

Annual Reports

S - Div. S-6, Soil and Water Management and Conservation Officers (S011.06)

2006 Annual Report

SSSA Division S-6
Soil & Water Management & Conservation
Annual Report 2006

2006 ANNUAL MEETINGS

One hundred and seventy six papers (176) were submitted to Division S06 for the 2006 meetings in Indianapolis. Of those 176 papers, 108 were poster papers and 68 were oral papers, which included 27 presentations by invited speakers (19 non-members).

2006 S-6 SYMPOSIA

This year, each division was limited to two (2) symposia. In addition, S-6 takes a lead role for SSSA in developing the SSSA-SWCS Joint Symposium, which is a society level symposium. We also sponsor the Howard M. Taylor Lectureship.

Symposium 1: "Management and Use of Waters of Altered or Impaired Quality"

Growing demands for use of existing water resources has resulted in need to address issues of management and use of waters of altered or impaired quality – whether to satisfy water use demands which exceed currently available supplies, to minimize undesirable impacts of reuse of impaired water, to mitigate such impacts as may occur or be anticipated, or to extend existing water resources. The intent of this symposium and associated poster session is to bring together researchers addressing issues of characterization, assessment, practical management, and challenges of use and re-use of waters of impaired quality. This combined invited speaker and volunteer poster symposium will address a multitude of aspects of water reuse and impaired water use and management.

The symposia will consist of presentations covering an overview of political, social, legal and regulatory constraints to use of impaired water, followed by presentations focused on specific venues which result in impaired water and subsequent management uses, opportunities, and challenges. Invited speakers will define how and what impairs water, the role of agriculture in impairment and mitigation, and what constitutes impairment. Speakers will present case studies, works in progress, and the state of knowledge and understanding of management and use of impaired water. Topics to be addressed include municipal water reuse, water management associated with energy extraction and production, mineral extraction and water management, irrigation drainage water re-use, bacterial contamination and impairment, and emerging issues related to impaired water use and management. A closing speaker will provide a summary, after which time will be allowed for questions, discussion, and audience interaction with speakers. A facilitated poster session will follow the oral presentations.

Time: 9:15 AM – 3:30 PM, Monday, November 13th ; Poster session 4:00-6:00 PM, Monday November 13th

Place: Indiana Conv. Center, Room 107, First Floor

Organizers: James Bauder and Michael Singer

Symposium 2: "Sediment Pollution from River Bank Erosion: Characterization and Budget"

Sediment pollution is one of the major causes of surface water impairment. In some rivers, as much as 70% of the sediments may be from riverbank sloughing/erosion. Because the source of these sediments is right next to a river, almost all of these sediments contribute directly to river water pollution. Comparatively, only a fraction of the upland sediment may actually reach surface waters. This source of sediment pollution has been relatively unknown to most of the public and as a result, has received limited attention from scientists and policy makers. Our next challenge in soil erosion/water quality research is to quantify the extent of sediment pollution from riverbanks, identify the underlying mechanisms of mass wasting and bank scouring, and develop possible remediation strategies to control bank erosion pollution. This symposium will bring together experts conducting research in this area and summarize the current knowledge and potential opportunities for future research on sediment pollution from bank erosion. The invitees include Soil Scientists, Geomorphologists, Geographers, Remote Sensing Experts, Water Quality Experts, Hydrologists, and Engineers

Time: 7:55 AM – 4:00 PM, Wednesday, November 15th and 7:55-10:10 AM, Thursday November 16th; Poster Session 4:00-6:00 PM, Tuesday November 14th

Place: Indiana Conv. Center, Room 106, First Floor

Organizers: Satish Gupta and Jerry Ritchie

Howard Taylor Lectureship

This year's Howard M. Taylor Lecture on Root-Soil Relationships will be given by Dr. Meine van Noordwijk, International Centre for Research in Agroforestry (ICRAF), Southeast Asia Regional Coordinator and senior soil ecologist based in Bogor, Indonesia. Dr. van Noordwijk has been responsible for shaping the content and assuring the quality, relevance, integration, planning, implementation and effective delivery of ICRAF's activities in the region. Before joining ICRAF he was a senior research officer in the Root Ecology Section at the DLO Institute for Soil Fertility Research in Haren, the Netherlands, concentrating on the relationships between soil fertility, nutrient use efficiency and root development of crops and trees in various temperate and tropical agroecosystems. He also worked for 2 years as a lecturer in botany and ecology at the University of Juba (Sudan). Born and educated in the Netherlands. The title and abstract of his presentation follow:

Root Distribution Effects on Tree and Crop Water Uptake in Agroforestry: Competition and Facilitation.

