



Newsletter of the National Sustainable Agriculture Information Service: A project of the National Center for Appropriate Technology (NCAT)

Understanding Organic Farming Systems

Organic agriculture has hit the big time. Its tremendous growth in the past decade has led to an annual U.S. market estimated at \$10.5 billion. This issue of ATTRAnews looks at significant research on the practical problems that organic farmers face in the field.

Organic Research on the Increase

In 1995, the Organic Farming Research Foundation (OFRF) conducted a detailed search of the USDA Current Research Information System, looking for research that pertained to organic farming. They didn't find much.

Out of 30,000 federally-funded projects, they found just 34 that they rated as strongly organic. Another 267 qualified as compatible with organic methods.



Photo by Scott Bauer, USDA ARS

Horticulturist Eric Brennan records data on USDA's 17-acre certified organic research plot in Salinas, California.

Today growing numbers of colleges across the country are developing programs of organic study. Last year, according to OFRF, 18 state land grant colleges were operating certified organic farms, totaling 496 acres. Other land grant colleges are bringing land into organic production (294 acres) and managing uncertified land with organic practices (371 acres). This amounts to 1,163 organically managed acres, out of a total of 885,865 available research acres in the U.S. land grant system, or 0.056%. There's room for expansion.

For details about the extent of organic research, see *Searching for the "O-Word": An Analysis of the USDA Current Research Information System (CRIS) for Pertinence to Organic Farming*, by Mark Lipson, OFRF 1997, and *State of the States: Organic Farming Systems Research at Land Grant Institutions 2001-2003*, compiled by Jane Sooby, OFRF 2003.

USDA Awards Grants to Organic Research Projects

Recent grants reflect the growing sophistication and scope of research into organic farming. Agriculture Secretary Ann Veneman announced September 29 that the USDA is awarding more than \$4.6 million in grants through its Integrated Organic Program. The awards will go to 10 university research teams and one from the Agricultural Research Service's Tree Fruit Laboratory in Wenatchee, Washington.

Researchers at Cornell received three awards, including the largest, \$894,450, for an organic seed partnership. Two projects from the University of California at Davis were funded, as were one each at UC Santa Cruz, Tufts University, the University of Vermont, and the University of Minnesota. Among the grants is an award to the University of Arkansas for an organic poultry study that includes the work of NCAT specialists (see *Researching Organic Poultry Production*, page 3). For more information, visit www.csrees.usda.gov/newsroom/releases/organic_agproject.html.



Photo by Sarah Hoffman

Katherine Kelly, owner of Full Circle Farm in Kansas City, sells her organic produce at the Farmers' Community Market at Brookside. Photo courtesy of Full Circle Farm, Kansas City, Kansas.

Tracking What Really Works on Organic Farms

Katherine Adam, NCAT Agriculture Specialist

Organic pumpkin and squash producers have a new weapon in their arsenal to combat an old adversary—squash bug (*Anasa tristis*). Research at Iowa State University, under the direction of Professor Kathleen Delate, demonstrates that the best control measure against squash bug in cucurbits is to use tightly secured, gauze-like row covers from the time the seeds or seedlings go in the ground until just before pollination.

Working on university and local farms, researchers compared row covers, kaolin clay applied bi-weekly, and interplanting of buckwheat to attract squash bug predators. The row covers also discouraged squash vine borer.



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NCAT Provides New Tools for Organic Producers

George Kuepper, NCAT Agriculture Specialist



Earlier this year, NCAT completed a project that created a unique set of resources for the organic industry. Dubbed the *Checksheet Project*, it was co-funded by the National Organic Program and the USDA Sustainable Agriculture Research and Education program. The effort combined NCAT staff skills with national expertise in a stakeholder team of farmers, certifiers, inspectors, and other members of the organic agriculture community.

The team created a set of crop and livestock workbooks to guide producers through the federal regulatory maze, a certification compliance checklist, and record sheets to aid producers in documentation. All of these materials are available from ATTRA and are

in wide use throughout the country.

NCAT is continuing this partnership with the National Organic Program this winter. The new project will create a compliance checklist for use by processors and handlers of organic products. NCAT will also produce templates and a workbook to assist farmers in creating the Systems Plans required for organic certification. For more information, contact George Kuepper, 800/346-9140 or at georgek@ncat.org.

Helping Organic Farmers Minimize Risk

Barbara Bellows, NCAT Agriculture Specialist

The USDA Risk Management Agency has awarded NCAT a grant to help certified and transitioning organic farmers in Arkansas, Louisiana, Kentucky, Mississippi, and Tennessee minimize the risks associated with getting and maintaining certification. The Independent Organic Inspectors Association (IOIA), the foremost trainer of organic inspectors in the U.S., is also involved in this project.

