

## ASSOCIATION AFFAIRS

### INSTRUCTIONS FOR AUTHORS OF *JOURNAL OF DAIRY SCIENCE*<sup>1</sup>

The American Dairy Science Association invites scientists from all countries to submit papers for the *Journal*. Authors need not be members of ADSA. The *Journal* does not discriminate against short communications of complete research.

These instructions detail the form and style required by *Journal of Dairy Science* (JDS) for papers submitted for publication in the *Journal*. Papers that do not follow the form and style of the *Journal* may be rejected without review. Refer to these instructions when preparing the manuscript, when incorporating requested changes into revisions after review, and when checking author proofs.

Data (including graphs, figures, tables, and illustrations) must not have appeared in print except as abstracts, local or regional field day reports, extension letters, or nonpeer-reviewed, noncopyrighted proceedings of conferences. Material submitted to *Journal of Dairy Science* should not be submitted for publication to popular magazines, company advertisements, or organizational proceedings until the author has received notification of acceptance of the manuscript. Before manuscripts are submitted, authors should have them read critically by others to facilitate review, and the senior author should have authorization to publish. All coauthors should approve the manuscript before its submission to the *Journal*.

Upon submission to the *Journal of Dairy Science*, a manuscript is sent to an editor, who assigns reviewers to assist in the evaluation of the manuscript. The review process is confidential, which infers a bond of trust between the authors, editor, and reviewers. The editor is trustee of the manuscript until the review process is completed. The editor ensures that the review process is fair, thorough, and confidential. Reviewers are asked not to share the contents of the manuscript with anyone, except that they may ask a colleague to assist with the review with approval of the editor. Communication with the authors should only be through the editor. Reviewers should notify the editor of conflicts of interest that may compromise their ability to render a fair and unbiased review. Authors must recognize their responsibility in maintaining the confidential nature of the review. Authors should suggest names of appropriate reviewers when submitting the manuscript and may list reviewers whom they consider unacceptable be-

cause of potential bias. These recommendations will be considered by the editor when assigning reviewers. Authors should read the statement on publication ethics, *Journal of Dairy Science* 68:3124.

Papers accepted become the copyright of the *Journal* and may be reprinted only by the publisher. The Editor-in-Chief may authorize reproduction of graphs, tables, and illustrations for books and periodicals. Requests to reproduce material published in *Journal of Dairy Science* must be made in writing and addressed to the Editor-in-Chief, John W. Fuquay, Department of Animal and Dairy Sciences, Box 9815, Mississippi State, MS 39762-9815 (662/325-2802; FAX: 662/325-8873; e-mail: jfuquay@ads.msstate.edu).

The Association grants to the authors the right of republication of their own material in any book of which they are authors or editors subject only to giving proper credit in the book to the original *Journal of Dairy Science* publication. In addition, authors may post abstracts of manuscripts on the World Wide Web at the time of submission.

A reviewed paper, including symposium papers, returned to authors for revision must be returned to the editor within 6 weeks. If not, the paper will be treated as a new submission. Under unusual circumstances, editors may extend the revision deadline beyond 6 weeks.

The page charge per printed page is \$85 for members (if one of the authors is a member) and \$140 for nonmembers for papers published in *Journal of Dairy Science*. A schedule of prices and the form to order reprints accompany the author proof, but authors are not required to order reprints.

For cases in which only the authors' personal funds are available for payment and such payment would be a hardship, authors may request, prior to publication, a page charge waiver from the Editor-in-Chief, John W. Fuquay, Department of Animal and Dairy Sciences, Box 9815, Mississippi State, MS 39762-9815 (662/325-2802; FAX: 662/325-8873; e-mail: jfuquay@ads.msstate.edu). Authors who apply for page charge waivers may not order reprints. Page charge waivers are limited to one per institution per year.

#### SUBMISSION OF MANUSCRIPTS FOR REVIEW

Submit manuscripts with figures of review quality in triplicate. Send new manuscripts to Jean Rice, Managing Editor, American Dairy Science Association, 1111 N. Dunlap Avenue, Savoy, IL 61874.

<sup>1</sup>This version of the instructions should be read carefully for new information.

### Manuscript Submission and Copyright Agreement Form

The form (published in issues of the Journal and available from the ADSA web site) should accompany each submitted paper. On the form, authors should provide a complete mailing address (street addresses are preferred over postal boxes and bags for cases when expedited delivery is used). The copyright agreement is included in the Manuscript Submission and Copyright Release Form, which should accompany submitted manuscripts. Manuscripts cannot be published without this form.

The corresponding author has the responsibility to obtain the signatures of coauthors. Authors not permitted to release copyright must still return the form signed under the statement of the reason for not releasing the copyright.

### Disk Submission

Authors are strongly encouraged to submit a file of manuscripts on disk. The disk should be labeled with the name of the first author, article title, manuscript number (with revised manuscript), and names of files. The manuscript should be broken into one file for text, one file for tables, and one file for figure captions. See FIGURES below for instructions on preparing digital files of graphics files.

Standard word processing software (preferably Microsoft Word or WordPerfect) and formatting tools (bold, italics, subscripts and superscripts, special characters, etc.) should be used. Tables should be prepared with table formatting tools or by separating fields by tabs; spaces should not be used to separate fields.

### TYPES OF MANUSCRIPTS PUBLISHED

In addition to full-length research papers, the following types of articles also appear in the Journal:

**Symposium Papers.** Current plans for papers submitted to the 2000 Joint Annual Meeting of the American Dairy Science Association and the American Society of Animal Science are that they will be published as an online supplement to the journal. Plans will be finalized in the early months of 2000; submission details will be published on the ADSA web site and will be provided to participants by conference chairs. Authors will be asked to provide interpretive summaries of papers to be presented by June 1, 2000, and to provide manuscripts for publication at the time of the meeting. A \$200 processing fee will be assessed for these papers.

**Our Industry Today.** The Our Industry Today section includes interpretive applied summaries and recommendations from research that are useful to the

dairy industry. Syntheses and applications from technical reports that contribute to solutions of problems in the dairy industry especially are solicited. Authors of reports for extension education of the nonscientist are encouraged to share their contributions with colleagues and to achieve larger circulation of their conclusions and recommendations through this section.

Organization of papers for Our Industry Today may vary but should be logical and effective. An abstract is required. Other instructions to authors apply.

