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UPDATED FEBRUARY 2017

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I. Scope and general information

A. Scope

The mission of *The Journal of Applied Poultry Research (JAPR)* is to provide practical, reliable, and timely information to those whose livelihoods are derived from the commercial production of poultry and those whose research benefits this sector; address topics of near-term application based on appropriately designed studies and critical observations; encourage scientific approaches to practical problem solving; and present information comprehensible to a broad readership. Opinions or views expressed in papers published by *JAPR* are those of the authors and do not necessarily represent the opinion of the Poultry Science Association or the editor-in-chief.

B. Submission

All manuscripts are submitted and reviewed via the journal's [Scholar One Manuscripts submission site](http://mc.manuscriptcentral.com/japr) at <http://mc.manuscriptcentral.com/japr>. New authors should create an account prior to submitting a manuscript for consideration.

C. Contact information for journal staff

For information on the scientific content of the journal, contact the editor-in-chief, Dr. John Carey, Texas A&M University
Department of Poultry Science, 101 Kleberg Center, 2472 TAMU, College Station, TX 77843-2472; e-mail: jcarey@poultry.tamu.edu

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D. Types of articles

i.) Research reports

Most papers published in *JAPR* are research reports. The journal emphasizes the importance of good scientific writing and clarity in presentation of the concepts, apparatus, and sufficient background information that would be required for thorough understanding by scientists in other disciplines. The results of experiments published in *JAPR* must be replicated, either by replicating treatments within experiments or by repeating experiments.

ii.) Field reports

Field reports will be published when adequate background is available and conclusions can be supported by quantifiable laboratory or diagnostic results.

The manuscript should follow the format outlined in the Style and Form section of this document. It should include a section titled Field Report in which the observations are explained and discussed under subheadings of Materials and Methods and Results and Discussion. Authors are encouraged to include subheadings for all major areas in this section.

iii.) Review articles

Articles submitted to this section may cover new developments in a field, describe the evolution of a currently accepted management practice, propose changes in management based on current research, or describe procedures. Clear distinctions should be made between firmly established practices and unresolved questions. Articles should begin with a concise description of the topic, followed by a critical evaluation of the important references. Review articles, whether solicited or unsolicited, will be subject to a stringent review process.

Review articles should follow the general format outlined in the Style and Form, when appropriate, and include brief subheadings to separate main ideas. A Conclusions and Applications section should be included in most cases.

iv.) Symposium and workshop articles

Manuscripts presented at the annual meeting as part of a symposium or workshop may be submitted with prior agreement by the editor-in-chief. These submissions will be subject to peer review and may be accepted or rejected in the same manner as other submissions. The format may be similar to reviews, research reports, or field reports, as outlined in the Style and Form.

v.) Letters and commentaries

The journal accepts letters, book reviews, and other free-form communications (used to correct errors, provide clarification, or offer other points of view on pertinent issues). Submissions may be edited in consultation with the author.

II. Journal Policies

A. Peer review process

The journal uses a two-stage review process. All manuscripts will first receive a preliminary review to ensure appropriateness for the journal. The second review will be a more detailed scrutiny by individuals knowledgeable in the specific subject area of the paper. Additional examination of the manuscript will be made by the editors. The review process will be stringent. Names of authors will be made known to reviewers; reviewers may contact the authors directly with questions, suggestions, and comments if such contact will improve the paper or streamline the review process. The subject editors will handle all initial correspondence with authors during the review process; the editor-in-chief will notify the author of the final decision to accept or reject.

B. Pre-review language editing

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C. Post-production corrections

No correction to a paper already published will be carried out without an erratum or corrigendum (as applicable), this applies to papers on Advance Access and published within an issue. This means that any change carried out to a paper already published online will have a corresponding erratum or corrigendum published with its own separate DOI. Whether on Advance Access or in an issue, if an erratum or corrigendum is published, the online version of the original paper will also be corrected online and the correction notice will mention this. Corrections will only be made if the publication record is seriously affected by the academic accuracy of published information.

Authors' corrections to Supplementary Data are made only in exceptional circumstances (for example major errors that compromise the conclusion of the study). Because the Supplementary Data is part of the original paper and hence the published record, the information cannot be updated if new data have become available or interpretations have changed.