Water uptake in crop monocultures under the influence of fine root dynamics and plant physiological characteristics is still largely understood as in the active research period of HM Taylor. Taking these principles to mixed cropping systems and agroforestry in a range of climates, however, still yields surprises as the combination of competition and facilitation remains difficult to predict. The (re)inclusion of trees in agricultural production landscapes affects processes from root to watershed scale, with interactions that are hard to unravel experimentally at the relevant spatial and temporal scales. Simultaneous hydraulic redistribution via tree and crop root systems and the local and functional equilibrium responses in fine root dynamics of all plants are essentially understood at process level, but only recently represented in dynamic simulation models. The lecture will provide examples of applications of the WaNuLCAS 3.1 model to early stages of introduction of timber trees into cassava systems on poor soils in Lampung (Indonesia), parkland systems in the dry

savannah zone of Burkina Faso, trees of different phenology in Kenya and emerging silvoarable systems in southern France.

Time: 8:25-9:45 AM, Tuesday November 14th

Place: Indiana Conv. Center, Room 107, First Floor

Convener: Bobbie McMichael

2006 Lectureship Committee: Bobbie McMichael, Diane Stott, Tom Kaspar, Jorge Delgado, Ken Van Rees, Kelly Morgan, Andres Quincke.

SSSA – SWCS Joint Symposium

Workshop: Advances of Nitrogen Management Practices for Water Quality

Time: 12:30-5:00 PM, Sunday November 12th

Place: Marriott, Marriott Ballroom 9-10, Second Floor

Organizing Committee: Warren Busscher, Jorge Delgado, Mike Lindstrom, Jeff Vonk

S06 Listserv

To unsubscribe from s06 Listserv:

Send an email to s06-request@acs-net.soils.org and put "unsubscribe" (just the word without quotes) in the Body of the message. Please do not type anything else in the Subject line or Body of the message. Also, be sure that your default signature is not included in the message.

To subscribe to the S06 Listserv:

Send an email to s06-request@acs-net.soils.org and put "subscribe" (just the word without quotes) in the body of the message. Please do not type anything else in the Subject line or Body of the message. Also, be sure that your default signature is not included in the message.

DIVISION S-6 CONTACT INFORMATION

Chair (2006), Tom Kaspar, kaspar@nstl.gov

Chair-Elect (Chair, 2007), Ted Zobeck tzobeck@lbk.ars.usda.gov

Incoming Chair-Elect (Chair, 2008), Brian Wienhold bwienhold1@unl.edu

Past Chair (Chair, 2005), Diane Stott destott@purdue.edu

Board Representative (2006-2008), Diane Stott destott@purdue.edu

SSSA Journal S-6 Technical Editor, Seth Dabney sdabney@ars.usda.gov

SSSA Rapid Response Contact, Div S-06 (2007), Diane Stott destott@purdue.edu

S-6 Committees

2007 S-6 Program (Indianapolis, IN, Nov. 12-16)

SSSA Division S-6 2007 Chair, Ted Zobeck,

Send Ted ideas for 2007 symposia and special sessions. Better yet, volunteer to organize a symposium for the next meeting. It's a great way to become involved. Topics will be discussed during the S-6 Division Business Meeting. Currently, we are allowed two symposia at the annual meeting. We can also organize non-funded oral or poster sessions around specific themes.

2007 Nominating Committee

Chair, 2007 (2009) Tom Kaspar, kaspar@nstl.gov

Member (2008) Diane Stott, destott@purdue.edu

Member (2007) Jorge Delgado jorge.delgado@ars.usda.gov

On Nov. 9, 2006 at 5:00 PM CST we will close nominations by email for Chair-Elect. Nominations for 2007 chair-elect can still be made at the business meeting on Tuesday Nov. 14 at 10:00 AM in the Indiana Conv. Center, Room 107, First Floor. Make sure that the nominee has agreed to serve. Two nominations are necessary for a candidate to be considered. So far we have three candidates: Louis Baumhardt, Neil Hansen, and Don Tanaka. The process for soliciting nominations has changed to meet the new deadline. Nominations were taken by email before the annual meetings. There were no nominations from the floor during the business meeting. A runoff election was held to narrow the list to two candidates. Nominations for the runoff election were Louis Baumhardt, Neil Hansen, and Don Tanaka. Tom Kaspar circulated bio's and coordinated the runoff election.

The runoff election concluded on 12-15-06. The nominees for general Division S06 2008 chair elect are Neil Hansen and Don Tanaka.

