

Review Form 1.7

Journal Name:	Journal of Experimental Agriculture International
Manuscript Number:	Ms_JEAI_114825
Title of the Manuscript:	Ecologically Based Rodent Management (EBRM): A Promising Approach to Resolving Conflict between Man and Rodent Pest Species in Nigerian Agro-ecosystem
Type of the Article	REVIEW

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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> <ol style="list-style-type: none"> 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>This review paper discusses a very important topic both ecologically and economically- The role of EBRM in rodent pest management.</p> <p>The title is suitable, but the article contents are inadequate to support the title.</p> <p>Yes</p> <p>No , Sub sections inadequate with respect to types of EBRM</p> <p>Yes, but content is inadequate</p> <p>Insufficient at many places.</p> <p>DETAILED POINT-WISE COMMENTS Abstract: In the sentence “So, with introduction of settled Agriculture, natural flora are removed and crops are introduced to create agro-ecosystem within which the biotic components continue to interact, but as pests because of their infringement on what human is producing for the sustenance of his population.” “So” can be removed In the sentence “This prompted man to wage war against the rodent pest species by using conventional rodent control via the use of synthetic pesticides which poses health and environmental risks.”, it should be “pose health and environmental risks”</p> <p>Keywords: Should be 1 or 2 words not a sentence like “promising approach to rodent management”. Kindly use short and precise key words.</p> <p>Introduction: Reference is needed for the sentence in the end of the first paragraph : “Therefore, identification of rodent species of economic importance before embarking on control measures is very crucial. Morphological identification may not give accurate and reliable information. So, molecular identification is used to complement the morphological identification so as to have accurate information about the pest species down to the species level”.</p> <p>In the end of page 2 , kindly include reference for the statements in the paragraph:</p> <p style="padding-left: 40px;">2. Ecosystem and Vertebrate Pest in Agriculture</p> Ecosystem/biome is understood as the interaction between the biotic and abiotic components of the environment, all relating as a system. The populations of biotic component form the community complex, which includes microbes, animals (invertebrates and vertebrates) and plants (herbs, shrubs, trees and flowering plants). These organisms interact in an interrelated manner in the natural ecosystem. They all co-exist as components of God created natural environment. The physical, chemical and biological forces that constitute the natural ecosystem are in a dynamic, but	

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	<p>well-balanced state. The forces are maintained by natural checks and balance from each component benefitting from the association and contributing its quota to further the association. For example, in their natural and undisturbed habitats the lower vertebrate species (mostly rodents) serve as prey items to sustain populations of predators.</p> <p>In Page 3, in second paragraph: “To this end, there had been little information on the rodent species causing which damage, the degree of damage caused and the economic impact of such damage.” The sentence can be reframed as “To this end, little information is available on the extent of damage caused by rodent species and the economic impact of such damage.”</p> <p>In Page 3, in second paragraph: “Farmers could only list the crops damaged and not the amount of losses caused in terms of yield and revenue.” The sentence can be reframed as “While the farmers are able to list the crops damaged, they are unable to assess the extent of damage caused by rodent species and the economic impact of such damage.”</p> <p>In Page 3, in second paragraph: Reframe the sentence and give reference for “Meanwhile, the rodent pest species was reported to have caused an economic loss of about 5% of the yield”.</p> <p>In Page 3, third paragraph starting with “Some of the detrimental effects of vertebrate pests include:...” Upto page 5. The three paragraphs are full of facts but no references for such statements are provided.</p> <p>In Page 5, Genesis of conflict paragraph.... Reference needed.</p> <p>In page 7, under “ People’s perception...” Reframe the sentences: “Meanwhile, these pest species know no boundary as they go about in search of their daily bread and shelter. In so doing, some gregarious species even depredate more than the portion allotted to them by the farmers.”</p> <p>In Page 8 and 9, the content on population management under EBRM is completely contradictory.</p> <p>The content as pasted below, explains about the use of Rodenticides, while EBRM discourages the use of Rodenticides. This should be edited in accordance to the EBRM supporting statements.</p> <ul style="list-style-type: none">• Use of toxicants commonly called rodenticides, baits, fumigants, glue boards, and several trapping techniques (Witmer, 2018). Rodenticides (toxicants or poison baits) are poisonous chemicals used either as baits, dusts or water formulations to kill rats and mice or reduce their populations. There are two major groups of rodenticides which include non-anticoagulant and anticoagulant rodenticides. Non- anticoagulant rodenticides are also regarded as acute poisons. They are single dose baits or toxicants used for quick rodent population reduction (Endepols <i>et al.</i>, 2015). Some examples of acute poisons include zinc phosphide, strychnine, bromethalin etc. The major advantage of using acute poisons is that it is often used in situations where anticoagulants cannot be safely set out over a long period of time. However, two major problems are often associated with use of non-anticoagulant toxicants which include development of bait shyness by rodents and increased hazard of secondary poisoning to non-target organisms particularly the	
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	<p>scavengers (Chamber <i>et al.</i>, 1999). Anticoagulants or chronic poisons are introduced to solve the problems of bait shyness development and secondary poisoning that acute poisons have. So, anticoagulants act mainly by lowering the rate at which prothrombin (a blood clotting factor) is secreted by the liver which in turn causes internal hemorrhage that eventually leads to the death of the animal. Anticoagulants come in various forms such as powders which are used as highway poisons, cereal-baits ready for use, concentrates only, weather-proof wax, block formulations or capsules. Examples of common anticoagulants include warfarin, brodifacoum, bromadiolone, flocoumafen, difethialone etc (Endepols <i>et al.</i>, 2015; Witmer, 2018).</p> <p>Some advantages of chronic poisons over acute poisons include the lack of bait shyness, their good palatability (acceptable taste) and availability of an effective and practical antidote.</p> <ul style="list-style-type: none"> • Rats and mice can also be killed using fumigation method. The most commonly used fumigants are hydrogen phosphide, methyl bromide and carbon tetrachloride (Endepols <i>et al.</i>, 2015). <p>In page 12, under People management : The first sentence font size is not appropriate. Kindly change. Last 6 points under people management is without any reference. Kindly include.</p> <p>Conclusion: Should be completely reframed. It lacks a scientific approach. As title speaks about Nigerian Agro-system, the conclusion should be in accordance to that.</p>	
<p>Minor REVISION comments</p>	<p>Amendments at few places suggested in the previous section.</p>	
<p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>MAJOR REVISION is recommended by the reviewer</p>	
<p>Optional/General comments</p>		

PART 2:

	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>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

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