

Peer-Review Report

Peer Review of “Assessing the Influence of Seasonal and Climatic Variations on Livestock Tick Incidence in Tehran Province, Iran: Cross-Sectional Study”

Vahid Noaman

Razi Vaccine & Serum Research Institute, Karaj, Iran

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KEYWORDS

impact of climate; seasonal change; frequency; livestock; ticks; Tehran

This is a peer-review submitted for the paper “Assessing the Influence of Seasonal and Climatic Variations on Livestock Tick Incidence in Tehran Province, Iran: Cross-Sectional Study.”

Round 1 Review

General Comments

The manuscript [1] presents a comprehensive study on the seasonal and climatic distribution of ticks in Tehran province, Iran. The research is well structured and provides valuable insights into the diversity and abundance of tick species in different climate zones. The study is relevant to the field of veterinary parasitology and has potential implications for tick control strategies in the region. However, there are several areas where the manuscript could be improved in terms of grammar, sentence structure, and adherence to standard academic writing conventions.

Specific Comments

Major Comments

Grammar and Sentence Structure

Overall clarity: The manuscript is generally clear, but there are instances where the sentence structure could be improved for better readability. Some sentences are overly long and could be broken down into shorter, more concise statements.

For example:

- Original: “The presence of ticks on livestock causes localized lesions at the bite site and systemic lesions, leading to death due to anemia and paralysis due to ticks transmitting various diseases such as theileriosis and babesiosis.”
- Suggested revision: “The presence of ticks on livestock causes localized lesions at the bite site and systemic effects, which can lead to anemia, paralysis, and even death. Ticks

are also vectors for diseases such as theileriosis and babesiosis.”

Subject-verb agreement: There are a few instances where the subject-verb agreement is incorrect.

For example:

- Original: “The distribution of collected ticks (in mountain and plain climates) indicated that out of 806 collected ticks, 44.78% and 55.21% belonged to the mountainous and plain regions, respectively.”
- Suggested revision: “The distribution of collected ticks (in mountainous and plain climates) indicates that out of 806 collected ticks, 44.78% belonged to mountainous regions, while 55.21% were found in plain regions.”

Tense consistency: The manuscript occasionally shifts between past and present tense. It is important to maintain consistency, especially in the Results and Discussion sections.

For example:

- Original: “The study is conducted in two different environments: plains and mountains within 20 selected villages in Tehran Province.”
- Suggested revision: “The study was conducted in two different environments: plains and mountains within 20 selected villages in Tehran Province.”

Structure and Organization

Abstract: The Abstract is well written and provides a concise summary of the study. However, it could benefit from a brief mention of the key findings related to seasonal variations, as this is a major focus of the study.

Introduction: The Introduction provides a good background on the importance of ticks and their impact on livestock. However, it could be strengthened by including more recent references (post-2020) to highlight the current state of research on tick-borne diseases and climate change.

Methods: The Methods section is detailed and well organized. However, the formula used for sample size calculation is not clearly explained. It would be helpful to provide a brief explanation of the variables used in the formula (eg, $p=0.3$ and $d=0.045$).

Results: The Results are presented clearly, with appropriate use of tables and figures. However, some of the tables could be simplified for better readability. For example, Table 4 could be restructured to make it easier to compare seasonal activity across species.

Discussion: The Discussion is thorough and compares the findings with other studies effectively. However, it could be improved by discussing the limitations of the study and suggesting areas for future research.

Similarity and Plagiarism

The manuscript appears to be original, with no significant issues of plagiarism detected. However, it is recommended to run the manuscript through a plagiarism detection tool (eg, Turnitin) to ensure that all sources are properly cited and that there is no unintentional duplication of text.

Adherence to Standard Academic Writing

References: The references are generally appropriate and relevant to the study. However, some references are quite old (eg, references from the 1980s and 1990s). It is recommended to include more recent studies to reflect the current state of knowledge in the field.

Add these references to the manuscript:

1. Noaman V. Identification of hard ticks collected from sheep naturally infected with *Anaplasma ovis* in Isfahan province, central Iran. *Comp Clin Pathol* 2012 Feb 21; 21(3):367-369. [doi: 10.1007/s00580-012-1438-1]
2. Noaman V, Abdigoudarzi M, Nabinejad AR. Abundance, diversity and seasonal dynamics of hard ticks infesting cattle in Isfahan province, central Iran. *Archives of Razi Institute*. 2017 Mar 1;72(1):15-21. [doi: 10.22034/ari.2016.107490]
3. Noaman V, Abdigoudarzi M, Nabinejad AR, Heidari MR, Khalilifard M. (2007). Identification of hard ticks of domestic ruminants in two ecological zones of Isfahan province, Iran. *Veterinary Journal (Pajouhesh va Sazandegi)*. 2008;77:88-95.

Figures and tables: The figures and tables are well presented and support the findings of the study. However, the legends for some figures (eg, [Figure 1](#)) could be more descriptive. For example, [Figure 1](#) could include a brief explanation of what the “ratio of caught ticks” represents.

The manuscript presents a valuable contribution to the field of veterinary parasitology, particularly in the context of tick

distribution and seasonal activity in Tehran province. With some revisions to improve grammar, sentence structure, and adherence to standard academic writing conventions, the manuscript will be suitable for publication in a reputable journal. The manuscript can be considered for publication in *JMIRx Bio* after major revision.

Round 2 Review

General Comments

The revised manuscript titled “Assessing the Influence of Seasonal and Climatic Variations on Livestock Tick Incidence in Tehran Province, Iran” has addressed the previous comments and suggestions effectively. The authors have made the necessary revisions to improve the clarity, structure, and overall quality of the manuscript. Below are my final comments.

Strengths

Improved clarity: The Abstract has been revised to be more concise and now includes key findings related to seasonal variation and the most abundant tick species, enhancing readability and impact.

Focused introduction: The Introduction now more clearly highlights the specific gaps in the literature that this study addresses, particularly in the context of Tehran province.

Streamlined methodology: The Methods section has been clarified, with more details on the randomization process and a more concise description of the study area. The inclusion of supplementary tables for geographical coordinates and ecological information is a welcomed addition.

Organized results: The Results section has been streamlined with the use of subheadings, making it easier to follow. All referenced figures and tables are now included, providing a comprehensive view of the findings.

Enhanced discussion: The Discussion section now more effectively focuses on the implications of the findings for tick control strategies in Tehran province. The comparison with studies from other regions has been made more concise, emphasizing key similarities and differences.

Practical conclusion: The Conclusion has been revised to highlight the practical implications of the findings, particularly the need for seasonal tick control measures in different climate zones.

Consistent references: All references are now formatted consistently according to the journal’s guidelines, with complete details provided.

Overall recommendation: The manuscript has been significantly improved and is now suitable for publication. I recommend acceptance of the manuscript in its current form.

Conflicts of Interest

None declared.

Reference

1. Abbasi E. Assessing the influence of seasonal and climatic variations on livestock tick incidence in Tehran province, Iran: cross-sectional study. JMIRx Bio. 2025;3:e69542. [doi: [10.2196/69542](https://doi.org/10.2196/69542)]

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