

Review Form 1.7

Journal Name:	Journal of Experimental Agriculture International
Manuscript Number:	Ms_JEAI_96927
Title of the Manuscript:	Estimation of energy potential by anaerobic digestion of agricultural residues in agro-ecological zone 5 in Benin.
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment:	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. (Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</p>	<p>It may be important for the local community.</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Partly</p> <p>Not, more biogas related references should be listed,</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>Yes</p>	
<p>Optional/General comments</p>	<p>This paper is a compilation of the biomass and biogas potentials of one of the largest agricultural regions in Benin. The study has been carried out presumably to establish the data necessary to development of a plan for a more efficient exploitation of the considerable amounts of agricultural waste and by-product biomass. The potential of the agricultural residues seems to be correctly estimated, but the estimated biogas production has some severe shortcomings. The following considerations should be addressed.</p> <p>1. The BMP test gives a maximum biogas potential of any given substrate. In real field applications you will never reach the value determined in the BMP test because maintaining the optimal conditions for biomass degradation, as it is the case in BMP tests, would be impractically expensive.</p> <p>2. BMP data from various regions or from various countries may vary considerably because the biomass cultivation practices, soil qualities, etc. conditions affecting biomass quality vary substantially.</p> <p>3. Biogas yields, particularly under field conditions depends strongly on the substrate composition fed into the reactors. The carbon-to-nitrogen (C/N) ratio of the input substrate mix should be 15-35. The overwhelming majority of the biomass sources listed in this paper is composed of lignocellulosic plant material. These are difficult to handle by the biogas producing microbial communities, hence biogas production would be slow and inefficient eventually leading to the collapse of the process.</p> <p>4. It is important to decide the biogas reactor types to be constructed, i.e. >800 m³ industrial size or small, few m³ household size. This will determine the transportation costs as well as the biogas utilization route. For example, in household size reactors the household and kitchen waste can also be put into the reactor and the transportation cost would be very low.</p> <p>Therefore, I propose a "major review" as final evaluation of this submission.</p>	

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PART 2:

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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