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Center for Sustainable Agricultural Systems Newsletter, May/June 2000

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CSAS Joins New Center for Applied Rural Innovation (CARI)

To more efficiently serve the needs of rural Nebraska, the Center for Sustainable Agricultural Systems will merge with the Center for Rural Community Revitalization and Development and the Center for Leadership Development. The new Center for Applied Rural Innovation will begin activities on July 1, 2000 pending approval by the University of Nebraska Board of Regents in June.

CARI pools the resources dedicated to resource efficient and sustainable agriculture with those in leadership and community development. The integrated Center will be more effective in putting together university talent in the areas of entrepreneurship, rural revitalization, and value-added enterprises on farm and in rural communities. We will have an improved capacity for seeking outside grant support. John Allen, former director of the Center for Rural Community Revitalization and Development, will serve as interim director of the new Center. Charles Francis and Pam Murray, former director and coordinator of the CSAS, will be actively involved in CARI.

CSAS has brought more than $3,000,000 in external grant support to programs in collaboration with departments on campus, other public agencies, and non-profit groups in Nebraska. Research on the Integrated Farm project has linked key departments in field activities. Extension has benefited from the four-year regional professional development program in sustainable agriculture, and we have worked closely with farmer groups in the Nebraska IMPACT project, a joint effort with the Nebraska Sustainable Agriculture Society and the Center for Rural Affairs. Through the CSAS, new courses in Integrated Farming Systems, Agroecology, and Urbanization of Rural Landscapes have been introduced into the curriculum. These and other CSAS activities have been summarized in the green book series, *Extension and Educational Materials for Sustainable Agriculture* (Volumes 1-11), which have reached more than 6,000 people across the U.S. and beyond (see [www.ianr.unl.edu/ianr/csas/reports.htm](http://www.ianr.unl.edu/ianr/csas/reports.htm) for details).
This is the last regular newsletter of the Center for Sustainable Agricultural Systems. The most important activities of the CSAS will continue under a new banner, and our current plans include initiation of a CARI newsletter later this year. Those on the CSAS newsletter mailing list will receive a copy of the first issue. Thank you for your support and interest in our programs over the past decade. We look forward to serving you through the new Center.

Submitted by Charles Francis and Pam Murray

Nebraska's Future Agriculture:

Natural Resources, Human Capital, and Rural Communities

This is the third in a series of articles on projections about the future of our most important industry. They present alternative views of the future, as we respond to growing concerns about how food is produced and agriculture's impact on rural Nebraska. These ideas from faculty will help guide the design of relevant research and education programs in the university.

Unique Natural Resources

Nebraska's topography and continental location provide a set of diverse ecozones that support different types of agriculture. The most profitable agroecosystems in each of our zones are specific to their rainfall, growing season and soils. Wheat is grown in the panhandle, corn in the irrigated Platte Valley and south central, and alfalfa and pastures in the northeast and Sandhills. We improve on current systems by seeking ways to make more efficient use of natural resources. Continuous wheat with cover crops or ecofallow systems with two crops in three years looks promising for the southwest and panhandle. Lower energy irrigation systems and more water-use-efficient hybrids reduce costs in central Nebraska. Rotations continue to improve productivity in the diverse systems of the northeast.

Short-term economic distortions such as tax incentives brought pivot systems into the Sandhills, and base acre requirements dictated acres in cereal grains. These change the placement of crops and animal enterprises in the landscape. Yet ultimately the crops that make most efficient use of the unique resources in each place will be the most sustainable. The most profitable crop today may not be the best in the long term, since we compete with other areas that also have unique resources and potentials. An example is irrigated corn--profitable now in spite of high production costs, but in the future a crop that will not compete with rain-fed corn in states to the east and with specialty crops here that can add more value to scarce energy and water resources. Only to the extent that we can add value locally to cheap crop commodities can we retain that value for farmers in Nebraska.
Unique Location

One factor influencing our potential to market higher value crops and products is close proximity to population centers in the Midwest. Local and bioregional markets do not mean only the immediate community, but can include a several-state area where consumers will seek "home-grown" food products, especially if they have unique traits of recognized value. Crops that have specialty uses and whose quality depends on our low humidity areas in central and western Nebraska could compete in a much larger arena. Where local processing of commodities into high-value products can be accomplished near where the crops are grown, this adds income to farms and communities in the state. When such entrepreneurial activities can be coupled with the special human capabilities and local capital in a place, that industry is likely to provide a sustained economic input into local communities.

