Geophysical Research Abstracts
Vol. 18, EGU2016-1542-1, 2016
EGU General Assembly 2016

Greenhouse gas (GHG) emission in organic farming. Approximate quantification of its generation at the organic garden of the School of Agricultural, Food and Biosystems Engineering (ETSIAAB) in the Technical University of Madrid (UPM)

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As it well-known, agricultural soil fertilization increases the rate of greenhouse gas (GHG) emission production such as CO_2, CH4 and N2O. Participation share of this activity on the climate change is currently under study, as well as the mitigation possibilities.

In this context, we considered that it would be interesting to know how this share is in the case of organic farming. In relation to this, a field experiment was carried out at the organic garden of the School of Agricultural, Food and Biosystems Engineering (ETSIAAB) in the Technical University of Madrid (UPM). The orchard included different management growing areas, corresponding to different schools of organic farming.

Soil and gas samples were taken from these different sites. Gas samples were collected throughout the growing season from an accumulated atmosphere inside static chambers inserted into the soil. Then, these samples were carried to the laboratory and there analyzed.

The results obtained allow knowing approximately how ecological fertilization contributes to air pollution due to greenhouse gases.