

S4S 2005 Highlights

The Science for Sustainable (S4S) Working Group provides input to CSREES programs, working groups, and educational activities to advance the knowledge and application of sustainability principles in CSREES programs and procedures. Comprised of national program leaders and specialists whose programs encompass sustainability in agriculture, communities, and forestry, the S4S team and individual members completed several projects in 2005 which better position the agency and its partners to serve stakeholders who are interested in and committed to sustainability. This summary highlights some of the S4S accomplishments in 2005. For more information on S4S, please see the [S4S webpage](#) or contact [Alexandra Raver](#), the S4S Coordinator.

S4S: Sustainable outcomes through grant programs and funded projects, partnerships, external education, and internal education and seminars

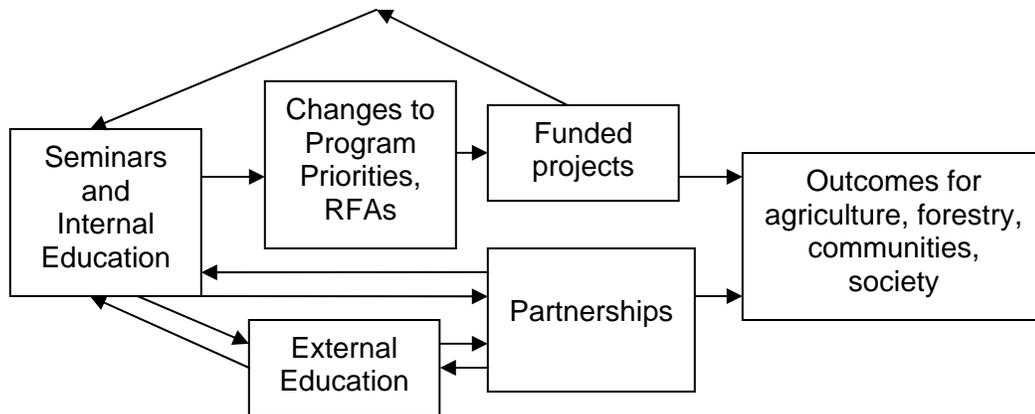
CSREES competitive grant programs had an increased focus on sustainability in 2005, in part due to actions of S4S members. Sustainability was newly incorporated into twelve competitive funding programs across units in the agency, including programs in SERD, NRI, and SBIR.

Additionally, S4S members worked in partnership with multiple sustainability committees, interagency working groups, roundtables, university task forces, and beyond to expand the research education, and extension efforts in sustainability. Examples include the newly expanded Sustainable Forests Partnership, the USDA Council on Sustainable Development, the Lawns and Environment Steering Committee.

CSREES program staff had the opportunity to give talks, publish papers, and develop a variety of educational tools that informed various professional and end-user audiences. The ultimate outcome of these efforts was that partners and stakeholders are better able to make informed decisions.

S4S also sponsored seminars, discussions, and other “internal education” at CSREES in order to expand understanding and expertise about sustainable agriculture, forestry and community development among program staff and administrators. This, in turn, influences a variety of agency efforts more visible to external partners, such as program priorities and activities with other agencies and partners.

These activities work together to bring economic, environmental, and social benefits to agricultural and forest land managers, communities, consumers, and society as a whole, as shown in the following diagram, and detailed in the report that follows.



Grant Programs and Funded Projects

Expected outcomes: We expect that these changes will lead to funded projects that will incorporate sustainability concepts and interdisciplinary thinking into university programs, and ultimately lead to improved human capital in issues pertaining to sustainability.

