Appendix: USDA Research, Program, and Regulatory Activities on Organic Agriculture

Federal Government efforts to facilitate organic production have focused primarily on developing national certification standards to assure consumers that certified organic commodities meet consistent standards. Now, a small number of new programs and pilot projects are underway to help organic producers with production problems and risks, and promote organic agricultural products overseas. The following sections outline the research, program, and regulatory efforts USDA is undertaking for organic agriculture.

USDA's Agricultural Marketing Service and Organic Agriculture

Contributed by Demaris Wilson, USDA-AMS

The Agricultural Marketing Service (AMS) is home to the National Organic Program (NOP), which developed, implemented, and administers national production, handling, and labeling standards for organic agricultural products. The NOP also accredits the certifying agents (foreign and domestic) who inspect organic production and handling operations to certify that they meet USDA standards. To facilitate the export of U.S. organic agricultural products, the NOP is working to establish formal recognition agreements with foreign governments.

In addition to its regulatory duties, AMS provides information to consumers via the NOP web page *www.ams.usda.gov/nop.*

The AMS Fruit and Vegetable (FV) Market News has provided some market coverage for organically grown fruits and vegetables at a few wholesale markets across the country for a number of years. To determine if additional market coverage could be provided with current resources, FV Market News reporters surveyed their contacts at both shipping point and wholesale markets to determine which markets handle organically grown produce as part of their normal or seasonal product line. A key aspect of the upcoming survey report will assess the willingness of contacts to provide price and volume data of organically produced fruit and vegetables separately from that of conventionally produced produce.

AMS is also involved in several areas of organic marketing research, working independently and in cooperation with major universities. AMS has formed a partnership with the University of California-Davis to study how existing fruit and vegetable marketing orders will be affected by the national organic standards and to determine marketing opportunities for organic commodities, particularly California almonds and kiwifruit and winter pears from the Northwest.

And, finally, to determine the availability of certified organic feed for use in organic livestock operations, AMS has a cooperative agreement with Iowa State University and North Carolina State University to canvass the amount of certified organic acreage that is planted in corn and soybeans.

USDA's Alternative Farming Systems Information Center

National Agricultural Library

Contributed by Mary Gold, USDA-NAL

The Alternative Farming Systems Information Center (AFSIC) is one of several topic-oriented Information Centers at the National Agricultural Library (NAL). The Library, located in Beltsville, Maryland, houses the Nation's largest collection of agricultural resources.

AFSIC serves as an information clearinghouse, specializing in locating and disseminating information related to alternative cropping systems including sustainable, organic, low-input, biodynamic, and regenerative agriculture. AFSIC also focuses on

alternative crops, new uses for traditional crops, and crops grown for industrial production. The Center's users are farmers, extension staff, researchers, and educators, as well as consumers and the general public. They access AFSIC's staff and resources from all over the world, via a Web site, *http://www.nal.usda.gov/afsic/*, or by email, phone, fax, and surface mail.

Staff members create publications that focus on specific topics of current interest. These publications are primarily research guides, and include bibliographies, directories and cyberguides. They reflect the materials contained in the National Agricultural Library collection and/or indexed in NAL's literature database, AGRICOLA, as well as electronic data and internet sites worldwide.

AFSIC's Web site currently emphasizes resources related to organic food production *(http://www.nal.usda.gov/afsic/ofp/)*. Unique publications include *Tracing the Evolution of Organic/Sustainable Agriculture, Organically Produced Foods: Nutritive Content; Organic Production: Terminology / Descriptive Phrases; Organic Production: Economic Aspects. Books, Articles, and Videocassettes, 1991-March 1997; and Organic Information Resources: What are They? Where are They? How Can I Find Them?* All AFSIC publications are available in full text format at the AFSIC Web site.

The Center has also initiated a project that will identify pre-1945 USDA publications that reflect research pertinent to current organic farming systems and will make selected documents available electronically via its Web site.

USDA's Agricultural Research Service and Organic Agriculture

Contributed by Mike Jawson, USDA-ARS

The Agricultural Research Service (ARS) is USDA's intramural research agency, conducting research at over 100 locations across the United States and at five overseas sites. ARS research addresses all aspects of agriculture from natural resource management to human nutrition. ARS research is organized into 22 national programs, which are described at *www.nps.ars.usda.gov.* There is not a national program on organic agriculture. ARS intends to incorporate organic producers' needs across all the appropriate national programs. The Integrated Farming Systems National Program, however, has been serving as the focal point for many in the sustainable and organic agriculture communities. In the coming months, ARS will post a new Web site featuring its organic farming research.

ARS conducts much research that is applicable to organic agriculture in areas such as soil management, biological control of pests and weeds, crop and animal production and maintenance of germplasm. More than 125 ARS scientists are engaged in research applicable to organic agriculture. Since most of this research is not conducted within a purely organic agriculture context, it requires additional research to test its applicability within organic production systems. ARS is now conducting more and more research in certifiable organic systems, often with on-farm producer involvement. To ensure that organic farming research meets growers' needs, ARS has established a strong working relationship with the Organic Farming Research Foundation.