SSSA – SWCS Joint Symposium

Chair, Warren Busscher, busscher@florence.ars.usda.gov

Member, Jorge Delgado, jorge.delgado@ars.usda.gov

Member, Mike Lindstrom, lindstrom@morris.ars.usda.gov

Member, Jeff Vonk, jeff.vonk@dnr.state.ia.us

2007 Howard M. Taylor Lectureship Committee

The membership of this committee is appointed in part by the SSSA President-Elect, but contact any of the following for information, interest in serving on the committee in the future, or for suggestions for next year's selection for lecturer.

2007 Chair, Tom Kaspar, kaspar@nstl.gov

2007 Chair-Elect, Ted Zobeck tzobeck@lbk.ars.usda.gov

2007 Member, Diane Stott, destott@purdue.edu

2007 Member, Bobbie McMichael, bmc michael@lbk.ars.usda.gov

2007 Member, Ken Van Rees, vanrees@sask.usask.ca
2007 Member, Kelly Morgan, ktm@ifas.ufl.edu
2007 Member, Andres Quincke, aquincke@le.inia.org.uy

2007 Young Scholar Award Committee
Chair, Tom Kaspar, kaspar@nstl.gov
Member, Diane Stott, destott@purdue.edu
Member, Jorge Delgado, jorge.delgado@ars.usda.gov

2007 Graduate Student Award Committee
Thanks to Ken Potter, who is rotating off this committee. Remember to nominate deserving graduate students for this award.

Chair, , Clark Gantzer, GantzerC@missouri.edu
Member, Zhi (Luke) Wang, zwang@csufresno.edu
Member, Tom Schumacher, Thomas_Schumacher@sdstate.edu

2006 S06 Business Meeting

Business Meeting Agenda

Awards

Board of Directors Report

SWCS Liaison Report

Division S06 Technical Editor's Comments

Nominations for Chair-Elect 2008

2007 Symposia Discussion

Best Paper Award Discussion

General Business, Announcements, and Discussion

Introduction of the New Chair and Chair-Elect

Adjourn

The business meeting was called to order by Chair Tom Kaspar at 10:00 a.m. Tuesday November14, 2006, in Indianapolis Convention Center, Room 107, First Floor

Awards

UNDERGRADUATE STUDENT SPEECH CONTEST

Division S-6 sponsored an undergraduate student speech contest in conjunction with the A-01 student speech contest at the annual international meetings in Indianapolis on Sunday, November 12, 2006. Ten students competed in the preliminary round and six of the ten contestants advanced to the finals. Two of the six students in the finals addressed topics relevant to the goals and ideals of division S-6. The contest winner was Anthony Ruiz, from the Agricultural Education Department at Oklahoma State University. Anthony speech addressed "Can agricultural producers be both productive and environmentally friendly?" Anthony was presented a plaque at the student awards banquet and will receive an award of \$200 and a one year membership in the Soil and Water Conservation Society. Division S-6 volunteer judges were: Neil Hansen, Mark A. Liebig, Bill Kuenstler, Steven Green, James B. Cropper, Chris Baxter, Ali Fares, David Hanson, and Ann-Marie Fortuna.

There was discussion among some of the judges, the A-01 speech contest committee, and club advisors about the cooperation of division S-6 with the ASA A-01 contest. Several people indicated that student clubs are aware of the additional award that S-6 offers and that some students may plan to select a topic that relates to soil and water conservation in order to increase their odds of winning prize money. Although results from recent contests do not support the claim, some argued that the contest may now have a bias toward more S-6 relevant topics. There was also some concern expressed that volunteer judges are disproportionately from division S-6. These concerns were expressed by a minority of those in the discussion and there was no motion to make a change in the current approach for a cooperative contest.

Neil Hansen will chair the S-6 committee one more time in 2007 and then will nominate a replacement. Steven Green from Arkansas State has expressed a willingness to serve in this capacity.

S-6 GRADUATE STUDENT AWARD

2006 Recipient: Ms. Holly Dolliver

The Graduate Student Award recognizes graduate students for outstanding contributions to Soil and Water Management and Conservation through their dissertation research. Candidates for this award are nominated by their major professors or department awards committee.

Holly obtained her B.S. in Soil Science from North Dakota State University in 2001. She obtained an M.S. in Water Resources Science from the University of Minnesota in 2003. Holly is pursuing her Ph.D. in Water Resources Science under the direction of Dr. Satish Gupta in the Department of Soil, Water, and Climate at the University of Minnesota. She is currently

finishing her dissertation research on the fate and transport of antibiotics from manure-amended soils.

2006 Graduate Student Award Committee: Ken Potter (chair), Clark Gantzer, Tom Schumacher.

S-6 YOUNG SCHOLAR AWARD

2006 Recipient: David Robinson

The Young Scholar Award recognizes scientists who have made an outstanding contribution in Soil and Water Management and Conservation within seven years of completing their Ph.D. Candidates for this award are nominated by their departments.