NCAT and IOIA staff will work with organic producers, Extension personnel, organic inspectors, and certification agencies to identify tools that will help producers choose a compatible inspector, keep accurate certification records, and protect their fields from contamination by unapproved substances. Checksheets will also be developed to help transitioning organic producers decide whether to become National Organic Program-certified. For more information about this project, contact Barbara Bellows at 800/346-9140 or at barbarab@ncat.org

ATTRA Organic Farming Publications

The list of ATTRA publications about organic agriculture is too long to print in this space. They cover many different crops and techniques in the following categories:

- **Organic Regulation, Certification, Transition, & History**
- **Organic Fruits** (separate publications on apples, berries, grapes, peaches, pears, plums, etc.)
- **Organic Vegetables, Flowers, and Herbs** (separate publications on tomatoes, sweet corn, asparagus, lettuce, garlic, winter squash, herbs, etc., plus greenhouse production of many crops)
- **Organic Field Crops** (separate publications on hops, field corn, soybeans, alfalfa, small grains, rice, cotton, etc.)
- **Organic Control of Pests** (more than 20 separate publications on various pests, diseases, and management options)
- **Organic Livestock**
- **Organic Soils & Fertilizer Issues**
- **Organic Marketing**
- **En Español: La Certificación para Granjas Orgánicas; Fresas Orgánicas; El Manejo Integrado de Plagas (CD)**
- See also New and Updated Publications, page 4.

In addition, many other ATTRA publications address sustainable farming methods that are compatible with organic farming. All these publications are available free of charge. You can order them or request a complete list of titles by calling 1-800-346-9140. Or you can download them from ATTRA's Web site, www.attra.ncat.org.



Favorite Web Resources about Organic Farming

AgWeb: The Ultimate Agricultural Research Directory
www.attra.ncat.org/searchAgWeb.html

Ecological Agriculture Projects
<http://eap.mcgill.ca/>

Cyber-Help for Organic Farmers: Rural Capacity Building Through Organic Agriculture
www.certifiedorganic.bc.ca/rcbtoa/

InfoBasket (British Columbia Ministry of Agriculture, Food & Fisheries)
<http://infobasket.gov.bc.ca/infoman/communities/community.asp>

Missouri Alternatives Center (MAC) Link List
<http://agebb.missouri.edu/mac/links/index.htm>

New Farm
www.newfarm.org/

Organic Ag Info/Organic Ag Consortium
www.organicaginfo.org/

Organic e-Prints
<http://orgprints.org/>

Organic Agriculture at FAO (Food & Agriculture Organization of the United Nations)
www.fao.org/organicag/

Resource Guide to Organic & Sustainable Vegetable Production
www.attra.ncat.org/attra-pub/vegetable-guide.html

Researching Organic Poultry Production

Holly Born, NCAT Agriculture Specialist

One of the greatest challenges in the transition to organic poultry production is finding viable solutions to the elimination of supplemental methionine (MET) from organic broiler diets. The National Organic Program (NOP) plans to phase out the use of synthetic amino acids, including MET, by the end of 2005. Supplemental MET has allowed producers to reduce overall dietary protein levels (thereby lowering feed costs), while maintaining growth performance and meat yield.

Most organic broiler producers in the U.S. use fast-growing hybrid broilers that reach 5 pounds in less than 7 weeks. In preliminary research at the University of Arkansas, Ph.D. candidate and part-time NCAT Agriculture Specialist Anne Fanatico found that slow-growing birds appeared to have lower MET requirements than fast-growing birds.



Photo by Joe Valbuena, USDA

Research on alternative approaches to meeting methionine requirements includes the work of Dr. Joe Moritz at West Virginia University, who investigated providing methionine by pasture access. The University of Minnesota's Dr. Jacqueline Jacob is looking at alternatives to corn and soy-based feeds.

Thanks to a grant (see page 1) from the USDA-CSREES, Fanatico—along with Dr. Jason Emmert and Dr. Casey Owens of the University of Arkansas Poultry Science Department—will continue the research. Dr. Moritz and NCAT agricul-

ture specialist Holly Born will collaborate on an evaluation and economic assessment of slow-growing broilers and alternative feeding strategies. Project information and results will be available through NCAT's Sustainable Poultry Web site, www.sustainablepoultry.ncat.org.

Workshops on Organic Farming

This fall, NCAT staff in California provided several training workshops in the San Joaquin Valley. Four of the workshops were conducted in Spanish for farm workers and limited-resource farmers interested in becoming organic farmers. Trainings emphasized personal finances and record-keeping, giving participants an idea of what's needed for the organic certification process. The groups also learned about integrated pest management and other skills needed on organic farms. The workshops—funded by USDA's outreach to disadvantaged farmers and ranchers program—were a collaboration with the Farmworkers' Institute for Education and Leadership Development (FIELDS) and California FarmLink.

