THE AMERICAN PHYTOPATHOLOGICAL SOCIETY

Founded 1908

Incorporated 1915

The APS Council

Officers:

President, H. L. BARNETT, West Virginia University, Morgantown
President-Elect, RALPH J. GREEN, JR., Purdue University, Lafayette, Indiana
Immediate Past-President, JOSEPH P. FULTON, University of Arkansas, Fayetteville
Vice President, J. L. TAMMEN, The Pennsylvania State University, University Park
Secretary, RICHARD E. FORD, University of Illinois, Urbana
Ireasurer, LAURENCE H. PURDY, University of Florida, Gainesville
Editor-in-Chief, A. R. WEINHOLD, University of California, Berkeley

ouncilors:

DURWARD BATEMAN, Cornell University, Ithaca, New York (At Large)
W.E. GALLEGLY, West Virginia University, Morgantown (Potomac)
LA.B. NOLLA, Puerto Rico University, Mayaguez, Puerto Rico (Caribbean)
LA.BROWNING, Iowa State University, Ames (North Central)
C.J. GILGUT, University of Massachusetts, Amherst (Northeastern)
EK. VAUGHAN, Oregon State University, Corvallis (Pacific)
DAVID ROSBERG, Texas A&M University, College Station (Southern)

off.

R.J. TARLETON, Executive Vice-President; The American Phytopathological Society, 3340 Pilot Knob Road, St. Paul, Unnesota 55121.

DIVISIONS OF THE SOCIETY

mbean: Pres. RODRIGO GAMEZ, Facultad de Agronomia, Universidad de Costa Rica; Vice-Pres. EDMUND M. JONES, Central Exp. Sta., Centeno Via Arima, Trinidad, W.I.; Secy.-Treas. GUILLERMO E. GALVEZ E., Ciat, Apartado Aereo 6713, Cali, Colombia.

witheastern: Pres. R. J. LUKENS, Conn. Agr. Exp. Sta., New Haven, Conn.; Vice-Pres. R. C. STAPLES, Boyce Thompson Inst., Yonkers, N.Y.; Secy.-Treas. R. J. CAMPANA, University of Maine, Orono, Maine.

Central: Pres. J. WEIHING, University of Nebraska, Lincoln; Vice-Pres. O. J. DICKERSON, Kansas State University, Manhattan; Secy.-Treas. B. W. KENNEDY, University of Minnesota, St. Paul.

Sexy-Treas. D. E. MATHRE, Montana State University, Boseman.

omac: Pres. H. B. COUCH, Virginia Polytechnic Institute, Blacksburg; Vice-Pres. H. L. KEIL, Plant Industry Station, Beltsville,

Maryland; Secy.-Treas. T. H. BARKSDALE, Plant Industry Station, Beltsville, Maryland.

whern: Pres. ROBERT S. HALLIWELL, Texas A&M University, College Station; Vice-Pres. ROBERT T. GUDAUSKAS, Vuburn University, Auburn, Alabama; Secy.-Treas. CARTER P. SEYMOUR, Florida Department of Agriculture, Gainesville.

EDITORIAL AND BUSINESS STAFF

DUCTION AND TECHNICAL EDITOR, Robert J. Minteer; BUSINESS MANAGER and ADVERTISING DIRECTOR, Farleton; The American Phytopathological Society, 3340 Pilot Knob Road, St. Paul, Minn. 55121.

Subscriptions: Communications should be addressed to The American Phytopathological Society, 3340 Pilot Knob Road, St. Minn. 55121. Subscription price: \$40 per year domestic, foreign postage \$3.00/yr. extra (including Canada and Mexico). Single met numbers (within 60 days of publication): \$4. (Price of back volumes and separate numbers on request.) Ten-Year Index (Vol. 41-50, 1941-1950): paper cover, \$3.50. Ten-Year Index (Vol. 41-50, 1951-1960): paper cover \$5.00. Claims for copies lost in domestic samust be received within 90 days from the date of issue, otherwise the replacement charge will be \$4. Deliveries overseas are not contect; foreign mailings are made at the subscriber's risk. Advertisement: Rates may be secured from the Advertising Director. Index (Vol. 41-50, 1951-1960): paper cover \$5.00. Claims for copies lost in domestic samust be received within 90 days from the date of issue, otherwise the replacement charge will be \$4. Deliveries overseas are not contect; foreign mailings are made at the subscriber's risk. Advertisement: Rates may be secured from the Advertising Director. Index (Vol. 41-50, 1951-1960): paper cover \$5.00. Claims for copies lost in domestic samust be received within 90 days from the date of issue, otherwise the replacement charge will be \$4. Deliveries overseas are not content of any statement of claims made in advertisements is assumed by this Journal or by The American Phytopathological society. Membership in The American Phytopathological Society: Information concerning membership in The American publication rates for members will be supplied by the Secretary or the Business Manager.