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Authors should observe high standards with respect to publication ethics as set out by the [Commission on Publication Ethics \(COPE\)](#). Falsification or fabrication of data,

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III. Preparation of manuscript

A. Manuscript format and structure/style

i.) General

Papers must be written in English. The text and all supporting materials must use American spelling and usage as given in *The American Heritage Dictionary*, *Webster's Third New International Dictionary*, or the *Oxford American English Dictionary*. Authors should follow the style and form recommended in *Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers*. 2006. 7th ed. Style Manual Committee, Council of Science Editors, Reston, VA.

ii.) Preparing the manuscript file

Manuscripts should be typed double-spaced, with lines and pages numbered consecutively, using Times New Roman font at 12 points. All special characters (e.g., Greek, math, symbols) should be inserted using the symbols palette available in this font. Complex math should be entered using MathType from Design Science (www.dessci.com). Tables and figures should be placed in separate sections at the end of the manuscript (not placed within the text).

Metric or English units (or both) are acceptable. Authors should use units appropriate for the intended audience. Energy content of feeds will be expressed as calories.

iii.) Headings

1. Major headings

Major headings are centered, boldface, in all capital letters, and consist of SUMMARY, DESCRIPTION OF PROBLEM, MATERIALS AND METHODS, RESULTS AND DISCUSSION, CONCLUSIONS AND APPLICATIONS, and REFERENCES AND NOTES.

Major headings in review articles, field reports, and symposium articles may vary from those listed here, but should include SUMMARY, CONCLUSIONS AND APPLICATIONS, and REFERENCES AND NOTES.

2. First subheadings

First subheadings are boldface and italic, on a separate line beginning at the left margin, and have the first letter of each important word capitalized. Text that follows a first subheading should be in a new paragraph.

3. Second subheadings

Second subheadings begin the first line of a paragraph. They are indented, boldface, italic, and followed by a period. The first letter

of each important word is capitalized. The text follows immediately after the final period of the subheading.

iv.) Title page

The title should be indicative of the content. It should capture the interest of all who might benefit from information in the manuscript. However, the length of the title should be kept to a minimum. The running title should be 30 characters or less, including spaces.

Address and affiliation of authors (listed by first name or initials, middle initial, and last name) should be included. Indicate to whom correspondence should be directed by means of a footnote, with the notation

“Corresponding author: (e-mail address)” at the bottom of the title page.

List 3 to 8 key words or phrases to identify the most important subjects covered by the paper.

Statement of primary audience. To determine appropriateness for the journal and to assist in selecting reviewers, the author should indicate clearly what sector(s) within the poultry community (e.g., flock supervisors, nutritionists, quality assurance personnel, researchers, plant managers, veterinarians) could benefit most from the content of this article.

v.) Summary

The Summary (maximum of 250 words) is not an abstract. It is intended to give readers with diverse backgrounds a general appreciation of the manuscript contents. It should be written so that even those not directly interested in the topic will enjoy reading at least this section to keep abreast of areas other than their own. This section should not include details of materials and methods or a detailed review of the results. Keep the summary free-flowing, giving the reader a general, not specific, idea of what the study revealed. Do not include reference citations in the summary.

vi.) Description of problem

This section will acquaint the reader with the problem, citing field experiences where appropriate. Readability is of utmost importance. Detailed literature reviews may not be appropriate for this section. A more extensive citation of references should be included in the Results and Discussion or References and Notes section. This section should end with a statement of the objective(s) of the study.

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The author(s) should clearly establish in the Materials and Methods section why the problem was approached in a particular way. The rationale for including each treatment should be clearly stated. Detailed laboratory and bird management procedures should be described in the References and Notes section and not in the Materials and Methods section. Sources of stock, equipment, and materials should be listed in the References and Notes section and referred to in text by citation number.

A brief statement of the statistical methods should be included, with more detailed descriptions placed in the References and Notes section.

In manuscripts using several treatments, a description of treatments should be included as Table 1.

viii.) Results and discussion

This section begins with observed results and their interpretation. Descriptive subheadings may precede all major paragraphs and changes in subject emphasis. This section should discuss specifically how findings address the problem described in the Description of Problem section and how they are related to published works.

