Vertical Distribution of Radiocesium in Pasture Soils after Pasture Renovation

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Pastures in Kawatabi Field Science Center Tohoku University were contaminated with radiocesium due to Fukushima Dai-ichi nuclear power plant accident in 2011. As a countermeasure against the contamination, the pastures were renovated by plowing followed by rotary tilling and seeding. To clarify the effect of renovation on vertical distribution of radiocesium in the renovated pastures, we collected soil samples from the pastures and measured their concentration of radiocesium by gamma spectrometry. Before the pasture renovation, a large proportion of radiocesium was distributed in surface soil, such as root mat layer. After renovation, the greater part of radiocesium was found to distribute in sub-surface layer below 10 cm depth. However, in some pastures where gravels were often found in the surface layer, a large part of radiocesium was still distributed in the uppermost layer.