

SOIL AND WATER MANAGEMENT AND CONSERVATION

SSSA DIVISION S-06

ANNUAL NEWSLETTER

OCTOBER 2011

Mission:

To implement soil and water conservation through improved land and water management using science, education, and technology transfer.



SOIL SCIENCE SOCIETY OF AMERICA CELEBRATES 75 YEARS!

The 2011 ASA-CSSA-SSSA Annual Meeting in San Antonio will showcase the 75th anniversary of the Soil Science Society of America (SSSA).

Established on 17 November 1936, SSSA has seen tremendous growth since its inception. Current membership exceeds 6,300, with 11 divisions (of which S-06 is the largest), and five journals. Such growth is consistent with the increasingly important role

SSSA members serve in addressing key issues related to food and energy production and ecosystem services.

There will be numerous events highlighting the 75th anniversary at the annual meetings in San Antonio. Related symposia are scheduled for Monday afternoon and all day Tuesday. The SSSA Plenary by Chris Mooney (author of *'Unscientific America: How Scientific Illiteracy Threatens our Future'*)

will precede the SSSA Awards Ceremony and Reception Tuesday evening. There will also be a SSSA Historical Area located in the Society Center with exhibits pertaining to the 75th anniversary. For a complete schedule, see acsmeetings.org.



URBAN SOILS: PROPERTIES, PROBLEMS AND NEEDS

Soil scientists have traditionally applied their expertise in the realm of agriculture and natural resource management. However, the unstoppable trend of rapid urban growth throughout the world creates a variety of challenges and opportunities for soil scientists. A symposium has been organized at the 2011 ASA-CSSA-SSSA

Annual Meeting in San Antonio TX to address critical issues related to urban soils. The first half of this symposium will be an overview of the prevalent chemical, physical, and biological characteristics of urban soils with an emphasis on their common problems and salient needs for restoration. Specific topics will include a case study of urban soils in

Detroit, Michigan, nutrient and carbon cycling in urban soils, and the impact of urbanization on soil ecosystem services. The second half of the symposium will focus on emerging and non-traditional soil science challenges including the design and manufacture of soils or soil amendments for specialized urban uses, such as the restoration of degraded

Inside this issue:	
Conservation Agriculture Symposium	2
Young Scholar Award	3
Outstanding Graduate Student	3
Topical Sessions	4
Soil and Water Scholarship Winner	5
Best Paper Award	5
SSSA/SWCS Symposium	5
Officers, Committees, and S-06 Website Information	6

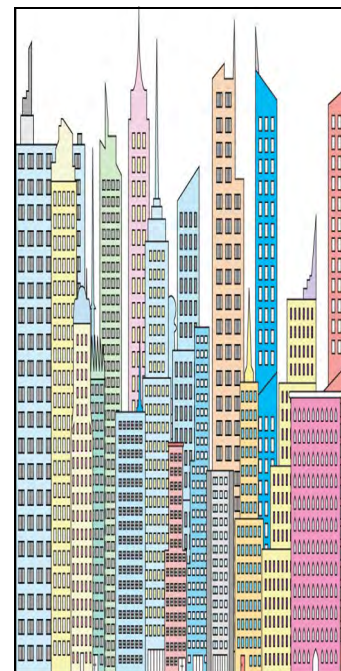
URBAN SOILS SYMPOSIUM; CONT'D

soils for urban greening projects and the manufacture of soil blends for parks, sports fields, plazas, streets, and rooftop gardens. The major theme of the symposium will emphasize the need to apply the principles of soil restoration, which include the establishment of ecosystem services normally provided by soil, to degraded urban soils or the development of soil blends and amendments

(manufactured soils). Symposium attendees will learn how soil scientists can have an important role in creating an urban environment that is environmentally sound and also improves the quality of life for large urban populations.

The symposium is scheduled for Monday, 17 October 2011 from 8:00 a.m. to 12:10 p.m. at the Henry Gonzales Convention Center, Room 217D.

Division S-06 Soil & Water Management & Conservation is sponsoring the symposium, with co-sponsorship by Divisions S-05 Pedology, S-10 Wetland Soils, S-11 Soils & Environmental Quality, and C-05 Turfgrass Science. Additional information about the symposium is available from the organizers, John Sloan, Jacqueline Aitkenhead-Peterson, Theodore Hartsig, and Richard Pouyat.



