

## INFLUENCE OF VERMICOMPOST AND GROWTH REGULATORS ON THE YIELD OF EARLY POTATO VARIETIES UNDER IRRIGATED CONDITIONS IN DAGESTAN

R.M. MAGOMEDOV, M.R. MUSAEV, A.A. MAGOMEDOVA  
Z.M. MUSAEVA, A.U. KURAMAGOMEDOV

FSBEI HE "Dagestan State Agrarian University named after M. M. Dzhambulatov"  
367032, RD, Makhachkala, 180 M. Gadzhiev str.  
E-mail: priem.daggau@mail.ru

*On light chestnut soils of flat Dagestan in 2018–2020 field studies were conducted to study the productivity of early potato varieties against the background of the introduction of vermicompost with a dose of 7.5 t/ha and treatment with growth regulators Zircon and Eksrasol. It was found that the complex application of vermicompost with a dose of 7.5 t/ha and growth regulators Zircon and Extrasol promoted an increase in the leaf surface area of varieties. In comparison with the control option, the excess was 19.1–17.1%. The largest indices of leaf surface area on average over 3 years were recorded in the varieties Zhukovsky Early and Predgorny – 50.4–49.6 thousand m<sup>2</sup>/ha. A decrease in this indicator, respectively, by 9.1; 5.4; 3.5 and 7.4; 3.8 and 1.8% were observed in the plantings of the varieties Volzhanin, Udacha, and Nevsky. Approximately the same dynamics was also observed in terms of dry matter accumulation and net productivity of photosynthesis. The highest yield of the potato variety was formed on the variant with the use of biohumus and treatment with the growth regulator Zircon. So, on average for varieties, the yield in this case was 34.8 t/ha, the excess in comparison with the control option was 34.4%. The yield on the variant with the introduction of vermicompost and the variant of the complex application of vermicompost with the Extrasol regulator was, respectively, 30.6–32.3 t/ha, which is 18.1–24.7% more than the control variant. The maximum yield data, at the level of 33.6–31.9 t/ha, was provided by the varieties Zhukovsky Early and Predgorny, which is more than the varieties Volzhanin, Udacha and Nevsky, respectively, by 26.3; 19.1; 13.1 & 19.9; 13.1 and 7.4%.*

**Keywords:** irrigated zone of Dagestan, early potatoes, biohumus, growth regulators, varieties, productivity, yield, quality.

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**Information about authors:**

**Magomedov Ruslan Magomedtagirovich**, postgraduate student of the Department of Land Management and Cadastres, FSBEI HE "Dagestan State Agrarian University named after M.M. Dzhambulatov".

367032, RD, Makhachkala, 180 M. Gadzhiev str.

E-mail: usaman\_magomedov\_92@mail.ru

**Musaev Magomed Rasulovich**, Doctor of Biology, Professor, head. Department of Land Management and Cadastres of the Federal State Budgetary Educational Institution of Higher Education "Dagestan State Agrarian University named after M.M. Dzhambulatov".

367032, RD, Makhachkala, 180 M. Gadzhiev str.

E-mail: musaev5858@mail.ru

**Magomedova Aminat Akhmedovna**, Candidate of Agricultural Sciences, Associate Professor of the Department of Land Management and Cadastres of the Federal State Budgetary Educational Institution of Higher Education "Dagestan State Agrarian University named after M.M. Dzhambulatov".

367032, RD, Makhachkala, 180 M. Gadzhiev str.

E-mail: daggau\_aminat@mail.ru

**Musaeva Zarema Magomedovna**, Candidate of Agricultural Sciences, Associate Professor of the Department of Land Management and Cadastres of the Federal State Budgetary Educational Institution of Higher Education "Dagestan State Agrarian University named after M. M. Dzhambulatov".

367032, RD, Makhachkala, 180 M. Gadzhiev str.

E-mail: zaremka\_76@mail.ru

**Kuramagomedov Abdula Umakhanovich**, Candidate of Agricultural Sciences, Associate Professor of the Department of Land Management and Cadastres, FSBEI HE "Dagestan State Agrarian University named after M. M. Dzhambulatov".

367032, RD, Makhachkala, 180 M. Gadzhiev str.

E-mail: Abdulajudo001@mail.ru