ACKNOWLEDGEMENTS

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GENERAL INFORMATION
1. Manuscripts must be original, have not been published previously in any scientific journal, that manuscripts are not being submitted for publication elsewhere.
2. All manuscripts submitted to the Journal must be double-spaced, 12-point Times New Roman font with 2.5 cm margin all around.
3. Consecutive line and page numbers are required.
4. Greek letters and special symbol are inserted using the symbol palette.
5. Math equations are created with Microsoft equation, MathType or LaTeX.
6. The interest of Livestock and Animal Research covering:
   1) Animal Production System;
   2) Animal Breeding and Genetics;
   3) Animal Physiology and Reproduction;
   4) Animal Nutrition and Feeding Technology;
   5) Technology of Animal Product;
   6) Animal Biotechnology;
   7) Animal Behaviour and Welfare;
   8) Socio-Economics in the field of Animal Research, and
   9) Animal health. The objects of the research can be livestock, laboratory, exotic, and/or wild animals.
7. This journal uses blind review where all the review processes using anonymous system so that both reviewer and author identities are not revealed during the process.
8. Started from the year 2020, the journal is published THREE times a year, i.e. March, July, and November.
9. This journal provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge.

MANUSCRIPT FILE
1. Manuscripts are written in English or In Bahasa Indonesia and used standard scientific usage. Authors whose first language is not English should consult the manuscript with English editing service before submit it to Livestock and Animal Research.
2. Manuscripts should be prepared in Microsoft Word format, except for Graphs using Microsoft Excel program and Figures using JPEG or PDF format.
3. Manuscripts should be typed using Times New Roman fonts at 12 points.
4. Manuscripts should be typed double spaced except for Title, Tables, Title of Graphs/Figures, and appendix typed single spaced. Manuscripts are prepared in A4 paper, margins on all four sides are 3 cm, and total number of pages is 12-20.
5. Tables, Graphs, and Figures should be placed after the References of the manuscript.
6. Use page numbers and line numbers.
7. Manuscript contents should be arranged as the following order: Title, Name of the author(s) and their institutions, Abstract, Introduction, Methods (for Socio-Economic), Materials and Methods (for non Socio-Economics), Results, Discussion, Conclusion, Conflict of Interest, Acknowledgment (if any), References.
9. Manuscripts and Form A should be submitted electronically through online system: https://jurnal.uns.ac.id/lar/index.

CONTENT OF MANUSCRIPTS
Original Article Research
1. Title
   A title with the first word and proper nouns capitalized. Species of subject is encouraged. The title should be unique.
2. Name of author(s)
   Full names (given name, middle initial, family name) of all authors. Institutions of the authors with location denoted with a number (1, 2, and so on) behind the author’s last name. Symbol (*) should be added behind the author’s last name who responsible as corresponding author.
3. Name of institution(s)
   Where the research was conducted must be accompanied with full address including institution/department, city, and country, and e-mail (for corresponding author).
4. Abstract
   A structured abstract is required for original articles and an unstructured one for review papers. The abstract, consisting of no more than 250 words, appears on a separate page following the title page. The abstract should summarize pertinent results in a brief but understandable form. A structured abstract should contain Objective (purpose/background), Methods, Results, and Conclusion sections. An
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unstructured abstract should be one paragraph without sections. References should never be cited in the abstract.

5. Keywords
At the end of the abstract, up to six keywords that best describe the nature of the research should be listed. The term "Keywords" should appear in bold followed by a colon. The first letter of each keyword is capitalized and keywords are separated by semicolon. Keywords should include the animal species, variables tested, and the major response criteria.

6. Headings
The article's major headings (Introduction, Materials and Methods, Results, Discussion, Conclusion, and References) appear in roman bold-faced type. Subheadings appear at the left margin on a separate line in bold-faced print, are not followed by punctuation, and only the first word is capitalized. Subheadings are used when subsections consist of several paragraphs.

7. Introduction
The introduction should briefly place the study in a broad context and highlight why it is important. It should define the purpose of the work and its significance. The current state of the research field should be reviewed carefully and key publications cited. Please highlight controversial and diverging hypotheses when necessary. Finally, briefly mention the main aim of the work and highlight the principal conclusions. As far as possible, please keep the introduction comprehensible to scientists outside your particular field of research. References should be numbered in order of appearance and indicated by a numeral or numerals in square brackets, e.g., [1] or [2,3], or [4–6]. See the end of the document for further details on references. When quoting from other sources, give a reference number in brackets after the author's name or at the end of the quotation. Examples are as follows: Cahyadi [1], Bernstein and Horbar [2], Wati et al [3].

