

**<sup>134</sup>CS UPTAKE BY PLANTS FROM SOIL APPLYING DIFFERENT ABSORBENTS**

**ONCSIK, M.**

Irrigation research Institute, 5540. Szarvas, Hungary; E-mail: oncsik@oki.ince.hu

A kind of utilisation of the contaminated soil radionuclides can be amelioration. It means not only liming but also using different soil-additives. Among of this additives are widespread the different zeolite minerals.

In their chemical compound the natural zeolites form incoherent spatial structure of SiO<sub>4</sub> ion groups. Selective, sorption, cation changing and specific surface properties of the zeolites connected with their nature can be explained with this structure.

In Hungary we can find territories suitable for zeolite mining in the Tokaj-mountains.

We have started to study the isotope uptake by plants using different zeolite clay minerals (montmorillonite, mordenite, clinoptilolite). Final aim of the experiment was to reduce the rate of isotope uptake by plants applying the additives given to the soil.

According to the experiment's results made in vegetation pots the Cs<sup>134</sup> activity of green peas were reduced averaging by 16% comparing with the control in the soils enriched with zeolite (mordenite type).

Under field conditions we studied the radioactivity of millet and carrot yields in the soils ameliorated with montmorillonit clay mineral. It was found that the radioactive contamination of yield in soil treated with zeolite reduced by 10% averaging in case of millet, while it was 24% for the carrot roots comparing with the control.



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