CSREES increased focus on sustainability in 2005 in competitive and formula grant programs through RFA modifications and developments and funded program results. Some highlights from programs include:

- Sustainability was incorporated into the National Needs Graduate Fellowships program where one of the targeted expertise shortage areas is now: “Training in sustainable sciences (environmental, social and economic disciplines)...” For more information, please contact [Audrey Trotman](#).
- In the Multicultural Scholars RFA, sustainability was included in the wording of the funding preferences and relevant disciplines. For more information, please contact [Audrey Trotman](#).
- The Agroecosystem cluster of the National Research Initiative emphasized sustainability with the goal of “...productive agriculture that sustains yields and rural prosperity while minimizing the negative environmental impacts of agricultural practices and technologies on surrounding natural ecosystems. Addressing the degree to which agriculture is sustainable is a critically important goal relevant to all USDA mission areas.” This cluster includes seven NRI programs, including Soil Processes, Water and Watersheds, Air Quality, Managed Ecosystems, Biology of Weedy and Invasive Species in Agroecosystems, Rural Development and Agricultural Prosperity for Small and Medium-Sized Farms. For example,
 - The NRI Program “Agricultural Prosperity for Small and Medium-Sized Farms” funded 15 integrated research, education and extension projects totaling \$5 million in 2004 and 2005 (\$2.5 million each year). These projects were chosen because they meet the program focus to foster interdisciplinary studies and improve our understanding of the interactions between the economic, social,

biological and environmental components important to small farms and rural economic development. For more information, please contact [Diana Jerkins](#), [Alexandra Raver](#), or [S. \(Suresh\) Sureshwaran](#).

- The Small Business Innovation Research new grant program for Small and Mid-Sized Farms, had the objective “to promote and improve the sustainability and profitability of small and mid-size farms and ranches.” For more information, please contact [S. \(Suresh\) Sureshwaran](#) or [Charles Cleland](#).
- The new SBIR program on Animal Waste Management funded 8 projects in 2005, including energy recovery through methane digestion and other environmentally sustainable focus topics. [Richard Hegg](#)
- The Sustainable Agriculture Research and Education (SARE) program made about 200 grants, including a new graduate student program and a new Sustainable Community Grants program in partnership with the regional Rural Development Center. Outcomes included new knowledge, professional development for Extension educators and others, and application of knowledge by farmers and ranchers – as evidenced by Western SARE’s evaluation of its Farmer/Rancher grants, see wsare.usu.edu/pro/pdf/FRSurveySum05.pdf. For more information, please contact [Jill Auburn](#).

Partnerships

CSREES participated in a number of partnership efforts with universities and non-profit organizations in order to expand the research, education, and extension efforts in sustainability. Here are some highlights of partnerships of S4S members in 2005 that related to sustainability:

- S4S worked with the Sustainable Forests Partnership team to organize, facilitate, and document the activities of SFP Expansion Conference in May 2005 and a special annual meeting to review new governance documents and the Memorandum of Understanding. Since then, five more universities have joined the partnership, including the College of the Menominee Nation. For more information, please contact [Eric Norland](#) or [Christy Kuczak](#).
- S4S members worked as a part of the Executive Leadership Team, Core Group, and Roundtable on Sustainable Forests. They worked closely with the Co-Chairs of the Roundtable, Jim Finley (Penn State University), Dick Brinker (Auburn University), and Joel Holtrop, USDA Forest Service Deputy Chief, National Forest System, to support the leadership and management of the Roundtable by developing agenda items, suggesting speakers, facilitating meetings, and more. One member facilitated a special meeting of the Roundtable involving 30 experts on soil, water and carbon from industry, government and the non-profit sector who provided recommendations for the international sustainability forestry protocol known as the Montreal Process Criteria and Indicators. For more information, please contact [Eric Norland](#) or [Christy Kuczak](#).

