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"Center for Sustainable Agricultural Systems Newsletter, September/October 1999" (1999). *Center for Sustainable Agricultural Systems -- Newsletters 1993-2000*. 40.

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Center for Sustainable Agricultural Systems

University of Nebraska-Lincoln

September-October, 1999 Newsletter

New Energy in Farming Communities

Current crops and cropping systems in Nebraska and throughout the country reflect the northern European heritage of the majority of our farmers. The farming industry has evolved during the past two centuries, with major changes in types of technology, additions of pesticides and fertilizers, and increases in productivity per unit of labor. Although the systems have become more refined, we are essentially growing the same crops using an industrial approach. With current commodity prices, there is little hope for an improved economic situation in agriculture, and many farmers are understandably discouraged.

Here's a new source of innovation and encouragement. In an August 12, 1999 *Wall Street Journal* article titled "Immigrants See Hope in Farming," Scott Kilman and Joel Millman report that opportunity is being grasped by immigrants to the U.S. from developing countries. Often coming from areas where land is scarce and economic systems do not allow or encourage entrepreneurs, new people are bringing energy and ideas into agriculture. The authors say that "American agriculture is receiving the biggest infusion of new blood since the original wave of immigrant farmers from Europe played out several generations ago."

The innovations span the spectrum from vegetables to fruit crops, fish to rice, and ethnic specialty crops to dairies. Examples in the article include a former migrant farm worker from Mexico who now grows 135 acres of apple, peach, and cherry trees in Washington state. There are more than 1,000 Laotians farming in California, and Cambodians growing vegetables and fish in Massachusetts. Vietnamese fishermen are growing rice in Texas. Dutch farmers are starting dairies in Texas, Michigan, and Washington. A recent article in *Nebraska Farmer* magazine described a Portuguese dairyman who had recently moved his herd to Nebraska.

The *Wall Street Journal* article continues with a description of the reception of these immigrants into rural communities. Farm equipment and input dealers welcome the infusion of people and energy into farming. A service manager at an equipment dealership in Washington state recently took Spanish classes and wants to hire bilingual

employees. University of Minnesota is teaching Hmong, Somali, and Ethiopian farmers about pest management, soil fertility, and marketing. The head of the program says, "The countryside was built on their kind of hard work."

Most immigrant farmers are willing to work hard and expect no handout from the government, partly because this expectation is not part of their prior farming culture and also because they are not primarily growing federally-subsidized commodities. The specialty vegetable and fruit crops, small animals, fish, mushroom, and other niche products are not part of the federal program. Many also have difficulty getting loans. Thus, they are infusing this new energy, work ethic, and enthusiasm through their own efforts and not through subsidies.

The authors point out that many immigrants are pursuing their own agrarian roots. There is a growing market for unique products, organic foods, and ethnic specialties, and these can often be grown on small land areas with major investments of time and labor by the farmer and family. Often they bring with them a serious land ethic, one which also came with the Europeans who invested in land because it would "always be there," unlike other types of investment. What better way to establish a conservation and stewardship ethic in the rural areas of this country?

Is there a message for Nebraskans? Given the progression toward ever larger investments in land and machinery and reliance on a few key commodities, it may be increasingly difficult for many farmers to make a profit no matter how hard they work. Crops our ancestors brought from Europe are not the only options. While immigrants can learn a language and a new culture from those already in our rural areas, we can learn from them about new crops, intensive systems, and innovative ways to make a living and establish a quality of life through agriculture.

Submitted by Charles Francis

University Role in Biotechnology: How Do We Assess the Risks and Benefits?

Fifth in a Series. There is growing debate about the emerging role of universities in research and applications of biotechnology. Current interest and investment in production and use of genetically modified organisms (GMOs) have sparked a revolution in university research laboratories and fields. Perhaps no single set of new techniques and potential technologies has caused such a substantial short-term shift in focus of people and resources in universities. We hope that encouraging debate within the university community and among our clients will help inform people of the issues and aid in charting a rational strategy for the future.

What are the specific risks?