Unique Human Capital

The well-established work ethic and family orientation of Nebraska citizens have drawn several companies to this state. Outside businesses seek stability in the workforce, dedication to the job, and quality of life for employees. If we are able to couple this unique human capacity with the unique natural resources that produce agricultural raw materials, and finance the activities using local resources, the combination can be stable business that is especially adapted to a site in our state. These are local industries that are unlikely to move offshore when there is a small shift in revenues, a change of management, or a consolidation of parent companies in the name of corporate efficiency. When the industry is tied to local natural resources, financial capital, and families, it becomes more immune to some of the pressures for globalization and rapid shifts of capital and people from one place to another. We should encourage local companies.

One major change in Nebraska in recent years is the number of new citizens from other parts of the world coming here to work on difficult jobs and willing to work hard to become established with their families. They represent another resource. While people come with different languages and cultures, it is to our advantage to make newcomers welcome in our state, help them assume the same attitudes of responsibility and hard work, and integrate their unique capabilities and culture into what is here already. This is a continuing process that has been underway for more than 150 years. We can capitalize on these unique new resources to build sustainable Nebraska communities for the new century.

Submitted by Charles Francis
Call for 2001 North Central SARE Research and Education Preproposals

The North Central Sustainable Agriculture Research and Education (SARE) program is calling for collaborative teams of researchers, educators, farmers and others to apply for competitive grants to study or educate others about environmentally benign agricultural systems that are profitable and supportive of local communities. Approximately $1.1 million will be available in 2001 to fund creative projects addressing sustainable agricultural practices and systems. Details of this annual Research and Education effort will be outlined in the Call for Preproposals, available July 14 and due September 8. For an application, contact North Central SARE at 402-472-7081 or ncrsare@unl.edu. The Call for Preproposals will be available online in mid-July at www.sare.org/ncrsare.

North Central SARE Maintains Marketing Listserv

You are invited to participate in a dynamic discussion about alternative marketing through North Central SARE's "altmarketing" listserv. As a follow-up to the North Central SARE November 1999 regional marketing conference, a listserv was created to continue discussions and information exchange regarding value-added and direct farm marketing. Farmers, farm educators, food business leaders, and others are welcome to ask questions and share insights into the wide world of alternative marketing. The address of the list is altmarketing@crsvms.unl.edu. To subscribe, send a message to listserv@crsvms.unl.edu that says:

SUBSCRIBE altmarketing Firstname Lastname

Find more marketing information at www.sare.org/san/ncrsare/marketing.htm. For more information, contact Lisa Bauer at 402-472-0265, lbauer2@unl.edu.

Integrated Farm Project: A Model for Collaboration

University research most often focuses on components of a system, for example, feedlot rations, fertilizer rates, or new soybean varieties. Less often we look at combinations of these components to see how they fit in the overall farming systems puzzle. Rarely do we work together to study the whole farm system in all its complexity. The Integrated Farm Project was started to help fill this void.
Building on interest from animal science, agronomy, and forestry, fisheries and wildlife faculty, and with strong interest from the Agricultural Research and Development Center (ARDC) administration, we began to look for themes that would add value to experiments already in the field at ARDC. Grazing studies on crop residues, compost from feedlot manure, and windbreak effects on livestock, field crops and vegetables were already a part of the research agenda, and involved several departments working together. We found that these systems still needed to be linked into a whole farm context, and the concept of the Integrated Farm became a reality. Federal support over the past eight years has provided some funds for developing infrastructure and personnel.

Some highlights of the Integrated Farm include grazing corn residues under different tillage systems, windbreak studies with agronomic crops and vegetables, and long-term crop rotations. Experiments have shown that there are no measurable effects of grazing residues on crop production the next year, and that there is more loss of grazing benefit when cattle trample the stalks in a ridge-till system compared to flat planting. Protection from windbreaks has shown both higher production and increased quality of some vegetable crops compared to non-sheltered areas, similar to the benefits found with agronomic crops. Long-term crop rotations continue to show benefits to diversity over time, with reductions in need for fertilizer application and less costly pest management. Compost from the feedlot has been applied in strips across ARDC production fields, and we are currently calculating the long-term effects of this practice.

