Original article

Study of samples of Cyamopsis tetragonoloba (L.) Taub in the forest-steppe zone of Ingushetia

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Abstract. The article is devoted to the study of the adaptation of a new plant Cyamopsis tetragonoloba (L.) Taub (guar) in the forest-steppe zone of Ingushetia. The studies presented in the article were being conducted from 2021 to 2023. New breeds for the region were also involved in the study. The article describes morphological features, biometric records and the onset of phenological phases. As a result, samples with more economically valuable features and properties were preliminarily found. A brief analytical review of the culture of Cyamopsis tetragonoloba (L.) Taub as a culture of diverse use: a source of guar gum, fodder plant, green manure, in relation to the climatic conditions of Ingushetia, is presented. A crop that can replace imported plant products, in particular, guar gum, by introducing a legume crop that is new for Russia. During the research, three forms of habitus of the studied plants were identified - basal branched, branched and single-stemmed. It has been established that the height and timing of the onset of the phenological phases of guar plants were largely determined by weather conditions. Relatively low, compared with the long-term average, air temperature caused a delay in linear growth and the timing of the onset of development phases. The height of guar plants in 2022-2023 was significantly lower than in 2021. It was determined that in the breed with earlier sprouts, the phase began earlier. The relationship between agrobiological indicators and the sample yield was also analyzed. It is proposed to continue the study of guar as a unique culture with important raw materials for various sectors of the economy of Ingushetia in particular and Russia in general.

Keywords: guar, phenological phases, plant height, habitus, line

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