

Appendix 1:

Ethics and Informed Consent

Acceptance number: JXAVLL-2022/002

Date: Oct. 20, 2022

Name	Mengling Zhang	Department	School of Economics and Management	Tel	+8618296158691
Funding	National Natural Science Foundation of China (grant number: 72163014)				
Reasons for application	Academic communication, Paper presentation				
Paper title	Economic and environmental effects evaluation of farmer's green production behaviors: Evidence from major rice-producing areas in Jiangxi Province				
Research purpose	Fertilizer inputs have surpassed the optimal level for balancing economic returns and ecological efficiency. According to the law of diminishing marginal returns, exceeding this optimal level reduces marginal output. Overreliance on chemical fertilizers has hindered agricultural economic growth. Additionally, irrational use of these fertilizers has caused significant ecological crises, including soil fertility decline, water pollution, and increased greenhouse gas emissions. These issues threaten agricultural product quality and safety and constrain sustainable agricultural development. Therefore, the scientific application of chemical fertilizers is crucial for sustainable agricultural development.				
Research approach	This paper utilizes survey data from 1,345 farm households in the main rice production areas of Jiangxi Province, China, using the example of reduced fertilizer application behavior among rice farmers. By constructing a DEA-SBM model with undesirable outputs to measure environmental effects, and applying an endogenous switching model to test the economic and environmental effects of farmers' adoption of green production technologies.				
Review comments:					
<p>1. This study does not fall within the scope of ethical research.</p> <p>2. The authors use survey data from National Natural Science Foundation of China (grant number: 71573111) for analysis. The survey was conducted anonymously, and all participants were fully informed of the reasons for conducting the survey and the use of relevant data. No personal identity information was collected during the survey, and there were no conflicts of interest or potential risks for the rights holders.</p>					
<p>Welfare Ethics Committee of Jiangxi Agricultural University (seal)</p> <p>Date: Oct. 20, 2022</p>					