Original article

**Agroecological efficiency of soil bioactivation**

**in the mineral nutrition system of winter wheat against the background**

**of green manure aftereffect**

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***Abstract.*** In the article, an agroecological assessment of the effectiveness of the pre-sowing application of a consortium of useful groups of soil microorganisms as a means of increasing the biological activity of the soil was carried out. The studies were carried out against the background of the aftereffect of green manure and increasing doses of mineral fertilizers. The authors set a goal to establish the degree of influence of soil bioactivation on the indicator of soil respiration intensity, the content of soil organic matter and the yield of winter wheat. The positive effect of soil enrichment with microorganisms on the biological activity of the soil manifested itself in the form of an increase in the intensity of soil respiration by 19.6–27.3%. As a result of the study, reliable data were obtained on a close correlation between the biological activity of the soil and the yield of winter wheat (r=0.994). The reception provided a significant increase in absolute control in numbers from 33.7 to 110.5%, depending on the level of supply of mineral fertilizers in the soil. Also, an average increase in soil organic matter was achieved – 0.13%. This method can be recommended as an effective means of increasing the biological activity and increasing the productivity of winter wheat.

***Keywords:*** Green manure, microorganisms, soil respiration, organic matter, productivity

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