

JOURNAL OF ANIMAL SCIENCE

V. R. BOHMAN, *Editor-in-Chief* (1972) *

CLAUDE CRUSE, *Business Manager*

Section Editors

J. S. BRINKS—*Breeding and Genetics* (1973)
V. R. BOHMAN—*Applied Animal Science and Teaching* (1972)
H. B. HEDRICK—*Meat Science* (1973)
R. J. MEADE—*Nonruminant Nutrition* (1971)
P. T. CUPPS—*Physiology and Endocrinology* (1971)
W. H. HALE—*Ruminant Nutrition* (1972)

Editorial Board

| | | |
|-----------------------|--------------------------|------------------------|
| D. H. BAKER (1972) | D. E. GOLL (1972) | E. R. MILLER (1971) |
| E. R. BARRICK (1973) | H. B. HEDRICK (1971) | R. R. OLTJEN (1972) |
| K. P. BOVARD (1971) | T. V. HERSHBERGER (1973) | I. T. OMTVEDT (1973) |
| R. G. CASSENS (1973) | H. F. HINTZ (1972) | M. P. PLUMLEE (1971) |
| A. J. CLAWSON (1973) | E. K. INSKEEP (1971) | R. L. PRESTON (1973) |
| B. N. DAY (1972) | N. L. JACOBSON (1971) | R. J. RALEIGH (1971) |
| L. B. EMBRY (1972) | M. D. JUDGE (1973) | G. M. SIDWELL (1972) |
| J. P. FONTENOT (1972) | C. O. LITTLE (1971) | H. S. TEAGUE (1971) |
| W. C. FOOTE (1972) | P. V. MALVEN (1973) | D. R. ZIMMERMAN (1973) |
| D. W. FRIEND (1973) | R. A. MERKEL (1972) | |

* Terms expire on December 31 of year indicated.

OFFICERS OF THE AMERICAN SOCIETY OF ANIMAL SCIENCE

| | |
|---|---|
| O. D. BUTLER, <i>President</i> | U. S. GARRIGUS, <i>Midwestern Director</i> |
| G. P. LOFGREEN, <i>Vice President</i> | J. F. LASLEY, <i>Midwestern Director</i> |
| T. J. MARLOWE, <i>Secretary-Treasurer</i> | G. E. MITCHELL, JR., <i>Southern Director</i> |
| D. E. BECKER, <i>Director-at-Large</i> | J. P. FONTENOT, <i>Southern Director</i> |
| D. M. KINSMAN, <i>Northeastern Director</i> | J. E. BUTCHER, <i>Western Director</i> |
| E. P. YOUNG, <i>Northeastern Director</i> | W. N. GARRETT, <i>Western Director</i> |

Subscriptions. Correspondence concerning subscriptions, purchase of single copies and back issues and related business should be addressed to the Business Manager, Claude Cruse, 425 Illinois Bldg., 113 North Neil St., Champaign, Illinois 61820. Subscription price for nonmembers for Volume 32 and Volume 33, (1971) is \$24.00 in U.S. and Canada, \$24.50 in rest of North and South America, and \$25.00 in other places. Checks should be made payable to the American Society of Animal Science. Foreign subscribers are requested to remit by international money order or by a draft on a New York bank.

Address Change. Notice of change in address should be received by the Business Manager. Lost copies, owing to change of address, cannot be supplied unless adequate notice has been given.

Missing Copies. Claims for missing copies should be sent to the Business Manager within 30 days (90 days foreign) of publication date to insure replacement copies at no charge.

Membership. Application is invited from persons with interest in animal science and livestock production. The Vice President of the Society is Chairman of the Membership Committee. Annual dues in the Society, which includes the Journal of Animal Science, are \$20.00 in U.S. and Canada, \$20.50 in rest of North and South America and \$21.00 in other countries.

Manuscripts. Address manuscripts and correspondence concerning them to the Editor-in-Chief, V. R. Bohman, Animal Science Division, University of Nevada, Reno, Nevada 89507. 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" on back cover and "Style and Form for Journal of Animal Science" in J. Anim. Sci. 29:850, 1969, for the standard requirements for Journal papers.

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, personnel changes and other items of interest to the Society may be sent directly to the Editor. Similar items relating to the U.S.D.A. and Federal Agencies are received from James O. Grandstaff, Cooperative State Experiment Station Service, U. S. Department of Agriculture, Washington, D. C.

Second class postage paid at Albany, N. Y.

3 

Copyright 1971 by AMERICAN SOCIETY OF ANIMAL SCIENCE. Printed in the U.S.A. All rights reserved. Reproduction in part or whole prohibited.

Boyd Printing Company, Inc., 49 Sheridan Ave., Albany, N. Y. 12210