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November 1995

## Center for Sustainable Agricultural Systems Newsletter, November/December 1995

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## November-December 1995 CSAS Newsletter

The Center for Sustainable Agricultural Systems (CSAS) in the Institute of Agriculture and Natural Resources (IANR) at the University of Nebraska-Lincoln (UNL) is an interdisciplinary center formed in 1991 for the purpose of bringing together people and resources to promote an agriculture that is efficient, competitive, profitable, environmentally and socially sustainable for the indefinite future. Electronic versions of the CSAS bimonthly newsletter are sent to SANET, PENPages, and the internal IANRNEWS 10-14 days before those on our mailing list receive their hard copy. They are also available along with other sustainable ag information via the gopher path:

IANRVM.UNL.EDU

IANR Information

Sustainable Agriculture

Note: The electronic version is not sent to individual e-mail addresses. To be added to the "hard copy" newsletter mailing list (not sent to overseas addresses), or for questions or comments, contact the newsletter editor, Pam Murray, Coordinator, Center for Sustainable Agricultural Systems, 221 Keim Hall, University of Nebraska, Lincoln, NE 68583-0949, 402-472-2056, fax -4104, e-mail: [csas001@unlvm.unl.edu](mailto:csas001@unlvm.unl.edu).

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### NORTH CENTRAL INSTITUTE FOR SUSTAINABLE SYSTEMS PILOT PROJECT LAUNCHED

A regional institute for undergraduate education in sustainable systems is being launched with the help of a \$128,000 USDA Higher Education Challenge Grant to Iowa State U. (lead), U. of Nebraska-Lincoln, and U. of Minnesota. With collaboration from U. of Missouri, Ohio State U. and Michigan State U., these partners will direct the three-year pilot project. The goal of the NCISS is to enhance the educational reach and effectiveness of agricultural education institutions by building a regional program including the facilities and knowledge of farmers,

agribusiness representatives, agricultural lenders, and other practitioners. Students will participate in the program by supplementing the courses available through curricula in local institutions. NCISS courses and experiences will be delivered electronically or on site, and with field workshops and internships. Funds are available for student scholarships and for reimbursement of faculty expenses. The administrative home of NCISS, initially, is Iowa State U., with Ricardo Salvador as director and Gina McAndrews as Academic Coordinator.

You and your students can learn more about this exciting new venture by viewing the World Wide Web page:

<http://www.ag.iastate.edu/departments/agronomy/nciss/nciss1.html>

The WWW page is a wonderful resource for all people interested in sustainable agriculture, not just the NCISS.

For more information, those in Nebraska can contact CSAS Director Chuck Francis (402-472-2056, csas002@unlvm.unl.edu); others should contact Ricardo (515-294-9595, salvador@iastate.edu) or Gina (515-294-0835, gina@iastate.edu).

#### AN ECOCENTRIC VIEW OF FUTURE RESEARCH

The focus in agriculture has moved from rural culture, occupation of new lands, and economics to one that emphasizes water quality, environment and food safety, according to Steve Fales, new head of the Agronomy Department at Pennsylvania State U. Although our past research of productivity and net income has provided adequate food and profits for farmers, the research agenda is now influenced by a broad range of players and interests. These include state and federal agencies, commodity and consumer groups, industry, and advocacy organizations. We need to work together to design new strategies for agriculture and for education in the future, Fales reported at the American Society of Agronomy annual meetings in St. Louis the week of October 29.

Historical and future dimensions of the 'crop science revolution' were explored by another panel of experts at the same meetings. Nobel Laureate Norman Borlaug described six hurdles that need to be overcome in developing countries to help avoid famine and achieve food self-sufficiency:

- fear of change to new methods of production;
- economic costs of new technologies;
- cheap food for urban people;
- political barriers to use of new science;
- curbing uncontrolled population growth;
- environmental concerns and chemical use.

Borlaug cited the loss of many qualified scientists to international organizations as a factor in the lack of progress in many developing countries.

Another symposium speaker, Stephen Baenziger (head of Agronomy, UNL) summarized what we know about future food and resource needs. He expressed confidence in the power of science and technology to help the human species survive. Baenziger also underlined the need for more integrative activities with plant

sciences and other life sciences, and the importance of broader partnerships in research. Especially important for support is learning to explain our research to other groups.

