



Yield Gains from Balancing Fertilizer Use: Evidence from Eastern India

Second Submission: RR_IND_2025_295

Mahin Tariq, Nihaa Sajid

reproducibility@worldbank.org

21st April, 2025

This review verifies the reproducibility of the exhibits included in the paper “Yield Gains from Balancing Fertilizer Use: Evidence from Eastern India”.

Contents in this review:

1. Main findings
2. List of exhibits and reproducibility status
3. Reproduction Environment

Main findings

- **Every exhibit has been reproduced accurately.**
- The code was successfully executed on a new computer after:
 1. Changing the file paths in the main do file, R code and python script.
 2. Setting the ado folder.
 3. Creating a new programming environment for the python code.
 4. Running `renv::init()` to initialize the R programming environment
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 40 minutes to run.
- We conducted our reproducibility analysis based on the paper shared by the authors over email on April 14th, 2025.
- **Reproducibility Summary:**
 - **Data:** All data sources are publicly available and included in the reproducibility package.
 - **Code:** All code files (from cleaning to analysis) are included in the reproducibility package.
 - **Outputs:** All outputs are generated by code included in the reproducibility package.
 - **Reproducibility verification:** Reviewers had access to the same materials in the public reproducibility package. The reviewers did not verify if publicly available data matches the data in the reproducibility package.
 - **Dependencies environment:** The reviewers created a new environment using the latest versions of dependencies available at the moment of the review.

*List of exhibits and reproducibility status***Results in the Main Section of the Paper**

- **Figure 1** Reproduced.
- **Figure 2** Reproduced.
- **Figure 3A** Reproduced.
- **Figure 3B** Reproduced.
- **Figure 3C** Reproduced.
- **Figure 4A** Reproduced.
- **Figure 4B** Reproduced.
- **Figure 4C** Reproduced.
- **Table 1** Reproduced.
- **Table 2** Reproduced.
- **Table 3 Panel A** Reproduced.
- **Table 3 Panel B** Reproduced.
- **Table 4** Reproduced.
- **Table 5** Reproduced.
- **Table 6** Reproduced.

Results in the Annex

- **Figure A1** Reproduced.
- **Table A1** Reproduced.
- **Table A2 Panel A** Reproduced.
- **Table A2 Panel B** Reproduced.
- **Table A3** Reproduced.
- **Table A4** Reproduced.

Reproduction Environment

Paper exhibits were reproduced on a computer with the following specifications:

- OS: Windows 11 Enterprise
- Processor: Intel(R) Core(TM) i5-1145G7 CPU @ 2.60GHz
- Memory available: 15.7 GB
- Software version: Stata 18.0 MP, R 4.4.0, Python 3.11