Innovative research in the Integrated Farm includes a new silvopastoral experiment that will couple grazing livestock with tree plantings, and these both combined with some crop and hay production between the tree rows. Diets in livestock rations are being tested for not only their effects on performance but also on the quality of manure and compost that comes from the feedlot. Crop rotations with compost and manure are being compared to similar rotations using legumes as the primary nitrogen source. Finally, the overall biological and economic performance of different sizes of diversified farms for eastern Nebraska will be calculated from the data available at ARDC. This will include estimation of the environmental impact of different farming strategies and their influence on the local community.

The Center for Sustainable Agricultural Systems has been the primary funding contact for this project. The Integrated Farm has provided a fresh way to conduct interdisciplinary research at ARDC—an approach that will be continued into the future. More information is available at [www.ianr.unl.edu/ianr/ardc/intfarm.htm](http://www.ianr.unl.edu/ianr/ardc/intfarm.htm).

Submitted by Charles Francis, Jim Brandle, and Terry Klopfenstein
Nebraska Study Shows Monarch Danger Is Exaggerated

Field studies of pollen from Bt corn fields accumulating on milkweed leaves indicate the threat to monarch butterflies may have been greatly exaggerated. UNL entomologists tracked pollen shed and monarch activity around five Bt corn fields in Saunders County, Nebraska, last year. Most of the pollen seemed to stay within 5 meters of the fields, and no pollen counts above 20 grains per square centimeter were found on any milkweed leaves more than 5 meters from the fields. Other studies have shown pollen densities of less than 150 grains per square centimeter had no effect on monarch butterfly larvae. For more information, contact John Foster, UNL Entomology Department, 402-472-8686, jfoster1@unl.edu.

Registration Fee Set for Alternative Ag Expo

In our last issue you read about the second annual Alternative Ag Expo to be held August 29, 2000 in Sioux City, Iowa. Topics will include farming alternatives, nutrition issues, economics of alternatives, transitioning from traditional agriculture to alternative methods, and direct marketing. Two roundtables will address alternative types of pork production and rotational grazing. Featured speaker, Sally Fallon, will talk about the nutritional benefits of natural foods. Fallon will also speak on the evening of August 28. The registration fee is $40 for the conference, an additional $10 for the August 28 session. For more information or a registration form, call 712-943-7882, or e-mail darrell.geib@ia.usda.gov.

CSAS Bids Heidi Carter Farewell

Heidi Carter, the CSAS Education Coordinator for more than five years, has accepted a position as County Extension Education Director for Page County in southwestern Iowa. She begins her new duties June 15. Her address and phone will be: Page County Extension Office, 311 E Washington St., Clarinda, IA 51632, 712-542-5171. We wish Heidi much success as she takes on this new challenge.

Farmers' Markets Moving Ahead

On May 6, the 8 am whistle started the 16th season for Lincoln's Haymarket Farmers' Market. By noon there had been more than 4,000 customers buying local vegetables, beef, poultry, breads, and crafts from 100 vendors. By mid-season there will be twice that number of customers and close to 150 vendors, according to Billene Nemec, the manager.
of the market. The *Lincoln Journal Star* gave the market good coverage, an important dimension of how to make a market successful and demonstration of excellent support from local media.

But the business planning and organization for a market starts well before the whistle blows. Food vendors who make up the backbone of the market have been busy building facilities, buying seed, and planning their plantings for months to meet their expected consumer demands. There is an educational meeting for vendors held prior to the May-to-October market season to acquaint them with local health and safety regulations, weights and measure, tax obligations, and market rules. They also get tips from other vendors on how to display products and how to best meet the public. According to one young couple, "The orientation session was one of the best events we have had in this business. It's great to learn from people who already have experience, and who are so willing to share what they know."

