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Center for Sustainable Agricultural Systems Newsletter

January-February 1998

National Organic Program Proposed Rule

By now everyone even remotely connected with organic farming knows that in December USDA published proposed regulations that would govern the USDA's National Organic Program (see Dec. 16 *Federal Register*). The original deadline for comments was March 16, 1998. This has been unofficially (as this goes to press February 5) extended to May 1 (watch the *Federal Register*). Interested persons are invited to submit written comments to: Eileen S. Stommes, Deputy Administrator, Agricultural Marketing Service, USDA, Room 4007-S, Ag Stop 0275, PO Box 96456, Washington, DC 20090-6456. Comments also may be sent by fax to 202-690-4632, or via the Internet through the National Organic Program homepage at <http://www.ams.usda.gov/nop> (text of proposed rule is at this site). Other sites having pages containing information, analysis and commentary on the include:

- Pest Management at the Crossroads, <http://www.pmac.net/nosrule.htm>
- Organic Farmers Marketing Association (OFMA), <http://web.iquest.net/ofma>
- Sustainable Farming Connection, <http://sunsite.unc.edu/farming-connection/>

There have also been many postings on this topic to the SANET-mg e-mail group since the proposed rule was published. To access, see the Sustainable Agriculture Network homepage at <http://www.ces.ncsu.edu/san/htdocs/hypermail/> (just browse the message titles and click on those dealing with the rule).

Side note: As Dr. Margaret Mellon of the Union of Concerned Scientists points out, a chicken that spent its entire life closed in a building with a hundred-thousand other chickens, eating genetically-engineered corn and soybeans that were grown on land fertilized with sewage sludge, and then irradiated after processing, could be labeled "organic" under the proposed National Organic Program rules.

National Strategy to Assist Small Farms

On January 22, 1998 Agriculture Secretary Dan Glickman received *A Time To Act*, a report by the 30-member National Commission on Small Farms that Glickman appointed in July 1997. The report contains 146 recommendations to improve USDA's service to small and beginning farmers, including credit, risk management, research, education, rural development, marketing, and outreach. It is the first time USDA has undertaken an in-depth examination of the needs of America's small farmers.

Highlights from the report include recommendations to:

- Initiate a new Beginning Farmer Development Program that creates training and assistance centers for beginning farmers in partnership with community-based nonprofits, land-grant universities, and the private sector. This program will provide farm management training and long-term support through mentoring programs.
- Develop a small farm research initiative that focuses on promoting less capital intensive technologies and practices to improve the competitiveness and profitability of small farmers.
- Create an interagency initiative to promote and expand local and regional food marketing opportunities for the benefit of small farmers, rural communities, and low-income families in rural and urban areas, including expanding the use of cooperatives as a business vehicle for small farmers.
- Launch a Small Farm Entrepreneurial Development Initiative to provide small and beginning farmers with entrepreneurial training, technical assistance, and priority program funding for the purpose of developing farmer owned and operated marketing enterprises.

For a copy of the report, check the USDA Web site at <http://www.usda.gov/news/releases/index.htm> (see January releases 0024-28 and 0030), or contact Jennifer Yezak Molen, National Commission on Small Farms, PO Box 2890, Washington, DC 20013, 202-720-0122, smallfarm@usda.gov.

Future Food Systems: Implications for Nebraska

Food production needs to at least double over the next generation if we are going to meet increased demand and reduce under nutrition globally! This central theme of a January workshop in Lincoln was echoed by several speakers, who added that poverty is an underlying cause of poor access to food. The conclusions were that food will be a major issue in the next century, and that places with a productive land resource will play a major role in contributing to global food supply.

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Dr. Alex McCalla (World Bank, Washington, DC) described food and nutrition in terms of availability, access, and utilization. He stated that food sufficiency must be measured at the household level, although national and international food security is also critical for the future. McCalla concluded that global food security can be achieved only if (1) we can develop sustainable production systems that double yields over the next 20 years, (2) we implement national policies that don't discriminate against agriculture, (3) we invest in practical research, and (4) we remove distortions in international trade.

Importance of future knowledge resources was stressed by Dr. Pierre Crosson (Resources for the Future, Washington, DC). He said new lands and more irrigation will make negligible contributions to increased productivity. New information and knowledge will be embodied in people, in technologies, and in institutions. The role of education and research is critical in developing this knowledge resource, and the University of Nebraska and other colleges in our state will be key players in bringing the land resource here together with people and technology to determine how the land will best be used. This knowledge resource will have to be applied to methods that increase productivity, and this must be done while dealing with environmental impacts of agriculture. Local problems of nitrate and pesticides in Nebraska water supplies are current examples of these impacts. Compared to other places, Nebraska has fewer limitations on additional irrigation and on bringing new lands into cultivation.