ARS now has long-term integrated systems projects dedicated to organic agriculture. Projects involving direct producer involvement have been initiated in Maryland, California, Texas, Florida, Iowa, and West Virginia. Other organic projects that build

ongoing efforts are under way in Nebraska, Maryland, Minnesota, Washington, Oregon, Wisconsin, and elsewhere. For example:

- Oregon scientists are working with organic growers to quell plant diseases.
- Scientists in California responded to the needs of local organic strawberry growers with some first-ever studies to study commercially available strawberry varieties grown on fields managed organically and are developing organic production systems.
- Researchers in Washington have developed an organic post-harvest treatment for fruit.
- ARS scientists in Florida played a pivotal role in developing a multi-agency group to which Florida's organic growers can turn for help. In current studies, the team is working with local organic growers to enhance weed and disease control on their vegetable farms. They are experimenting with novel cover crops, paper mulches, soil solarization, and biological control agents.
- Beltsville, Maryland, research is investigating organic methods to control animal parasites.
- Grain producers are cooperating with ARS researchers in Maryland, Iowa, Minnesota, and Washington to devise reduced tillage organic systems that provide effective weed control.

USDA's Cooperative State Research, Education, and Extension Service and Organic Agriculture

USDA's Sustainable Agriculture Research and Education (SARE) program

Contributed by Jerry DeWitt, USDA-CSREES SARE

Since 1988, the USDA-CSREES SARE program has helped advance farming systems that are profitable, environmentally sound, and good for communities through an innovative research and education grants program. The information SARE has gleaned from more than 2,100 projects is more relevant than ever, as many research findings have suggested ways to counter low agricultural prices by reducing input costs and expanding market opportunities.

SARE has funded around 391 projects—or 19 percent of its portfolio—that focus on some aspect of organic production and marketing. SARE funds research and education programs through four regional offices in Vermont, Georgia, Utah, and Nebraska.

Most of the SARE grants that support organic agriculture are research and education projects, which involve scientists, producers and others in an interdisciplinary approach to explore new farming systems, methods, and educational opportunities. SARE makes sure that project findings get put to use through its Professional Development Program (PDP), which offers educational opportunities in the latest sustainable practices and systems to extension educators and other agricultural advisers. SARE runs a Producer Grants Program, providing farmers and ranchers an opportunity to test experiments on site and share the results with their peers. SARE also supports the Sustainable Agriculture Network (SAN), which publishes materials for producers and educators. See *www.sare.org* for additional information.

All of SARE's grant programs include opportunities for funding of organic projects. Here is a sampling of some of those:

- A widespread sweet corn pest, corn earworm moths, seek the sweet odor of corn silk to lay their eggs, compelling producers nationwide to accept wormy corn or apply broad-spectrum pesticides 3 to 10 times per crop. Organic growers, in particular, are forced to accept wormy corn. Thanks to work headed by SARE-funded researcher Ruth Hazzard at the University of Massachusetts, growers now use new, effective biological controls to fight the earworm—corn oil and *Bacillus thuringiensis* (Bt). Hazzard's technique calls for applying Bt and corn oil to the top of each ear during the formative stage, causing earworms that crawl down the silks into the ear to suffocate. Eight farmers from Vermont to Connecticut testing the method found that the oil controlled ear damage in 83 percent of their trial plots in 2000. [For more information, see *http://www.sare.org/projects/san_db_viewer.asp?id=1439]*

- When a national organic dairy opened on Maryland's Eastern Shore in 1996, mid-Atlantic grain producers realized they had an opportunity to add value to their product. They knew how to grow corn and beans, but now they wanted to do so organically—and needed help. Recognizing that new niche, University of Maryland extension educator John Hall applied for a SARE grant to create tools that agricultural professionals could use to teach farmers the basics of organic grain production. The final product, a three-part video series, provides essential production information and a colorful mix of examples from successful organic grain farmers. University researchers explain how to create diverse agricultural systems with innate abilities to combat pests, use minimum tillage to minimize compaction and preserve insect habitats, and plant cover crops to build the soil. The project has spawned a nonprofit institute in eastern Maryland that is exploring other marketing outlets for organically produced grain. [For more information, see *http://www.sare.org/projects/san_db_viewer.asp?id=1296]*

- Florida organic farmers seeking an alternative to expensive organic fertilizers tested a new technology that converts food waste to liquid fertilizer. The digester resides at a farm, where about 2 tons of cafeteria food waste is handled each week. Anaerobic bacteria in the digester convert the food waste to methane and carbon dioxide, while the nutrients remain in the water or in a small amount of solid residue that can be applied to land directly or cured to a mature compost. The fertilizer nitrogen value produced from 2 tons of food waste per week ranges from $800 to more than $10,000 annually if calculated on the basis of nitrogen values in poultry litter or fish emulsion, respectively. [For more information, see *http://www.sare.org/projects/san_db_viewer.asp?id=1160]*

"Organic Transitions" and Other CSREES Competitive Grant Programs

Contributed by Tom Bewick, USDA-CSREES

CSREES recently initiated an "Organic Transitions" competitive grants program on pest management to assist farmers in adopting organic practices. This program supports systems research on organic farming combined with outreach and education programs to help farmers apply the results of that research (see *http://www.reeusda.gov/agsys/pestmgt/organic.htm*). The maximum award is for up to 4 years, with no funding limit set.