Submitted by Chuck Francis and Heidi Carter

#### DIVERSITY IN HUMAN AND ECOLOGICAL SYSTEMS

We are in the process of losing both biological and cultural diversity in the Midwest. In a recent workshop at Iowa State U., Laura Jackson of the U. of Northern Iowa showed maps of Iowa that detailed the loss of most natural grasslands over the past two centuries, where annual crops have replaced perennial plant species on more than 95% of the landscape. Much of the land that was in rotation with hay crops as recently as 1940 has been transformed into annual monocultures in the latter half of this century. The interface between natural systems and cultivated farming was described by Dana Jackson, who called for a new look at the farm as a natural habitat. We should consider nutrient and water cycling, energy capture and transformation, and succession of species as part of this innovative concept of farm design. Both speakers were among the several dozen who presented talks and posters at the North American Symposium of the Association for Farming Systems Research/Education held in Ames November 6-8.

Other speakers described diversity in communities, food systems, and other human systems. Colette DePhelps of Washington State U. urged us to consider the importance of connectedness within systems, learning from emerging fields of human ecology, ecofeminism, and cultural ecology. Elizabeth Bird of the Center for Rural Affairs explored the importance of knowledge diversity and how information is imbedded in culture. She explained how 'all knowledge is locatable, but not necessarily transferable.' Most useful knowledge will grow out of democratic debate and determination of community goals. The importance of communities of different types was discussed by Lorna Michael Butler of Washington State U. She described diverse types of communities defined not only by location, but by interest group, discipline, environmental or resource concern. She said the bridge between urban and rural residents was one that will be increasingly essential as we find more competition for space and resources. "How Much Diversity is Sustainable?" was presented by CSAS Director Chuck Francis.

The workshop included field tours to farms and watersheds, and special sessions on use of the Internet and whole-farm planning. Team problem solving, land privatization, farmers markets and other innovative marketing strategies, and statistical methods for dealing with the complexity of whole-farm systems were included in the program. The paper, "Economic, Environmental, and Sociological Effects and Linkages of Whole-Farm Systems in Eastern Nebraska" was presented by UNL's Kevin Bernhardt, Brenda Johnson, John Allen, and Glenn Helmers. A poster, "Producer-Initiated On-Farm Research: Collaboration with Those Most Concerned in Integrated Agricultural Systems" was presented by Victoria Mundy (UNL) and Wyatt Fraas and Rose Mason with the

Center for Rural Affairs. Tom Larson, farmer from St. Edward, Nebraska, presented "Systems Integration at the Farm Level - A Seasonal Look."

Submitted by Chuck Francis

#### POLITICS OF SUSTAINABLE AGRICULTURE

The Homestead Act that was initially designed to promote a dispersed pattern of ownership and yeoman agriculture in the U.S. in fact resulted in a strategy for land settlement, secure frontiers for an expanding nation, and eventually a large-scale production system for food and fiber export. According to Angus Wright, a keynote speaker at the "Politics of Sustainable Agriculture conference," 'family agriculture' actually dominated the U.S. scene for a short 100 years, a transitory event in our history. He went on to describe the current consolidation of lands, dispossession of farmers, abandoned farmsteads and rural communities, and flight to the cities and then the suburbs. Wright views agriculture as one component of a much larger economy, and sustainable agriculture a growth industry that is being embraced and even co-opted by large commercial corporations. He cited the hypocrisy of 'eco-sensitive advertising' by companies that are pushing at the same time a legislative agenda that will promote a scorched-earth pesticide policy and dismantle decades of environmental gains on endangered species and water quality. Wright, a Professor of Environmental Sciences at California State U. at Sacramento, urged the audience to realize that political power means mobilizing people with like goals, and that urban and environmental group support is essential.

Wes Jackson of The Land Institute in Kansas outlined the planning of a new joint research initiative with USDA personnel and support. An interdisciplinary, high-risk, and innovative research approach that is focused on perennial agriculture will be launched in the near future. Konza Prairie near Manhattan is a likely 'alpha-site' for the first team to assemble plant polycultures and study their performance in the field. Jackson remarked that we need an agriculture that is more resilient and less sensitive to human folly, as we plan for sustained food production in the future. The Land Institute and Kansas State U. are dedicated to exploring potentials of annual monoculture when combined with the sustainability of perennial mixtures. Jackson cited the need for a renewable economy that would replace the current extractive economy, and the urgency of exploring a social agenda in concert with the search for new science.

Another keynote address by Patricia Allen of U.C. Santa Cruz focused on sustainability as a political issue, thus one that requires a political solution. This means educating the public, shaping popular opinion, and building awareness in society of the importance of the natural environment and long-term ecological approaches to food production. She reminded the audience that food production has always been political, from the irrigation systems of Mesopotamia to the land distribution patterns in North

and South America. Allen lamented the lack of a \*food policy\* in the U.S., and the fact that we continue to operate on a \*farm policy\* instead. She detailed the level of regulation that currently governs the way we farm, and the amount of support that industry spends on campaign contributions for each national Senate and House seat in the U.S. Allen urged us to find ways to involve citizens in the political arena in support of a food program.