SUPPORTING ECOSYSTEM SERVICES WITH CONSERVATION AGRICULTURAL APPROACHES

Ecosystem services can be either degraded or enhanced with contemporary agricultural practices. Conservation agricultural systems are diverse, but have three key principles that can be used and modified to improve ecosystem services:

- minimizing soil disturbance;
- maximizing soil surface cover; and
- stimulating biological activity.

Climate change, food security, water quality, soil degradation, and renewable energy are contemporary issues interlinked with regulating, provisioning, cultural, and supporting services provided by ecosystems.

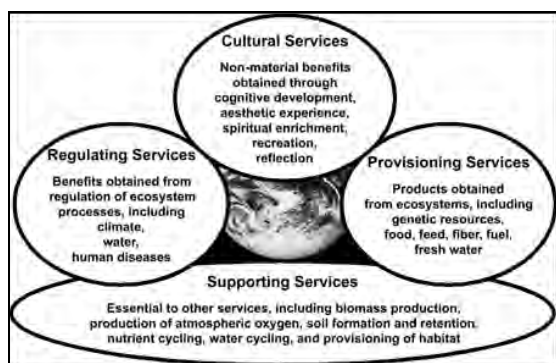
Hence, greater appreciation is needed of the value of a diversity of conservation agricultural approaches to meet the growing interest of farmers, scientists, and society in developing a more productive and healthier environment with robust ecosystem functioning, not only within traditionally cropped fields, but also in a broader view of a spatially diverse landscape that includes grasslands, forests, and wetlands.

Noted experts will gather to speak about conservation approaches that can enhance ecosystem services derived from a variety of agricultural production systems.

Speakers will address specific components of agricultural systems, such as conservation tillage, crop diversity, pasture management, organic agricultural approaches, and wetland management. Practical experiences on the farm, as well as insights from ecosystem modeling and opportunities

through government programs, will be explored to foster new ideas and new approaches towards making agricultural systems more robust and ecologically resilient within watersheds and regional landscapes.

The symposium is scheduled for Tuesday, 18 October 2011 from 8:00 to 11:40 am at the 2011 Tri-Societies Annual Meeting in San Antonio TX. Division S06 Soil & Water Management & Conservation is sponsoring the symposium, along with support from Division C03 Crop Ecology, Management & Quality, Division S03 Soil Biology & Biochemistry, S10 Wetland Soils, and ASA Communities on Land Management & Conservation and Agro-nomic Production Systems. Peer-reviewed manuscripts are being prepared by invited speakers for presentation in a special issue of a journal. For more information, please contact the symposium organizer, Alan Franzluebbers, USDA-ARS, Watkinsville GA.





Division Business Meeting

Wednesday, 10/19, 10:15–11:45 a.m.

Henry Gonzalez Convention Center, Room 207A, Concourse Level

JOSH MCGRATH SELECTED FOR YOUNG SCHOLAR AWARD

The 2011 recipient of the S-06 Young Scholar Award is Dr. Josh McGrath, Assistant Professor and Extension Specialist, Department of Environmental Science and Technology, University of Maryland, College Park, MD.

Dr. McGrath leads an active research and extension program aimed at providing science-based, reliable, and cutting-edge information in the arena of agricultural nutrient management, nutrient use efficiency, non-point source nutrient pollution and water quality protection. In just a few short years, Dr. McGrath's work has become widely recognized for its impact on sustaining agricultural productivity and improving environmental quality in the

mid-Atlantic region.

Prior to his appointment at University of Maryland, Dr. McGrath was a post-doctoral research associate at Virginia Tech University. He holds degrees from University of Delaware (Ph.D., 2004) and Johns Hopkins University (B.A., 1997).



CONGRATULATIONS!



