Chaikovska L.A., Klyuchenko V.V., Ovsienko O.L.

THE ACTION OF BACTERIZATION ON THE MIKROBIOCENOSIS OF WINTER WHEAT RHIZOSPHERE BY HEAVY METALLS POLLUTION OF SOIL.

Application of biological preparations on the basis of useful microorganism's strains is one aspect of modern biological agriculture. The one of the dangerous pollutants of soil are heavy metals (HM). They reducing plants productivity and disturbed intensity of microbiological processes, also decrease the number of beneficial microorganisms.

The researches consist in investigation of effect from seeds bacterization on the numbering of microorganisms in the rhizosphere of winter wheat at influence of HM (Cr, Cu, Pb). Field experiments were carried out on the southern carbonate chernozem. Salts of HM were introduced into the soil on the basis of 5, 10 and 20 MPC. For pressowing inoculation of seeds was used Phosphoenterin biopreparation. Determination of the number of microorganisms was conducted at widespread methods.

The negative influence of HM on the number of bacteria in the rhizosphere of wheat during the spring-summer growing season had been established. Showed, that the number of soil bacteria and streptomycetes on the rate of HM 20 MPC had reduced to 2,6 and 1,9 time against control. In the rhizosphere of bacterization plants found to increase the number of bacteria compared with control: to 45%, 36% and 96% at doses of 5, 10 and 20 MPC of HM respectively). The number of microscopic fungi in the soil rhizosphere of bacterization plants was lower than in control: down at 28% on the background plots, on 15 – 40% – contaminated soil.

So, the seed pressowing bacterization (Phosphoenterin) promoted to optimization of microorganisms quantity on the soil of rhizosphere: increased the amount of bacterium, streptomycetes and reduced numbers of micromycetes.

Key words: winter wheat, bacterization, rhizosphere, microorganisms, heavy metalls.