Annotation

Prokopchuk I.V., Nikitina O.V.

Ecological and agrochemical evaluation of long-term application of potassium fertilizers in field crop rotation

The use of agrochemicals as a component of intensification of agricultural production generates many new problems, the main one of which is the ecological one. The purpose of the work was to identify the effect of long-term use of various systems and doses of fertilizers, on the ecological state of the soil. Studies conducted in a stationary experiment were laid in 1964. Its basis is a 10-field crop rotation, deployed in time and space. The organic, mineral and organo-mineral fertilizer systems are used. It has been established that in spite of the considerable amount of chlorine that was introduced with potassium chloride in autumn in a dose of 45-135 kg K2O per 1 ha of crop rotation area, depending on the experiment variant, a significant increase in its content in the 0- A 160-cm soil profile was not observed. This confirms the data on intensive leaching of chlorine in autumn-winter-spring precipitation, when the accumulation of productive moisture passes. Studies have shown that with increasing dose of introduced potassium fertilizers in the soil, the specific activity of the radioactive isotope of potassium increases. Downward along the soil profile, the specific activity of radioactive potassium decreased and at a depth of 40-60 cm was 2 times less than in the 0-20 cm layer. Key words: podzolized corn, field crop rotation, potash fertilizers, long-term use of fertilizers.Key words

Key words*: chornozem podzolized, field crop rotation, potash fertilizers, long-term use of fertilizers.*