**Hot Topics.** Papers submitted for this section must report a completed experiment testing a timely, original hypothesis of importance to an area of dairy science. The work may be preliminary in nature, but with sufficient data so that the hypothesis is clearly tested. Results may point to avenues for fruitful in-depth analyses. Reports must contain an explicitly stated hypothesis, objectives, sufficient detail in methodology for repetition of the work, results with brief discussion, and references. Total page limits for text, tables, figures, and references must be no more than two Journal pages (approximately four typewritten pages minus space for tables and figures). The manuscript should contain a title and short abstract but not separate sections. The total number of tables and figures should be no more than three; references should be minimal. The first page must have HOT TOPICS in capital letters on the header line, and the desire for review as a rapid communication should be stated in a cover letter.

Papers will be given priority for review. An effort will be made to notify authors of acceptance or not within 1 month of date of receipt. Once accepted, the paper should be published within 3 months.

**Short Communications.** Short communications are reports of limited experiments that test a timely, original hypothesis of importance to some area of dairy science. The manuscript, which can be no more than two Journal pages in length (approximately four typewritten pages minus space for tables and figures), should contain a title and short abstract but not separate sections. "Short Communications:" should precede the title on the title page of the manuscript. The manuscript may report negative results. Reports must contain a hypothesis, objectives, sufficient detail in methodology for repetition of the work, results with brief discussion, and references.

**Technical Notes.** Papers in this section should report a method that is useful to some aspect of dairy science. Submissions should include a brief justification for the technique, be it new or an improvement on a previously published technique. The report should state a hypothesis, include a full description of procedures that can be repeated by researchers, and include ex-

explicit controls to indicate sensitivity, precision, and accuracy of the technique.

If the technique is an improvement on an existing technique, sufficient comparison of the previous technique should be included, and mean and dispersion information must be included. The page limit is no more than two Journal pages (approximately four typewritten pages minus space for tables and figures). Use of tables, figures, and references should be minimized. The manuscript should contain a title and short abstract but not separate sections.

**Nucleic Acids Sequences.** The section on nucleic acids sequences is for data that are not appropriate for a full paper but that are useful to other scientists. The section is not intended for data that will be published in full elsewhere, nor is the section a repository for nucleic acid sequence information; the reported sequence must address basic questions of structural or functional interest. Authors should be aware that publication of sequences or description of molecular clones places them in the public sector. Sequences published must relate to dairy cattle, dairy products, or dairy pathogens and microorganisms. Manuscripts dealing with comparative analyses of sequences may be considered if the genes are relevant to dairy science. Sequences of cDNA or genes for which gene products are not relevant to dairy science are not acceptable. All DNA sequences should be accompanied by a statement indicating that both strands have been sequenced with appropriate overlapping sequence runs.

Sequences must be submitted on disk or as camera-ready copy. Camera-ready sequences should be provided at a maximum of 100 characters per line.

Acceptance for publication of sequencing data is contingent on the submission to one of the databases (e.g., GenBank, EMBL Data Library). Accession number and name and address of the database should be stated in a footnote to the title page.

Sequence data are peer-reviewed, but publication is very fast.

The format for publication of nucleic acids sequences is name of sequence, species in which the sequence was determined, origin of the clone, evidence that a protein is produced from the DNA, sequencing method (both strands must be sequenced with appropriate overlapping sequence runs), submission number (or accession number) to EMBL data bank (or GenBank), comments, and references. Sequences not accompanied by an EMBL Data Library (GenBank) accession number will be returned to the authors.

**Invited Reviews.** The mechanism for consideration of invited reviews is to encourage additional publication (perhaps 6 to 10 per year) of invited reviews. Additional reviews will be encouraged in all sections of the Jour-

nal. Section editors will advise the Editor-in-Chief on suggested reviewers and justification for the review. The Editor-in-Chief will make the invitation and ensure the quality of the review with the assistance of the editors.

**Letters to the Editor.** Short (300 words) letters to the editor on topics of concern to readers, including comment on publications with rebuttals from authors if needed, may be submitted to the Editor-in-Chief or to any of the editors. The letters should be titled, and the title and running head should include "Letter to the Editor."

**Biographical Sketch.** Occasionally, retiring or past scientists and educators should be biographed, both as a small honor to them and an example and history to other readers. This section brings a maturity and completeness to our field. Individuals who wish to submit biographical sketches should contact the Editor-in-Chief or one of the editors for additional instructions.

**Online Manuscripts for Genetics and Breeding Section of Journal of Dairy Science.** The ADSA Board of Directors has approved a pilot program for an online-only option for the Genetics and Breeding section of the *Journal of Dairy Science*. The online only articles are listed at the end of the table of contents of the printed Journal, and only abstracts of those papers appear in the printed version of the Journal. The entire online article may be accessed from the home page by anyone with an ADSA membership or institutional subscription to the Journal.

Authors submitting papers to the section should be aware that the burden for technical compatibility is on the authors. Current requirements, submission protocols, and costs are posted on the JDS home page and should be consulted prior to submitting an article to this section.

## PREPARING THE MANUSCRIPT

Type with double spaces between lines on bond paper 21.6 by 27.9 cm. Number lines on the left margin on each page for reference in review. Side margins should be 2.5 cm. Pages should be numbered.

## TITLE PAGE

**Note: Instructions for preparing the title page are revised this year. Please read this section carefully.** Across the top of the title page (first page) indicate a running head (abbreviated title) of 40 characters or fewer. The running head is centered and all uppercase. Our Industry Today, Hot Topics, and Nucleic Acids Sequences papers serve as their own running heads. Short Communications, Technical Notes, Re-

views, and Letters to the Editor use a running head beginning with the appropriate designation (i.e., SHORT COMMUNICATION:) followed by a short title.

The title should be in boldface and limited to 100 characters. The first letter of each word is capitalized except for short articles and prepositions. The title should contain words or phrases used for indexing the article.