- CSREES provides both substance and process support for the USDA Sustainable Development Council by hosting the listserv, organizing information for the new web presence, organizing seminars, and sharing information with colleagues across USDA. www.usda.gov/oce/sustainable. For more information, please contact [Greg Crosby](#).
- An S4S member was a US Government Advisor through the State Department and USDA to the 13th United Nation's Commission on Sustainable Development in the areas of education and partnerships. For more information, please contact [Greg Crosby](#).
- The National Network for Sustainable Living (NNSL) was formed in 2005. CSREES worked with partner universities to form this new network designed to share information and develop a camping sustainability certification program, among other things. For more information, please contact [Greg Crosby](#).
- With funding support and program leadership from CSREES, NRCS and the USDA Forest Service, My Community, Our Earth (MyCOE) Geographic Learning for Sustainable Development (www.sdp.gov) launched a regional initiative in U.S. states that border the Gulf of Mexico and the Greater Caribbean Region that provided modest stipends and dedicated support to a limited number of university students and their universities to work with local community projects through 4-6 month experiences at sites in Puerto Rico, Honduras, Jamaica, Panama, and in U.S. states that border the Gulf of Mexico. For more information, please contact [Greg Crosby](#).
- A S4S member served on the Lawns and Environment Steering Committee, comprised of non-profit organizations, USEPA, and private industry. The committee has published "Environmental Guiding Principles" which describe how homeowners can implement sustainability principles in their home landscapes. A CSREES Innovation Grant, in cooperation with other organizations and agencies supported a one-day, nationwide web-based training session for Extension faculty, Master Gardeners, and other interested persons. This work will allow everyone to enjoy a healthier home environment while improving the appearance of their landscaping. For more information, please contact [Jim Green](#).
- S4S members worked on the interagency Animal Feeding Operation Work Group involving CSREES, USEPA, ARS, and NRCS. Six workshops were conducted to help formulate research priorities. Richard and Mary Ann serve as Co-Chairs of the work group. For more information, please contact [Richard Hegg](#), [Mary Ann Rozum](#) or [Mervalin Morant](#).
- A S4S member provided leadership and collaborated with State and Federal agencies and Land Grant Universities on sustainable integrated pest management demonstration projects. A partnership among the University of California, Davis, the California Department of Agriculture, and the U.S. Army Environmental Center, completed a successful demonstration project on the sustainable integrated control of

invasive yellow starthistle on military training areas of Fort Hunter Liggett, CA. A second partnership among the USDA, Agriculture Research Service, the U.S. Environmental Protection Agency, Clemson University and the U.S. Army Environmental Center completed a demonstration project on the sustainable integrated control of invasive imported red fire ants at Fort Jackson and McEntire Air National Guard Base, SC. For more information, please contact [Herb Bolton](#).

- S4S members completed an Inventory of academic courses in the Natural Resources and Environment, Agriculture, and Life Sciences sectors at 1890 and 1994 institutions. Results were presented by Dan Kugler to the American Indian Higher Education Consortium (AIHEC) and Eric Norland, George Godfrey, and Christy Kuczak to the Inter-tribal Timber Council (ITTC). As a result of this work a group of tribal college faculty and administrators established the Tribal Colleges and Universities Natural Resources Task Force to address natural resources and environment challenges and opportunities at the tribal colleges and universities. For more information, please contact [Christy Kuczak](#) or [Antonio McLaren](#).
- An S4S member led the interagency task force, Extramural Programs for Research on Invasive Species (EPRIS) Interagency Working Group that includes representatives from five agencies (CSREES, NOAA, EPA, NSF, ERS) that seeks to coordinate federal-sponsored research focusing on invasive species. The task force helped organize a CSREES-NSF-EPA Interagency PI meeting Oct. 17-19, 2005 at CSREES headquarters which led to the creation of an invasive species tools website <http://www.bio.miami.edu/nsfinvdb/index.htm>. For more information, please contact [Michael Bowers](#).
- Resulting from CSREES funding in 2003 (CRIS #0196693), Auburn University started a campus-wide Sustainability Initiative (www.auburn.edu/projects/sustainability/index.php) including a recycling program, a new interdisciplinary freshman course, and a War on Hunger Student Campaign in partnership with the U.N. World Food Programme. For more information, please contact [Jill Auburn](#).