Dr. Robert Smith (Institute of Food Technologists, Chicago, IL) described the potentials of computers and new technologies in linking people, food, and health. The demise of major food companies has been due to short-term planning and bottom lines, and a new culture of small, specialized companies is growing in importance. The new culture depends on team research and development, recognizing the contributions of each member, and creating an environment of interdependence. A new workforce paradigm will require companies to come together in cooperative ventures. Universities need to

educate young people to work productively in this new environment. Specific skills needed for future employees in the food industry include information technologies, biotechnologies, genome mapping, nutrition, life cycle production methods, and especially communication skills to understand and deal with consumer needs and wants. An unabashed technophile, Smith sees a great future for integration of computer and information potentials into the entire food system.

A broad, integrated perspective on agricultural research was provided by Dr. Mike Duffy (Leopold Center, Iowa State University). He thinks the university must proceed under the assumptions that (1) everything in the ecosystem is connected and we are part of the natural system, (2) all choices involve tradeoffs and costs, (3) our world view must change from conqueror to co-inhabitant, (4) everyone should have access to resources and a chance to get ahead, although success is not assured, and (5) change is inevitable. Duffy outlined a clear agenda for public research that gives people options and education to help them make rational choices. We must work for the public good. The goal of feeding the world is an egotistical and unrealistic one; we need to focus on how the world will be fed. Duffy insists we develop multiple visions for the future, and alternative technologies, as well as the wisdom to understand the implications of choices we make.

The program concluded with Chuck Hassebrook (Center for Rural Affairs, Walthill, NE and NU Regent) describing his vision of education as a potential leading force for change in the future. He sees the research agenda as, in fact, a long-term form of social planning. Hassebrook outlined the history of several civilizations that collapsed as a result of concentration of wealth and power, and said that many of our ancestors came to this country to escape such systems in Europe and elsewhere. He stated that university education has the potential for creating the mentality in many young entrepreneurs to return to towns in Nebraska and develop owner-operator farms and small businesses throughout the state. He further urged an economic and policy environment that supports the individual business owner, the strength of a Jeffersonian rural system and viable rural communities. Hoop-house swine production was cited as a technology that provides efficiency of scale for the family farmer, and he urged further research on these types of technologies. Hassebrook further cited integrative courses in systems agriculture and agroecology as key elements of a comprehensive and futuristic education.

All of the speakers emphasized the importance of long-term thinking and planning in education and research. Several mentioned the need for greater focus on holistic systems approaches, and agroecology as an integrating theme for study of systems. The need for community involvement, for developing local food systems, and for stimulating local business was stressed. We need to ask questions such as "Who benefits from research?" while setting our priorities. It will be more valuable to provide ideas and processes, a true method of education, rather than giving prescriptions to put band-aids on larger problems. Much of the focus of the speakers in this workshop coincide with the goals of the CSAS, and some implementation of their recommendations is found in our current programs. The conference was sponsored by NN21, the effort to revitalize land grant universities sponsored by the Kellogg Foundation.

Submitted by
Chuck Francis

North Central Region SARE Offers Producer Grants

Celebrating a decade of the USDA's Sustainable Agriculture Research and Education (SARE) program, SARE's North Central Region (NCR) launches 1998 by offering competitive grants to farmers and ranchers. Producers interested in researching, demonstrating or educating others about profitable, environmentally sound, socially responsible agricultural systems are encouraged to apply to the NCR Producer Grant Program. A total of \$225,000 is available for awards of up to \$5,000 for individual producers investigating any sustainable practice or concept, and up to \$10,000 for groups of three or more producers proposing creative marketing projects.

"The Producer Grant Program emphasizes the importance of farmer-driven research and indigenous knowledge," says Ken Schneider, former farmer/rancher and NCR SARE's producer grant liaison. "We support innovative farmers and ranchers looking for ways to overcome obstacles to a sustainable operation."

Nearly 200 producer projects in the NCR have received grants since 1992. Projects cover such topics as reducing off-farm inputs, testing technologies, improving water quality, educating young people or consumers about agriculture, managing weeds and pests, recycling wastes, and creating viable markets for sustainable products.

Producers must reside in the NCR: IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI. Applications are due May 1. Funding decisions will be made in late-June, with funds available in mid-fall of 1998. Call 402-472-7081, fax 402-472-0280, or e-mail sare001@unlvm.unl.edu for an application. You can also find the application at <http://www.sare.org/ncrsare/>.

