Methane flux analyze in the interface soil-atmosphere at a rice plantation, a soybean plantation and a tropical forest, in Oriental Amazônia.

Irene Cibelle Gonçalves Sampaio, Large Biosphere-Atmosphere, cibelle@lbasantarem.com.br (Presenting)
Raimundo Cosme de Oliveira Júnior, EMRABAPA Oriental Amazonia, cosme@cpatu.embrapa.br
Michael Keller, University of New Hamphire, michael.keller@unh.edu
Cleuton Pereira, Tropical Forest Institute - IFT, cleuton@lbasantarem.com.br
Kemeson Oliveira, Tropical Forest Institute - IFT, kemeson@lbasantarem.com.br

The goal of this research was to quantify soil methane (CH_4) flux in a convectional rice and soybean plantation, identify impact factors, beside to compare these fluxes with those measured in an undisturbed forest. The research sites were: mature tropical forest, rice plantation and soybean plantation. Methane flux was measured by vented static camera and correlated with volumetric moisture and temperature of soil. The average of all soils researched showed negative CH_4 flux. The flux in the forest was quantitatively higher (about -0.3 ± 0.2 e -0.1 ± 0.9 mg CH_4 m^{-2} d^{-1}) than those sites under plantation (-1.1 ± 3.2 mg CH_4 m^{-2} d^{-1} e -1.2 ± 1.7 mg CH_4 m^{-2} d^{-1}, at rice and soybean plantation respectivelly). There was no difference between the two sites under plantation. At the three sites, moisture and soil temperature did not control efficiently the methane flux. The fertilizers and pesticides, used in the sites under plantation, did not influenced methane flux.

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