

Table of Contents

A SECTION

FEATURES

134A

Building resilient soils through agroecosystem redesign under fluctuating climatic regimes
Humberto Blanco-Canqui and Charles A. Francis

Assessment of gully erosion using conventional field measurements: A case study from northern Ethiopia

Andreas Klik, Florian Kluibenschädl, Stefan Strohmeier, Feras Ziadat, and Claudio Zucca

Mississippi River threatens to make Dogtooth Bend peninsula in Illinois an island
Kenneth R. Olson and Lois Wright Morton

IDEAS & INNOVATIONS

147A USDA Agricultural Research Service creates Nutrient Uptake and Outcome Network (NUOnet)

Jorge A. Delgado, Sharon Weyers, Curt Dell, Daren Harmel, Peter Kleinman, Karamat Sistani, April Leytem, David Huggins, Tim Strickland, Newell Kitchen, John Meisinger, Steve Del Grosso, Jane Johnson, Kip Balkcom, John Finley, Naomi Fukagawa, Mark Powell, and Scott Van Pelt

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION

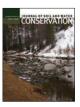
I. Publication Title: Journal of Soil and Water Conservation. 2. Publication Number: 0282-8800. 3. Filing Date: September 14, 2016. 4. Issue Frequency: Bimonthly (January/February, March/April, May/June, July/August, September/October, November/December). 5. Number of Issues Published Annually: Six (6). 6. Annual Subscription Price: \$115. 7. Complete Mailing Address of Known Office of Publication: 945 SW Ankeny Rd., Ankeny, IA 50023-9764. 8. Complete Mailing Address of the Headquarters of General Business Offices of Publisher: 945 SW Ankeny Rd., Ankeny, IA 50023-9764. 9. Full Names and Complete Addresses of Publisher, Editor: And Managing Editor: Publisher: Soil and Water Conservation Society, 945 SW Ankeny Rd., Ankeny, IA 50023-9764. Editor: Annie Binder, Soil and Water Conservation Society, 945 SW Ankeny Rd., Ankeny, IA 50023-9764. 11. Known Bondholders, Mortgages, and Other Security Holders Owning of Holding 1 Percent or More of Total Amount of Bonds, Mortgages. or Other Securities: None. 12. Tax Status: The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes has not changed during preceding 12 months. 13. Publication Title: Journal of Soil and Water Conservation.

Average no, copies each issue

	during preceding 12 months	published nearest to filing date
A. Total No. Copies Printed (net press run)	2,186	2.080
B. Paid Circulation	2,200	2,000
Mailed Outside-County Paid Subscriptions	1,983	1,911
2. Mailed In-County Paid Subscriptions	1	1
3. Paid Distribution Outside the Mailes Including Sales Through Dealers and Carriers,	109	98
Street Vendors, Counter Sales, and Other Paid Distribution Outside USPS		
4. Paid Distribution by Other Classes of Mail Through the USPS	0	0
C. Total Paid Distribution	2,093	2,010
D. Free or Nominal Rate Distribution		
1. Outside-County	0	0
2. In-County	0	0
3. Other Classes Mailed Through USPS	0	0
Free or Nominal Rate Distribution Outside the Mail	5	0
E. Total Free or Nominal Rate Distribution	5	0
F. Total Distribution	2,098	2,010
G. Copies Not Distributed	88	70
H. Total	2,186	2,080
I. Percent Paid	99.8%	100%
16. Electronic Copy Circulation		
A. Paid Electronic Copies	1,425	1,425
B. Total Paid Print Copies + Paid Electronic Copies	3,518	3,435
C. Total Print Distribution + Paid Electronic Copies	3,523	3,435
D. Percent Paid (Both Print & Electronic Copies)	99.9%	100%

I certify that 50% of all my distributed copies (Electronic & Print) are paid above a nominal price. 17. Publication of Statement of Ownership: This publication is a general publication. Publication of this statement is required and will be printed in the November/December 2016 issue of this publication. 18. Signature and Title of Editor, Publisher, Business Manager, or Owner: Annie Binder, Editor, Soil and Water Conservation Society. I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

No. copies of single issue



On the Cover New Fork River, Sublette County, Wyoming. Photo by Kathy Raper. Winner of 2016 SWCS Photo Contest.



