum in agriculture and livestock farming is considerable.

Conclusion

White sorghum is a plant widely used for fodder, food, and technical purposes. Under the conditions of Uzbekistan, it is distinguished by its resistance to drought and salinity. In Uzbekistan, white sorghum is mainly cultivated on partially rainfed and poorly irrigated lands in regions such as Khorezm, Bukhara, Samarkand, Syrdarya, and the Republic of Karakalpakstan. Studying the agrobiological characteristics of white sorghum and properly organizing its agrotechnology contribute to the production of high-quality and nutritious feed

for livestock on saline and arid soils. Expanding the cultivation areas of white sorghum serves to create a stable fodder base for agriculture and livestock farming in the country.

References:

1. Atabayeva H.N, Kadirho'jayev O Plant science.-Tashkent "New generation of the century"
2. Abdullayev A. Plant science— Tashkent: Publisher, 2020.
3. Ergashev A., Jo'rayev A., Islomov B. Plant science.— Tashkent: Teacher, 2014.
4. Jo'rayeva O. Growth physiology of cotton in saline soils. – BuxDU, 2020.
5. Usmonova G.I., Ochilova G.A. The role of microorganisms in the biological activity of soil. – Tashkent, 2022.
6. Amonova D. Soil contamination with radioactive substances and its impact on human health. – BuxDU, 2021.
7. Mustafayev S.M. Botany. – Tashkent, 2002.
8. Ramazonov A., Buriev S. Soil science and agriculture. – Tashkent, 2018.