Potential risks from the use of transgenic organisms (often called GMOs) were elaborated at the June meeting of the National Agricultural Biotechnology Council (see CSAS newsletter, July-August 1999). Gene escape, especially through the transfer of pollen

from modified plants and pollination of wild relatives of crops, is being widely debated by geneticists and ecologists. Most support the conclusion that the risk of escape and establishment of these new genes is low, but not impossible. Some conclude that even a small level of risk is unacceptable, and that a precautionary approach, including much more testing, would be a prudent path. To the issue of wide crosses or transfer of genes among drastically different species, many plant breeders argue that this is a logical extension of conventional breeding techniques used for decades in the search for genes that control specific traits, for example, stress tolerance, insect resistance, or grain quality. Others such as Wes Jackson, cytogeneticist and futurist, draw the tolerance line at moving genes within major families, like the grasses. Outside these limits, such as moving a flounder gene to a tomato for cold tolerance, he suggests that we are creating genetic combinations with which humans and other animals have no evolutionary selection experience, thus introducing unacceptable risk.

More immediately tangible than these potential risks to the ecosystem are the possible risks to humans who consume the food from transgenic plants. This is the expressed concern from people in EU countries and others around the world in opposition to GMO-based foods, and the reason that major food processors and supermarket chains in Europe have recently decided to only use and market non-GMO grains for the near future. We have been assured by the companies that market seed that the products--plant-based foods or livestock fed on GMO grains--are no different than those that come from conventional crops. A majority of people in the U.S. seem to accept these claims or are indifferent toward such concerns. Perhaps this reflects greater trust in the commercial sector, general acceptance of new technologies, or apathy on the part of consumers who are interested only in getting food that is convenient and cheap. In contrast, people in Europe have a much higher level of respect for food, expect to pay more for quality, and see food as more integral to their culture. They may also have a higher level of scepticism about the assurances of large corporations that conduct their own safety testing and have greater allegiance to their stockholders than to clients who consume the products. Concern about food safety may be associated with the impersonal relationship of consumers with this unknown source of food, and with the entire concept of a global food system dominated by a few multinational corporations and lacking in any local responsibility or control.

Other risks that may or may not be important to consumers include the ownership of genetic material (see CSAS newsletter, May-June 1999), issues of equity in the availability of food products or the benefits of research, and the consolidation of land resources and farming activities in a smaller number of large farms. On the first issue, major purchases of seed companies by multinational chemical corporations have removed their ownership from communities, states, or even nations, and patenting of new varieties restricts their use to those willing to pay royalties for technology. On the second, Jeffrey Sachs recently said in *The Economist* (14 August 1999) that "inequalities of income across the globe are actually exceeded by the inequalities of scientific output and technological innovation." He further observed that "global science is directed by the rich countries for the rich-country markets," and found that technology does not easily cross the "ecological divide" between temperate and tropical countries. On the last issue, we know that a growing proportion of food is produced on a smaller number of farms, a

trend that maintains cheap food but causes the decline and death of many rural communities.

What is the university's role?

As a research and education organization, the university has an obligation to study and describe objectively how these technologies work and their potential impacts on production and society. In research on transgenic plants we can assure less potential bias if the work is financed by sources other than those that will benefit from the results, thus government or foundation support is far preferable to that from the seed or chemical industries. It is essential that the new crop plants are studied as components of systems, and not in isolated conditions of the laboratory. Recent research on low concentrations of nitrate together with insecticide and herbicide residues shows that the "cocktail" of these water contaminants can cause cancer in test animals at chemical rates below what is considered safe for the individual compounds, a result also described in the 1962 Rachel Carson book *Silent Spring*. This underlines the importance of testing in the context of real-world systems. It is also essential to sort out the claims of benefits of any new technologies, including GMO crops, and to determine who will benefit in the long term.

In the past we have often concentrated research on the immediate production and economic consequences of introducing a single new variety or production practice, without taking into account the effect on the entire production system and community. The implicit assumption has been that higher levels of production meant greater income and thus benefits for the producer as well as the rest of the industry. Appropriate social science methods exist to study impacts of technology, and we are obligated to use these before introducing or promoting new technologies. A comprehensive look at transgenic crops, how and where they will be grown, and the impact on the food system can help us determine the distribution of benefits. For example, multi-generation farm families that have been driven from their livelihood by consolidation in agriculture would scarcely be seen as beneficiaries of large-farm specific technologies, even though these same changes could result in cheaper food for urban dwellers. New crop varieties that compel a grower to use a predetermined package of chemical inputs are seen as a step toward control by corporations of an "assembly-line, industrial model" of agricultural production that removes decision making and independence from the farmer.

