SOME RESULTS OF LAND RECLAMATION WITH FINE FRACTIONS OF DOLOMITE AND BLAST FURNACE SLAG OF THE CHEREPOVETS STEEL MILL

Litvinovich A. V.¹, Nebolsina Z. P.², Lavrishchev A. V.¹, Pavlova, O. Yu.¹, Kovleva A. O.¹, Kuzemkin I. A.¹

Agrophysical Research Institute of the Russian Academy of Agricultural Sciences
 14 Grazhdansky pr., Saint-Petersburg, Russia, 195220
 North-West Research Institute of Agriculture

 Institutskaya ul., Belogorka, Gatchinsky raion, Leningradskaya oblast, 188231
 E-mail: avlavr@rambler.ru

A comparative study of the fertilizing value and reclamation properties of dolomite and blast furnace slag was carried out in a 4-year pot experiment. It was shown that the usage of dolomite in the rates equivalent by the neutralizing capacity with the blast furnace slag resulted in a greater shift of the pH_{KCl} value and higher precipitation of phytotoxic cations of aluminum, manganese and iron. It also resulted in the absorbtion of higher amounts of exchangeable cations $(Ca^{2+} + Mg^{2+})$ by the soil. Significant differences between yields of rapeseed, vetch and wheat straw were found for average rates of the ameliorants. The effect on the productivity of wheat grain was higher for dolomite than for blast furnace slag.

Key words: soil, plants, dolomite, blast furnace slag.