Fall 1988 Volume 3, Number 4

TABLE OF CONTENTS

Articles

- 144 Comparison of soil properties as influenced by organic and conventional farming systems John P. Reganold
- 156 Use of organic amendments to increase the productivity of sand and gravel spoils: Effect on yield and composition of sweet corn Sharon B. Hornick
- 163 Using crop diversity to manage pest problems: Some California Mary Louise Flint and Philip A. Roberts
- 168 On-farm experiment designs and implications for locating research Phil E. Rzewnicki, Richard Thompson, Gary W. Lesoing, Roger W. Elmore, Charles A. Francis, Anne M. Parkhurst and Russell S.
- 174 Commentary: Open questions in sustainable agriculture William Lockeretz

Departments:

Opinion—142 ● Upcoming Events—155 ● Book Reviews—182 ● From the Literature—183 ● Resources—184 ● Institute News—185 • Special Reports—186

Journal Editorial Board

Miguel A. Altieri, University of California at Berkeley • Lloyd A. Andres, USDA-ARS • David F. Bezdicek, Washington State University • Harold F. Breimyer, University of Missouri • Michael C. Brumm, University of Nebraska • Frederick H. Buttel, Cornell University • Katherine L. Clancy, Syracuse University • Eliot Coleman, The Mountain School-Milton Academy, Vermont • R. James Cook, USDA-ARS • Robert B. Dahlgren, U.S. Fish and Wildlife Service • John W. Doran, USDA-ARS • Sara Ebenreck, Editorial Consultant • Thomas C. Edens, Michigan State University • Frank P. Eggert, University of Maine • Lloyd F. Elliott, USDA-ARS • A. Dale Flowerday, Pioneer Hi-Bred International • Charles A. Francis, University of Nebraska • Stephen R. Gliessman, University of California at Santa Cruz • Joan Gussow, Columbia University • Don F. Hadwiger, Iowa State University • Richard R. Harwood, Winrock International • Glenn A. Helmers, University of Nebraska • Larry D. King, North Carolina State University • Dietrich Knorr, University of Delaware • J. Patrick Madden, Madden Associates • Robert I. Papendick, USDA-ARS • James F. Parr, USDA-ARS/USAID • Richard L. Ridgway, USDA-ARS • Neill Schaller, USDA-CSRS-SPPS.

Institute Board of Directors

Mrs. Jean Wallace Douglas, Washington, DC; President • John A. Harris IV, Berwyn, PA; Vice President • Jerald R. DeWitt, Ames, IA; Secretary • Maureen K. Hinkle, Washington, DC; Treasurer • Jim Bender, Weeping Water, NE • Robert O. Blake, Washington, DC • Katherine L. Clancy, Syracuse, NY • Thomas B. Harding Jr., Wind Gap, PA • Earl Lawrence, Martinsville, VA • William C. Liebhardt, Davis, CA • Per Bye Ohrstrom, Arlington Heights, IL • Gordon Watkins, Parthenon, AR.

Journal Staff

Editor - Garth Youngberg Technical Editor - William Lockeretz Associate Technical Editor - Paul B. Marsh Book Review Editors - Thomas C. Edens - James F. Parr Contributing Editor - Sara Ebenreck Assistant to the Editor - Sarah C. Byler

Circulation Manager/Word Processing -Susan E. Ward

Art Director - Randy White

Subscription Information

The American Journal of Alternative Agriculture (ISSN 0889-1893) is published quarterly by the Institute for Alternative Agriculture, Inc., 9200 Edmonston Road, Suite 117, Greenbelt, Maryland 20770. The IAA is not responsible for statements and opinions expressed by authors. Journal subscription rates: Institutions \$40 a year (\$47 foreign); Individuals \$20 a year (\$27 foreign); IAA Members \$15 a year (\$22 foreign); Students \$10 a year (\$17 foreign). Second Class postage paid at Greenbelt, MD. Postmaster: Send address changes to American Journal of Alternative Agriculture, 9200 Edmonston Road, Suite 117, Greenbelt, MD

Institute Information

The Institute for Alternative Agriculture is a nonprofit, tax-exempt research and education organization established in 1983 to encourage and facilitate the adoption of low-cost, resourceconserving and environmentally-sound farming methods. It works closely with producer groups, public research and education institutions, and government agencies in promoting a sustainable agriculture system.

Its programs include providing a national information clearinghouse, serving as a voice for sustainable agriculture in Washington, and developing and implementing research and educational outreach programs. It holds an annual scientific symposium and publishes a monthly newsletter.

The Institute is governed by a grass roots Board of Directors, which includes several commercial-scale organic farmers, and maintains a small professional staff. It is supported by memberships and donations and grants from foundations, corporations, and individuals.

Cover Photo

The cover photo illustrates the importance of organic amendments for improving the tilth, fertility, and productivity of marginal soils. Shown here, is the growth response of corn (Zea mays L.) on a marginal soil in Maryland, USA. The soil on the right was amended with 25 tons of sewage sludge compost per acre and no chemical fertilizer was applied. The soil on the left received the recommended rate of chemical fertilizer for optimum corn yields. Photo provided by J. F. Parr, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Maryland.