ASIM BISWAS: OUTSTANDING GRADUATE STUDENT FOR 2011

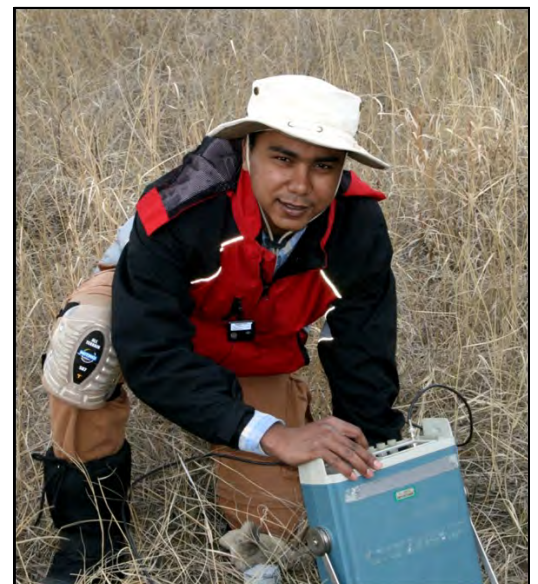
Mr. Asim Biswas has been selected as the 2011 S-06 Outstanding Graduate Student.

Mr. Biswas is a doctoral candidate studying soil physics and vadose zone hydrology under the supervision of Prof. Bing Cheng Si in the Department of Soil Science, University of Saskatchewan.

His research focuses on examining scale-dependent controls on soil water movement in complex landscapes. Mr. Biswas has developed new and innovative techniques to explore and improve the

understanding of soil water redistribution in the Prairie Pothole Region of North America. This information can be used to improve the prediction for use in environmental management and modelling of hydrological processes.

Prior to embarking on his Ph.D., Mr. Biswas received his M.Sc. in Soil Science from the University of Agricultural Sciences, Bangalore, India, and B.Sc. in Agriculture with major in Soil Science and minor in Soil Testing from Bidhan Chandra Krishi Viswavidyalaya, West Bengal, India.



S-06 TOPICAL SESSIONS: 3 DAYS, 16 SESSIONS, 178 PRESENTATIONS

Title	Date; Time; Location
Agricultural Practices to Increase Nitrogen-Use Efficiency, Carbon Sequestration, and Greenhouse Gas Mitigation: I	Monday, 10/17; 8:25-11:50 a.m.; Room 218, Concourse Level
Monitoring Water Quantity and Quality at the Field Edge: Methodologies and Case Studies: I	Monday, 10/17; 12:55-4:15 p.m.; Room 218, Concourse Level
Agricultural Practices to Increase Nitrogen-Use Efficiency, Carbon Sequestration, and Greenhouse Gas Mitigation : II	Monday, 10/17; 4:00-6:00 p.m.; Hall C, Street Level
Monitoring Water Quantity and Quality at the Field Edge: Methodologies and Case Studies: II	Monday, 10/17; 4:00-6:00 p.m.; Hall C, Street Level
Management, Methods and Models for Efficient Use of Water and Nutrients: I	Tuesday, 10/18; 8:55-11:45 a.m.; Room 213B, Concourse Level
Impact of C3 (Crop Rotation, Cover Crops, and Conservation Tillage) On Soil Quality: I	Tuesday, 10/18; 12:55-4:00 p.m.; Room 006D, River Level
Soil Conservation on the Great Plains – From Sidelines to Center Field: I	Tuesday, 10/18; 1:10-3:00 p.m.; Room 007A, River Level
Management, Methods and Models for Efficient Use of Water and Nutrients: II	Tuesday, 10/18; 2:30-4:30 p.m.; Hall C, Street Level
Impact of C3 (Crop Rotation, Cover Crops, and Conservation Tillage) On Soil Quality: II	Tuesday, 10/18; 2:30-4:30 p.m.; Hall C, Street Level
Soil Conservation on the Great Plains – From Sidelines to Center Field: II	Tuesday, 10/18; 2:30-4:30 p.m.; Hall C, Street Level
Cover Crops: Impacts on Agronomic Crops, Soil Productivity, and Environmental Quality: I	Wednesday, 10/19; 8:10-10:15 a.m.; Room 207A, Concourse Level
Bioenergy Crops and Their Impacts On Crop Production, Soil and Environmental Quality: I	Wednesday, 10/19; 8:25-11:35 a.m.; Room 206B, Concourse Level
The Development, Application and Validation of Agri-Environmental Indicators	Wednesday, 10/19; 12:55-2:45 p.m.; Room 207A, Concourse Level
Cover Crops: Impacts on Agronomic Crops, Soil Productivity, and Environmental Quality: II	Wednesday, 10/19; 2:00-4:00 p.m.; Hall C, Street Level
Bioenergy Crops and Their Impacts On Crop Production, Soil and Environmental Quality: II	Wednesday, 10/19; 2:00-4:00 p.m.; Hall C, Street Level
General Soil & Water Management & Conservation	Wednesday, 10/19; 2:00-4:00 p.m.; Hall C, Street Level

SOIL AND WATER SCHOLARSHIP WINNER: HELEN LEAVENWORTH

Helen R. Leavenworth was selected the inceptive awardee of the 2011 Soil and Water Conservation Scholarship sponsored by SSSA Division S-06 and the Agronomic Science Foundation.