David obtained his BSc in Soils and the Environment with Sedimentary Geology from Reading University, UK. He obtained his Ph.D. from the University of Ulster/Institute of Hydrology in 1998 focusing on water content measurement and soil processes under irrigated crops. He worked for 2 year as postdoc in Israel at the Volcani Center, improving water content and salinity determination in soils. And then moved to the USDA Salinity lab focusing on water content determination and geophysical mapping of soil properties. Currently he is a staff scientist in the Department of Geophysics, Stanford University and is acting as operations director for the Consortium of Universities for the Advancement of Hydrological Sciences Inc. The focus of this work is to coordinate the development of a community hydrologic measurement facility. He also holds an appointment as Assistant Professor in the Department of Plants, Soils, and Biometeorology at Utah State University. His research has been focused on developing and applying new methods that can be used to provide better characterization of soil properties, especially water content and soil structure. He has worked on water content determination in soils using TDR, TDT, capacitance probes, and impedance probes. Other research areas include field hydrology, mapping soils using EM methods, structural characterization and electrical properties of soils, and avalanching of granular materials. He received the Vadose zone editors citation for excellence in 2004 and the S1 soil physics early career award in 2005. David has authored/co authored 34 peer reviewed papers and most recently contributed to 3 white papers providing a vision for hydrological measurement in the US.

2006 Young Scholar Award Committee: Diane Stott (chair), Jorge Delgado, Gary Peterson

2006 Best Paper Award

The best paper award will not be awarded in 2006. At last years meeting it was decided to let the technical editor and associate editors for S-6 make the selection from the papers they handled. This proved to be unworkable and technical editor did not receive enough input from the associate editors to make this possible. Discussion of this award will be part of the S-6 division Business Meeting on Tuesday, November 14th.

Board of Directors Report

Reporting: Diane Stott, S-6 Board of Directors Representative

The SSSA Board of Directors held a retreat in August. Following the first SSSA Board meeting in Indianapolis members were asked to begin implementing the strategic plan. This plan will be implemented utilizing member leadership. Brochures are available for the activities needing participants. At the board meeting three Task Forces were approved: 1) K-12 education, 2) joint efforts with CSSA and ASA to enhance annual meetings, and 3) Ohio and Florida joint efforts. Fund raising for the Smithsonian Soils Exhibit is going well. \$2.1 million of the \$2.5 million needed to fund the DC exhibit has been raised. Wilding's have donated matching funds for the DC or traveling soils exhibit. The Fertilizer Institute donated \$1 million. A Soils Caucus has been established in the U.S. House of Representatives and policy updates are available. The next meeting will be in New Orleans on Nov 4- 8, 2007.

SWCS Liaison

Reporting Warren Busscher

Joint Symposium of SWCS and SSSA: The 2006 symposium was "Advances of Nitrogen Management for Water Quality." It is the 7th in the series of joint SWCS and SSSA symposia. It was both a workshop on the NLEAP model and a symposium of three talks at the SWCS meeting in Keystone, CO, July 22 to 26. The workshop was full with 20 participants. It was presented by Chris Gross, Jerry Lemunyon, Marv Schafer, and Jorge Delgado showcasing the new NLEAP model and N Index version 1.0. Participants were given a copy of the model and received hands-on training to assess natural resources concerns.

The talks at the SWCS meeting were moderated by Jorge Delgado: Management of Nitrogen to Reduce losses in Primary and Secondary Pathways throughout the Environment by Ron Follett. Water Management: A Key to Reduce Nitrogen losses by E. John Sadler. A New Generation of Nitrogen Leaching Index and Potential use for Evaluation by Jorge Delgado

At the SSSA meeting in Indianapolis, IN, the symposium held on Sunday November 12 involved the workshop that had 35 participants and a facilitated poster session with 9 participants. The workshop, talks, and facilitated poster presentations summarized recent advances in nitrogen management that preview contents of a book developed with support from USDA-ARS, and USDA-NRCS. The symposium was presented by Chris Gross, Jerry Lemunyon, Marv Schafer, and Jorge Delgado. Warren Busscher facilitated the poster session.

Soil Research Award:

As a result of our work on the liaison committee, the SWCS Board of Directors approved a Conservation Research Award. Though other awards can be given for research accomplishments, this is the only award aimed at specifically at researchers. The award is listed on the web site www.swcs.org under Awards and 'New' Conservation Research Award. The award will be offered in 2007, the deadline for nominations is December 12.