None of these issues has been given high priority in the past by plant breeders developing new varieties. Increased awareness of the broader economic and social issues is causing scientists to take a longer look at the types of technology being developed. We are also starting to assess the costs and benefits in a more comprehensive and holistic manner. This emerging focus by universities will help us continue to provide valuable service to agriculture as well as to society.

Submitted by Charles Francis

CSAS Director Receives Honorary Degree

Charles Francis, CSAS Director since 1991, traveled back to the area of his recently completed sabbatic to receive an honorary Doctor of Science degree from Helsinki University. Francis was Visiting NOVA Professor in Agroecology assigned to the Agricultural University of Norway from June 1998-June 1999. During that time he worked with a regional team to develop a new M.S. curriculum in Agroecology. This work involved extensive travel in Norway, Sweden, Denmark, Finland, and the Baltic countries. The honorary degree was awarded in recognition of his contributions to agriculture and education in Finland and the Nordic/Baltic Region.

Sooby Now at OFRF

Jane Sooby, formerly with the University of Nebraska and the Nebraska Sustainable Agriculture Society, began working for the Organic Farming Research Foundation (OFRF) in June. In her new position she offers resources to assist people in planning organic farming research, including contacts with local extension and/or university cooperators, help with literature reviews on the background of research questions, assistance in shaping production questions into research projects, and tips on experimental design and data collection. She invites farmers, ranchers, and researchers to contact her for further information on applying for organic farming research grants at OFRF, PO Box 440, Santa Cruz, CA 95061, 831-426-6606, jane@ofrf.org.

Note: OFRF has increased its ceiling for individual grants to \$10,000. The next deadline for submitting proposals for organic farming research and education projects is January 15, 2000. More information is available at <http://www.ofrf.org/>.

NCR SARE Revised Web Site

The North Central Region Sustainable Agriculture Research and Education (NCR SARE) program invites farmers and ranchers, researchers, educators and others interested in North Central region sustainable agriculture to access <http://www.sare.org/ncrsare> for information on research results, competitive grants, and other resources to support profitable, environmentally sound farming and ranching systems.

Users can find the latest information about NCR SARE activities and programs, including competitive grants, educational opportunities, sustainable agriculture resources,

and links to products from the national SARE office and SARE's Sustainable Agriculture Network (SAN).

Features include:

- application forms for competitive grant programs;
- helpful tips and links for grant applicants;
- information sorted by North Central states, including links to funded SARE projects, state SARE contacts, and lists of and links to state organizations;
- newsletters, fact sheets, and links to other publications and resources from SARE;
- links to the national SARE program and SAN, which offer a variety of sustainable ag information products and a searchable database of SARE projects;
- links to organizations and programs nationwide;
- information on NCR SARE's November 1999 marketing conference;
- coming soon, a calendar of educational events and resources developed in NCR SARE's Professional Development Program.

Contact Lisa Bauer at 402-472-0265 or lbauer2@unl.edu for more information.

New Food Ethics Journal in 2000

Food Ethics Review is a new international refereed journal for all who are involved with food at a professional level, including those in agricultural and food related business and commerce, academia and research, government and public bodies.

The journal will serve as an essential forum for ideas and discussion on ethical and moral issues in relation to food, raising the level of debate at every stage in the food chain from primary production to the consumer. It will adopt an interdisciplinary approach to the subject of food and publish original and authoritative research, review articles, viewpoint letters and commentaries from diverse areas including: agriculture and food production; biosciences; environmental and public health; food science and technology; food marketing and retailing; philosophy, politics and economics; the humanitarian and social sciences.

The Editor is David Early at Harper Adams University, and Associate Editors are Margaret Britz at University of Melbourne, Australia, and Magni Martens at The Royal Veterinary and Agricultural University, Denmark.

Food Ethics Review will be published quarterly in 2000, with the first issue in March. For more information contact Tom Gold-Blyth, tom.gold-blyth@blacksci.co.uk.

DOE Announces New Wind Energy Initiative

At the annual conference of the wind energy industry in June, DOE Secretary Richardson announced a new initiative to promote wind energy projects, with three main goals: supply at least 5% of the nation's electricity needs by 2020; double the number of states having more than 20 megawatts of wind capacity to 16 by 2005, and triple the number to 24 by 2010; and increase the federal government's use of wind generated electricity to 5% by 2010.

