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EFFECTIVE METHODS OF CULTIVATION OF BASIC FIELD CROPS IN AGROTECHNOLOGIES OF A NEW GENERATION OF THE KABARDINO-BALKARIAN REPUBLIC

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The article presents the results of studying effective methods of cultivating new corn hybrids in the conditions of the steppe natural and climatic zone of the KBR. Experimentally, the optimal sowing dates for the Terek and Mayskiy 260 MV hybrids of the selection of the Institute of Agriculture KBSC RAS were established, which ensure the formation of the highest productivity during sowing in the second decade (April 15), which makes it possible to increase the yields of the studied hybrids by 4.0-4.5 c / ha in comparison with the indicators obtained when sowing in the third decade of April.

The influence of the sowing time on the field germination and stand density of the Terek and Maisky 260 MV hybrids was revealed. So the field germination of maize hybrids Terek and Maisky MV at sowing dates of 15.04 and 26.04 turned out to be practically equal. At the same time, the sowing of the parental forms of these hybrids, both paternal and maternal, showed a higher field germination on the variants of the third sowing date (26.04). However, they did not significantly affect the density of productive stems. By the beginning of harvesting, they formed within the limits - for the Terek hybrid 73.5-75.5 thousand / plants / ha; for Mayskiy 260 MV - 71.1-74.0; those. approximately equal.

Field germination and plant density in a changing climate towards warming had a significant impact on the formation of grain yield in the studied hybrids.

So, at the second sowing date of April 15, on average, 113-115 ears were formed per 100 plants, at the third (April 26) 106-105, which is less than at the second sowing date by 8-9 ears.

In general, sowing of corn hybrids in the third decade of April (26.04) led not only to a decrease in the number of ears per 100 plants, but also to a grain yield. The yield of hybrids Terek and Maisky 260MV at sowing 15.04 (76.0-74.0 centners / ha) exceeds the results obtained when sowing them on 26.04 by 5.5-3.6 centners / ha, respectively.

In the conditions of the steppe natural and climatic zone of Kabardino-Balkaria with a hydrothermal coefficient of 0.9, corn crops are mainly located on irrigated lands, where weeds and especially perennials (gumai (Sorghum halepense), sow thistles, etc.) cause significant damage to the crop. In this regard, the development of methods for their suppression with the expansion of the field of application of new herbicides in order to increase the yield of field crops is of great importance in intensive technologies of a new generation, designed to obtain the planned high quality yield.

The study showed that the largest number of weeds on average by the end of the growing season of the crop was noted on the control sowing - 39-81 specimens, incl. gumai 20-39 plants per 1 sq. meter. The use of herbicides against the background of the control variant of the studied maize hybrids (Terek and Maisky 260 MV) makes it possible to reduce the total number of weeds to the level of 48-71 and 61-72%, respectively. At the same time, the technical efficiency of the herbicide Elumis at a dose of 2.0 l / ha was formed by the degree of suppression of gumai at the level of 83.0-89.0% of their death compared to the variants where Voyage herbicides were used at a dose of 0.1 kg / ha and Cassius - 0, 05kg / ha (65.0-81.0 and 62.0-70.0%) on crops of both maize hybrids and their parental forms.

The aim of this work is to determine the optimal sowing dates and their influence on the formation of productivity of new maize hybrids Terek and Mayskiy 260 MV of the selection of the Institute of Agriculture of KBSC RAS and their parental forms when sowing in the second and third decades of April.

The most effective terms, methods and doses of the Elumis herbicide application for the suppression of weeds on irrigated lands have been identified.

The studies were carried out in the steppe zone of the Kabardino-Balkarian Republic, the height above sea level is 170 m, the sum of effective temperatures is above 10 ^{o}C - 3400 ^{o}C, the amount of precipitation is 435, the hydrothermal coefficient is 0.9. [1]

Keywords: agricultural technologies, corn hybrids, parental forms, sowing dates, natural climatic zones, yield, agrocenoses, production process, herbicides, care techniques.

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