Under the title, names of authors should be typed upper and lowercase (space between initials) and in boldface. Institutional addresses are displayed below the author names; footnotes referring from author names to displayed addresses should use symbols, in the following order: \*(asterisk or star), † (dagger), ‡ (double dagger), § (section mark), || (parallels), and # (number sign). **The full name, mailing address, phone number, fax number, and e-mail address of the corresponding author should appear directly below the affiliation lines on the title page.** All corresponding authors will be identified by name and e-mail address below the accepted line on the first page of the published article. Footnotes to the title appear on the bottom of the first page. Supplementary address information may given in footnotes to the first page. Acronyms (except USDA) are discouraged unless the acronym is the official name. State or provincial postal code abbreviation is not included between city and zip code if the state or province is previously mentioned in the address (see example). Authors should consult a recent issue of the Journal for acceptable variations in format.

Acceptable format is shown.

**J. E. Smith,\* R. A. Jones,†  
and A. T. Peters‡**

\*Department of Animal Science and

†Department of Dairy Science,  
University of Wisconsin, Madison 53706

‡Department of Animal Science,  
Utah State University, Logan 84321

or:

**J. E. Smith,\*<sup>1</sup> R. A. Jones,\*<sup>2</sup>  
and A. T. Peters†**

\*University of Wisconsin, Madison 53706

†Department of Animal Science,  
Utah State University, Logan 84321

<sup>1</sup>Department of Animal Science.

<sup>2</sup>Department of Dairy Science.

## ABSTRACT

Abstracts should be limited to 250 words or 2500 characters. The abstract should review important objec-

tives, materials, results, conclusions, and applications as concisely as possible. The abstract disseminates scientific information through abstracting journals and is a convenience for readers. Open the abstract with objectives and make the abstract intelligible without reference to the manuscript. Use complete sentences and standard terms.

Limit abbreviations in the Abstract to units of measure with digits or used parenthetically, common amino acids, chemical elements and their combinations, and appropriate abbreviations from the list on the inside front cover of the Journal.

Minimize the amount of data in the abstract and exclude statements of statistical probability (e.g.,  $P < 0.05$ ).

Exclude references to other work because the abstracts will appear online and in indexing services without the reference list.

## KEY WORDS

After the abstract, list two to four key words or phrases for subject indexing the article. In most instances, these key words should be taken from the title; they should be typed in lowercase letters, enclosed in parentheses, and separated by commas.

## ABBREVIATION KEY

On a line after the key words, each manuscript should include an alphabetical key to all author-defined abbreviations used in the body of the paper. The key need not contain the abbreviations from the inside cover of the Journal, symbols for chemical elements, abbreviations for standard units of measure, or common amino acids. The key should not contain items used only in an equation, table, or figure. Note that the words "Abbreviation key" and the abbreviations themselves are in boldface type in the key. A sample key is given:

**Abbreviation key:** **E<sub>2</sub>** = estradiol, **Fe-WP** = Fe-whey protein, **GCGF** = ground corn gluten feed, **rbIFN** = recombinant bovine interferon, **SBM** = soybean meal.

## BODY OF THE PAPER

The body of the paper should contain an introduction to the problem (questions, objectives, reasons for research, and related literature); materials, methods, experimental design, and procedures; and results, discussion, conclusions, and applications.

## Headings

Three classes of headings are used within the text of the manuscript.

Major headings are centered, uppercase, boldface, and consist of ABSTRACT, INTRODUCTION, MATERIALS AND METHODS, RESULTS, DISCUSSION (or RESULTS AND DISCUSSION), CONCLUSIONS (heading optional, but statement of conclusions is mandatory), ACKNOWLEDGMENTS (optional), REFERENCES, and APPENDIX (optional).

First subheadings begin at the left margin, the first letter of all important words is capitalized, and the headings are in boldface.

Second subheadings begin the first line of a paragraph. They are indented, italicized and boldfaced, and followed by a period. Only the first letter of the first word and of proper nouns is capitalized.

### Abbreviations

Abbreviations should be limited to the following: units of measure with digits or used parenthetically; abbreviations from the list on the inside front cover of the Journal, common amino acids, and chemical elements and their combinations. Other abbreviations should be introduced in the Abbreviation Key as noted above and be spelled out followed by the abbreviation in boldface in parentheses at first use.

Consult scientific style manuals for guidance in forming abbreviations and for lists of the correct forms of many standard abbreviations.

### Selected Units and Terms

afternoon	p.m.
atmosphere	atm
base pair	bp
calorie (gram)	cal
Celsius (with number)	°C
centimeter	cm
centimeter, square	cm <sup>2</sup>
circa	ca.
centimorgan	cM
centipoise	cP
central processing unit	CPU
colony-forming units	cfu
counts per minute	cpm
counts per second	cps
crossed with, times	×
cubic	cu
cubic centimeter	cc, cm <sup>3</sup>
cubic millimeter	mm <sup>3</sup>
curie	Ci
cycles per second (Hertz)	Hz
day	d
dalton	Da

deci	d (prefix)
deciliter	dl
disintegrations per minute	dpm
equivalents	eq
foot-candle	use lx
gram	g
gravity	g
hour(s)	h
inside diameter	i.d.
International Unit	IU
intramuscularly	i.m.
intraperitoneally	i.p.
intravenously	i.v.
Joule	J
kilo	k (prefix)
kilobase	kb
kilobase pairs	kbp
kilobyte	KB
kilocalorie	kcal
kilogram	kg
Klett units	KU
kiloelectron volts	keV
kilopascal	kPa
liter	L, l when combined with prefix
logarithm (natural)	ln
logarithm (base 10)	log <sub>10</sub>
lux	lx
mega	M (prefix)
meter	m
metric tonne	tonne
micro	μ(prefix)
microcurie	μCi
micro-Einstein	μE
microfarads	μF
microgram	μg
milli	m (prefix)
milliliter	ml
millimeters of mercury	mm Hg
millimolar (concentration)	mM
millimole (mass)	mmol
minute	min
molar (concentration)	M
molar (mass)	mol
mole (number, mass)	mol
month	mo
morning	a.m.
nano	n
nanogram	ng
osmolality	use mmol/kg
outside diameter	o.d.

parts per billion	μg/kg
parts per million	mg/kg
Pascal	Pa
pico	p
picogram	pg
plaque-forming unit	pfu
probability	<i>P</i>
rennet activity unit	RU
revolutions per minute	rpm
second	s
Sigma Frankel units	SFU
Siemens	S
species	sp., spp.
subcutaneous	s.c.
subspecies	ssp.
tonne (metric)	tonne
unit	U
volt	V
volthour	Vh
volume	vol
volume/volume	vol/vol
watt	W
week	wk
weight/volume	wt/vol
year	yr

### Amino Acids

alanine	Ala
arginine	Arg
asparagine	Asn
aspartic acid	Asp
citrulline	Cit
cysteine	Cys
glutamic acid	Glu
glutamine	Gln
glycine	Gly
histidine	His
isoleucine	Ile
leucine	Leu
lysine	Lys
methionine	Met
ornithine	Orn
phenylalanine	Phe
proline	Pro
serine	Ser
threonine	Thr
tryptophan	Trp
tyrosine	Tyr
valine	Val

### Numbers, Measures, and Mathematics

When not used with units of measurement, spell out numbers below 10 and use digits for numbers 10 and above.