RESEARCH SECTION

- Effects of tillage and compost amendment on infiltration in compacted soils
 F. Mohammadshirazi, V.K. Brown, J.L. Heitman, and R.A. McLaughlin
- 450 An integrated grazingland assessment approach for range and pasturelands D. Toledo, M. Sanderson, S. Goslee, J. Herrick, and G. Fults
- How gauge length and loading rate influence the root tensile strength of *Betula platyphylla* Y. Yang, L. Chen, and N. Li
- Improving salt leaching in a simulated saline soil column by three biochars derived from rice straw (*Oryza sativa* L.), sunflower straw (*Helianthus annuus*), and cow manure
 Y. Yue, W.N. Guo, Q.M. Lin, G.T. Li, and X.R. Zhao
- Soil and water conservation using the socioeconomics, sustainability concerns, and policy preference for residual biomass harvest

B. Wolde, P. Lal, J. Alavalapati, P. Burli, and P. Iranah

- Cattle use of perennial streams and associated riparian areas on a northeastern Oregon landscape D.E. Johnson, L.L. Larson, K.D. Wilson, P.E. Clark, J. Williams, and M. Louhaichi
- 494 Cattle use of off-stream water developments across a northeastern Oregon landscape
 D.E. Johnson, P.E. Clark, L.L. Larson, K.D. Wilson, M. Louhaichi, T. Freeburg, and J. Williams
- 503 Soil water in small drainages farmed with no-tillage and inversion tillage in northeastern Oregon J.D. Williams and D.S. Robertson

CONSERVATION

o n l i n e

The Journal of Soil and Water Conservation is online.

AUTHORS

Please submit manuscripts using the online manuscript review system.

MORE INFORMATION
Go to www.jswconline.org

JOURNAL OF SOIL AND WATER CONSERVATION

Soil and Water Conservation Society 945 SW Ankeny Road, Ankeny, IA 50023 USA www.swcs.org

EXECUTIVE DIRECTOR

Jim Gulliford Soil and Water Conservation Society Ankeny, Iowa, USA

EDITOR & DIRECTOR OF PUBLICATIONS Annie Binder Soil and Water Conservation Society

Ankeny, Iowa, USA

RESEARCH EDITOR & CHAIR OF EDITORIAL BOARD Jorge A. Delgado Soil Plant Nutrient Research Unit

USDA Agricultural Research Service Fort Collins, Colorado, USA

EDITORIAL ASSISTANT

Jody Thompson Soil and Water Conservation Society Ankeny, Iowa, USA

I. Gordon Arbuckle, Ir. Department of Sociology Iowa State University Ames, Iowa, USA

Cecilia María Armas Herrera University of Zaragoza Zaragoza, Spain

Francisco Arriaga Department of Soil Science and UW–Extension University of Wisconsin-Madison Madison, Wisconsin, USA

Karl Auerswald Technische Universität München Freising, Germany

Iamiu Oladipupo Azeez

Department of Soil Science and Land Management Federal University of Agriculture Abeokuta Abeokuta, Ogun, Nigeria Claire Baffaut

Cropping Systems and Water Quality Research Unit USDA Agricultural Research Service Columbia, Missouri, USA

Meni Ren-Hur Institute of Soil, Water and Environmental Sciences Agricultural Research Organization, Volcani Center Bet-Dagan, Israel

Kathryn J. Brasie Department of Agricultural Economics & Rural Sociology The Pennsylvania State University University Park, Pennsylvania, USA

Zhibao Dong Key Laboratory of Desert and Desertification Chinese Academy of Sciences Lanzhou, Gansu Province, China

Moustafa A. Elrashidi National Soil Survey Center USDA Natural Resources Conservation Service

Lincoln, Nebraska, USA Uriel Figueroa-Viramontes National Institute of Forestry, Agricultural, and Livestock Research

Clark J. Gantzer Soil, Environmental, and Atmospheric Sciences University of Missouri Columbia, Missouri, USA

Margaret W. Gitau Agricultural and Biological Engineering

Matamoros, Coahuila, México

Purdue University West Lafayette, Indiana, USA

Lomonosov Moscow State University Moscow, Russia

Valentin Golosov

LeRoy Hansen USDA Economic Research Service Washington, DC, USA

Iuan M. Herrea Institute of Agricultural and Environmental Biosciences University of Buenos Aires Buenos Áires, Argentina

Chunsheng Hu Center for Agricultural Resources Research Shijiazhuang, Hebei, China

Kanika Sharma Inglett Soil and Water Science Department University of Florida Gainesville, Florida, USA