8. Materials and Methods
a. Materials and methods section may be divided by subheadings. It should be described with sufficient details to allow others to replicate and build on published results. Please note that publication of your manuscript implicates that you must make all materials, data, computer code, and protocols associated with the publication available to readers. Please disclose at the submission stage any restrictions on the availability of materials or information. Interventional studies involving animals or humans, and other studies require ethical approval must list the authority that provided approval and the corresponding ethical approval code.

b. New methods and protocols should be described in detail while well-established methods can be briefly described and appropriately cited. A clear description or original reference is required for all biological, analytical, and statistical procedures used in the experiment. All modifications of procedures must be explained. Diets, animals (breed, sex, age, body weight, and weighing conditions [i.e., with or without restriction of feed and/or water]), surgical techniques, measurements, and statistical models should be described clearly and fully. Brand names and company names and locations for all substances and equipment referred to in the text should be included in parentheses within the text, not in footnotes.

c. Research manuscripts reporting large datasets that are deposited in a publicly available database should specify where the data have been deposited and provide the relevant accession numbers. If the accession numbers have not yet been obtained at the time of submission, please state that they will be provided during review. They must be provided prior to publication.

d. Statistics: Biology should be emphasized, but the use of incorrect or inadequate statistical methods to analyze and interpret biological data is not acceptable. Consultation with a statistician is recommended. Statistical methods commonly used in the area of animal sciences do not need to be described in detail, but adequate references should be provided. The statistical model, classes, blocks, and experimental unit must be designated. Any restrictions used in estimating parameters should be defined. Reference to a statistical package without reporting the sources of variation (classes) and other salient features of the analysis, such as covariance or orthogonal contrasts, is not sufficient. A statement of the results of statistical analysis should justify the interpretations and conclusions.

9. Results
This section may be divided by subheadings. Results should be presented in tabular form when feasible. The text should explain or elaborate on the tabular data, but numbers should not be repeated extensively within the text. Sufficient data, all with some index of variation attached, should be
presented to allow the readers to interpret the results of the experiment.

9. Discussion
This section may be divided by subheadings. The discussion should interpret the results clearly and concisely in terms of biological mechanisms and should integrate with the research findings of other studies to provide the readers with a broad base for understanding whether the hypotheses tested were accepted or rejected. In this section, repetition of the result section is not allowed in the discussion section.

10. Conclusion
Conclusion section emphasizes a pertinent overview of the study without any more discussion it can be an answer to the study objective. It should be briefly and clearly written.

11. Conflict of Interest
Declare conflicts of interest or state “The authors declare no conflict of interest with any financial organization regarding the material discussed in the manuscript”. Authors must identify and declare any personal circumstances or interest that may be perceived as inappropriately influencing the representation or interpretation of reported research results. Any role of the funders in the design of the study; in the collection, analyses or interpretation of data; in the writing of the manuscript, or in the decision to publish the results must be declared in this section. If there is no role, please state “The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results”.

12. Acknowledgement (if any)
In this section, you can acknowledge any support given which is not covered by the author contribution or funding sections. This may include administrative and technical support, or donations in kind (e.g., materials used for experiments). Persons who contributed to the papers, but not enough to be co-authors, may also be acknowledged.

13. Review Article
All other types of manuscripts should meet the abovementioned requirements. For additional requirements for other types of manuscripts, the following guidelines apply.

Reviews are invited by the editor and should be comprehensive analyses of specific topics. They are to be organized in the same way as an Original Article with an unstructured abstract (300 words maximum). The number of references is limited to 80.

14. References:
This journal follows Journal of Animal Science reference style (https://academic.oup.com/jas). References should be 20 to 30 references for research papers, with minimum 80% of journals published within the last 10 years. All authors of a cited work should be listed. We recommend preparing the references with a bibliography software package, such as EndNote, Reference Manager or Zotero to avoid typing mistakes and duplicated references. Include the digital object identifier (Doi) for all references where available. Non-published findings and personal communications should not be included in the list of references. Journals titles shall be abbreviated according to the conventional ISO abbreviations used by PubMed (http://www.ncbi.nlm.nih.gov/nlmcatalog/journals). Sample references are given below. Other types of references not described below should follow the NLM Style guide for authors, editors, and publishers (http://www.nlm.nih.gov/citingmedicine).

