

ISSN 1742-1705 Volume 25 Number 2 June 2010

Renewable Agriculture and Food Systems

Formerly known as American Journal of Alternative Agriculture

Special Issue

**“Sustainable Agriculture Systems
in a Resource Limited Future”**

Special Guest Editors: Rick Welsh,
Lydia Oberholtzer, and
Caroline Dimitri

CAMBRIDGE
UNIVERSITY PRESS

Renewable Agriculture and Food Systems

Editor-in-Chief

John W. Doran, USDA-ARS, 305 Entomology Hall, University of Nebraska, Lincoln, NE 68583-0938, USA
Email: rafjournal@cambridge.org

Forum Editors

Fred Kirschenmann, Leopold Ctr. For Sustainable Ag., Iowa State University, Ames, USA.
Email: leopold1@iastate.edu
Mark Liebig, USDA-ARS, Mandan, ND, North Dakota, USA.
Email: mark.liebig@ars.usda.gov

Resources Review Editor

Charles A. Francis, University of Nebraska, USA.

Associate Editors

Molly Anderson, Consultant, Massachusetts, USA
John Beeby, Cornell University, NY, USA
Patrick Carr, North Dakota State University, USA
Stella Coffey, Ladybird Organic Farm, Co Tipperary, Ireland
Kathleen Delate, Iowa State University, USA
Martin H. Entz, University of Manitoba, Canada
Gail Feenstra, Sustainable Agri. Res. & Educ. Program, UC Davis, USA
Charles A. Francis, University of Nebraska, USA
Alan Franzluebbbers, USDA-ARS, Georgia, USA
Athanasios Gertsis, American Farm School, Greece
Peter R. Grace, Queensland University of Technology, Australia
Jonathan Halvorson, USDA-ARS, West Virginia, USA
Ulrich Köpke, Bonn University, Germany
Tom Larson, Farmer, Nebraska, USA
Don Lotter, Freelance Writer, Davis California, USA
Stephen R. Moore, North Carolina State University, USA
Daniel Neuhoff, Bonn University, Germany
Margaret Roper, CSIRO Plant Industry, Australia
John Ryan, ICARDA, Syria
Mickey Swisher, University of Florida, USA
Ilkden Talay, Ankara University, Turkey
Raymond R. Weil, University of Maryland, USA
Rick Welsh, Clarkson University, Potsdam, NY, USA

Submission of Manuscripts

Manuscripts should be submitted via our online manuscript submission and tracking site, www.edmgr.com/rafs. Full instructions for electronic submission are available directly from this site and from journals.cambridge.org/raf. To facilitate rapid reviewing, communications for peer review will be electronic and authors will need to supply a current e-mail address when registering to use the systems.

Full Notes for Authors

are available from: journals.cambridge.org/raf, and an abbreviated version is printed at the back of this issue.

Subscriptions

Renewable Agriculture and Food Systems (ISSN 1742-1705) is published four times a year in March, June, September and December. The subscription price for institutions of Volume 25 (2010) which includes electronic access and delivery by air is £190 (US \$375 in the USA, Canada and Mexico); the electronic only price for institutions is £145 (US \$280 in the USA, Canada and Mexico). Single parts are £48 (US \$93 in the USA, Canada and Mexico), plus postage.

Orders, which must be accompanied by payment, may be sent to a bookseller, subscription agent or direct to the publisher: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK; or in the USA, Canada and Mexico: Cambridge University Press, Journals Fulfillment Department, 100 Brook Hill Drive, West Nyack, New York, 10994-2133. EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered subscribers should provide their VAT registration number.

Japanese prices for institutions are available from Kinokuniya Company Ltd, P. O. Box 55, Chitose, Tokyo 156, Japan.

Copies of the journal for subscribers in the USA, Canada and Mexico are sent by air to New York to arrive with minimum delay. Periodicals postage paid at New York and at additional mailing offices. Postmaster: send address changes in the USA, Canada and Mexico to: *Renewable Agriculture and Food Systems*, Cambridge University Press, 100 Brook Hill Drive, West Nyack, New York 10994-2133. Claims for missing issues should be made immediately on receipt of the subsequent issue.

Advertising

Advertising queries for all parts of the world *except* the USA, Canada and Mexico to the Journals Advertising Co-ordinator: Rebecca Curtis, ad_sales@cambridge.org
Address enquiries in the USA, Mexico and Canada *only* to: journals_advertising@cup.org

Copying

This journal is registered with the Copyright Clearance Centre, 222 Rosewood Drive, Danvers, MA 01923, USA. Organizations in the USA who are also registered with C. C. C. may therefore copy material (beyond the limits permitted by sections 107 and 108 of U.S. Copyright law) subject to promotional or commercial purposes. Code 1742-1705/2009 \$16.00. *ISI Tear Sheet Service*, 3501 Market Street, Philadelphia, PA 19104, USA is authorized to supply single copies of separate articles for private use only. Organizations authorized by the Copyright Licensing Agency may also copy material subject to the usual conditions. *For all other use*, permission should be sought from Cambridge or the American Branch of Cambridge University Press.

Renewable Agriculture and Food Systems is abstracted/indexed in Academic Search FullTEXT, AGRICOLA (Bibliography of Agriculture), AGRIS, Biological and Agricultural Index, CAB ABSTRACTS, Dietary Supplements (IDIS) Database, Environment Abstracts, Environmental Periodicals Bibliography, First Search (OCLC), Sociological Abstracts, Social Planning/Policy & Developmental Abstracts, Uncover

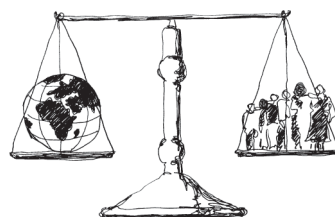
Internet Access

The online edition is available at: journals.cambridge.org/raf with free table of contents alerts (upon registration).

CAMBRIDGE UNIVERSITY PRESS

The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK
32 Avenue of the Americas, New York, NY 10013-2473, USA
477 Williamstown Road, Port Melbourne VIC 3207, Australia

This journal issue has been printed on FSC-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information. Printed by Latimer Trend, Plymouth, UK.



"Sustaining Earth and its People"

Scales image: Design, George Eisele, Lincoln, NE; artwork, Pat Scullion, ASA/CSSA/SSSA, Madison, WI, USA

Cover images: Farm/city landscape: © USDA Photo, Tim McCabe; Wind turbines in field: © John Doran; Farmers market: © BLE Bonn, Dominic Menzler; Cropping scene: © USDA Photo, Cole; Pasture & farm: © USDA Photo, Ron Nichols; Passion fruit farmer: © Manor House Agricultural Center, Kitale, Kenya