Statements regarding statistically significant differences between treatments in results should be included in the text, tables, and figures. Statements regarding differences should be avoided unless they are supported by statistical analyses and meet the stated level of probability (e.g., $P < 0.05$).

ix.) Conclusion and applications

Conclusions and recommendations of the author(s) should be listed numerically. Each statement should be clear, concise, and without discussion. Authors are encouraged to summarize their significant findings, to identify further research needs, and to describe the constraints, economics, and other factors associated with using the results in scientific or commercial applications. Do not include references in this section.

x.) References and notes (with Acknowledgements)

References and notes should be cited in text, by number within an editorial bracket (e.g., [1]). In the References and Notes section, citations should be listed in the order they appear and are numbered in the text (not alphabetically). Authors are encouraged to use reference management software (e.g., EndNote or Reference Manager) to facilitate renumbering or inserting references by the editor or inserting references during the revision process. Manuscripts may be returned to authors before review for renumbering of references if not cited in numerical order. Include details such as statistical analysis; detailed procedures; sources of birds, instruments, or items; details of designed instruments; a literature review; and other tangential matters.

Cite acknowledgments at the end of this section in a subsection called Acknowledgments. These entries are not numbered.

xi.) Sample references

1. Journal Article

1. Dansky, L. M., and F. W. Hill. 1952. Application of the chromic oxide indicator method to balance studies with growing chicks. *J. Nutr.* 47:449–459.
2. Snow, J. L., M. W. Douglas, and C. M. Parsons. 2003. Phytase

effects on amino acid digestibility in molted laying hens. *Poult. Sci.* 82:474–477.

3. Witter, R. L., and I. M. Gimeno. 2006. Susceptibility of adult chickens, with and without prior vaccination, to challenge with Marek's disease virus. *Avian Dis.* 50:354–365. doi:10.1637/7498-010306R.1

2. Monograph

4. NRC. 1994. *Nutrient Requirements of Poultry*. 9th rev. ed. Natl. Acad. Press, Washington, DC.

3. Dissertation

5. Heskett, E. A. 2003. Efficacy of a recombinant herpes virus of turkeys vector vaccine, expressing genes to Newcastle disease virus and Marek's disease virus, in chickens and turkeys against exotic Newcastle disease virus challenge. PhD Diss. Univ. Florida, Gainesville.

4. Trade Publication

6. Wilgus, H. S. 1973. Temperature-programmed feeding schedules and other means of conserving protein in market turkey production. *Feedstuffs* 45(27):27–31.

5. Book or Chapter in Book

7. AOAC International. 2007. *Official Methods of Analysis of AOAC International*. 18th ed. Rev. 2. AOAC Int., Gaithersburg, MD.

8. Whittow, G. C. 1976. Regulation of body temperature. Pages 146–173 in *Avian Physiology*. P. Sturkie, ed. Springer-Verlag, New York, NY.

6. Proceedings

9. Hruby, M., J. C. Remus, and E. E. M. Pierson. 2004. Nutritional strategies to meet the challenge of feeding poultry without antibiotic growth promotants. Pages 3–5 in *Proc. 2nd Mid-Atlantic Nutr. Conf.*, Timonium, MD. Univ. Maryland, College Park.

7. Federal Register

10. USDA, Animal and Plant Health Inspection Service. 2004. Blood and tissue collections at slaughtering and rendering establishments, final rule. 9CFR part 71. *Fed. Regist.* 69:10137–10151.

8. Laboratory Procedure

11. The extract was added to 30 mL of hexane, made to 100 mL with 10% aqueous Na₂SO₄.

9. Personal Communication

12. Wilson, H. R. 2005. Univ. Florida, Gainesville. Personal communication.

10. Proprietary Product

13. Avizyme TX, Finnfeed International, Marlborough, Wiltshire, UK.
14. Thymol, 99% purity, Acros Organics, Geel, Belgium.

