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YIELD AND NUTRITIONAL VALUE OF FORAGE CROPS FOR DAIRY GOAT PRODUCTION IN THE STEPPE OF NORTHERN KAZAKHSTAN

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ABSTRACT

One of the reasons hindering the growth of the goat population is the low feed base for the year-round provision of animals with adequate feed, and in the Akmola region (Kazakhstan), this is also caused by severe soil and climatic conditions with a lack of heat and moisture during the growing season of forage crops. Therefore, to solve this problem, it is necessary to create raw material conveyors for goat farms based on the rational management of natural feed resources, taking into account the peculiarities of soil and climatic zones of the Republic of Kazakhstan. This paper presents a comparative assessment of the yield and nutritional value of the types of annual and perennial feed crops used in the raw material conveyor system for the year-round provision of complete feed for dairy goats with a productivity of 3-4 kg of milk per day. The studies were conducted in the Tselinograd district (51°09'08.8"N 71°10'10.5"E) of the Akmola region (2020-2021), which is located in the northern part of Kazakhstan. The need for feed types was calculated taking into account the daily feeding rations of animals, and the types, varieties, and hybrids of forage crops were selected taking into account the bioclimatic potential of forage crops and the socio-economic conditions of the goat farm. The scheme of the raw material conveyor with the selection of sites has been developed, and the chemical composition and nutritional value of annual and perennial forage crops have been studied. The results of the study show the need to create raw material conveyors with the selection of species and varieties from perennial and annual forage crops in pure form and grass mixtures, providing an output from a unit area of coarse feed from 0.95 to 3.8 tons with a nutritional value on average from 7.05 to 10.9 MJ/kg of exchange energy and from 0.53 to 0.96 feed units.

Keywords: Raw material conveyor; Nutritional value; Feeding of dairy goats; Yield; Forage crops; Steppe zone; Feed for dairy goats.