Iane M.F. Iohnson North Central Soil Conservation Research Laboratory
USDA Agricultural Research Service
Morris, Minnesota, USA

Amy I. Kaleita Agricultural and Biosystems Engineering lowa State University Ames, Iowa, USA

Peter I A Kleinman Peter J.A. Keninian Pasture Systems & Watershed Management Research Unit USDA Agricultural Research Service University Park, Pennsylvania, USA

Institute of Hydraulics and Rural Water Management BOKU-University of Natural Resources and Life Sciences Vienna, Austria

Birl Lowery Department of Soil Science University of Wisconsin-Madison Madison, Wisconsin, USA

Loretta M. Lynch Department of Agricultural and Resource Economics University of Maryland College Park, Maryland, USA

Faculty of Regional Environmental Science Tokyo University of Agriculture Tokyo, Japan

Ballier Mollasi Great Plains Agroclimate and Natural Resources Research Unit USDA Agricultural Research Service El Reno, Oklahoma, USA

The New Zealand Institute for Plant and Food Research Limited Hamilton, New Zealand

Southwest Watershed Research Center USDA Agricultural Research Service Tucson, Arizona, USA

Sharon K. Papiernik North Central Agricultural Research Laboratory USDA Agricultural Research Service Brookings, South Dakota, USA

Linda S. Prokopy Department of Forestry and Natural Resources Purdue University West Lafayette, Indiana, USA

Zevuan Oiu Department of Chemistry and Environmental Science New Jersey Institute of Technology Newark, New Jersey, USA

Felix Kolawole Salako Department of Soil Science and Land Management University of Agriculture Abeokutá, Nigeria

Gretchen Sassenrath Department of Agronomy Kansas State University Manhattan, Kansas, USA

M.S. Srinivasan National Institute of Water and Atmospheric Research Ltd. Christchurch, New Zealand

Institute for Land and Water Management Research Federal Agency for Water Management Pöchlarn, Austria

R. Scott Van Pelt Wind Erosion and Water Conservation Research Unit USDA Agricultural Research Service Big Spring, Texas, USA

John Westra Department of Agricultural Economics and Agribusiness Louisiana State University Baton Rouge, Louisiana, USA

John D. Williams Columbia Plateau Conservation Research Center USDA Agricultural Research Service Pendleton, Oregon, USA

Wanhong Yang Department of Geography University of Guelph Guelph, Ontario, Canada

BOARD OF DIRECTORS Jon Scholl, President & At-Large Director Rex Martin, Vice President & At-Large Director Wendi Goldsmith, Secretary & Northeastern Director Don Wysocki, Treasurer & Northwestern Director Steve Kadas, Southwestern Director Bruce Knight, At-Large Director
William Kuckuck, At-Large Director
Susan Meadows, North Central Director Dale Threatt-Taylor, Southeastern Director

The Journal of Soil and Water Conservation (print ISSN 0022-4651, online ISSN 1941-3300) is published bimonthly by the Soil and Water Conservation Society. © 2016 by the Soil and Water Conservation Society. All rights reserved.

For subscriptions or membership, please visit www.swcs.org or call 800-THE-SOIL. POSTMASTER: Send address changes to Journal of Soil and Water Conservation, 945 SW Ankeny Road, Ankeny, IA 50023 USA. Periodicals postage paid at Ankeny, IA, and additional mailing offices.

Submit comments, contributions, advertising queries, and requests for reprints and permissions to the editor at pubs@swcs.org. Articles in the Research Section have undergone peer review. The Soil and Water Conservation Society assumes no responsibility for statements and opinions expressed by contributors.

Soil and Water **Conservation Society Corporate Membership**

GOLD CORPORATE MEMBERS

Agri Drain Corporation www.agridrain.com

Hickenbottom Inc. www.hickenbottominc.com

SILVER CORPORATE MEMBERS

Dairy Management Inc. www.dairy.org

The Fertilizer Institute www.tfi.org

Verdesian Life Sciences www.vlsci.com

BRONZE CORPORATE MEMBERS

Conservation Technology Information Center www.ctic.org

Ecosystem Services Exchange www.ecoexch.com

La Crosse Seed www.lacrosseseed.com

The Nature Conservance www.nature.org

Watershed Materials www.maddogfoambridges.com

White River Irrigation District

For information on becoming a corporate member, please contact

> Jamie Nieman 515-289-2331 ext. 114 corporate.info@swcs.org