Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2019-1069-RC1, 2020 © Author(s) 2020. This work is distributed under the Creative Commons Attribution 4.0 License.



## Interactive comment on "Effects of fertilization and stand age on N<sub>2</sub>O and NO emissions from tea plantations: A site-scale study in a subtropical region using a modified biogeochemical model" by Wei Zhang et al.

## **Anonymous Referee #2**

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This manuscript presents an outstanding study. First, the authors modified the process-oriented biogeochemical model: CNMM-DNDC by adding tea growth-related processes that could induce a soil pH reduction and simulate NO and N2O emissions under very low soil pH condition. This is an very important improvement of the CNMM-DNDC model. Second, the authors made in-situ measurements on NO and N2O fluxes in tea planted soil and calibrated the emission factors for both NO and N2O. Therefore the improved CNMM-DNDC model could be used for quantifying NO and N2O emissions under tropical and subtropical low pH soils. The study is perfect to fit the scope

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of the ACP journal. I recommend to accept it in its current form.

Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2019-1069, 2020.