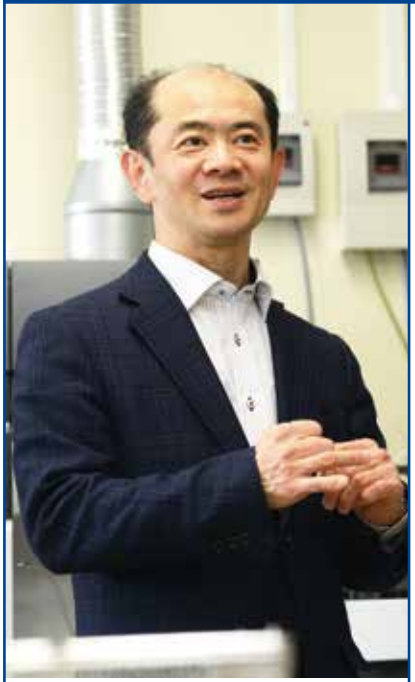

Prof.
MORI Yasushi

Installing artificial macropore to enhance infiltration and increase organic matter in soils.

Soil is the largest carbon storage body at terrestrial area. Our previous research showed that macroporous soils conduct surface water without clogging and that bypass flow by macropores segregated organic matter from the surface. Organic matters will be effectively conserved by these physical processes, which contributed greatly to carbon storage as well as bio-chemical processes.

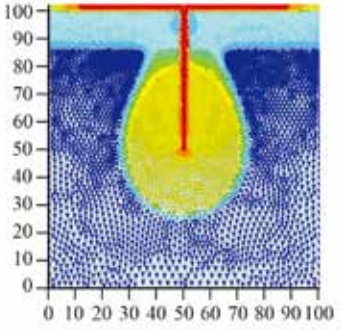

Figure Rainfall was effectively conducted by artificial macropore which contributed to organic matter conservation.

Linear Macropore Installation for Reducing Red-soil Erosion at Sugarcane Field.

Figure Surface water caused by heavy rain removes nutrient rich surface soil, but macropore structure reduces them greatly.

Red-soil erosion in sugarcane fields has been reported as a significant agricultural and environmental problems in Ishigaki Island in Okinawa, where such erosion has led to loss of nutrient-rich agriculture soil and also negatively impacted coral reefs. We introduced linear-macropore to the field. The result showed that the erosion almost cancelled the conservative land management and installation of linear macropre reduced surface water and erosion amount to 1/7.