Nearly \$1.2 million in DOE grants will go to states, cities, and wind technology companies for small wind turbine projects in 10 states across the country. For details, see <http://home.doe.gov/news/releases99/junpr/pr99153.htm>.

Conference Celebrates Sustainable Ag Coming of Age in 2000

"Farming and Ranching for Profit, Stewardship, and Community" is the theme of a major sustainable agriculture conference to be held in Portland, Oregon on March 7-9, 2000. Nationally-known speakers, producers, researchers, agricultural extension agents, and others from the western U.S. and around the nation will share their sustainable agriculture successes, experiences, and research results.

The event is sponsored by the USDA Western Sustainable Agriculture Research and Education (SARE) program, with major contributions from several land-grant universities and the federal sustainable agriculture effort.

The event will showcase techniques, experts and enterprises that demonstrate why "sustainable agriculture will continue to grow" in the next century and be adopted by all types of producers and agricultural enterprises--large and small, corporate and owner-operated.

Confirmed keynote speakers include Virginia producer and author Joel Salatin, who will talk about how to increase farm and ranch profits through innovative livestock and ecological practices. Salatin, author of *Pastured Poultry Profits* and *Salad Bar Beef*, will also conduct a workshop. In addition, Oregonian Karla Chambers, co-owner and marketing director of Stahlbush Island Farms, will discuss changes in consumer demand for sustainably grown foods.

A day-long tour will give attendees on-the-ground experience with prospering Portland-area farms, direct-marketing approaches, eco-labeling successes, and youth and

community efforts that relate to local agriculture. Issues about farming in the midst of urban sprawl and regulation will also be illustrated.

The conference will highlight the methods and outcomes of diverse research and education projects funded by SARE including university-based, on-farm and producer-directed work. Innovative marketing strategies and examples will be shared, and the role of non-profit organizations and public policy in promoting sustainable agriculture will also be discussed. The benefits of involving farmers and ranchers in agricultural research is another key element of the program.

Specific program topics include: irrigated and dryland cropping systems; grazing and livestock operations; innovative marketing strategies, including eco-labeling and direct-marketing; soil quality; biological pest control; vegetable, tree fruit, wine grape and other crops; and more. The program will also offer a number of information-sharing opportunities.

For more information about the conference, or to register, contact Gina Hashagen, Oregon State University, at hashageg@bcc.orst.edu, 541-737-5477. Conference information is also online at <http://wsare.usu.edu/2000>.

Resources

Organic Wheat Production Handbook. The 60-page book is free, but there is \$10 copy/s&h fee. Provides practical information for growing high-quality organic wheat. Each section addresses specific management issues such as: planting practices, growth and development, nutrient management, grain protein content and nitrogen, irrigation management, harvest suggestions. While written for New Mexico farmers, most of the information is relevant for organic wheat production throughout the U.S. Send checks payable to: Kernel of Life, c/o Organic Wheat Production Handbook, 200-B Callecita Place, Santa Fe, NM 87501.

Legal Guide for Farm Marketers. \$20. Explores legal issues regarding direct marketing farm products, contracts, liability and insurance, processing and marketing of meat and poultry, labor and employment, community-supported agriculture, farmers markets, and local food processing rules. Drake University Agricultural Law Center, 2507 University Ave., Des moines, IA 50311-4505, 515-271-2947.

Sharing the Harvest: A Guide to Community-Supported Agriculture. \$24.95 + \$3 s&h. This how-to book by Elizabeth Henderson with Robyn VanEn (who died before it was finished) covers getting started, finances, and legalities of a CSA. Food growing, handling, and distribution are discussed. Chelsea Green Publishing Co., PO Box 428, White River Junction, VT 05001, 1-800-639-4099, <http://www.chelseagreen.com>. You can also order directly from Elizabeth Henderson, 2218 Welcher Rd, Newark, NY 14513, 315-331-9029.

Sustainable Agriculture Task Force Report. Issued Summer 1999. This is one of the reports from the President's Council on Sustainable Development. Copies of PCSD Reports may be obtained by calling 1-800-363-3732, or may be purchased from the U. S. Government Printing Office by calling 202-512-1800. Many are also at the PCSD Web site: <http://www.whitehouse.gov/PCSD/>.