Sample References
(Journal Articles)

(Books and Book Chapters)

(Web sites)

(Conference Papers)

TABLES, FIGURES, AND GRAPHS

1. Table
a. Tables are used to present numerical data in a self-explanatory manner. They should be intelligible without consulting the text and should not duplicate data already given in the text or in illustrations. Any abbreviation used in a table must be defined in that table. Tables should be double-spaced with each table on a separate sheet. Tables should appear immediately after the references. The tables should be paginated in series with the text.
b. All tables should be cited in the text. Arabic numerals are used to number tables. The table number (i.e., Table 4.) is typed in bold face followed by a period. The title of the table continues on the same line with only the first letter capitalized. A period should not appear at the end of the title. Column headings should have the first letter of each word capitalized while the names of variables are to be typed with only the first letter capitalized (i.e., Average daily gain).
c. For numerals less than 1, a zero should be inserted to the left of the decimal point, and if possible, columns should be centered aligned. If there are no data for a particular entry, a hyphen should be inserted. If an explanation is necessary, an abbreviation can be used in the body of the table (e.g., ND) and it should be explained clearly in the footnotes.
d. References to footnotes in a table are to be specified by superscript numbers, independently for each table. Superscript letters are used to designate statistical significance. Use a lower case p to indicate probability values (i.e., p < 0.05).
e. Presentation of pooled standard errors, the general basis for statistical comparisons of means, is recommended when variance is homogeneous. These should be presented in a separate column or row. Standard errors can be attached to each mean by ± signs when variance or SE is heterogeneous (e.g., unbalanced experiments or unequal numbers of observations in treatment means). The pooled standard error is the preferred estimate of experimental error because presenting individual standard errors tends to clutter up the table.
f. For diet composition, major ingredient inclusion levels should be presented as a percentage of the total rather than in grams or kilograms of food.

2. Figure and Graph
a. Figures should be placed at the end of the manuscript with each figure on a separate page. Figure legends should be typed (double spaced) on a separate page. Figures should fit in one column (8 cm wide), or full-page width (17 cm wide). A minimum type size of 8 points (Times New Roman) is recommended so as to be readable in the final publication size.
b. For tables containing multiple lines, solid, long-dash, short-dash, and dotted lines should be used, while gray or shaded lines should be avoided. Lines with different symbols for the data points may also be used to distinguish curves. Unnecessary backgrounds and grid lines should be removed from graphs. Each axis should have a description and a unit.
c. For bar charts, different fill patterns may be used if needed (black, white, gray, and stripes). Curves and data points should be identified using the following symbols (●, ○, □, ■, ♦, ◊, ▲, △, +, and ×). Symbols should be defined in the figure legend or in a key on the figure.
d. The preferred file type for figures is JPEG, TIFF, or PPT. If figures are to be reproduced in grayscale (black and white), they should be submitted as such. If figures are to appear in color in the print journal, the files must be submitted in CMYK color (not RGB). The minimum resolution is 300 dpi for color and grayscale figures, and 600 dpi for line art.
e. Photomicrographs must have their unmagnified size designated either in the caption or with a scale bar on the figure. A legend should be prepared to provide sufficient information and
all abbreviations, and the symbols used in the figure should be defined in the legend.

**ADDITIONAL NOTES**

1. Authors are better to use Microsoft equation in preparing math equation. This is an example of an equation:

\[
HU = 100 \log (h + 7.57 - 1.7W^{0.37})
\] (1)

2. The text following an equation need not be a new paragraph. Please punctuate equations as regular text.

3. The following rules address the formatting of numbers:
   - Numbers one through nine should be spelled out and numerals be used for 10 and above.
   - Arabic numerals should be used with abbreviated units of measure: 2 g, 5 d, $4.00, 3\%$, and numerical designations in the text: exp 1, group 3, etc.
   - Arabic numerals should be used to express times and dates: 08:00 h, 3 Sept. 1985, etc.

   • In a series using some numbers less than 10 and some more than 10, numerals should be used for all (i.e., 2 Holsteins, 6 Charolais, and 15 Friesians).
   • When writing a large number ending in several zeros that represents an approximation, a word should be used for part of the number (i.e., 1.8 million rather than 1,800,000).
   • When two numbers appear adjacent to each other, the first should be spelled out (i.e., ten 2-d-old chicks rather than 10 2-d-old chicks).
   • A sentence should not begin with a numeral. The number should be spelled out, and when possible, the sentence can be rearranged to eliminate lengthy sentence-initial numbers.
   • The 24-h clock system should be used: 09:30, 13:40, etc. Periods of time should be expressed in quantitative hours (e.g., 2 h 16 min). The terms hour (h), minute (min), second (s), and year (yr) should be abbreviated when used with a number in the text but spelled out when they are used alone.
   • A hyphen should not be used to indicate inclusiveness (e.g., 12 to 14 mg or wk 3 and 4, not 12-14 mg or wk 3-4).