Educators Invited to Attend SARE Celebration

The first decade celebration for the Sustainable Agriculture Research and Education Program will be in Austin, Texas, March 5-7, 1998. *Building on a Decade* aims to broaden understanding of sustainable agriculture nationwide, and to showcase the many efforts of sustainable agriculture advocates working in the research and extension community, nonprofit sector, and on farms and ranches.

Two sessions at the conference are especially for educators. On Friday, March 6, Nancy Grudens Schuck, Cornell University, and Dick Richardson, University of Texas, will lead small group deliberations on the following questions:

- Who is your learning audience?
- What are their learning expectations?
- How do you design the learning environment?
- What are your biggest challenges as a learning facilitator?

On Sunday, March 8, Grudens Schuck and Chuck Francis, University of Nebraska, will summarize the topics from Friday and moderate expanded discussions. Attendees will give reports on successful learning experiences and describe curricula, syllabi, and training resources. One of the products from the sessions will be a draft working document for circulation.

To enrich the formal presentations, the North Central Region will have a large display highlighting Professional Development Program grants. The display will include covers of the materials developed to date. Next to the display will be a poster from the North Central Sustainable Agriculture Training Program with information from the 1997 workshops, *Linking People, Purpose, and Place: An Ecological Approach to Agriculture*.

For information on the conference, see <http://www.sare.org/san/10year/> or contact Valerie Berton at 301-405-5270, vberton@wam.umd.edu. If you have items for the North Central Region educational display, contact Heidi Carter at 402-472-0917, csas007@unlvm.unl.edu.

Submitted by Heidi Carter

Symposium: Preserving Farmland, Policies and Practices

The Ohio Ecological Food and Farm Association will host its 19th Annual Conference March 14-15 at Wilmington College, in Wilmington, Ohio. Experts from around the country will share sustainable agriculture production and marketing techniques. Grace Gershuny of the National Organic Program, and other organic industry representatives will critique the National Organic Standards, and their impact on organic farmers and consumers. A panel of Ohio's farmland preservation leaders will answer farmland conservation questions and address the recommendations of the Farmland Preservation Task Force. For more information, contact Sean McGovern, OEFFA, PO Box 82234, Columbus, OH 43202, 614-294-3663, oeffa@iwaynet.net.

Resources

Dynamic Farmers' Marketing: A Guide to Successfully Selling Your Farmers' Market Products, 1997. \$14.95 + \$2.50 s&h. Addresses the explosive growth of public farmers' markets in the U.S. and how family-scale farmers can capitalize on this trend. Step-by-step procedures for vendors, market management and new market organizers. Bittersweet Farmstead, PO Box 52, Middlebrook, VA 24459, 1-800-311-2263, farmsted@cfw.com.

Weeds as Teachers: 'Many Little Hammers' Weed Management, 1997. \$6 AERO members, \$12 non-members. Presents proceedings of 1995 weed management conference, which emphasized least-toxic and non-toxic techniques for controlling weeds in Northern Plains. Includes text of presentations on weed ecology, integrated pest management, crop diversity, exotic plant problems and biological control. Discusses topics in lay terms for non-specialists. Alternative Energy Resources Organization, 25 South Ewing Street, Suite 214, Helena, MT 59601, 406-443-7272, aero@desktop.org.

Alternatives in Agriculture. \$10. 1997 annual research report of Thompson On-Farm Research in Boone, Iowa. Updates all previous reports and describes all of the sustainable and alternative agriculture experiments conducted on the farm. Chapters detail the farm's inspiration, documentation and education, research on fertility, cover crops, alternative weed management systems, crops, water quality, soil health, economics, livestock, and farming systems, and the viability of rural communities. Thompson On-Farm Research, 2035 190th Street, Boone, IA 50036-7423, 515-432-1560.

Overexposed: Organophosphate Insecticides in Children's Food, 1998. \$20. New report by Environmental Working Group discusses results of a study EWG conducted to monitor effectiveness of the 1996 Food Quality Protection Act, which requires all pesticides to be safe for infants and children. EWG, 1718 Connecticut Ave, N.W., Suite 600, Washington, DC 20009, 202-667-6982, info@ewg.org; <http://www.ewg.org>.

Earthworm Ecology, \$59.95 + \$5 s&h. This comprehensive book edited by earthworm guru Dr. Clive Edwards from The Ohio State University covers the gamut from earthworm biology and physiology to earthworms in agroecosystems. Soil and Water Conservation Society, 7515 NE Ankeny Road, Ankeny, IA 50021-9799, 515-289-2331, jonw@swcs.org.