A second set of trainings—funded by Western SARE's Professional Development Program—explained organic farming and certification to agriculture professionals who work with organic and transitional farmers. "This workshop gave me a better understanding of the organic process, and has given me ideas for suggestions to my growers," said one participant. For information about any of these workshops, contact Rex Dufour, 530/792-7338 or at rexd@ncat.org.

Tracking What Really Works . . .

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Delate's results tallied with a West Virginia study funded by the USDA Sustainable Agriculture Research and Education grants program, comparing control of squash bug and squash vine borer by using the row covers or spraying with Neem.

Farther south, North Carolina State University (NCSU) and the state Department of Agriculture and Consumer Services operate the Center for Environmental Farming Systems in Goldsboro. Under the leadership of Dr. Nancy Creamer, the Center is conducting long-term, whole-farm research, with the help of local farmers. Large enough to simulate conditions on a modern commercial farm, the Center includes an organic unit that is investigating complex crop rotations, forage-based livestock husbandry, composting, habitat diversity, and high-value marketing.

These projects are all part of the effort to understand organic farming systems. In 2002, the Organic Farming Research Foundation, Iowa State, Ohio State, Tufts, and NCSU formed the Organic Agricultural Consortium (OAC). You can see the results of these and many other organic research projects at OAC's Web site, www.OrganicAgInfo.org.

Drawing the Connection between Organic Farming and Conservation

Montana's Alternative Energy Resources Organization (AERO) and a collaboration of partners have been hosting workshops on making the transition to organic agriculture. The group includes the Montana Natural Resources Conservation Service (NRCS), Montana State University's Cooperative Extension Service, the Montana Department of Agriculture, the Independent Organic Inspectors Association (IOIA), the Western Sustainable Agriculture Working Group, and NCAT.

"Montana is second in the nation in organic acreage," says Rick Fasching, NRCS state agronomist and a member of the planning committee. "Our field staff need to be able to answer producers' questions and support the conservation aspects of organic production." This summer, NRCS partnered with NCAT, AERO, and IOIA to provide on-farm organic workshops for NRCS staff in conjunction with AERO farm tours. The group is planning more tours and workshops as well as an Organic E-newsletter, a Montana-based Web site about organic ag practices, and an organic information hotline. For more information, contact Nancy Matheson, 406/227-0389 or at nancym@ncat.org.



“Make Mine Organic”

The Midwest Organic and Sustainable Education Service (MOSES) will once again host the annual Upper Midwest Organic Farming Conference (UMOFC) at the La Crosse Center in La Crosse, Wisconsin, on February 24-26, 2005. This year the theme will be “Make Mine Organic.” Over the past 15 years, the UMOFC has developed into one of the most successful farmer-centered conferences in the nation, drawing more than 1,500 participants in 2004. The February program features more than 45 workshops, including one by NCAT agriculture specialist Steve Diver on soil biology and humus farming. The busy trade show has close to 130 exhibitors.

ATTRA plays a unique supporting role in the conference, providing much of the educational material for the Organic University—a daylong program of educational workshops held on the first day of the conference.

To receive a pre-conference flyer, with complete information on the conference and the Organic University, e-mail info@mosesorganic.org, call 715/772-3153, or write UMOFC, P.O. Box 339, Spring Valley, WI 54767. Flyers are also available from George Kuepper at NCAT, 800/346-9140.

Excellent Resources for Organic Farmers

Alternative Farming Systems
Information Center (AFSIC) at the
National Agricultural Library
10301 Baltimore Ave., Room 132
Beltsville, MD 20705
301/504-6559
afsic@nal.usda.gov

International Federation of Organic
Agriculture Movements (IFOAM)
Charles-de-Gaulle-Str. 5
53113 Bonn - Germany
49 (0) 228 926 50-10
www.ifoam.org

National Organic Program (NOP)
Room 4008-South Building
1400 Independence Avenue, SW
Washington, DC 20250-0020
202/720-3252
www.ams.usda.gov/nop/indexNet.htm

In addition to colleges and universities, many states have helpful and innovative farmer-run organic agriculture organizations that can be found through the above resources.

Organic Farming Research
Foundation (OFRF)
P.O. Box 440
Santa Cruz, CA 95061
831/426-6606
www.ofrf.org

Organic Materials Review Institute
(OMRI)
Box 11558
Eugene, OR 97440
541/343-7600
info@omri.org

Sustainable Agriculture Network
(SAN)
10300 Baltimore Avenue
BARC West, Bldg. 046
Beltsville, MD 20705
301/504-6425
www.sare.org/publications/index.htm

New and Updated Publications from ATTRA

New

- ◆ Enterprise Budgets and Production Costs for Organic Production

Updated

- ◆ Tree Fruit: Organic Production Overview
- ◆ Potting Mixes for Certified Organic Production
- ◆ Organic Crop Production Overview
- ◆ Field Bindweed Control Alternatives
- ◆ Oilseed Processing for Small-Scale Producers

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