**Example of Table, Figure, and Graph**

**Table 1.** Agonistic behavior of weaned piglets on days 1, and 2 after mixing between the Con and Trt groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Day 1</th>
<th>Day 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Con</td>
<td>Trt</td>
</tr>
<tr>
<td>Agonistic latency (min)</td>
<td>2.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Transformed data</td>
<td>0.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Duration of agonistic behavior (s/h)</td>
<td>139.5</td>
<td>301.4</td>
</tr>
<tr>
<td>Transformed data</td>
<td>2.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Agonistic frequency (no/h)</td>
<td>175.4</td>
<td>163.6</td>
</tr>
<tr>
<td>Transformed data</td>
<td>2.3</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Con, control; Trt, treatment.

\(^1\) Comparisons between the Con and Trt groups based on a multivariate analysis of variance (ANOVA).

\(^* p < 0.05\), \(^{**} p < 0.01\).

**Figure 1.** If there are multiple panels, they should be listed as: (a) Description of what is contained in the first panel; (b) Description of what is contained in the second panel. Figures should be placed in the main text near to the first time they are cited. A caption on a single line should be centered.

**Supplementary Materials:** The following are available online at https://jurnal.uns.ac.id/lar/index, Figure S1: title, Table S1: title.
MANUSCRIPT PUBLICATION FEE

Author(s) are charged IDR 850,000,- for Indonesian author(s) or 100 US$ for foreign author(s) for each article accepted for publication. Livestock and Animal Research only charges Author(s) for the article publication fee, without any submission fee. The journal office will send the invoice to the corresponding author along with the PROOF of the manuscript and they need to complete the payment process before being published. Corresponding authors will get one exemplar of the journal.

POLICY OF ETHICS AND MALPRACTICES STATEMENT

Livestock and Animal Research is a peer-reviewed journal that upholds the standards of academic publication ethics and against publication malpractices including plagiarisms. It is therefore important to agree the proper ethical for scientific journals publication of all parties including: the authors, editors, peer reviewers, the publishers and the society to develop conducive scientific environment and to avoid certain problems that may arise due to some conflict of interests.

Authorship of the Research Paper

Authorship of the research paper should be included to those who have performed a contribution to the concept of the research, research design, data acquisition and analysis, or interpretation of the reported study. Co-authors should be listed as to the entire persons who have made significant contributions of the manuscript. The person who have participated in certain substantive aspects of the research but do not qualify as authors, they should be acknowledged or listed as contributors. Corresponding author have to responsible for the paper authorship. The corresponding author should make sure that all the co-authors are listed in paper, and that all co-authors have seen and approved the paper and have agreed to the submission for publication.

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Authors are responsible to provide original data without plagiarism and fraudulent data. Many forms of plagiarisms such as copying or paraphrasing substantial parts of another’s paper without attribution, passing off another’s paper as the author’s own paper, claiming results from research conducted by other researchers are prohibited. Plagiarism in all its forms included as unethical publishing behavior and unacceptable by Livestock and Animal Research. Authors should ensure that they have written entirely original works concerning the manuscript submitted to Livestock and Animal Research. Authors are obliged to follow in peer review process set by Livestock and Animal Research. The submitted manuscript should not be under consideration or accepted for other journals. Where parts of the data have been published elsewhere, the sources have to be acknowledged or cited properly. Proper citation and permission are required when the authors reproduce data from other sources. Research employing animal, performed by authors should ensure that the study is performed according to animal ethics and welfare. Any potential conflict of interest with other persons has to be declared, and authors are requested to be able to publish corrections, clarifications, restrictions and apologies when needed. Authors should cite publications that have been used in determining every things of any parts of the reported work.

Duties of Editors

Livestock and Animal Research editors are responsible for deciding which submitted articles should be published and which one to be rejected. They have to evaluate the submitted manuscripts for their intellectual and academic content without discrimination on race, gender, sexual orientation, religious belief, ethnic origin, citizenship, political, or geographical origin of the authors. The Livestock and Animal Research editors must not spread any information about a submitted manuscript to anyone other than the corresponding author, reviewers, potential reviewers, other editorial advisers, and the publisher, as appropriate. Unpublished materials disclosed in a submitted manuscript must not be used in an editor’s own research without the express written consent of the author.

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Reviewers are requested to assist in improving the quality of the submitted manuscript through an objective review process within a scheduled period of time, and to contribute to decision-making process on the manuscript. The editors have to inform reviewers if find any published or submitted content similar to that under their review. Reviewers should avoid conflict of interest with respect to the research, the authors and/or the research funders. Any confidentiality of information supplied by the editor or author should be maintained.
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The integrity of the academic record during the whole process of publication should be maintained by authors, reviewers and editors. Economic orientation and business should be precluded from compromising intellectual and standards of ethical publication.
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Department of Animal Science, Faculty of Agriculture,
Sebelas Maret University

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