Paper: **"Factors Influencing Farmers' Knowledge, Capacity, and Practice of Conservation Agriculture in Bangladesh"**

Corresponding Author: Md Mahmudul Hoque

Peer review:

Reviewer A:
Recommendation: Revisions Required

The TITLE is clear and it is adequate to the content of the article.
Yes, the title is clear, specific, and well alligned with the content of the journal.
The ABSTRACT clearly presents objects, methods, and results.
Yes, The abstract effectively presents the objectives, methods (cross-sectional survey of 201 farmers), and key findings (significance of income, access to machinery, and knowledge gaps). It's concise, informative, and reflective of the full article.
There are a few grammatical errors and spelling mistakes in this article.
Minor Issues.
Overall, the grammar and spelling are acceptable, but there are occasional inconsistencies or minor issues such as:

Use of inconsistent or unnecessary capitalization (e.g., "Know gap" instead of "know gap").

Slight awkwardness in some sentence structures.

Redundant words or overly complex phrasing in places.

These do not impede understanding but could benefit from minor language polishing.
The study METHODS are explained clearly.
Yes.
The methods are well explained. The questionnaire design, sampling, pilot study, and analytical techniques (including the Three-Gap model and Problem Confrontation Index) are all clearly described, allowing for replication.
The body of the paper is clear and does not contain errors.
Mostly yes.
The article body is well-organized and detailed. It discusses:

The extent of CA practices.

Influential socio-economic variables.

Farmers' difficulties and constraints.

Tables and figures are used effectively. A few sections are dense and could be improved with better paragraphing and transitions for easier readability.
The CONCLUSION or summary is accurate and supported by the content.
Yes.
The conclusion accurately summarizes the research findings and provides appropriate

recommendations based on the data. It logically flows from the results and aligns with the study objectives.

The list of REFERENCES is comprehensive and appropriate.

Yes.

The reference list is comprehensive and relevant, citing a wide range of studies on CA from both global and local (Bangladesh-specific) perspectives. All key claims are appropriately backed by references.

Please rate the TITLE of this paper.

[Poor] **1-5** [Excellent]

3

Please rate the ABSTRACT of this paper.

[Poor] **1-5** [Excellent]

3

Please rate the LANGUAGE of this paper.

[Poor] **1-5** [Excellent]

3

Please rate the METHODS of this paper.

[Poor] **1-5** [Excellent]

4

Please rate the BODY of this paper.

[Poor] **1-5** [Excellent]

3

Please rate the CONCLUSION of this paper.

[Poor] **1-5** [Excellent]

3

Please rate the REFERENCES of this paper.

[Poor] **1-5** [Excellent]

4

Overall Recommendation!!!

Accepted, minor revision needed

Comments and Suggestions to the Author(s):

Title

Suggestion: You could consider a slightly more concise version, e.g., "Factors Influencing Farmers' Knowledge, Capacity, and Practice of Conservation Agriculture in Bangladesh" to enhance readability.

Abstract

Suggestion: Consider rephrasing "Know gap" and similar terms using consistent lowercase formatting (e.g., "know gap," "can-do gap") to align with conventional usage and improve flow.

Methodology
Suggestion:

Clarify why only seven CA components were used when Poddar et al. (2017) identified eight.

Results and Discussion
Suggestion:

Some tables (e.g., Table 6.2) would benefit from cleaner formatting (spacing, alignment).

The ranking of PCI problems is informative — consider presenting these visually (e.g., a bar chart) for more impact.
Provide a brief visual or tabular summary of the Three-Gap model (Figure 6.1 could be formatted for clarity).

Language and Style
Some minor grammatical inconsistencies:
Use consistent tense throughout.
Avoid repetition (e.g., "very high and frequently faced" could be simplified).
Simplify sentence structure where possible to enhance clarity.

