DYNAMICS OF AGROCHEMICAL INDICATORS OF ORDINARY CHERNOZEM UNDER THE INFLUENCE OF MODERN TECHNOLOGIES OF CULTIVATION OF FIELD CROPS

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The aim of the research is to conduct soil surveys of the lands of the test site of the Samara Research Institute of Agriculture - a branch of the Samara Scientific Center of the Russian Academy of Sciences to study the dynamics of changes in the agrochemical indicators of the fertility of ordinary chernozem over time during agricultural use of land using geoinformation technologies, computer systems, modern devices and equipment. The studies conducted at the Samara Research Institute of Agriculture - a branch of the Samara Scientific Center of the Russian Academy of Sciences and the Federal State Budgetary Institution "Samara Agricultural Scientific Center" showed that the chernozem soils of the test site have a relatively high productivity potential. More than 50% of the test site area has an average humus content in the soil: from 4 to 6%, about 60% of the area has a very high content of mobile phosphates: 201-250 mg / kg, about 70% of the arable land area has a very high content of exchangeable potassium: from 180 to 260 mg / kg. According to the results of the agrochemical survey, positive dynamics of humus and mobile nutrients in the soils of the experimental site were established. Compared with the results of the 2019 survey, the area of arable land with a low humus content (2.1-4.0%) decreased by 37.5%, the area of arable land with an average humus supply increased by 34%. The area of arable land with high and very high supply of mobile phosphorus increased by 16.5%. The area of arable land with high supply of exchangeable potassium decreased by 56%, with very high supply increased by 77.7%. As a result of joint research, updated electronic cartograms of humus content, mobile nutrients and microelements in the soils of the test site and agrochemical passports of fields were prepared, experimental data were obtained on the dynamics of changes in soil fertility indicators over time, the degree of use of soil nutrients and fertilizers and standards for the dependence of yields on the agrochemical properties of the soil.

Keywords: monitoring, survey, technology, soil, fertility.

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