*УДК: 633.1.633.17*

*DOI:****10.35330/****1991-6639-2020-4-96-49-57*

**PRODUCTIVITY OF SORG CROPS IN ONE SPECIES**

**AND MIXED SEEDINGS IN THE STEPPE ZONE OF THE**

**KABARDINO-BALKAR REPUBLIC**

**A.S. KUSHKHOV, N.V BERBEKOVA**

Institute of Agriculture –

branch of FSBSE «Federal scientific center

«Kabardin-Balkar scientific center of the Russian Academy of Sciences»

360004, КBR, Nalchik, Kirov street, 224

E-mail: [kbniish2007@yandex.ru](mailto:kbniish2007@yandex.ru)

*The article presents the data of three-year field studies in the steppe arid zone of the republic.The most optimal options for cultivating sorghum crops in pure form and with the introduction of various legumes components in the mixtures that increase the protein content in feed are developed, the ratio of sown crops in mixed crops is established, which allows to obtain more energy-saturated feed with an increase in the total yield of areas. The most productive methods of sowing and harvesting are proposed, providing the greatest collection of feed units and protein from the cultivated area. The quality and feed advantages of the green mass of sorghum and its various mixtures with soy and spring vetch for the production of silage, green fodder, haylage and hay are determined.*

**Keywords:** mixed, joint sowing, sorghum crops, legumes, feed value, crop ratio, energy value, precipitation, cultivation technology, balanced feed.

**REFERENCES**

1. Alabushev A.V. Anipenko L.N. *Sorgo (selektsiya, semenovodstvo, tekhnologiya, ekono-mika)* [Sorghum (selection, seed production, technology, economics)]. Rostov-on-Don: ZAO Book, 2003. Рр. 367-369.

2. Andreev N.G. *Lugovoye i polevoye kormoproizvodstvo* [Meadow and field feed production]. M.: Kolos, 1975. 416 р.

3. Artemov I.V. *Intensifikatsiya kormoproizvodstva. Kormoproizvodstvo* [Intensification of feed production. Feed production]. 2003. Рр. 15-18.

4. Dospehov B.A. *Metodika polevogo opyta* [Methodology of field experience]. M.: Kolos, 1979. 416 р.

5. Tyutyunnikov A.I. *Odnoletniye kormovyye travy* [Annual forage grasses]. M.: Rosselkhozizdat, 1973. 200 p.

6. Velik N.L. *Agrofitotsenozy, stroyeniye i biologicheskiye osnovy povysheniya produktivnosti. Biologiya i ekologiya kul'turnykh rasteniy* [Agrophytocenoses, structure and biological basis for increasing productivity. Biology and ecology of cultivated plants]. Tambov, 1994. Рр. 1-10.

7. Bilenko P.D., Shevnikov N.Ya. *Sorgo v odnovidnykh i smeshannykh posevakh* [Sorghum in single and mixed crops] // Feed production. 1985. No. 2. Рр. 30-31.

8. Gromov A.A. *Biologicheskiye i agrotekhnicheskiye osnovy formirovaniya vysokopro-duktivnykh agrofitotsenozov odnoletnikh kormovykh kul'tur v stepnoy zone Yuzhnogo Urala: diss. doktora s.-kh. nauk* [Biological and agrotechnical foundations of the formation of highly productive agrophytocenoses of annual feed crops in the steppe zone of the Southern Urals: Diss. Doctors of agricultural sciences]. Orenburg, 1995. 316 р.

9. Elchanikova N.N., Ogurtsov V.N. *Produktivnost' i kormovoye dostoinstvo sakharnogo sorgo pri razlichnykh srokakh poseva i ispol'zovaniya* [Productivity and feed value of sugar sorghum for different periods of sowing and use] // Bulletin of the Kuibyshev Agricultural Institute. 1970. T. 26. Рр. 174-179.

10. Zubritsky V.A., Nesterchuk V.P., Smosarenko M.Ya. *Agromodelirovaniye pri vozde-lyvanii smeshannykh posevov* [Agro modeling during the cultivation of mixed crops] // Corn and Sorghum. 1994. No. 3. Рр. 4-7.

11. Krasnokutsky V.P., Zakutny I.P. *Smeshannyye posevy sakharnogo sorgo s vyso-kobelkovymi kul'turami na silos* [Mixed crops of sugar sorghum with high-protein crops for silage]. Don Zonal Scientific Research Institute of Agricultural Sciences. 1969. Рр. 46-52.

12. Malinovsky B.N. *Sorgo na Severnom Kavkaze* [Sorghum in the North Caucasus]. Rostov-on-Don, 1992.

13. Volodin A.B., Kapustin S.I., Kolodkin A.V., Kapustin A.S. *Vyrashchivaniye sakharnogo sorgo kak faktor stabilizatsii kormoproizvodstva v zasushlivykh regionakh* [Cultivation of sugar sorghum as a factor in stabilizing feed production in arid regions] / Agribusiness, 2017.

14. Lukashek N.A. *Metodika biokhimicheskikh issledovaniy rasteniy* [Methodology of biochemical studies of plants]. Leningrad, 1986.

15. Lebedeva P.T., Usovich A.T. *Rukovodstvo po analizu kormov* [Feed Analysis Guide]. M., 1983.

16. Dospehov B.A. *Metodika polevogo opyta. 5 izd., pererab. i dop* [Methodology of field experience. 5th ed., Revised. and add.]. M.: Agropromizdat, 1985. 351 р.

**Information about the authors:**

**Kushkhov Aslan Sultanovich,** researcher, Laboratory of field crop cultivation technology of the Institute of Agriculture - branch of the Kabardino-Balkarian Scientific Center of the Russian Academy of Sciences.

360004, KBR, Nalchik, Kirov street, 224.

Ph. 8-906-189-12-58.

E-mail: [kbniish2007@yandex.ru](mailto:kbniish2007@yandex.ru)

**Berbekova Natalia Vladimirovna,** senior researcher of Equine Laboratory, Institute of Agriculture - a branch of the Kabardino-Balkarian Scientific Center of the Russian Academy of Sciences.

360004, KBR, Nalchik, Kirov street, 224.

Ph. 8-928-701-14-10.

E-mail: natali\_26081976@mail.ru