Acres U.S.A. \$24/1 yr, \$42/2 yrs, \$58/3 yrs. Monthly newspaper, published by organization of same name, has "A Voice for Eco-Agriculture" as a subtitle. Covers such topics as soils, row crops, livestock, poultry, specialty crops, marketing, and much more. Also has a book catalog. Acres U.S.A., PO Box 8800, Metairie, LA 70011, 1-800-355-5313, info@acresusa.com.

A good Web site for watershed education is
http://cgee.hamline.edu/rivers/miss_adv/msa_pblc/ws_map.html

Integrated Farm Update

Small Grain Cover Crops in Crop/Livestock Systems

Cover crops have potential for several uses in crop and livestock production systems. Early spring grazing for beef can reduce the need for purchased protein and energy feeds and reduce labor costs for feeding. Benefits of nitrogen fixing and improved soil quality with cover crops are well known. They may also be used for hay, erosion control, and weed suppression. Experiments on the Integrated Farm at the UNL agricultural research site have explored cover crops for grazing, as well as their effects on later crop production. Objectives included learning the following effects of cover crops:

- Date of over-seeding into soybeans on stand and yield of small grain forages;
- Potential of different winter small grains as spring forages;
- Impact of winter small grains on later crop yields;
- Potentials of cover crops for weed suppression;
- Overseeded cover crops' effect on soil erosion and soil compaction.

In late summer 1994 we overseeded winter wheat, triticale, barley, and rye at 100 lb/a into two soybean fields on August 26, September 3, and September 13. Spring forage yields were measured the next year, as well as corn and soybean yields after the small grains. A similar study was planted the next year following a dry summer, and continuing into a dry fall and winter with limited snow cover. Best cover crop stands were found when early seeded, before soybean leaf drop and harvest. Later seeding results in poor stands due to soybean residue on the surface causing poor seed/soil contact. Winter wheat and rye had the best forage yields, around 2 tons/a in spring 1995; only rye survived the dry winter the next year. Corn yields were reduced 63% (54 to 20 bu/a) and grain sorghum yields 27% (91 to 66 bu/a) in the dry season of 1995 in plots with cover crops compared to those without. Apparently the cover crops used available soil water before it could be used by the summer cereals. In the second year rye produced 1.4 tons/a forage dry matter, and grain sorghum planted after the rye cover was reduced in yield by 16% (134 to 113 bu/a) compared to sorghum on land without the prior cover crop.

In another experiment in 1994 the same winter cover crops were no-till drilled after corn silage harvest, producing better forage stands and more consistent yields. Forage yields the next spring were 3.2 (rye), 3.0 (wheat), 2.8 (triticale), and 1.4 tons/a (barley) -- higher because of a cool, wet spring and later harvest. Under irrigation there was no difference in soybean yields (32 bu/a) between land with cover crops and land without. Under dryland conditions the control (no cover crop) soybean yields were 29 bu/a, but these were reduced to 23 bu/a (after wheat), 21 bu/a (after triticale), 17 bu/a (after rye), and 16 bu/a (after barley). There were minimal differences in weed populations among the cereal forage crops. The same trial planted in 1995 had lower spring forage yields due to dry soil conditions and a cool spring; only rye survived the winter with a good stand, producing 1.3 tons/a of forage dry matter. Winter wheat delayed pigweed and common water hemp emergence, while barley reduced foxtail density by 72% compared to a control.

In a third experiment rye was aerial seeded on September 18, 1995 into corn and soybean strips under pivot irrigation. The field was fall and winter grazed for corn and soybean residue, and rye forage used for spring grazing. Rye plant populations were 10% higher in soybean residue than in corn residue. Cattle stocked at 1.1 hd/a gained an average of 1 lb/day for one month in April. Bulk density increased 5% following spring grazing in the wet spring of 1996. Water infiltration rates were only 0.25 in/hr on tracked areas in grazed plots compared to 2.66 in/hr on ungrazed check plots. With approximately half the field tracked, this is a substantial reduction in the ability of the soil to absorb and store rainfall. There was 27% greater residue cover in the plots overseeded with rye compared to those soybean areas without rye, an important factor in reducing erosion during the subsequent summer cropping season. There was no difference in corn yields (174 bu/a) nor in soybean yields (54 bu/a) following grazed or non-grazed treatments. Conclusions from these three experiments are:

- Cover crops can be established by overseeding in fall if rainfall or irrigation are sufficient;
- Seeding into soybean should be done before leaf fall and harvest to get better stands;
- Rye appears to be the most versatile and consistent of the winter small grains, with the least winter kill and highest forage production;
- Cover crops often have a negative effect on following summer crops, particularly in dry years without irrigation;
- Grazing cover crops during spring may provide a month or more of forage, and will not affect later crop yields; grazing may cause reduction in soil quality through more compaction and resulting lower water infiltration potential.