Reviewer B:
Recommendation: Accept Submission

The TITLE is clear and it is adequate to the content of the article.
The title clear and adequate to the content of the article
The ABSTRACT clearly presents objects, methods, and results.
The abstract clearly presents objects and results but the methods well presented
There are a few grammatical errors and spelling mistakes in this article.
Editorial work is needed
The study METHODS are explained clearly.
The sampling methods are not clearly explained
The body of the paper is clear and does not contain errors.
The body is not clear in terms of organisation of study and the section number
The CONCLUSION or summary is accurate and supported by the content.
The conclusion is supported by the content
The list of REFERENCES is comprehensive and appropriate.
The list of references is comprehensive.
Please rate the TITLE of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the ABSTRACT of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the LANGUAGE of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the METHODS of this paper.
[Poor] **1-5** [Excellent]
3

Please rate the BODY of this paper.
[Poor] **1-5** [Excellent]
3

Please rate the CONCLUSION of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the REFERENCES of this paper.
[Poor] **1-5** [Excellent]
4

Overall Recommendation!!!
Accepted, minor revision needed

Comments and Suggestions to the Author(s):
The article is appropriate this era of climate change

Reviewer C:
Recommendation: Revisions Required

The TITLE is clear and it is adequate to the content of the article.
I agree. The title clearly states the subject of the study, setting a clear expectation for the reader about what the study involves and the geographic focus. Moreover is in line with the content of the manuscript, CA practices among Bangladeshi farmers and some specific elements (knowledge, ability, and performance) reflecting also the empirical data directly referenced in the title.
The ABSTRACT clearly presents objects, methods, and results.

I mostly agree. Overall, the abstract provides a concise and coherent presentation of the study's core elements. There is room for improvement: consider (i) including research questions, (ii) clarifying the analytical techniques used (e.g., statistical models, regression analysis) and the criteria for selecting the 201 CA-adopting farmers, (iii) more detail on the implications of results for policy or practice is needed. For example, how do the identified knowledge gaps specifically impact CA practices? Are there particular areas where interventions are most needed?

There are a few grammatical errors and spelling mistakes in this article.

Is: agro-ecological method to resource-conserving agricultural manufacture (Corsi and Muminjanov 2019)
It should be: agro-ecological method for resource-conserving agricultural manufacture (Corsi and Muminjanov 2019)

Is: including machinery, labor, and fuel, while increasing yields and better utilizing natural resources
It should be: including machinery, labor, and fuel while increasing yields and better utilizing natural resources (unnecessary comma)

Is: (5 million hectare)
It should be: (5 million hectares) (in plural)

Is: difficulties of CA practice are context specific
It should be:difficulties of CA practice are context-specific (consider a hyphen)

Is: the adoption of CA is Bangladesh remains limited
It should be: the adoption of CA in Bangladesh remains limited

Is: for any adoption related studies,
It should be: for any adoption-related studies,

Is:The three gap model of the study
It should be:The three-gap model of the study

Is :with what farmers actual behavior (their extent of practice of CA).
It should be:with what farmers' actual behavior (their extent of practice of CA)

....etc. Consider to revise it again!

The study METHODS are explained clearly.

I agree. Overall, the methods section of the manuscript provides a clear and comprehensive description of how the study was conducted, including the design of the survey, the analytical techniques used, and the data collection process. It is suggested for you to include a sensitivity analysis to test the robustness of the results against variations in key assumptions or parameters. Moreover, provide more detailed descriptions of the data cleaning and processing steps to allow other researchers to replicate the study or reanalyze the data.

The body of the paper is clear and does not contain errors.

I agree. The body of the manuscript is detailed and provides a comprehensive discussion of the issues at hand. Consider improving transitional phrases between paragraphs and sections, which

could enhance the logical flow of the document. Moreover, ensuring consistent use of key terms and definitions throughout the document can avoid confusion. Lastly, make sure that all posed research questions or hypotheses are thoroughly addressed by the end of the manuscript, and the not-conclusively discussed issues should be explicitly acknowledging these gaps and suggesting areas for future research can provide a more rounded conclusion.

The CONCLUSION or summary is accurate and supported by the content.
I agree. The conclusions drawn are directly supported by the results discussed in the body of the paper.

The list of REFERENCES is comprehensive and appropriate.
I agree. Consider verifying if there are orphan references or citations.