This year a special workshop on farmers' markets was held on April 18 at the University of Nebraska's Agricultural Research and Development Center. There were several growers as well as people who will be organizing markets in other communities in Nebraska. Extension specialists with experience in vegetable production and nutrition provided helpful ideas on how to grow and market quality products. Nemec described the operation and the many details of how to organize a successful market. One highlight of the workshop was a panel of growers who each described their farm and the motivations for getting into direct marketing. These ideas were valuable to others just starting out. The workshop was sponsored by the Nebraska Sustainable Agriculture Society (NSAS) and the CSAS, with funding from a USDA Sustainable Agriculture Research and Education (SARE) grant.

For further information, contact Billene Nemec, 402-435-7496, or NSAS executive director Paul Rohrbaugh, 402-869-2396.

Submitted by Charles Francis

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**Community Supported Agriculture: New Potentials for Nebraska**

"How many consumers in Nebraska would prefer to have locally-grown vegetables on their tables every day, and know where that food was produced?" This was a question from Shelly Gradwall, Cooperative Extension Specialist from Iowa State University at a workshop in York on April 4. She and Robert Karp of the Practical Farmers of Iowa shared an intriguing program to demonstrate the success of community supported agriculture (CSA) in their state with our growers and Extension Educators.

We don't know how many Nebraskans would prefer this option, but we did learn that the program has been highly accepted in Iowa. In 1995 there were three CSAs in that state,
and in the 2000 growing season there will be 45 CSAs in operation. It is likely that this success will continue, because consumers like to know who produces their food and want to support local farmers, according to Gradwall and Karp.

Most CSAs are initiated by growers who learn the vegetable business, develop a marketing plan, and begin to assemble a list of potential customers. One unique group in Ames was organized in the opposite direction--it was started by consumers. In this case the city people came together and decided what they wanted in terms of food items, then set out to find growers willing to produce and sell to them. The group continues to be highly involved in the distribution and record keeping for the CSA. Their Magic Beanstalk Cooperative was provided with assistance from the Practical Farmers of Iowa, and was used as a model for other consumer-driven activities in the state.

There was great interest in the Equinox CSA in Lincoln, described in the program by Ruth Chantry and Evrett Linquist. They are in the fourth year of a growing business (pun intended!) with vegetables delivered to more than 30 families in Lincoln and Omaha, and recently moved to their own property near Raymond where they plan to certify as biodynamic producers. Their new farm was used as a planning model by the UNL class in Agroecology this last semester--a practical way for students to gain real-world experience in putting their academic education to work under the constraints faced by growers. Ruth Chantry is currently President of the Board of Directors of the Nebraska Sustainable Agriculture Society (NSAS).

The workshop concluded with a tour of John and Susie Ellis' farm south of York. They are upgrading their packaging facility in a retrofitted straw-bale barn to be able to better market to their CSA members in York and Lincoln. They also sell directly in the farmers' markets in Omaha and Lincoln each Saturday through the season. One of the new products is a home-ground wheat flour that is finding a ready market. The Ellis family finds this a challenging but valuable departure from their prior conventional corn and soybean production system. John says the problems are bigger and more diverse in this kind of farming, and he finds that they are always on a steep learning curve. Their success demonstrated the potential for conversion from conventional commodity crops to a diverse farming and marketing system in Nebraska.

The York workshop on CSAs was sponsored by NSAS, CSAS, and Nebraska Cooperative Extension. Gary Zoubek in York County was responsible for local arrangements. We anticipate that these types of workshops will generate a larger demand for innovative educational activities in the future.

Submitted by Charles Francis

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**E-Conference on Integrating Sustainable Food Security**

An electronic conference on Integrating Sustainable Food Security Dimensions into the Research Agenda of the National Agricultural Research Systems (NARSs) will be held
June 5 - July 14, 2000. This is a follow-up to the World Food Summit held in Rome in 1996, and will assist NARSS of developing countries in integrating sustainable food security dimensions into their research agendas. Additional information, including how to sign up, is at www.fao.org/NARS/RAFS2000, or contact the CSAS office.

**Resources**


*Organic Food Markets in Transition.* $15. New report by Carolyn Dimitri of the USDA's Economic Research Service and Nessa Richman of the Wallace Center identifies the most critical issues confronting the organic foods industry, develops potential approaches to resolve the issues, and outlines a future research agenda. Wallace Center, 9200 Edmonston Rd. Ste. 117, Greenbelt, MD 20770-1551, 301-441-8777, wallacecenter@winrock.org.

