

Global Warming in Relation to Paddy Cultivation

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Which cereal crop, planted in ankle-deep water, emits large quantities of the green house gas METHANE ? ---- The gas is released from water submerged – soil, of rice or paddy plants, is menthane-either through the roots & stems of rice plants or something which TreeHugger as explained by Professor/Chrisvan, Kessel of the University of California in Davis & co-author of the study and also by Mat McDermott @ matmcdermott), science / climate change, October 22, 2012)

This rice is world's, second largest crop, & already significant source of the methane-emissions and that methane is a more powerful green house gas than CO₂ (MatMcDermotta, Science, Oct 22, 2012). New research published in “*Nature climate change*” shows that the world warms it both increases the methane- emission from rice paddies & decreases the crop yield of rice.

Rising temperatures were found to have only small effects of CH₄ emissions but as they decrease rice yield, they thus also increase the amount of CH₄ emitted per kilogram of rice (Mat Mc Dermott 2012 & 2015). Total methane emissions from rice production “will strongly increase” as global demand for rice increase alongside human population.

Then, what can be done about it ? the report says that draining rice paddies in mid-season & using different fertilizers can reduce methane emissions while switching to more draught / heat tolerant varieties of rice can off set crop yield declines (e.g. in India, Hyderabad or in Saudi Arabia, S. Datta, 2016, and that's why this study formulated by the Author (S. Datta, Feb, 2017) as the powdered / dust or solid bio-fertilizer [1) Azotobacter 1013 (ICBR – 1:3.45) 30% 2) Neem leaf dust 40% 3) Ground nut shell dust 10% 4) Azolla –a-fern – dust – 18% & tobacco – dust – 0.2%], which can be used at anytime of the day & night, preferably 2 or 3 times daily, (instead of previously formulated liquid – bio-fertilizer / S. Datta, JERAD, vol. 6. No. 3A, Jan – March, 2012) – A **NEW – VISTAS or INNOVATION** – which is now in the “Field trial stage”. The “Indepth report will be communicated shortly after, as “An applied – Article” or as a “paper” Liquid bio-fertilizer is related to paddy-cultivation only but solid bio-fertilizer can be used also in the wheat & vegetable fields. It has no side effects & no chemical is included as a preservative. It shows no terata-formation like chemical fertilizer in chick & rat so far observed.

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