Finally, Peter Rosset of the Institute for Food and Development Policy described their program of scientist and farmer exchange with Cuba. That country has launched a national effort of conversion to organic farming, in part due to the political changes in the Eastern Block that eliminated most imports of oil to the island. The country has made remarkable strides in the use of composts and animal manures, and continues to learn about low-input food production systems.

These keynote talks were followed by a series of concurrent sessions on visions of technology, regulations versus a market economy, information networks, global integration, community participation, and other social and political topics. About 160 people attended the two-day conference held at the U. of Oregon in Eugene.

Submitted by Charles Francis

#### IMPACT PROJECT GETS ADDITIONAL FUNDING

The Nebraska Ag IMPACT project, which funds local group research/demonstration sustainable agriculture projects in Nebraska, has received supplementary funding from two sources. Started in 1994 with a substantial grant from the W.K. Kellogg Foundation, the project has recently received grants from the Environmental Protection Agency and the Nebraska Environmental Trust Fund. The additional funds will provide support for more groups.

The next deadline for project proposals and group applications is February 23. For application information, contact the IMPACT office, 402-254-2289. For background information, see the May-June, Nov-Dec 1994, and Jan-Feb 1995 CSAS newsletters.

The IMPACT project is a joint effort of UNL, the Center for Rural Affairs, and the Nebraska Sustainable Agriculture Society. The UNL project co-leader is Victoria Mundy, who has written a summary of all currently funded projects; contact the CSAS for a copy.

#### PARTICIPATION A NEW RESEARCH DIRECTION IN FINLAND

"Where do I go for practical production information on organic vegetables?" is a frequent question today in Finland. There is a rich history of close collaboration within the agricultural sector there. Sharing information on surveys, working in joint

education programs, and doing field demonstrations have long been cooperative activities in University and Ministry of Agriculture programs in Finland. Farmers and university or government researchers working together to establish research priorities for emerging systems is something new.

A key group of researchers and administrators met in late November on a snowy Tuesday morning at the Suitia Continuing Education Center to explore this new direction. In a workshop organized by Laura Seppanen, Lars Fridfors, and Charles Francis, the group reviewed the successes and challenges found in past programs that involved close participation with farmers. They also focused on the growing need for specialized information on organic production systems, a rapidly growing segment of the food sector in Finland. While setting priorities for future research and education, and starting to design an action agenda for work in this new direction, the group tested several participatory learning methods. Many of these are currently being used in our own Chapter 3 Extension and NRCS sustainable agriculture training programs in the North Central Region.

Participants first introduced themselves with their professional affiliations, and a neighbor added personal glimpses into hobbies, key outside interests, and family. This helped to build community and bring people with similar interests together. Short reports on successes and failures in past programs brought a third of the people into presentation roles; this process helped to legitimize farmer participation in research projects and created an atmosphere of trust in sharing within the group. Key issues for research were identified by pairs of people, who then presented their ideas and posted them on cards in the room. The group voted (each for four issues) and the cards were assembled around key themes. The most important issues were 1) finding better markets and working on the economics of organic farming, 2) promoting better researcher-advisor-farmer cooperation in research, 3) building better nutrient recycling and efficiency in vegetable systems, and 4) finding ways to minimize energy use and making better use of renewable energy resources.

Presentation of a progress report on the organic vegetable project was enhanced by assigning roles of farmer, advisor, or researcher to each of the listeners, who focused their questions and comments as if they were attending as a representative of that group. It was useful for everyone to see the challenges through another's eyes. Since there had been little prior discussion of the basic role of biodynamic and organic farming in Finland's future, a group of four people sat in the middle of the room and discussed the research and information needs. The rest of the group practiced listening skills. We finished the workshop with one-on-one interviews by pairs of participants who asked two questions: What did you learn in this workshop that was new? and, What specific tools or information did you find today that will be useful in your job? We found from the final evaluation that the workshop was well received by the participants, and that a core of interested people had been formed to help support the project in the future.

The organic vegetable project is directed by Dr. Eija Pehu, Chair of the Department of Plant Production, and Dr. Artur Granstedt, Professor and Visiting Scientist at the ARC Partala Ecological Research Station in Eastern Finland. Ms. Sepannen and Mr. Friddefors are the people who are implementing the project with three key groups of farmers. They plan a series of follow-through activities with people from the various government agencies to maintain their interest and increase their support of this key initiative.