11. Statistical Procedure

If a note has an embedded reference, the reference is cited by number (as in the text) or parenthetically within the note:

15. Data were analyzed by ANOVA with flock as the independent variable. When differences among flocks were significant, means were separated using Duncan's multiple range test (SAS User's Guide, 2001, Version 8 ed., SAS Institute Inc., Cary, NC). Pearson product-moment correlation coefficients were calculated between average percentage cracks from each flock recorded every week and average values for egg-specific gravity, breaking strength, percentage shell, shell thickness, and shell weight per unit of surface area. Significance implies $P < 0.05$.

12. Statistical Software

16. SAS User's Guide. 2001. Version 8 ed. SAS Inst. Inc., Cary, NC.

13. US Patent

17. El Halawani, M. E., and I. Rosenboim. 2004. Method to enhance reproductive performance in poultry. Univ. Minnesota, assignee. US Pat. No. 6,766,767.

14. Website

18. Dyro, F. M. 2005. Arsenic. WebMD. Accessed Feb. 2006. <http://www.emedicine.com/neuro/topic20.htm>.

15. Acknowledgments

19. The advice and technical assistance of Thomas Jones (affiliation, location) are acknowledged.

B. Tables

Number tables consecutively according to the citation in the text. Tables must be created using the Microsoft Word table feature and inserted in the manuscript after the references section. Each table must be placed on a separate page and must have a clear descriptive heading so that the meaning of the data will be understandable without reference to the text. Indicate footnotes to tables with numbers, beginning with 1.

Statistical notation should be made with lowercase and uppercase superscript letters or with asterisks, as appropriate. Statistical notation should place the superscript "a" on the largest mean. Probability values may be indicated as follows: * $P \leq 0.05$, ** $P \leq 0.01$, *** $P \leq 0.001$, and + $P \leq 0.10$. Consult a recent issue of the journal for examples of tables.

C. Miscellaneous usage notes

i.) Abbreviations

The following abbreviations may be used without definition in *JAPR*. Plurals do not require "s." Chemical symbols and 3-letter abbreviations for amino acids do not need definition. Other abbreviations should be defined at first use in the summary and the main text, as well as in each table or figure in which they appear. Author-defined abbreviations are boldface at first use in the main text. Abbreviations should not be used in the manuscript title, running title, or to begin a paragraph or sentence. They can be used in section headings if previously defined. This list appears inside the back cover of each issue of the journal.

The following abbreviations may be used without definition in *JAPR*:

ADF acid detergent fiber

ADFI average daily feed intake

ADG average daily gain

AME apparent metabolizable energy

AMEn nitrogen-corrected apparent metabolizable energy

ANOVA analysis of variance

AOAC Association of Official Analytical Chemists

BSA bovine serum albumin

BW body weight

°C Celsius

cDNA complementary DNA

CF crude fiber

cfu colony-forming units (following a numeral)

CI confidence interval

CP crude protein

cpm counts per minute

CV coefficient of variation

d day

df degrees of freedom

DM dry matter

DNA deoxyribonucleic acid

EDTA ethylenediaminetetraacetate

EE ether extract

ELISA enzyme-linked immunosorbent assay

°F Fahrenheit

FCR feed conversion ratio

FE feed efficiency

ft foot

g gram

gal gallon

G:F gain-to-feed ratio

GLM general linear model
h hour
HEPES N-(2-hydroxyethyl)piperazine-N'-2-ethanesulfonic acid
HPLC high-performance (high-pressure) liquid chromatography
ICU international chick units
Ig immunoglobulin
IL interleukin
i.m. intramuscular
in. inch
i.p. intraperitoneal
IU international units
i.v. intravenous
kcal kilocalorie
L liter (also capitalized with any combination, e.g., mL)
lb pound
L:D hours of light:hours of darkness in a photoperiod
LSD least significant difference
m meter
 μ micro
M molar
ME metabolizable energy
MEn nitrogen-corrected metabolizable energy
MHC major histocompatibility complex
mRNA messenger ribonucleic acid
min minute
mo month
MS mean squares
n number of observations
NADH reduced form of NAD
NDF neutral detergent fiber
NRC National Research Council
NS not significant
PBS phosphate-buffered saline
PCR polymerase chain reaction
ppm parts per million
r correlation coefficient
r² coefficient of determination, simple
R² coefficient of determination, multiple
RH relative humidity
RIA radioimmunoassay
RNA ribonucleic acid
rpm revolutions per minute
s second
SAS Statistical Analysis System