Use zeros left of the decimal for numbers less than 1 (e.g., 0.2 kg).

Numbers of four digits or less do not use commas (e.g., 6000 ha); for numbers of five digits or more, use commas (e.g., 10,000 kg).

Use “to” instead of a hyphen to indicate numerical range in text.

Measures must be in the metric system; however, US equivalents may be used in the Our Industry Today section with permission of the appropriate scientific editor.

Hyphenate units of measure used as preceding adjectives (e.g., 5-kg sample). Hyphens are not used with percent or degree signs.

Authors of papers containing mathematics should indicate what material, if any, is in boldface type. Matrices and vectors should be in boldface type. Insert spaces around all operators when these signs occur between two items.

### Statistical Analyses

The design of planned experiments or the sampling protocol of surveys should be conveyed clearly and concisely. The replication and blocking structure must be described so that readers can reconstruct the experimental layout.

Appropriate statistical methods must be used to analyze and summarize numerical data. Any model used should be specified; if more than one source of variation (e.g., split-plot structure) exists, the residual (error term) used to test the effects in the model should be stated. If appropriate and if space permits, an analysis of variance table should be presented.

It is not sufficient to indicate computer software used to perform numerical calculations; statistical references must cite the specific test or tests used.

A measure of dispersion, such as the standard error, should accompany means or other parameter estimates presented. In a table, these data may appear in columns, rows, or footnotes. (See instructions on formatting tables for examples of placement.) In a figure, dispersion measures should appear on the figure or in the caption if needed.

Mean separation procedures should be appropriate for the treatment structure. Multiple comparison procedures are generally applicable only for comparing unstructured qualitative treatments. For situations in which the treatments follow a factorial structure or represent graded levels of a quantitative variable, linear contrasts are often appropriate. Differences among means should be indicated in tables using superscript letters; the first letter should appear on the largest mean.

## Sensory Data

Sensory data should comply with the "Statement of Policy in the Report of the Committee on Sensory Data to the Journal Management Committee of the American Dairy Science Association, 1986," *Journal of Dairy Science* 69:298.

## Computer Software

Computer software should conform to the "Report of ADSA Subcommittee on Standards for Publications with Reference to Computer Software," *Journal of Dairy Science* 70:209–210.

## Nomenclature

**Microorganisms.** All microorganisms must be named by genus and species. Current names appear in *Bergey's Manual of Systemic Bacteriology*, Volume 1 (1984), edited by N. R. Kreig and J. G. Holt; Volume 2 (1986), edited by P.H.A. Sheath, N. S. Mair, M. E. Sharpe, and J. G. Holt; Volume 3 (1989), edited by J. T. Staley, M. P. Bryant, N. Pfenning, and J. G. Holt; and Volume 4 (1989), edited by S. T. Williams, M. E. Sharpe, and J. G. Holt; *The Yeasts: A Taxonomic Study*, 3rd edition (1984), edited by N.J.W. Kreger-van Rij; *Ainsworth and Bisby's Dictionary of the Fungi, Including the Lichens*, 7th edition (1983), edited by D. L. Hawksworth, B. C. Sutton, and G. C. Ainsworth; and Classification and Nomenclature of Viruses prepared by the International Committee on Taxonomy of Viruses, edited by R.E.F. Matthews and published in *Intervirology* 17:23–199 (1982). These documents should be used to determine the correct names of the microorganisms. Also, names of bacteria that have been validated and published in the *International Journal of Systemic Bacteriology* since *Bergey's Manual* was published should be used.

The name of the genus must appear in full the first time that the microorganism is cited in the abstract, in the body of the paper, and in each table and figure legend. Thereafter, the genus can be abbreviated by its first initial unless it will be confused with other microorganisms cited in the paper, in which case each genus should be abbreviated to use enough letters to avoid confusion. The names of all microorganisms should be in italics. Specific strain designations and numbers should be used when appropriate.

For microorganisms that are genetic variants of a parent strain, the genotypic and phenotypic properties should be cited according to the procedures described by Demerec et al. (1966) in *Genetics* 54:61–76. Phenotypes should be identified by three letters; the first is capitalized. Genotypes should be identified by three lower-

case italic letters. Superscript plus (+) signs are used to refer to a wild-type. The serial isolation number is placed after the locus symbol for mutations. The delta symbol is used to indicate deletions. Nomenclature for bacterial plasmids should be cited according to Novick et al. (1976) in *Bacteriological Reviews* 40:168–189.

**Enzymes.** Mention of an enzyme should include the EC number.

## Animal Care and Use

All research animals should be acquired, retained, and used in compliance with federal, state, and local laws and regulations. Authors should make it clear that experiments were conducted in a manner that avoided unnecessary discomfort to the animals by the use of proper management and laboratory

## Commercial Products

The use of names of commercial products should be minimized. When a commercial product is being tested as part of the experiment, the manufacturer and location should be given parenthetically at first mention in text, tables, and figures, but, when possible, the generic name should be used thereafter. Trademark symbols and registration marks are no longer required for editorial use.

## Miscellaneous Style and Format Notes

Footnote numbers should follow punctuation (e.g., Jones,<sup>1</sup> or . . . end of sentence.<sup>2</sup>).

Do not use italics for common foreign words and phrases (e.g., in vivo, ad libitum).

Indicate probability with a capital italic *P* and space around sign of operation (e.g.,  $P < 0.05$ ).

Use the slant line only when it means "per" with numbered units of measure or "divided by" in equations. Use only one slant line in a given expression (e.g., 2.3 kg/d per cow).

Consult standard dictionaries and writing manuals for detailed instructions on prose style.

