

Increasing the productivity of varieties of Sudanese grass against the background of treatment with a growth stimulant Raikat Start

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Annotation. Sudanese grass is a promising drought-resistant forage crop. In the conditions of the continental climate of our country, with its occasional droughts and the presence of significant areas of saline soils, Sudanese grass is a promising drought-resistant forage crop. Drought resistance of this crop is ensured thanks to a powerful root system, which allows the use of water from the deep layers of the soil. However, during the period of germination, there is a slow growth of the aboveground mass, since the root system is actively developing at this time. So, it takes 5-6 weeks for the formation of the first five leaves. Therefore, the issue of using growth stimulants to activate growth processes in the initial phases of development is relevant. Taking it into account, field studies were conducted in order to select varieties of Sudanese grass against the background of treatment with the growth stimulator Raikat Start on medium-saline light chestnut soils of the Tersko – Sulak sub-province of Dagestan. As a result, it was revealed that the highest indicators of photosynthetic activity of varieties of this crop were observed when crops were treated with a dose of 10.0 l/ha stimulant. Compared with the control (water treatment), the leaf area and net photosynthesis productivity were 9.7 and 14.3% higher on average for the varieties. The analysis of the formation of these indicators depending on the studied varieties showed that they were significant on the crops of Alice and Grazia varieties and amounted to 46.8 - 46.2 thousand m²/ha and 4.90 – 4.78 g/ m²·day, respectively. Varieties of Sudanese grass provided a sufficiently high yield of green mass on the variant with a dose of 10.0 l/ha stimulant, which is 16.9% more than the control data. In plots with doses of 2.0 and 6.0 l/ha, the excess ranged from 5.3 to 9.9%. On average, according to the variants with doses of the growth stimulant Raikat Start, the yield of Alice and Grace varieties was 54.4 and 53.8 t/ha, which is higher than the standard data (Alexandrina) and Anastasia and Sputnitsa varieties, respectively, by 10.0 – 9.1; 12.2 – 10.9 and 8.8 – 7.6%. The minimum data are marked on the crops of the Anastasia variety.

Key words: Tersko-Sulak sub-province of Dagestan, light chestnut soils, Sudanese grass, varieties, growth stimulator Raikat Start, doses of application, photosynthetic activity, yield

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