Biogeosciences Discuss., 7, C2023–C2024, 2010
www.biogeosciences-discuss.net/7/C2023/2010/

Biogeosciences Discussions

Interactive comment on "Effects of free-air CO_2 enrichment (FACE) and soil warming on CH_4 emission from a rice paddy field: impact assessment and stoichiometric evaluation" *by* T. Tokida et al.

A. Neftel (Referee)

albrecht.neftel@art.admin.ch

Received and published: 26 July 2010

The paper reports on a "FACE" type experiment to look at changed CH4 emissions caused by increased CO2 concentration and/or increased temperature. Because rice production is essential for food security it is important to know whether changed climatic conditions potentially also alter the greenhouse gas emissions. As far as I can understand as outsider the authors are given reasonable mechanistic explanations for their observed changes. I am wonder too which extent "FACE" type experiments can be translated to real world conditions. The measured strong increase with temperature

should e.g. be seen in CH4 emission time series over longer period covering a range of ambient temperature. the manuscript certainly would gain in quality in case this aspect could also be discussed.

Because the measured increase of 26% with enhanced CO2 emissions alone is not significant it has to be explicitly mentionned in the abstract, the indication of the p-value in bracket is missleading. The same holds for the conclusiosn where the lack of significance is omitted.

Albrecht Neftel, editorial review

Interactive comment on Biogeosciences Discuss., 7, 1863, 2010.