15. Development of Techniques for Stripping the Topsoil of Radioactively-polluted Agricultural Land

Yuichi Nakamura, Katsuhisa Teraguchi, Shinpei Matsuda, Shingo Masuda

The accidents at a nuclear power plant caused by the Great East Japan Earthquake of March 11, 2011 widely polluted agricultural land mainly in Fukushima Prefecture with radioactive materials.

The Ministry of Agriculture, Forestry and Fisheries has been developing techniques for removing radioactive materials from the soils in agricultural land by conducting verification tests. As the applicable techniques for removing radioactive materials from the soils in agricultural land, are replacing upper soils with lower soils, crushing and removing soils using water and stripping the topsoil have been presented.

A technique was developed for stripping the topsoil of agricultural land polluted with radioactive materials. It involves the stripping of the soils of radioactively-polluted agricultural land following the surface irregularities and enables the stripping and packing the soils into large sandbags in a series of actions to minimize the exposure of workers to radiation. The technique was applied to construction for agricultural land pollution control verification conducted by the Ministry of Agriculture, Forestry and Fisheries and its performance was verified.

Key words: radioactive pollution, decontamination, topsoil, stripping