Next Year's Symposium

The committee is developing the 8th joint symposium based on 'Energy and Agriculture' focusing on energy production from agriculture and energy usage by agriculture. For SWCS, the symposium is being developed along with the main program committee who hopes to have a plenary session and at least one symposium related to Energy and Agriculture. The 2007 SWCS Annual Meeting will be held in Tampa Florida from July 21-25.

Division S-6 Technical Editor's Comments

Seth Dabney Reporting

The SSSAJ is making a profit and supporting the society.

The new Managing Editor is Rebecca Funck. She is changing the look and feel of the Journal by changing the type font to Garamond, which will reduce printed article page numbers by 10%. Publishing is being moved in house with the next issue, which will increase the flexibility and reduce the cost of adding color or publishing supplemental information in the on-line version

The board recommended changing from the current flat publication fee to a per page charge to be set by the Budget and Finance Committee such that it is revenue neutral to the present situation. The board also voted, by a narrow 16-13 margin, to recommend that a differential cost for members and non-members be retained.

Three special sorts of papers were discussed: "Special Topics," "Issue Papers," and "Review Articles." Review guidelines for these sorts of papers will be drafted by a subcommittee. Current "Special Topics" areas are "Urban Soils" and "Landscape Management." These will be retained for another year. New topics of interest are solicited. Issue Papers explore the relationship of soil science to society, policy, and legislation. S-6 accepted an issue paper this year that deals with long-term agricultural research. Review articles should be narrowly focused reviews of the state of science. Volunteered reviews will be accepted and each Technical Editor can solicit two "invited review" papers that must be completed within 1 year of invitation and will be published without page charges. For 2006, I have been trying to get authors to accept reviews in the areas of "the state of soil erosion modeling" and "nutrient management in conservation tillage systems" haven't yet been successful. I solicit your suggestions for suitable subjects and potential authors for S-6 invited reviews.

S-6 received a steady stream of papers at a similar rate of 85 to 90 per year. The division has 12 Associate Editors. Outgoing Associate Editors are Clark J. Gantzer (6 yrs.), Fred E. Rhoton (3 yrs.), Manoj K. Shukla (3 yrs.), Clinton C. Truman (1 yr.), and Brian J. Wienhold (6 yrs.). Terry A. Howell has been appointed for a second 3 year term. Incoming Associate Editors are Humberto Blanco-Canqui, Neil C. Hansen, and April B. Leytem.

Nominations for Chair-Elect

The process for soliciting nominations has changed to meet the deadline. Nominations were taken by email before the annual meetings. There were no nominations from the floor. A runoff election will be held to narrow the list to two candidates. Nominations for the runoff election are Louis Baumhardt, Neil Hansen, and Don Tanaka. Tom Kaspar will circulate bio's and coordinate the runoff election.

The runoff election concluded on 12-15-06. The nominees for general Division S06 2008 chair elect are Neil Hansen and Don Tanaka.

2007 Symposia

At the 2006 Annual Meeting Division S-6 sponsored two symposia plus the joint SWCS workshop. In addition there were special topic sessions. Ted Zobeck, Incoming Chair, has received four suggestions for next year: 1) Biofuels (overlaps with the SWCS topic), 2) Soils as a dumping ground, 3) History of Soil and Water Conservation (100 anniversary of ASA), and 4) State of erosion prediction technology. Other ideas can be submitted to Ted.

General Business Items

There were a total of 176 papers presented within Division S-6 with 108 posters and 68 oral papers. Twenty-seven of the papers were invited.

List-serve issues with requests to be removed from the list have been resolved.

Best Paper Award Discussion. The "Editor's Choice" paper award didn't work out. There weren't enough nominations. An S-6 committee has been formed to develop and apply criteria for a "best paper" award. This 'best paper' will be selected based on impact over the last 3 to 5 years rather than trying to identify a quality paper the year of publication. Committee members are Diane Stott and Jeff Strock. Others interested in being on the committee can send a message via the list-serve.

Tom Kaspar thanked all committee members for their work during the year.

New Business

None

New Division Chair for 2007 is Ted Zobeck

New Division Chair Elect Brian for 2007 is Brian Wienhold

Meeting Adjourned at 11:15 a.m.

Business meeting minutes submitted by Brian Wienhold, Incoming Chair-Elect.

Items Requiring Board Attention:

Members of the Committee:

Ted Zobeck (Chair, Div. S-6)

Brian Wienhold (Chair-Elect, Div. S-6)

Thomas Kaspar (Past Chair, Div. S-6)

Diane Stott (Div. S-6 Bd. Rep.)

Prepared By:

Thomas C. Kaspar