Ms. Leavenworth is a senior at the University of Wisconsin-Stevens Point (UWSP), where she majors in Soil Science and minors in International Resource Management.

In addition to excelling academically in a challenging curriculum at UWSP, Ms. Leavenworth currently coordinates a major research project addressing nutrient loading in the Wisconsin Horicon marsh. The project, conducted through the UWSP

Soil and Water Conservation Society Student Chapter, aims to provide critical information to improve soil management of agricultural lands adjacent to the Horicon marsh.

Ms. Leavenworth has received numerous honors and awards, and was most recently selected as the UWSP SSSA 2011 Outstanding Senior.

In her free time, Ms. Leavenworth enjoys hiking, kayaking, gardening, and music. She also travels extensively to Central America, Australia, and Europe to broaden her appreciation of natural resource issues around the world.



SAXTON AND RAWLS RECEIVE S-06 BEST PAPER AWARD



A 2006 paper by Keith Saxton and Walter Rawls was selected as the 2011 S-06 Best Paper Award (*Saxton, K.E., and W. J. Rawls . 2006. Soil water characteristic estimates by texture and organic matter for hydrologic solutions. Soil Sci. Soc. Am. J. 70: 1569-1578*).

Their paper was selected from S-06 papers published in the last seven years that have had exceptional impact on the scientific community. Criteria for selection includes 1) content and advancement of knowledge, 2) communication and presentation, 3) originality, 4) citation, and 5) overall impression. As of Oct 2011, their paper had been cited 98 times (Source: scopus.com).

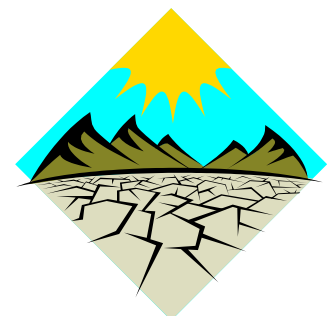


SSSA/SWCS JOINT SYMPOSIUM ON CLIMATE CHANGE MITIGATION AND ADAPTATION

Jr. Jorge Delgado, SSSA/SWCS Liaison, has organized a Z Series Special Session on conservation and adapting to climate change.

Through six invited talks, the session will contribute the discussion between NRCS staff, scientists, extension educators, policymakers, and others about how conservation practices may be able to mitigate and/or adapt to the effects of climate change.

The session is scheduled for Tuesday, 18 October, from 9:00 a.m. to 12:00 p.m. in Room 006D (River Level). A poster session on the same topic is scheduled that afternoon, with authors present from 2:00 to 4:00 p.m.



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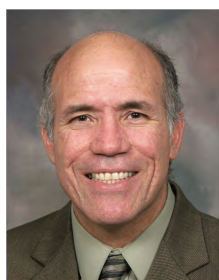
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S-06 COMMITTEES

Annual Meeting Program

Chair – Mark Liebig

Nominating

Chair – Harry Schomberg

Member – Neil Hansen

Member – Brian Wienhold

SSSA – SWCS Joint Symposium

Chair – Jorge Delgado

Member – Clark Gantzer

Member – Donald Tanaka

Member – Warren Busscher

Young Scholar Award

Chair – Harry Schomberg

Member – Neil Hansen

Member – Brian Wienhold

Graduate Student Award

Chair – Clark Gantzer

Member – Zhi (Luke) Wang

Member – Tom Schumacher

Soil and Water Conservation Scholarship

Chair—Jerry Lemonyon

Member—Seth Dabney

Member—Tommy Daniel

Member—Bill Kuenstler

Member—Greg Hoyt

Best SSSAJ S-06 Paper

Chair – Jane Johnson

Member – David Huggins

Member – Maysoon Mikha

Member – Jason Warren

Member – Craig Drury

Member – Hero Gollany

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