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Interactive comment on "A process-based model for ammonia emission from urine patches, GAG (Generation of Ammonia from Grazing): description, validation and sensitivity analysis" *by* A. Móring et al.

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The article presents a process-based model for ammonia emission from urine patches. The model was well described in the article. The authors gave a very sound scientific development for the issue. The article is very valuable reference for further studies of the ammonia exchange between the atmosphere and biosphere. The processes of ammonia emission from urine patches are very complex. To simplify these complex processes, some assumptions were made by the authors in the model. However, some of these assumptions might be invalid in the real world, such as no capillary forc-

ing when soil moisture reaches field capacity, which is the dominant diving forcing for water movement in unsaturated soil. Soil temperature, an important factor for ammonia emission from urine patches, was not discussed in the model. To my understanding, water film and plant cuticle are two different materials, and their resistance to ammonia emission are also different. So, Equation 8 might not represent both.

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