Submitted by Chuck Francis

#### NEBRASKA PARTICIPATES IN WHOLE FARM CONSERVATION PLANNING PILOT

Nebraska has been selected as one of six pilot states to participate in the Natural Resources Conservation Service Whole Farm Conservation Plan Initiative. Whole farm planning is a National USDA Performance Review Initiative with the goal of aiding producers by simplifying compliance with the environmental and conservation requirements of several federal and state agencies by creating a single plan for each farm. Whole farm planning is an important part of the public debate now occurring during the farm bill reauthorization and is expected to represent a future major program initiative. Nebraska Cooperative Extension is part of a Nebraska planning group to discuss and implement a pilot project appropriate for Nebraska producers and landowners. For more information Nebraska Extension personnel can call Elbert Dickey, 402-472-2966.

#### NEW INTERNSHIP IN FOOD PRODUCTION/MARKETING

To honor the late Ward Sinclair--a gifted farmer, renowned writer, and passionate champion of alternative agriculture--the Henry A. Wallace Institute for Alternative Agriculture, starting in 1996, will award one internship each year to a person desiring "hands-on" experience of working on a farm that produces and direct markets food, and with a public agency having responsibilities related to direct marketing.

Interns will spend roughly half of their time working on a farm/ranch in Pennsylvania, and the other half working with or at a public agency with regulatory, research, or educational responsibilities related to direct marketing of food, preferably an agency of the state of Pennsylvania or Maryland. The internship will be for three to six months during the period from late spring to early winter.

The Wallace Institute will manage the application and selection process, provide financial support, and monitor and assist in guiding the program. Persons of any age, sex, race, formal education, and religion who demonstrate an unusually keen interest in, and personal commitment to, the ideal of sustainable agriculture production and/or marketing and associated career opportunities may apply. Prior agricultural experience is not



required. Applications are due March 1. For more information, contact: Henry A. Wallace Institute for Alternative Agriculture 9200 Edmonston Road, Suite 117 Greenbelt, Maryland 20770-1551, 301-441-8777.

#### USDA-DOE PACT COMBINES SCIENTIFIC ENERGIES

On November 2 Secretary of Agriculture Dan Glickman and Secretary of Energy Hazel O'Leary signed a Memorandum of Understanding that will provide a framework for the two agencies' renowned scientists and engineers to create solutions to complex problems associated with maximizing crop yield and produce new products. The agreement will focus on ways to improve food quality and safety, and also investigate agricultural applications using skills and technologies developed at DOE's national laboratories originally for Cold War use.

The partnership couples DOE's expertise in physics, engineering and computer science with USDA's expertise in plant breeding, biological pest control, soil and water conservation and other areas.

USDA and DOE scientists have worked together in the past to develop biofuels, introduce electronic means to detect plant materials during airport baggage inspection, mass produce beneficial insects to control crop pests, and develop technology to more precisely apply agrichemicals to minimize environmental impacts. Future projects envisioned by the partnership include improved technology for previously untilled soil, developing precision farming systems, and sensor detection of pathogens.

#### INTERESTED IN BECOMING CERTIFIED ORGANIC?

Nebraskans wanting to know what is involved in becoming a certified organic farmer can contact Dave Welsch, Certification Coordinator, OCIA NE #1, Rt 2, Box 63, Milford, NE 68405, 402-826-5361. Non-Nebraskans can contact Organic Crop Improvement Association International, 3185 Twp. Rd. 179, Bellefontaine, OH 43311, 513-592-4983.

#### RESOURCES

"Making the Connection: a Community Supported Agriculture Handbook for Producers." \$25 + \$5 s&h (payable to UC Regents). UC Cooperative Extension, Attn: CSA Handbook, 11477 E Avenue, Auburn, CA 95603.

"Udder Sense: A Search for Low-Cost/Sustainable Strategies of Resourceful Dairy Farms." \$10. Farmer interviews and on-farm research results on grass-based dairying, manure management, low-cost facilities, fly control and renewable energy. Center for Rural Affairs, PO Box 406, Walthill, NE 68067, 402-846-5428.

"Increasing Organic Agriculture at the Local Level: A Manual for

Consumers, Grocers, Farmers and Policy Makers." \$18. A 100-page book promoting a sustainable, healthful food system. Community Environmental Council, 930 Miramonte Drive, Santa Barbara, CA 93109.