In November 1999, the North Central Region SARE program hosted a regional conference, Alternative Agricultural Marketing: Developing Skills for the New Millennium. A limited supply of the conference notebook, which includes abstracts from speakers and exhibitors, as well as a bibliography of resources, is available from the NCR SARE office. Contact Lisa Bauer at 402-472-0265, lbauer2@unl.edu.


*World Food Security and Sustainability: The Impacts of Biotechnology and Industrial Consolidation.* First copy free, $5 each after that. The report is from the 1999 annual meeting of the National Agricultural Biotechnology Council, which was held in Lincoln, Nebraska. Send an e-mail request for NABC Report 11 to nabc@cornell.edu (include full name, mailing address and telephone number).
The last in a set of 10 windbreak circulars has finally been published. The titles and dates are: How Windbreaks Work (1991); Windbreak Establishment (1991); Windbreaks for Rural Living (1991); Windbreaks and Wildlife (1991); Windbreaks in Sustainable Agricultural Systems; (1991); Windbreaks for Livestock Operations (1994); Windbreak Management (1996); Windbreaks for Snow Management (1996); Windbreak Renovation (1998); Field Windbreaks (2000). Single copies are available free at Nebraska Extension offices, or by contacting Tim McGill, printing and distribution coordinator, 402-472-3023, tmcgill1@unl.edu. For multiple copies, contact Jim Brandle, jbrandle1@unl.edu. They are also on the Web at ianpubs.unl.edu/forestry/.

SARE 2000 Highlights. Eight-page national report by the Sustainable Agriculture Network is available in print and online. Features 12 recently funded, innovative SARE projects from around the country. See www.sare.org/san/2000high/.

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**Coming Events**

Contact CSAS office for more information.

**2000**

June 24 - Specialty Crops Field Day, Lincoln, NE  
June 24 - Bison and Grass Ranch Tour (featuring Allan Nation), Rose, NE  
July 8 - The Grain Place tour, featuring Jo Robinson, author of *Why Grassfed Is Best*, Marquette, NE  
July 18-20 - Grazing Retreat, Center, NE  
July 25-26 - Grazing Retreat, Franklin, NE  
July 29 - NSAS farm tour, Hooper, NE  
Aug. 12 - NSAS farm tour, Milford, NE  
Aug. 25 - NSAS farm tour, Ogallala, NE  
Aug. 29-30 - Alternative Ag Expo, Sioux City, IA  
Aug. 29-31 - Carbon: Exploring the Benefits to Farmers and Society, Des Moines, IA, [www.cvrcd.org/carbon.htm](http://www.cvrcd.org/carbon.htm)  
Aug. 28-29 - Alternative Ag Expo, Sioux City, IA  
Sep. 13/14/15 - Grazing Tour with Burt Smith, Crofton/Atkinson/Imperial, NE  
Oct. 29-31 - Community Food Security Coalition annual conference, Santa Fe, NM  
Nov. 30-Dec. 1 - Future of Our Food and Farms Summit 2000, Philadelphia, PA

**2001**

Jan. 5-6 - Great Plains Regional Vegetable Conference, St. Joseph, MO

For additional events, see:  
[www.sare.org/wreg/view_notice_adm.pl](http://www.sare.org/wreg/view_notice_adm.pl)  
[www.agnic.org/mtg/](http://www.agnic.org/mtg/)
Did You Know...

A graph in "Earth Day 2000: A 30-Year Report Card" (March-April 2000 issue of *World Watch*) shows that from 1970 to 2000, the number of pesticide-resistant weeds has increased from a handful to more than 200, and the number of pesticide-resistant pathogens from less than 50 to nearly 250.

According to a USDA ERS report (see Resources), the number of acres of certified organic cropland increased from 403,000 in 1992 to 850,000 in 1997; the 1997 figure represents 0.2% of all U.S. cropland. The 1998 Organic Farming Research Foundation survey reported that the average size of a U.S. organic farm is 140 acres.

"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."

Aldo Leopold

"The emerging structure of agribusiness puts American farmers well down the road to serfdom and renders food consumers vulnerable to exploitation."

Auburn University professor C. Robert Taylor