Submitted by Gary Lesoing & Chuck Francis

Did You Know. . .

The National Audubon Society has opened its first state office in Nebraska at: 140 N. 8th St., Suite 217, Lincoln, NE 68508, 402-475-1177, dsands@audubon.org, <http://rip.physics.unk.edu/audubon/nebraska/>.

The theme for the Nagano Winter Olympics is "Coexistence with Nature."

As the United Nations' International Year of the Ocean commenced, 1,600 marine scientists and conservation biologists from 65 countries issued a warning that the sea is in trouble. Their report, issued January 6, 1998, is titled "Troubled Waters: A Call for Action."

1997 was the warmest year on record, averaging three-quarters of a degree Fahrenheit above the normal world temperature of 61.7 degrees.

Of the 9.5 million acres offered by landowners, 5.9 million (178,000 in Nebraska) were accepted into the Conservation Reserve Program in the 16th sign-up period.

Seventeen countries, led by Brazil, contain more than two-thirds of the planet's biological wealth and diversity, a report released 12/10/97 by the environmental group Conservation International.

A 1996 USDA industry concentration study showed that three beef packers -- IBP (38%), Excel (22%) and ConAgra (21%) -- control 81% of the market.

Forty percent of hog production in the U.S. is in the hands of 50 producers.

The National Catholic Rural Life Conference, in a statement from its Board of Directors dated December 18, 1997, supports a moratorium on the expansion and building of new farm factories and calls for consideration of their replacement by sustainable agricultural systems. For more information, contact NCRLC, 4625 Beaver Ave., Des Moines, IA 50310-2199, 515-270-2634, ncrlc@aol.com.

Coming Events

Contact CSAS office for more information.

Feb. 26-28 -- Conference of the North American Farmers' Direct Marketing Association and the North American Strawberry Growers Association, Victoria, BC Canada

<http://www.agf.gov.bc.ca/agric/nafdmc/dfmchome.htm>

Feb. 28 -- NSAS Annual Meeting

Mar. 2-3 -- Acres U.S.A. conference - Eco-Ag/East, Lancaster, PA

Mar. 5-6 -- National SARE Conference - Building on a Decade of Sustainable Agriculture Research & Education: Sharing Experiences to Improve Our Agriculture, Austin, TX

<http://www.ces.ncsu.edu/san/> (see page 2)

Mar. 9-11 -- 27th Nebraska Water Conference - Nebraska Water 2000, Kearney, NE

Mar. 14-15 -- Ohio Ecological Food and Farm Association Annual Conference - Preserving Farmland, Policies and Practices, Wilmington, OH (see page 2)

Mar. 29-Apr. 1 -- 1998 North American Conference on Pesticide Spray Drift Management, Portland, ME

<http://www.state.me.us/agriculture/pesticides/drift/>

May 21-June 2 -- Alternative Paradigms for Commercializing Biological Control Workshop, New Brunswick, NJ

<http://www.rci.rutgers.edu/~insects/biopesticides.htm>

June 1 -- First International Conference: Geospatial Information in Agriculture and Forestry, Lake Buena Vista, FL

<http://www.erim.org/CONF/conf.html>

June 3-6 -- Conference: Who Owns America II: How Land and Natural Resources are Owned and Controlled, Madison, WI

July 5-9 -- Soil and Water Conservation Annual Conference, Balancing Resource Issues: Land, Water, People, San Diego, CA

Oct. 4-7 -- North American Conference On Enterprise Development Through Agroforestry, Minneapolis, MN

Nov. 23-27 -- First International Agronomy Congress - Agronomy, Environment, and Food Security for 21st Century, New Delhi, India

Nov. 29 - Dec. 4 -- AFSRE 15th Symposium - Rural Livelihoods, Empowerment and the Environment: Going Beyond the Farm Boundary, Pretoria, South Africa

The teacher asked, "What is agriculture?"

The pupil replied, "Agriculture is just like farming, but farming is doing it."

The Center for Sustainable Agricultural Systems bimonthly newsletter is currently available free in hard copy to U.S. addresses, and electronically via: SANET, PENPages, and the internal IANRNEWS. Current and back issues, along with other sustainable agriculture information is also available on the Internet:

<http://www.ianr.unl.edu/ianr/csas/>

For comments or questions, or to be added to the mailing list for hard copy, contact the editor at the masthead address, or e-mail csas001@unlvm.unl.edu.

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