

## Cultivation of new varieties of winter durum wheat in the Kabardino-Balkarian Republic

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**Annotation.** Plant nutrition elements have great opportunities to increase the yield of grain crops, which contribute to the activation of initial growth and acceleration of plant development, stimulate the filling and formation of grain, increase the resistance of grain to adverse soil and climatic conditions, increase productivity and biochemical quality indicators. In modern conditions, the development of a technological system for regulating the growth and development of winter durum wheat by complex application of mineral fertilizers in the steppe conditions of the KBR is very relevant. In this article the positive effect of nutrition elements on the development and root system of grain crops has been revealed. Seeds of modern durum wheat varieties have high nutritional and taste qualities. The aim of the research was to optimize the elements of the technology of growing winter durum wheat to increase productivity by identifying optimal doses of mineral fertilizers and growth regulator. The author in this article studied how the use of various doses of mineral fertilizers affects the growth and formation of grain, yield and grain quality of new varieties of hard winter wheat (Alyona (ct), Carmen, Kristella). The data obtained allowed us to establish that the use of mineral fertilizers at a dose of N90P120K60 in combination with the treatment with the growth regulator Agrostimulin is effective, because this technique provides the best indicators of AF and BPF by varieties, and among the varieties the Carmen variety stands out positively. According to the yield data, the maximum indicator was obtained in the Carmen variety and amounted to 42.3 c /ha, when applied in a complex of mineral fertilizers at a dose of N90P120K60 and the growth regulator Agrostimulin. The main direction of increasing the production of winter durum wheat is the introduction of new high-yielding varieties into production and their cultivation using intensive technology with the use of growth regulators.

**Key words:** winter durum wheat, mineral fertilizers, growth regulators, yield, grain quality

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