External Education

CSREES program staff gave talks, published papers, and developed a variety of educational tools that informed various partner and external audiences. Here are some of the highlights from 2005:

- [Dan Schmoldt](#) co-authored a keynote address, "Information and Knowledge Management in Support of Sustainable Forestry: A Review," presented at the conference, "Sustainable Forestry in Theory and Practice" in Edinburgh, UK, April 5-8, 2005. This keynote will be published in 2006 as a chapter in a book of the same name, for which Schmoldt also co-authored an overview chapter.
- [Christy Kuczak](#) was an author on a peer-reviewed journal article of the Sustainable Forestry Partnership that is an online publication of the Multiple Perspectives on the

National Report on Sustainable Forests 2003 (accessible at <http://www.sustainableforests.net/perspectives/index.php>) in preparation for publication in 2006 in a special electronic edition of the Journal of Forestry.

- The Sustainable Agriculture Network of the SARE program updated its book and on-line database of innovative farms, "The New American Farmer" (www.sare.org/publications/naf.htm). For more information, please contact [Jill Auburn](#).
- [Jill Auburn](#) was an invited lecturer on sustainable agriculture to the agribusiness class of the graduate school of the Industrial College of the Armed Forces (March, 2005).
- SARE and Community Food Project representatives from CSREES, SARE national staff, and grantees, made presentations at the Smithsonian Folklife Festival on the National Mall in Washington, DC. The festival attracts approximately 1 million visitors, and many of these were educated about sustainable agriculture and its relationship to the food they buy and consume because of the presentations by CSREES and our partners. For more information, please contact [Jill Auburn](#).
- [Michael Bowers](#) served on the Editorial Board of Landscape Ecology, an international journal dedicated to increasing the understanding of the relationship between spatial patterns and ecological/socioeconomic processes.
- In December 2005, USDA/CSREES ([Richard Reynnells](#), [Carmela Bailey](#)) co-hosted with Pat Millner (USDA/ARS), a one day roundtable to discuss composting cafeteria food waste and biobased cafeteria-ware such as cups, plates, and utensils, and then using the compost for landscaping federal facilities. The roundtable was held at ARS in Beltsville, MD, and attendees represented all potential stakeholders: composters, manufacturers of biobased plastic products, scientists, cafeteria managers, facility managers, and managers of successful programs.
- [Dan Schmoldt](#) collaborated with the U.S. and Canadian Forest Services and the University of Natural Resource and Applied Life Sciences, Vienna, Austria, to co-author a book chapter in *Sustainable Forestry in Theory and Practice*.

Internal Education and Seminars

S4S sponsored seminars, discussions, and other internal education at CSREES to expand understanding and expertise about sustainable agriculture, forestry and community development among program staff and administrators. Here are some of the highlights from 2005:

- "Aiming for safety and sustainability in U.S. agriculture and biotechnology" by Don Doering of Winrock International, May 31, 2005, was attended by about 30 CSREES program staff and visitors from the Foreign Agricultural Service and the State Department. The outcome of the seminar was a constructive frame of reference for understanding relationships between biotechnology and sustainability. For more information, please contact [Ann Marie Thro](#).

- “Achieving energy security through a bioeconomy with sustainable rural landscapes and communities” was presented by Robert Brown, Richard Cruse, Steve Fales, Carl Herndl, and Gene Takle of Iowa State University, September 20, 2005. Over the afternoon-long seminar and dialogue, 30 program staff and 3 deputy administrators participated in discussions related to energy technologies, agricultural production, and environmental and social goals. The discussion of a system science approach to understanding the interrelationships among environmental, economic, and social aspects of the bioeconomy was subsequently revisited and discussed at a later Competitive Programs unit staff meeting, further extending the ideological impact of this engaging seminar. For more information, please contact [Dan Schmoltdt](#).
- “Sustainable Community Innovation Grants” by Jerry DeWitt of Iowa State University, December 6, 2005, was attended by about 25 CSREES program staff. The outcome of the seminar was increased understanding at CSREES of community impacts of sustainable agriculture, and feedback to two CSREES programs, the Southern Rural Development Center and Southern SARE. For more information, please contact [Jill Auburn](#).
- S4S members convened several seminars on international agricultural issues which touched upon many sustainability issues. For more information, please contact [Hiram Larew](#).