Published monthly at The American Phytopathological Society 3340 Pilot Knob Road, St. Paul, Minn. 55121

Second class postage paid at St. Paul, Minn. Subscription, \$40.00 per year

Phytopathology

EDITORIAL BOARD

- A. R. WEINHOLD, Editor-in-chief, Department of Plant Pathology, University of California, Berkeley B. W. KENNEDY, Senior Editor, University of Minnesota, St. Paul 55101
- T. KOSUGE, Senior Editor, University of California, Davis 95616
- J. L. LOCKWOOD, Senior Editor, Michigan State University, East Lansing, Michigan 48823

ASSOCIATE EDITORS

- L. J. ASHWORTH, JR., University of California, Parlier
- C. W. AVERRE, North Carolina State University, Raleigh
- J. A. BROWNING, Iowa State University, Ames
- E. E. BUTLER, University of California, Davis
- R. J. COOK, Washington State University, Pullman
- M. E. CORDEN, Oregon State University, Corvallis
- R. E. DAVIS, Plant Virology Laboratory, Beltsville, Md.
- P. R. DAY, Connecticut Agricultural Exp. Station, New Haven
- R. S. DICKEY, Cornell University, Ithaca, N.Y.
- BEN DOUPNIK, JR., University of Nebraska Coop. Extension Serv., Clay Center
- E. ECHANDI, North Carolina State University, Raleigh
- J. W. ECKERT, University of California, Riverside
- B. Y. ENDO, Plant Industry Station, Beltsville, Md.
- W. H. ENGLISH, University of California, Davis
- J. W. GERDEMANN, University of Illinois, Urbana
- J. G. HANCOCK, JR., University of California, Berkeley
- T. T. HEBERT, North Carolina State University, Raleigh
- D. R. HOUSTON, 151 Sanford St., Hamden, Ct.
- C. W. KUHN, University of Georgia, Athens
- F. L. LUKEZIC, Pennsylvania State University, University Park

- E. S. LUTTRELL, University of Georgia, Atha C. A. MARTINSON, Iowa State University, An
- D. E. MATHRE, Montana State University, In
- D. P. MAXWELL, University of Wisconsin,
- P. R. MILLER, University of California, River
- M. R. NELSON, University of Arizona, Tucson
- Z. A. PATRICK, University of Toronto, Ontan
- A. O. PAULUS, University of California, Riveri
- T. P. PIRONE, University of Kentucky, Lexing
- D. E. PURCIFULL, University of Florida, Gam
- R. A. REINERT, North Carolina State University Raleigh
- R. D. RIGGS, University of Arkansas, Fayette
- A. P. ROELFS, University of Minnesota, St. P.
- R. P. SCHEFFER, Michigan State University Lansing
- R. A. SCHMIDT, University of Florida, Gainen
- R. T. SHERWOOD, U.S. Regional h Laboratory, University Park, Pa.
- E. K. SOBERS, University of Georgia, Coastal Station, Tifton, Ga.
- R. E. STALL, University of Florida, Gainesville
- G. STROBEL, Montana State University, Bozen
- P. H. TSAO, University of California, Riverside
- P. H. WILLIAMS, University of Wisconsin, W.
- P. J. WUEST, Pennsylvania State University Park

GENERAL PUBLICATION POLICIES

At least one author must be a member of The American Phytopathological Society, except the subscribing institution outside the United States or Canada may have published, by a staff member, one (in English) per volume. A letter of transmittal, signed by an official of the foreign institution, a accompany such manuscripts.

Submission of manuscripts: Submit all new manuscripts to The American Phytopathological Scripts Editorial Office, 3340 Pilot Knob Road, St. Paul, Minn. 55121. Do not submit new manuscripts Editor-in-Chief. Submission implies nonsubmission elsewhere and (if accepted) no publication elsewhere same form without consent.

Subject matter should fall into the following categories: 1) Original research on some phase of disease. 2) Review papers developing a new concept, hypothesis, theory, or other integration of pathology. 3) Phytopathological Notes: These are accounts of techniques, original research phytopathological history of general importance, but sufficiently brief (1-4 typed pages) as not to compublished pages. 4) Letters to the Editor: These may explain, amplify, or otherwise comment upon respublished in the journal or elsewhere. Letters to the editor are reviewed in the same manner as no contributions, and the Editorial Board reserves the right to reject or to publish letters of rebuttal appropriate.

Page charge: A charge of \$35 per published page will apply to all manuscripts submitted by authorse obituaries and those submitted in response to invitation by the Society after March 1, 1973.

Separates: No free copies supplied. Reprints will be available at a nominal cost; quotation will be sent proof.

For style details, follow: Author's Guide for Manuscript Preparation, Phytopathology 62:1-4, 1972. Style Manual for Biological Journals (latest edition). Amer. Inst. Biol. Sci., Washington, D.C. Author urged to have one or more colleagues read the manuscript critically prior to submission.

Use of material in Phytopathology: Phytopathology is not copyrighted, but those who wish to be illustrations or data appearing in Phytopathology for use in other publications should obtain the permission the author of the paper, and provide a line crediting Phytopathology as the source of the material.