## REFERENCES

List only pertinent references (more than 30 for research papers and more than 60 for reviews are discouraged; no more than three references should be needed to support a specific concept).

References are listed alphabetically by surname(s) of author(s). Secondly, use chronological order for papers with identical authorship. When more than one paper in a given year is listed by authors whose names

are in the same order in each paper, the papers are listed in alphabetical order of the paper title, and the date is assigned a letter suffix (e.g., 2000a.)

Use the English system of alphabetizing (e.g., deVries and van Waller, not Vries, de or Waller, van).

**Note: beginning with the January 2001 issue, the Journal will use the author, year style of citation. Authors who have papers in the review and revision process during 2000 will be informed if they need to change numbered references.** Literature should be referenced in text parenthetically by author last name, "et al." or "and" second author's last name, comma, and year [e.g., (Smith, 2000) or (Smith et al., 2000) or (Smith and Jones, 2000)]. Multiple references should be separated by semicolons. The construction "Smith (2000) described . . ." is also acceptable.

The sequence is names of authors (invert name of first author only), year of publication, title (lower case letters), abbreviated name of periodical, volume, and range of pages. Include name and address (city and state or country) of publisher for books. Provide publisher (city and state or country) for conference proceedings and conform to either book or journal format in accordance with the original document. Follow style and form of current Journal.

The sequence for patents is inventors' names, year, title, patent assignee, US patent number (if applicable), and international clearance number.

All reference entries must be cited in the body of the paper. References must be typed double spaced. Abstracts and articles from nonpeer-reviewed magazines and proceedings should be used sparingly as references. Use of abstracts published more than 3 years earlier is strongly discouraged.

Manuscripts that have been accepted for publication but are not yet published can be listed in the literature cited with the designation "(In press)" following the journal title. In press citations should not have a publication year.

Personal communications and unpublished references should be mentioned parenthetically in the text and should include name(s), date, and type of communication. *Serial Sources for the Biosis Data Base* indicates appropriate journal title abbreviations.

## Examples of References

### Journals

Lane, M. A., R. L. Baldwin, and B. W. Jesse. 1995. Sheep rumen metabolic development in response to different dietary treatments. *J. Dairy Sci.* 78(Suppl. 1):310. (Abstr.).

Swalve, H. H. 1995. The effect of test-day models on the estimation of genetic parameters and breeding values for dairy yield traits. *J. Dairy Sci.* 78:929–938.

Tyrrell, H. F. 1980. Limits to milk production efficiency by the dairy cow. *J. Anim. Sci.* 51:1441–1447.

Tyrrell, H. F., and P. W. Moe. 1975. Effect of intake on digestive efficiency. *J. Dairy Sci.* 58:1151–1163.

### Books

Association of Official Analytical Chemists. 1990. *Official Methods of Analysis*. Vol. I (or Vol. II). 15th ed. AOAC, Arlington, VA.

Goering, H. K., and P. J. Van Soest. 1970. *Forage Fiber Analyses (Apparatus, Reagents, Procedures, and Some Applications)*. Agric. Handbook No. 379. ARS-USDA, Washington, DC.

Lengemann, F. W., R. A. Wentworth, and C. L. Comar. 1974. Physiological and biochemical aspects of the accumulation of contaminant radionuclides in milk. Pages 159–170 in *Lactation: A Comprehensive Treatise. Nutrition and Biochemistry of Milk/Maintenance*. Vol. 3. B. L. Larson and V. R. Smith, ed. Academic Press, London, United Kingdom.

Marshall, T. R., ed. 1992. *Standard Methods for the Examination of Dairy Products*. 15th ed. Am. Publ. Health Assoc., Inc., Washington, DC.

National Research Council. 1989. Pages 90–110 in *Nutrient Requirements of Dairy Cattle*. 6th rev. ed. Natl. Acad. Sci., Washington, DC.

Steel, R.G.D., and J. H. Torrie. 1980. *Principles and Procedures of Statistics: A Biometrical Approach*. 2nd ed. McGraw-Hill Book Co., New York, NY.

### Conferences

Barbano, D. M. 1996. Mozzarella cheese yield: factors to consider. Page 29 in *Proc. Wisconsin Cheese Makers Mtg., Ctr. Dairy Res., Univ. Wisconsin, Madison*.

Henderson, C. R. 1973. Sire evaluation and genetic trends. Pages 10–41 in *Proc. Anim. Breeding Genet. Symp. in Honor of Dr. J. L. Lush*, Am. Soc. Anim. Sci., Am. Dairy Sci. Assoc., Champaign, IL.

National Mastitis Council. 1995. Summary of peer-reviewed publications on efficacy of premilking and postmilking teat disinfections published since 1980. Pages 82–92 in *Natl. Mastitis Council. Reg. Mtg. Proc.*, Harrisburg, PA. Natl. Mastitis Council, Inc., Arlington, VA.

Van der Werf, J.H.J. 1990. A note on the use of conditional models to estimate additive genetic variance in selected populations. Proc. 4th World Congr. Genet. Appl. Livest. Prod., Edinburgh, Scotland XIII:476–479.

Warner, R. G. 1982. Calf rearing—new wrinkles on an old subject. Page 53 *in* Proc. Cornell Nutr. Conf. Feed Manuf., Syracuse, NY. Cornell Univ., Ithaca, NY.

### Other

Biernoth, G., and W. Merk, inventors. 1985. Fractionation of milk fat using a liquified gas or a gas in the supercritical state. Unilever NV-PLC, assignee. US Pat. No. 4,504,503.

Chosson, P., C. Deshayes, and J. Frankinet, inventors. 1988. Removal of sterols from edible fats with bacteria. Monservbio Co., assignee. Fr. Pat. Appl. FR 2,609,291.

Gengler, N., A. Tijani, G. R. Wiggans, C. P. Van Tassel, and J. C. Philpot. 1999. Estimation of (co)variances of test day yields for first lactation Holsteins in the United States. *J. Dairy Sci.* 82(Jan.). Online. Available: <http://www.adsa.uiuc.edu/jds/remote/rem13.html>.

Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching. 1988. Consortium, Association Headquarters, 1111 N. Dunlap Avenue, Savoy, IL 61874.

Johnson, J. C., Jr., R. D. Appleman, R. E. McDowell, R. P. Lehmann, and B. L. Southwell. 1965. A study of the comparative performance of purebred and crossbred dairy cattle under southern conditions. Mimeo Ser. No. 240. Georgia Agric. Exp. Stn., Athens.