s.c. subcutaneous
SD standard deviation
SE standard error
SEM standard error of the mean
SNP single nucleotide polymorphism
SRBC sheep red blood cells
TBA thiobarbituric acid
T cell thymic-derived cell
TME true metabolizable energy
TMEn nitrogen-corrected true metabolizable energy
TSAA total sulfur amino acids
USDA United States Department of Agriculture
UV ultraviolet
vol/vol volume to volume
vs. versus
wt/vol weight to volume
wt/wt weight to weight
wk week
yr year

ii.) **SNP Nomenclature**

The increasing number of SNP association studies and the improvements in chicken genome annotation require a standardized SNP nomenclature for unequivocal and correct SNP identification. Additionally, information regarding the SNP investigated should be easily accessible in a publicly available database. Therefore, all relevant SNP included in a study should be listed with their unique RefSNP (rs) or submitted SNP (ss) number (if rs number is not yet available) as indicated in the public domain NCBI dbSNP database (<http://www.ncbi.nlm.nih.gov/snp>). If the SNP investigated do not yet have an entry in the NCBI dbSNP database, the authors of the manuscript are responsible for submitting all the required information to NCBI (see <http://www.ncbi.nlm.nih.gov/projects/SNP/>) for depositing the SNP into this database and obtaining a unique ss number for the SNP. In the text of the manuscript, use of the rs/ss number of the SNP or an alternative standardized nomenclature is recommended.

D. Figures/Illustrations

i.) **Permissions**

All copyright permission must be cleared and, if necessary, paid for by the author; this includes applications and payments to DACS (Data Access Control System), ARS (Artists Rights Society), and similar licensing agencies where appropriate. It is also the author's responsibility to include acknowledgements as stipulated by particular institutions.

[Download the permissions instructions here.](#)

ii.) Requirements

Submission of figures in an electronic format will help us to ensure that your work is produced to the highest possible standard. This page contains information on how best to prepare your artwork for electronic submission. Most figure file formats are acceptable, although TIFF is preferable. TIFFs (Tagged Image File Format) are used for bitmap, greyscale, and colour images. To save files in TIFF format, go to the 'Save As' or 'Export' commands under 'File'.

Before submitting artwork, please make sure that your image(s) fulfil the following criteria

iii.) Formats

A number of different file formats are acceptable, including:

1. Tagged Image File Format (.tif)* (please check settings when exporting to Tiff from the original application).
2. Encapsulated PostScript (.eps)*
3. Rich Text Format (.rtf)
4. (Editable) Microsoft Word (.doc/.docx) (image files embedded into Word are often not good quality).
5. (Editable) Microsoft PowerPoint (.ppt/.pptx) (image files embedded into PowerPoint are often not good quality).
6. Microsoft Excel (.xls/.xlsx)
7. editable Portable Document Format (PDF)
8. Postscript (.ps)
9. Photoshop (.psd)
10. Adobe Illustrator (.ai)
11. Graphics Interchange Format (.gif)
12. Portable Network Graphics (.png)

*preferred file format. Note that .jpg is not a file format listed as files produced as JPGs condense every time they are opened (and thus lose quality).

iv.) A note about resolution and quality: PPI vs. DPI

1. The quality of an image is not dependent upon DPI. Typically when an image is of low quality (even though the resolution is within standards), the image contains pixelated text. This means that the figure should be redrawn using a standard font and that care should be taken to ensure the font is embedded.
2. DPI pertains to the print version of the image; PPI to the online version. The compositor will take care to convert the accepted figure files accordingly. It is important to note that maximum size should be set at 1081 width by 1280 height for PPI / 600 DPI for line drawings and a minimum 300 DPI for colour or tone images.