Please rate the TITLE of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the ABSTRACT of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the LANGUAGE of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the METHODS of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the BODY of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the CONCLUSION of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the REFERENCES of this paper.
[Poor] **1-5** [Excellent]
4

Overall Recommendation!!!
Accepted, minor revision needed

Comments and Suggestions to the Author(s):
Consider updating and expanding references.
Consider strengthening the discussion by comparing the findings with those of other studies in similar contexts.
Elaborate on the policy implications of the findings. Provide more detailed recommendations for

policymakers, including specific actions that could be taken to overcome the barriers identified in the study.

Clearly articulate any limitations of the study, such as potential biases, geographical constraints, or data limitations.

Reviewer D:
Recommendation: Revisions Required

The TITLE is clear and it is adequate to the content of the article.
The title is clear, descriptive, and appropriate for the study content.
The ABSTRACT clearly presents objects, methods, and results.
The abstract could briefly mention the Three-Gap model explicitly for clarity. The term "Know gap" is used with inconsistent capitalization – it should be "Know Gap" or standardized throughout.
There are a few grammatical errors and spelling mistakes in this article.
Language and grammar need improvement.
The study METHODS are explained clearly.
Better flow in the description of statistical methods is needed; the explanation feels segmented. More details should be included on sampling strategy: How were the 201 farmers selected? Was it random? Stratified?
The body of the paper is clear and does not contain errors.
Improvements are needed.
The CONCLUSION or summary is accurate and supported by the content.
Too reliant on repeating earlier content. Could be more forward-looking (e.g., implications for policy or future research).
The list of REFERENCES is comprehensive and appropriate.
There are a few inconsistencies in formatting.
Please rate the TITLE of this paper.
[Poor] **1-5** [Excellent]
5

Please rate the ABSTRACT of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the LANGUAGE of this paper.
[Poor] **1-5** [Excellent]
4

Please rate the METHODS of this paper.
[Poor] **1-5** [Excellent]

Please rate the BODY of this paper.
[Poor] **1-5** [Excellent]
3

Please rate the CONCLUSION of this paper.
[Poor] **1-5** [Excellent]
3

Please rate the REFERENCES of this paper.
[Poor] **1-5** [Excellent]
4

Overall Recommendation!!!
Accepted, minor revision needed

Comments and Suggestions to the Author(s):
Manuscript Title:
An Examination of the Factors Influencing Farmers' Knowledge, Ability, and Performance of Conservation Agriculture Practice in Bangladesh

1. The use of the Three-Gap model (Know Gap, Know-Can Gap, Can-Do Gap) is interesting but not clearly defined or conceptually grounded. You mention Ibnat et al. (2019), but the adaptation to the agricultural context feels superficial. Suggestion: Provide a clear, conceptual framework showing how the model applies specifically to conservation agriculture, with diagrammatic support and examples.
2. The paper claims a sample size of 201 farmers, but does not mention sampling design, inclusion/exclusion criteria, or representativeness. Was it random? Stratified? Why only Rajshahi, Rangpur, and Dinajpur?
The use of the Problem Confrontation Index (PCI) is not well-justified. Why PCI and not a more statistically robust measure (e.g., factor analysis or PCA to identify key constraint dimensions)?
The regression model lacks depth: No mention of multicollinearity tests (VIF?), residual diagnostics, or potential endogeneity. What kind of regression was run? OLS? If so, assumptions should be verified. No model equations or variable definitions are provided.
3. The literature review is broad but lacks synthesis. Many studies are cited in succession without critical engagement. For example: 'Only a few countries… share 90% of CA land area…' – This is descriptive. What does this mean for Bangladesh's policy?
There is no discussion of behavioral adoption models (e.g., Theory of Planned Behavior, Innovation Diffusion), despite the clear relevance.
4. Table 6.4 mixes coefficients and p-values without confidence intervals or model details (e.g., number of observations, F-statistics). The presentation of findings is too descriptive. There is no analytical interpretation of why, for example, access to machinery has a negative coefficient - the meaning of sign direction is unclear without context.
5. Discussion does not link back strongly to previous studies or theory. There is no critical reflection on why farmers are reluctant to continue CA beyond the usual 'lack of machinery'

explanation. No gender-disaggregated analysis, even though gender is mentioned in data collection.
6. Language and Grammar need improvement;
Inconsistent use of abbreviations — Conservation Agriculture (CA) is sometimes redefined or restated unnecessarily.