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Interactive comment on "Determining the optimal nitrogen rate for summer maize in China by integrating agronomic, economic, and environmental aspects" *by* G. L. Wang et al.

Anonymous Referee #2

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The authors have responded comprehensively to the comments posed by the two reviewers. Still, there is the issue that the system under study "wheat-maize cropping in North China Plains" seems to be managed unsustainably, although this research provides a valuable strategy to minimize the environmental burden of intensive N fertilization.

Apart from the risk of soil organic matter degradation there is also the question of resilience towards pest and diseases and weather extremes when a large agricultural area and its smallholders depend solely on wheat-maize cropping. In the revised version of the manuscript the critical aspects I have raised in my previous comment should be discussed in the manner, like the authors did in their response letter. And it should

be made clear in this discussion that the approach to determine the optimal nitrogen rate for summer maize in China by integrating agronomic, economic, and environmental aspects seem to be a straight-forward option for agricultural sustainability in the short- and maybe mid-term but cannot be the only option for a long-term perspective.

Interactive comment on Biogeosciences Discuss., 11, 2639, 2014.