Kelly, M. G. 1977. Genetic parameters of growth in purebred and crossbred dairy cattle. M.S. Thesis, North Carolina State Univ., Raleigh.

SAS User's Guide: Statistics, Version 5 Edition. 1985. SAS Inst., Inc., Cary, NC.

Schaeffer, L. R. 1997. Subject: random regressions. <http://chuck.agsci.colostate.edu/wais/logs/agdg869258263.html>. Accessed Nov. 18, 1997.

Tirtiaux, A., inventor. 1989. Procédé et installation de fractionnement par cristallisation de matières grasses. S. A. Fractionnement Tirtiaux, assignee. Eur. Pat. No. 0,262,113,A3.

Vasquez, L. H. 1985. Relationship between physical activity, stage of estrous cycle, sexual behavior and plasma luteinizing hormone in dairy cattle. Ph.D. Diss., Univ. Illinois, Urbana.

### Abbreviations of Frequently Cited Periodicals

Acta Agric. Scand.  
Acta Endocrinol.  
Acta Theriol.  
Adv. Carbohydr. Chem. Biochem. (since 1968)  
Adv. Exp. Med. Biol.  
Adv. Genet.  
Adv. Protein Chem.  
Adv. Vet. Sci. Comp. Med. (since 1969)  
Agric. Biol. Chem.  
Am. J. Anat.  
Am. J. Clin. Nutr.  
Am. J. Clin. Pathol.  
Am. J. Obstet. Gynecol.  
Am. J. Ophthalmol.  
Am. J. Pathol.  
Am. J. Physiol.  
Am. J. Vet. Res.  
Anal. Biochem.  
Anal. Chem.  
Anat. Rec.  
Anim. Behav.  
Anim. Breed. Abstr.  
Anim. Feed Sci. Technol.  
Anim. Prod.  
Anim. Reprod. Sci.  
Ann. Biol. Anim. Biochim. Biophys.  
Ann. New York Acad. Sci.  
Ann. Rech. Vet.  
Ann. Zootech. (Paris)  
Annu. Rev. Biochem.  
Annu. Rev. Pharmacol. Toxicol.  
Antibiot. Chemother.  
Appl. Anim. Ethol.  
Appl. Environ. Microbiol. (since 1976)  
Appl. Microbiol. (before 1976)  
Arch. Biochem. Biophys.  
Arch. Gefluegelkd.  
Arch. Tierernaehr.  
Arch. Tierz.  
Aust. J. Agric. Res.  
Aust. J. Biol. Sci.  
Aust. J. Dairy Technol.  
Aust. J. Exp. Biol. Med. Sci.  
Aust. Vet. J.  
Bacteriol. Rev.  
Behav. Processes  
Biochemistry  
Biochem. J.  
Biochem. Biophys. Res. Commun.  
Biochimie  
Biochim. Biophys. Acta  
Biol. Reprod.

- Biol. Technol.  
 Biometrics  
 Bioscience  
 Bio/Technology (New York)  
 Biotechnol. Bioeng.  
 Biotechnol. Lett.  
 Br. J. Nutr.  
 Br. Vet. J.  
 Cancer Res.  
 Can. Inst. Food Sci. Technol. J.  
 Can. J. Anim. Sci.  
 Can. J. Comp. Med.  
 Can. J. Genet. Cytol.  
 Can. J. Physiol. Pharmacol.  
 Can. J. Zool.  
 Can. Med. Assoc. J.  
 Carbohydr. Res.  
 Cell. Tissue Res.  
 Cheese Rep.  
 Chem. Ind. (Lond.)  
 Clin. Chem.  
 Clin. Chim. Acta  
 Clin. Endocrinol.  
 Clin. Toxicol.  
 Comp. Biochem. Physiol. (now in series)  
   (A Comp. Physiol.,  
   B Comp. Biochem.,  
   C Comp. Pharmacol., or  
   C Comp. Pharmacol. Toxicol.)  
 Compend. Contin. Educ. Proc. Vet.  
 Cornell Vet.  
 CRC Crit. Rev. Biochem.  
 Cult. Dairy Prod. J.  
 Curr. Opin. Biotechnol.  
 Dairy Field  
 Dairy Ind. Int.  
 Dairy Sci. Abstr.  
 Dev. Biol.  
 DNA Cell Biol. (since 1989)  
 DNA (New York); changed in 1989 to  
   DNA Cell Biol.  
 Domest. Anim. Endocrinol.  
 Dtsch. Tieraerztl. Wochenschr.  
 Electrophoresis  
 Endocrinology  
 Eur. Assoc. Anim. Prod. Publ.  
 Eur. J. Biochem.  
 FASEB J.  
 FEBS Lett.  
 Fed. Proc. (now FASEB J.)  
 FEMS Microbiol. Immunol.  
 Fertil. Steril.  
 Food Eng. (New York)  
 Food Res.  
 Food Technol.  
 Gastroenterology  
 Gen. Comp. Endocrinol.  
 Gene (Amst.)  
 Genet. Sel. Evol.  
 Genetics  
 Horm. Behav.  
 Immunol. Today  
 Indian J. Dairy Sci.  
 Infect. Immun.  
 Int. Dairy J.  
 Int. J. Food Microbiol.  
 J. Agric. Food Chem.  
 J. Agric. Sci.  
   [(Camb.) if published in England (before  
   1991)]  
 J. Am. Oil Chem. Soc.  
 JAVMA  
 J. Anim. Sci.  
 J. Appl. Physiol.  
 Jpn. Agric. Res. Q.  
 J. AOAC  
 J. Bacteriol.  
 J. Biol. Chem.  
 J. Br. Grassl. Soc.  
 J. Cell Biol.  
 J. Cell Physiol.  
 J. Clin. Endocrinol. Metab.  
 J. Clin. Invest.  
 J. Clin. Pathol. (Lond.)  
 J. Comp. Pathol.  
 J. Cult. Dairy Prod.  
 J. Dairy Res.  
 J. Dairy Sci.  
 J. Endocrinol.  
 J. Environ. Pathol. Toxicol. Oncol.  
 J. Exp. Anal. Behav.  
 J. Exp. Biol.  
 J. Exp. Med.  
 J. Food Sci.  
 J. Food Prot.  
 J. Gen. Microbiol.  
 J. Gen. Physiol.  
 J. Hered.  
 J. Immunol.  
 J. Immunol. Methods  
 J. Infect. Dis.  
 J. Lab. Clin. Med.  
 J. Lipid Res.  
 J. Mol. Biol.  
 J. Morphol.  
 J. Nutr.  
 J. Pharmacol. Exp. Ther.  
 J. Physiol. (Lond.) [or (Paris)]