Greenbook '98: A Diversity of Tools. Free. Summarizes knowledge gained through innovative or experimental farming projects in Minnesota. Includes project description, results, management tips, and additional resources related to more than 40 projects funded by the Energy and Sustainable Agriculture Program. Projects focus on alternative crops, cropping systems and soil fertility, fruits and vegetables, livestock, or whole farm systems. Energy and Sustainable Agriculture Program, Minnesota Department of Agriculture, 90 West Plato Boulevard, Saint Paul, MN 55107, 651-296-7673, prescott.bergh@state.mn.us, <http://www.mda.state.mn.us>.

The full transcript of a debate between Dennis Avery and Joel Salatin aired July 28, 1999 on WSVA radio in Harrisonburg, VA can be found at the Sustainable Farming Connection Web site, <http://metalab.unc.edu/farming-connection/>.

Sustainable Vegetable Production from Start-Up to Market. \$42 + \$5.50 s&h. This 280-page book containing 91 illustrations introduces the full range of processes for moderate-scale vegetable production using ecological practices that minimize the need for synthetic inputs and maximize stewardship of resources. Provides practical information on selecting a farm site, planning and record keeping, marketing options, and systems for starting, planting, protecting, and harvesting crops. NRAES-104, Coop. Ext., 152 Riley-Robb Hall, Ithaca, NY 14853-5701, 607-255-7654, nraes@cornell.edu, <http://www.nraes.org>.

A Guide to Successful Direct Marketing. \$12. Includes developing a business plan, advertising, quality control, product display techniques and pricing. Make checks payable to T.E.E.F. (Texas Extension Education Foundation) and mail to Tracy Davis, Texas Ag. Extension Service, Texas A&M University, 464 Blocker Bldg., College Station, TX 77843-2124, 409-845-1772, tdavis@tamu.edu.

Fresh Produce Marketing (B-5053). Free. Describes wholesale markets for producers who cannot sell all products directly and are getting large enough to sell to restaurants or wholesalers. Covers market research, post-harvest steps, calculating costs, a developing a marketing plan. Order from Tracy Davis (see above).

Coming Events

Contact CSAS office for more information.

1999

Nov. 10-11 - Farmer Cooperatives 2000, Kansas City, MO

Nov. 11-13 - Northeast Community Supported Agriculture Conference II, Tamiment, PA

Nov. 19-20 - Developing Agricultural Marketing Skills for the New Millennium, Lincoln, NE

Dec. 6-7 - Adding Value Through Environmental Management and Marketing: Opportunities for Food Producers, Processors and Retailers, Madison, WI,
<http://www.iatp.org/labels/envcommodities/>

Dec. 9-11 - Acres USA Conference, Minneapolis, MN

2000

Jan. 5-6 - Mid-America Fruit Growers Conference, St. Joseph, MO

Jan. 7-8 - Great Plains Regional Vegetable Conference, St. Joseph, MO

Jan 19-22 - 20th Annual Ecological Farming Conference, Pacific Grove, CA,
<http://www.csa-efc.org>

Feb. 26 - Nebraska Sustainable Agriculture Society Annual Meeting, Aurora, NE

Mar. 7-9 - Farming and Ranching for Profit, Stewardship, and Community Conference, Portland, OR

For additional events, see:

http://www.sare.org/wreg/view_notice_adm.pl

<http://www.agnic.org/mtg/>

Did You Know...

In August the Berkeley, California school board adopted a new food philosophy that includes a contract with a San Francisco-based distributor to purchase 700 pieces of organic fruit a day to stock the snack program. There is also a mandate for an organic garden at every school to defray some of the added expenses of serving pesticide-free foods.

"GMOs have become the albatross around the neck of farmers on issues of trade, labeling, testing, certification, segregation, market availability and agribusiness concentration. Until all these issues are answered, it is best for production agriculture to

examine alternatives to planting GMOs," said Gary Goldberg, Chief Executive Officer of the American Corn Growers Association. See the 8/24/99 press release at <http://www.acga.org/news/>.

Northampton County's farms and open lands contributed over four times as much money to the county's tax base in 1998 as they used in services, according to a study released 8/10/99 by the American Farmland Trust. The study also found that revenues from residential development were not enough to cover the cost of services demanded by that land use. See the press release at <http://www.farmland.org/news/index.htm>.

This document is online at:

<http://www.ianr.unl.edu/ianr/csas/newsletr/sepoct99.htm>