

**THE INFLUENCE OF WINTER WHEAT AND PRECURSOR CROPS GROWN USING NO-TILL TECHNOLOGY ON SOIL FERTILITY INDICATORS DYNAMICS IN SOUTHERN CHERNOZEM**

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The paper presents the results of the experiment where the influence of winter wheat with different precursor crops grown using the no-till technology on the agrophysical properties of the soil (structural and aggregate composition, aggregate water resistance, moisture content) was studied.

The studies were carried out in 2018 at the agricultural enterprise KFKH Vodopyanov S. S. located in the arid zone of the Stavropol Territory. The object of research was the leading culture of the south of Russia - winter wheat (Bagrat variety) cultivated after winter rape, corn for grain or sunflower on the southern chernozem. It was revealed that by the phases of heading-flowering and full ripeness of winter wheat, the supply of productive moisture in the upper layer of the soil (0.0–0.20 m) and in the 1-meter layer decreased independent of the precursor crop type. The highest content of agronomically valuable soil aggregates was measured in the soil under winter wheat cultivated after corn for grain. The structural coefficient did not differ for all the different precursor crops. The quantity of water-resistant aggregates was increasing at the phase of full ripeness of winter wheat, and the highest quantity of these aggregates was measured in the soil under wheat cultivated after winter rape. Indicators of bulk density of the soil under wheat cultivated after winter rape were lower compared to the soils with other precursor crops.

**Key words:** winter wheat, precursor crops, no-till, agrophysical properties.