Three collaborative farmer-researcher projects on organic weed management—on citrus in Florida, organic vegetables in southern California, and limited-resource and family farms in Iowa—were funded in FY 2001. FY 2002 projects include: (1) weed

management programs that strengthen the systems approach of organic agriculture, including the effects of soil biology, cover crops, crop rotations, crop/livestock integration and grazing, on weed severity and impact; (2) understanding the relationship of applied organic fertility management to crop health and the resistance of crops to pests and diseases; and (3) designing training systems to elevate the awareness of county Cooperative Extension personnel and other farm advisors about organic practices and information on a national or regional level with particular emphasis on weed management, insect pest management, soil fertility enhancement, best organic cultural practices and livestock management. Priorities for funding in FY 2002 were based, in part, on the biennial survey of research needs of organic farmers conducted by the Organic Farming Research Foundation. A summary of the most recent survey is available online at *http://www.ofrf.org/publications/survey/index.html.*

Also, the 2002 Farm Act authorizes new mandatory appropriations for fiscal years 2003-07 under the Organic Agriculture Research and Extension Initiative. CSREES will administer a competitive research grants program with these new funds. Research is to focus on determining desirable traits for organic commodities; identifying marketing and policy constraints on the expansion of organic agriculture; and conducting advanced research on organic farms, including production, marketing, and socioeconomic research.

USDA's Economic Research Service and Organic Agriculture

The Economic Research Service (ERS) conducts economic research and develops and distributes a broad range of economic and other social science information and analysis on organic agriculture. ERS provides information and analysis on organic farming and marketing in the organic briefing room available online at *http://www.ers.usda.gov/briefing/organic/*. The briefing room describes characteristics of the U.S. organic farm sector, including estimates of certified organic farmland acreage and livestock, by commodity and by State. The briefing room also features industry data depicting industry growth and sales. Other highlights include ERS publications on organic agriculture and current organic-related activities of ERS researchers.

ERS developed a new set of statistical indicators several years ago—certified organic acreage and livestock estimates—to track the organic farm sector as regulatory and market conditions change. These estimates are based on data from State and private certifiers in the United States and Canada who certify U.S. organic producers. Estimates are posted in the organic briefing room.

Another current research project focuses on risk management in the U.S. organic farm sector. The study will include a review of the economics of organic farming and an analysis of public and private data sources for organic prices and other economic statistics. Focus group discussions were conducted with various types of organic farmers, in different regions of the country, in order to better understand the risk management strategies and needs in the organic farm sector. Previous ERS organic research projects have examined U.S. consumer demand for organic milk, frozen vegetables, and baby food, and the farming practices and socioeconomic characteristics of certified organic fruit and vegetable producers in the United States.

USDA's Foreign Agricultural Service and Organic Agriculture

Contributed by Pam McKenzie and Kelly Stzrelecki, USDA-FAS

The Foreign Agricultural Service (FAS) assists the organic industry with U.S. export programs and services. The FAS International Trade Policy group, in conjunction with the Agricultural Marketing Service, has developed protocols for working with foreign nations to keep organic trade moving as more countries develop organic standards. This program has also worked on many trade issues facing the organic industry including labeling, certification, and market access.

Since 1999, the FAS Commodity and Marketing Program (CMP) area has made over $180,000 of funding available to the Organic Trade Association (OTA) through the Market Access Program (MAP) to conduct marketing efforts in Canada, Europe, and Japan. This support has enabled OTA to develop an extensive export directory titled "Organic Trade Association's Organic Export Directory." This publication will be available via the Internet and printed in four languages this year. MAP support has also assisted the OTA in conducting market research and using internationally based trade shows to exhibit product and information on U.S. organic products.

CMP's AgExport Services division has published the *Organic Perspectives Newsletter* since 1998 (see *http://www.fas.usda.gov/agx/organics/organics.html*). This bimonthly newsletter contains reports on organics from around the world using U.S. attaché reports, trip reports made by AgExport Services staff, and other sources. The newsletter also covers items of interest concerning the U.S. national organic program and the domestic organic industry. A list of upcoming conferences, trade shows, and other events is included in every issue. In 2002, CMP's AgExport Services Division will be helping OTA establish improved market presence, and FAS hopes to include OTA in some of its other programs soon. Additional programs include the Emerging Markets Program (EMP), Quality Samples Program (QSP), