

JOURNAL OF ANIMAL SCIENCE

Robert A. Merkel, *Editor-in-Chief* (1981)*
Claude J. Cruse, *Business Manager*
Bernice Wilson, *Editorial Assistant*

SECTION EDITORS

L. T. Frobish, *Applied Animal Science* (1979)
G. Eric Bradford, *Breeding and Genetics* (1981)
R. A. Field, *Meat Science and Muscle Biology* (1979)
E. R. Peo, Jr., *Nonruminant Nutrition* (1980)
E. M. Convey, *Physiology and Endocrinology* (1980)
Jay C. Meiske, *Ruminant Nutrition* (1981)

EDITORIAL BOARD

Francis Aherne (1980)	Philip Dziuk (1980)	T. M. Nett (1980)
Gary Allee (1979)	R. A. Easter (1981)	W. E. Neville, Jr. (1980)
R. P. Amann (1979)	E. J. Eisen (1980)	C. Boyd Ramsey (1981)
Henry Amos (1979)	W. C. Ellis (1980)	Jack G. Riley (1981)
Jean Apgar (1980)	L. B. Embry (1980)	D. B. Schanbacher (1981)
D. M. Baird (1980)	N. L. First (1980)	Gerald T. Schelling (1981)
Robert Bellows (1980)	Danny G. Fox (1981)	Stephen Schmidt (1980)
N. J. Benevenga (1979)	George Graber (1981)	Dan C. Sharp (1981)
Ben Bereskin (1979)	R. L. Harrold (1981)	G. C. Smith (1980)
W. E. Berndtson (1980)	Frank C. Hinds (1981)	G. S. Smith (1980)
Jack H. Britt (1981)	M. Peter Hoffman (1981)	Lewis W. Smith (1981)
Robert Britton (1979)	G. W. Horn (1980)	J. D. Sink (1981)
L. S. Bull (1979)	R. K. Johnson (1980)	A. L. Sutton (1981)
Floyd M. Byers (1981)	Marshall H. Jurgens (1981)	H. J. Swatland (1980)
D. R. Campion (1981)	A. W. Kotula (1979)	T. D. Tanksley (1979)
T. R. Cline (1979)	D. D. Kress (1981)	William W. Thatcher (1981)
S. L. Davis (1980)	J. W. Lauderdale (1979)	P. J. VanSoest (1979)
M. E. Dikeman (1979)	C. R. Long (1981)	P. J. Wangsness (1980)
D. A. Dinius (1979)	J. A. Marchello (1980)	James G. Welch (1981)
C. A. Dinkel (1979)	D. R. Mertens (1979)	Lowell L. Wilson (1980)
T. G. Dunn (1980)	D. N. Mowat (1980)	L. G. Young (1980)

*Terms expire on December 31 of year indicated

OFFICERS OF THE AMERICAN SOCIETY OF ANIMAL SCIENCE

C. J. Kercher, *President*
M. B. Wise, *President-Elect*
D. C. England, *Secretary-Treasurer*
Virgil W. Hays, *Past-President*
Herbert Brown, *Director-at-Large*
B. P. Cardon, *Director-at-Large*
B. N. Day, *Midwestern Director*

D. R. Zimmerman, *Midwestern Director*
V. G. Pursel, *Northeastern Director*
C. J. Sniffen, *Northeastern Director*
E. R. Barrick, *Southern Director*
W. C. McCormick, *Southern Director*
R. W. Gardner, *Western Director*
Mack Kennington, *Western Director*

Membership. Application is invited from persons with interest in animal science and livestock production. Annual dues in the Society, which includes the *Journal of Animal Science*, is \$24.00. Student Affiliate Membership to those who are certified by a Professional member as a regularly enrolled college student who does not hold a full-time position at the time of application for, or annual renewal of, affiliate membership, \$12.00 annually which includes receipt of the *Journal of Animal Science*. Institutional members (including receipt of the *Journal of Animal Science*), \$55.00 per year. Applications for membership with remittance should be mailed to the Business Manager, ASAS, 309 West Clark Street, Champaign, Illinois 61820.

Address Change and Missing Copies. Notice of change in address should be received by the Business Manager in advance of change. Claims for missing copies should be received within 30 days (90 days foreign) of publication date to insure replacement copies at no charge.

Manuscripts. Address manuscripts and correspondence concerning them to the Editor-in-Chief R. A. Merkel, Department of Animal Husbandry, Michigan State University, East Lansing, MI 48824. At least one of the authors of a manuscript must be a member of the Society. Publication of papers by nonmembers requires the approval of the Executive Committee. See "Information for Contributors" at the back of the journal and "Style and Form for Journal of Animal Science" in *J. Anim. Sci.* 47:283, 1978, for the standard requirements for Journal papers. Authors are requested to designate in which Section of the Journal they prefer to have their manuscript considered for publication.

Reprints. Reprints of papers in the Journal are obtainable only from the authors or their institutions. Authors of papers accepted for publication are required to make a minimal purchase of 100 reprints.

News and Notes. Announcements about meetings, personal changes and other items of interest to the Society may be sent directly to Edwin Tout, ASAS, 309 West Clark Street, Champaign, Illinois 61820.

Journal of Animal Science (ISSN 0021-8812) is published monthly by the American Society of Animal Science.

Second-class postage paid at Champaign, IL 61820 and at additional mailing offices.

Copyright 1979 by American Society of Animal Science. Printed in USA. All rights reserved.

Reproduction in part or whole prohibited.

Boyd Printing Company, Inc., 49 Sheridan Avenue, Albany, NY 12210