"Intensive Agriculture and Environmental Quality: Examining the Newest Agricultural Myth." \$4. Wallace Institute for Alternative Agriculture, 9200 Edmonston Rd, #117, Greenbelt, MD 20770, 301-441-8777.

"Alternatives in Agriculture." \$10 + \$2 s&h. 1995 report published by Thompson On-Farm Research and Wallace Institute includes new information on fertility, weed management and economics. Thompson On-Farm Research, 2035 190th St., Boone, IA 50036, 515-432-1560.

"Sustaining Wetlands and Farms: Critique of Current Proposal and Recommendations for a Reasonable Wetland Policy." Free. Sustainable Agriculture Coalition, 110 Maryland Ave., NE, Box 76, Washington, DC 20002, 202-547-5754.

"Biological Control: Learning to Live with the Natural Order" (video). Free. Educational film for elementary through high school describes classical biological control practices and history, and mentions hazards of agrochemical-intensive farming. USDA, National Biological Control Institute, 4700 River Road, Unit 5, Riverdale, MD 20737, 301-734-4329.  
<http://www.aphis.usda.gov/nbci/nbci.html>.

"Sustainable Agriculture in Print: Current Periodicals, 1995." Free. Annotated guide to international periodicals related to sustainable agriculture, covering range of issues including organic and low-input farming, soil and water science, policy, marketing, food security and technology. "Videocassettes in the NAL Collection Pertaining to Alternative Farming Systems" and many other information products are also available free from the National Agricultural Library, Alternative Farming Systems Information Center, 10301 Baltimore Boulevard, Beltsville, MD 20705, 301-504-6559, e-mail [afsic@nal.usda.gov](mailto:afsic@nal.usda.gov). Also available online: [gopher](http://gopher) ;  
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"American Journal of Alternative Agriculture." Annual subscriptions are \$44, institutions; \$24, individuals; and \$12, students. The most recent (Vol. 10, No. 3) of the Wallace Institute's quarterly journal of research on alternative agriculture contains articles about the Wisconsin integrated cropping systems trial, and farmers' markets and the local community. Wallace Institute, 9200 Edmonston Road, #117, Greenbelt, MD 20770, 301-441-8777.

"Agroforestry and Sustainable Systems: Symposium Proceedings." Free. From an August 7-10, 1994, symposium in Fort Collins, CO. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, National Agroforestry Center, Lincoln, NE 68583-0822, 402-437-5178.

National Pesticide Telecommunications Network is a toll-free (1-800-858-7378) pesticide information and referral service sponsored by Oregon State University Extension Service and EPA.

"The Hot 50 Farm Marketing Tips." \$2. Subjects on produce marketing include direct marketing, selling through grocery stores, restaurants and wholesale channels, merchandising, customer service, promotion and advertising. New World Publishing, 3085 Sheridan St., Placerville, CA 95667.

See the Dec. 1995 issue of "National Geographic" for a feature article on sustainable agriculture. To receive a copy of just that issue (\$3), call 1-800-368-2728.

FARM AID launched a world wide web site during its October concert:

<http://justicerecords.com/farmaid/>

DID YOU KNOW...

According to FARM AID officials, the sold-out 10th Anniversary Concert held October 1 in Louisville, KY netted nearly \$1 million--twice the amount of money raised at any of the past three concerts. Among those attending the concert and pre-concert town hall meeting was Secretary of Agriculture Dan Glickman.

#### COMING EVENTS

Contact CSAS office for more information:

Jan. 4/5 -- Nebraska Forage and Grassland Conference, Columbus/Lexington, NE  
Jan. 11-13 -- National No-Tillage Conference, St. Louis, MO  
Jan. 24-27 -- Annual Ecological Farming Conference, Pacific Grove, CA  
Feb. 2-3 -- Western Nebraska Sustainable Agriculture Conference, Ogallala, NE  
Feb. 6-7 -- Mid-America Alfalfa Expo, Hastings, NE  
Feb. 15/16 -- Dairy Grazing Conference, Hartington/Fairbury, NE  
Feb. 20-25 -- North American Farmers' Direct Marketing Conference, Saratoga Springs, NY  
Feb. 24 -- Nebraska Sustainable Agriculture Society Annual Meeting, Columbus, NE  
Feb. 27-Mar. 2 -- Third National IPM Symposium, Washington, DC  
Feb. 27-28 -- Platte River Basin Ecosystem Symposium, Kearney, NE  
Mar. 11-13 -- Annual Nebraska Water Conference, Omaha, NE  
June 15-20 -- International Interdisciplinary Conference on the Environment, Newport, RI



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