3. Graphics downloaded from the Web are not acceptable for print reproduction. These graphics are low-resolution images (usually 72 dpi) that are suitable for screen display but far below acceptable standards for print reproduction.
4. Please take care that images you supply are not simply low resolution figures that have been expanded. These types of images will appear pixelated when maximised.

v.) Specific types of artwork

1. Bar graphs

Avoid the use of gray or color in bar graphs. Instead, please use solid black, solid white, and patterned (e.g., horizontally or diagonally striped) bars.

2. Line art

Line art is best reproduced when it is submitted as crisp black-and-white images and contains no unnecessary gray shading.

3. Patterns

If your image requires the use of many lines (as line graphs often do), please choose patterns that are easily distinguished from each other. Patterns with similar characteristics are hard to differentiate after reduction.

For additional useful information on preparing your figures for publication, go to <http://art.cadmus.com/da/index.jsp>.

4. Equations and tables

All equations to be formatted using MathType only; image versions should be avoided.

All tables to be in editable format in either Word or Excel; image and pdf versions should be avoided.

vi.) Requirements

Follow these rules for figures:

1. Number them consecutively following the sequence in which they are mentioned in the text.
2. Include scale bars where appropriate. These should not be placed in the legend.
3. Size figures for publication:

Design	Page size	Page size in inches	No of columns	Required figure processing width	
				Single column (mm/in.)	Double column (mm/in.)
Large format	279 x 216 mm	10.98 X 8.50 in.	Double	90 mm/3.54 in.	180 mm/7.09 in.
Medium format	246 x 189 mm	9.68 X 7.44 in.	Double	80 mm/3.15 in.	160 mm/6.30 in.
Small format	234 x 156 mm	9.21 X 6.14 in.	Single	130 mm/5.12 in.	

4. Figures must:

- Be submitted for publication at resolutions of 600 dots per inch for line figures/black&white images and 300 dots per inch for half tones/color figures.
- Use the same font type for all figures; use standard fonts such as Times, Courier, Arial, Helvetica, or Symbol.
- Have embedded fonts. Embedding the fonts ensures that the text is retained within the figure during production.
- Have uniform lettering style and ensure that figure locants are consistently sized throughout. Figures will not be redrawn by the publisher.
- Have legends that define abbreviations and contain enough information so the figure can be understood independently of the text. Legends should be listed one after the other at the end of the main text document.
- Be converted to grayscale if originally created in color but intended to be printed in black and white BEFORE acceptance.
- Be saved in a separate file.
- Always use the latest version of the software program available. Files from older versions often lose integrity when opened in newer versions.
- Have layers flattened into one layer, if using any files consisting of layers (e.g., .eps).
- Be saved as clearly named files so that they can easily be identified in terms of manuscript, figure number, and format (e.g. [first author surname]Fig1.tif).
- Have figure legends/captions included at the end of the main text file. Please ensure that figures and figure legends/captions are in agreement. Symbols must NOT be included in figure legends; ALL symbols used in figures should be described in

the legend/caption using words (e.g., filled triangle, open circle). Symbols may be used in the key within the figure artwork.

- Have line weights between 0.35 pt and 1.5 pt; if there are multiple lines in use, use patterns to differentiate them. Do not use lines that are thinner than 2 points, including the “hairline” width option in some programs.
- Have colour supplied in CMYK and not RGB. Please note that the use of red and green in figures is particularly problematic for approximately 5% of the male population. Advice on the preparation of colour-friendly figures is provided at http://jfly.iam.u-tokyo.ac.jp/html/manuals/pdf/color_blind.pdf.
- Have all data included within the illustration area.
- Avoid placing labels over a shaded area of the image.

E. Supplementary data

Submit all material to be considered as Supplementary Material online at the same time as the main manuscript. Ensure that the supplementary material is referred to in the main manuscript at an appropriate point in the text. Supplementary material will be available online only and will not be copyedited, so ensure that it is clearly and succinctly presented, and that the style conforms to the rest of the paper. Also ensure that the presentation will work on any Internet browser. It is not recommended for the files to be more than 2 MB each, although exceptions can be made at the editorial office’s discretion.

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Waivers of page charges must be requested in advance of submission and will only be considered from authors from the approved list of developing countries found [here](#).

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The cost to publish in color in the print journal is \$600 per color image. Color versions of figures will be included in the online PDF and full-text article at no charge.

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