J. Range Manage.  
 J. Reprod. Fertil.  
 J. Sci. Food Agric.  
 J. Soc. Dairy Technol.  
 J. Texture Stud.  
 J. Toxicol. Environ. Health  
 J. Ultrastruct. Res.  
 J. Ultrastruct. Mol. Struct. Res.  
 J. Vet. Med. Ser. A or B  
 J. Vet. Res.  
 J. Zool. (Lond.)  
 Jpn. J. Zootech. Sci.  
 Lab. Anim.  
 Lait  
 J. Leukocyte Biol.  
 Lipids  
 Livest. Prod. Sci.  
 Milchwissenschaft  
 Mol. Cell. Endocrinol.  
 Mol. Gen. Genet.  
 Nature (Lond.)  
 Neuroendocrinology  
 New England J. Med.  
 Neth. J. Agric. Sci.  
 Neth. Milk Dairy J.  
 Nutr. Res. Rev.  
 N.Z. J. Dairy Sci. Technol.  
 Obstet. Gynecol.  
 Onderstepoort J. Vet. Res.  
 Pharmacol. Rev.  
 Physiol. Rev.  
 Physiol. Zool.  
 Poult. Sci.  
 Proc. Natl. Acad. Sci. USA  
 Proc. Soc. Exp. Biol. Med.  
 Process Biochem.  
 Recent Progress Lipid Res.  
 Reprod. Fertil. Dev.  
 Res. Vet. Sci.  
 Science (Washington, DC)  
 Theor. Appl. Genet.  
 Theriogenology  
 Toxicol. Appl. Pharmacol.  
 Transgenic Res.  
 Vet. Clin. North Am. Food Anim. Pract.  
 Vet. Rec.  
 Vet. Res. Commun.  
 Z. Tierz. Zuechtungsbiol.  
 Zentralbl. Veterinaermed. Reihe A, B, or C  
 Z. Lebensm. Unters. Forsch.

Short words, such as “and”, “of”, and “the”, are not used in journal titles in the References section of *Journal of Dairy Science*.

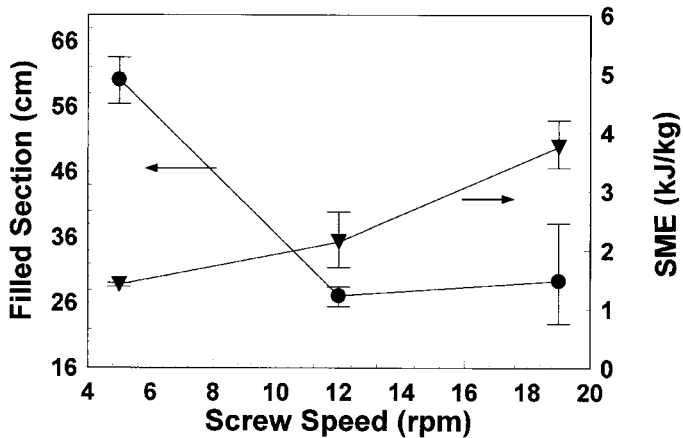
### Abbreviations of Words Used in Citations

Abstract	Abstr.
Agriculture	Agric.
American	Am.
Annal	Ann.
Annual	Annu.
Association	Assoc.
British	Br.
Bulletin	Bull.
Circular	Circ.
College	Coll.
Conference	Conf.
Congress	Congr.
Department	Dep.
Edition, Editor(s)	ed.
Experiment	Exp.
Extension	Ext.
International	Int.
Livestock	Livest.
Miscellaneous	Misc.
Monograph	Monogr.
National	Natl.
Number	No.
Patent	Pat.
Proceedings	Proc.
Publication	Publ.
Report	Rep.
Research	Res.
Review	Rev.
Station	Stn.
Supplement	Suppl.
Symposium	Symp.
Technical	Tech.
University	Univ.

### FIGURES

The use of figures should be minimized. Do not repeat material already included in Materials and Methods or in tables. However, verify that each figure is independently comprehensible without reference to the text, to other figures, or to tables. For each figure, captions should define all abbreviations used in the figure. Abbreviations, when used, should be consistent with text usage. Figure format and style should be consistent across figures.

Each figure should be identified in the margin, on the front, with author name, figure number, and the first few words of the title of the article to which it belongs (when submitting revised manuscripts, the manuscript number should also be included). Indicate which side is “top” if orientation is not immediately clear.



**Figure 1.** Effect of screw speed of the stretcher-cooker on the length of the filled section (●) and specific mechanical energy (SME: ▼). (Adapted from *J. Dairy Sci.* 80:3036.)

Illustrations should be submitted at camera ready size (8.5, 14, or 18.5 cm). Second copies may be reproductions, except for micrographs, which must be originals. Glossy photographs of original copy are acceptable as “originals” if they are of high resolution and in focus.

Computer-generated figures are preferred if they meet Journal specifications for line width, symbols, and layout. The original printout of figures (rather than photocopies) is required; do not make glossy photographs of computer-printed figures. Use the highest resolution printer available to you; take care that lettering and symbols are of sufficient size, scale, and resolution to be legible after reduction. Figures should be uniform in scale and in line density (boldness).

On line graphs, symbols should not contain other symbols within them (e.g., a circle within a triangle) to indicate data points. When possible, symbols should be defined in the caption; when the legend is a part of the figure, it should appear within the axes but outside the data field. Lettering on the y-axis should be printed vertically along the axis (see Figure 1). Small dot or line patterns or gray shading will not reproduce evenly and, thus, should be avoided. Three-dimensional figures, although attractive, often obscure the data presentation and should generally be avoided; however, if three-dimensional bar graphs are necessary, indicate in the caption which portion of the bar is to be used for making comparisons.

For plates, individual photographs are preferred. If submitted as a composite, plates should be carefully mounted on a white background with rubber cement or spray adhesives. Margins between photographs should be minimal and even, and the outside border of the plate should be aligned to be rectangular or square in shape. Individual figures, if mounted, must conform to plate

specifications also. Labels should be on photographs, not outside them, whenever possible.

### Captions and Legends

Legends should be typed double spaced on a separate page preceding the figures. Identify curves with symbols: □; ■; ○; ●; ▲; ▼; △; ▽; ★; ☆; ◇; ◆; +, or ×. Abbreviations used in figure or caption must be defined in caption. Abbreviations should conform to Journal style.

### Electron Micrographs

Authors should submit original plates and high-grade photographs for reviewers. Micrographs should be submitted as near as possible to the desired published size. If micrographs are reduced during the publication process, authors should use scale bars to indicate size. If scale bars are not used, authors need to alter magnification amounts in the figure caption to reflect the percentage of reduction.

### Color Illustrations

The cost to publish each color figure is \$995; a surcharge for reprints will be assessed. Authors must indicate in writing that they are willing to pay the additional cost of color reproduction.

### Digital Files

Hard copy (i.e., reflective art) must be provided for all figures, but authors knowledgeable in preparing digital files are encouraged to do so. Files must be saved in .tif, .eps, or .jpg format for PC or in .tiff, .pict, .jpeg, or .eps for Macintosh. (Note: the file extension should be used in preparing the file. Most software programs do not recognize files without the proper extension. That is, the file name should be, e.g., smithf1.tif) Image files generated with office suite programs such as PowerPoint, Word, or Excel embedded in word processing documents cannot be used because resolution is not high enough for print production. For photographic images, the resolution must be 360 dpi at the printed image size; line art should be at 600 dpi. Digital files of photographic images cannot be enlarged; black and white images should be saved as gray scale images. Files may be submitted on zip disks or CDROM; these media will be returned to the author. The disk or CDROM must be labeled with file names, manuscript number, first author's name, computer platform, and file extensions.

### TABLES

The use of tables should be minimized. When used, tables should be self-explanatory and may be a most

**Table 1.** Least squares means and significance of effects of previous and present lactation recombinant bST treatments on present 38-wk average production variables. (Adapted from J. Dairy Sci. 73:3253.)

Dependent production variable	Previous lactation treatment		Present lactation bST treatment (mg/d)			Type II SS $P > F$ for main comparisons		
	Treated (n = 14)	Untreated (n = 29)	0 (n = 15)	10.3 (n = 15)	20.6 (n = 13)	Previous	Present	Contrast <sup>1</sup>
Milk, kg	31.8	32.4	28.2 <sup>b</sup>	33.5 <sup>a</sup>	35.0 <sup>a</sup>	NS	**	**
3.5% FCM, kg	32.1	32.6	28.7 <sup>b</sup>	33.3 <sup>a</sup>	35.0 <sup>a</sup>	NS	**	**
DMI, kg	22.9	21.8	21.6	22.2	23.2	NS	*	†
FC <sup>2</sup> , 3.5%	0.81 <sup>a</sup>	0.71 <sup>b</sup>	0.87 <sup>a</sup>	0.70 <sup>b</sup>	0.71 <sup>b</sup>	*	**	**
EI <sup>3</sup> , Mcal	39.4	37.5	36.9 <sup>b</sup>	38.2 <sup>ab</sup>	40.8 <sup>a</sup>	NS	*	*
EI/FCM, Mcal/kg	1.38 <sup>a</sup>	1.21 <sup>b</sup>	1.46 <sup>a</sup>	1.20 <sup>b</sup>	1.22 <sup>b</sup>	*	**	**
Fat, %	3.54	3.44	3.54	3.39	3.54	NS	NS	NS
Protein, %	3.34	3.30	3.34	3.26	3.31	NS	NS	NS
Lactose, %	5.00	5.08	4.49	5.07	5.05	NS	NS	NS
SCC, ln	4.72	4.87	4.65	4.67	5.01	NS	NS	NS
BW, kg	667	659	665	660	664	NS	NS	NS
BW Gain, kg	0.36	0.41	0.33	0.42	0.41	NS	NS	NS

<sup>a,b</sup>Subcolumn means within row and treatment category with different superscripts differ ( $P < 0.05$ ).

<sup>1</sup>Contrast compares present controls with all present bST-treated cows.

<sup>2</sup>FC = Feed conversion = DMI/3.5% FCM.

<sup>3</sup>EI = Energy intake.

† $P \leq 0.10$ .

\* $P \leq 0.05$ .

\*\* $P \leq 0.01$ .

effective way to organize extensive data. Refer to *Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers*. Table 1 may be used as an example.

Place tables at the end of manuscript.

When possible, tables should be organized to fit across the page without running broadside. Be aware of the dimensions of the printed page when planning tables.

Place table number and title on the same line above the table (as shown in sample table).

Do not use vertical lines and few horizontal lines. Do not use boldface in the table body.

Limit data field to the minimum needed for meaningful comparison within the accuracy of the methods.

For each table, spell out the first use of abbreviations in parentheses or in numbered footnotes. Abbreviations should conform to Journal style and be consistent with those used in the text. Avoid reference to other tables, figures, or text.

### Table Footnotes

Footnotes to tables should be numerals. Superscript letters should be used for statistical analyses within the body of the table. Probability may be indicated: † $P < 0.10$ , \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$ . Each footnote should begin a new line (see sample table).

### AUTHOR PROOFS

Author proofs of all manuscripts will be sent to the corresponding author. Although the proof appears in a two-column page format, it should be considered a galley proof; page layout will change when the article is pagination into an issue.

Author proofs should be read carefully and checked against the typed manuscript, because the responsibility for proofreading is the author(s).

Excessive author alterations to the proofs will be charged to the author. Corrections to the author proof should be made legibly in ink in the margins of the proof sheets by the corresponding author.

Authors are discouraged from adding references at the author proof stage. However, when such additions become necessary, added references should appear at the end of the reference section, under the main level heading REFERENCES ADDED IN PROOF.

Editor queries should be answered on the galley proofs; failure to do so may delay publication.

Proofs and the typed, edited manuscript should be returned within 3 days of receipt. Express mail and FAX transmission (followed by paper copy and typed manuscript) are encouraged, but returning proofs by first class mail within the United States or air mail outside the United States is acceptable.

Publication cannot proceed until proofs and copy are returned.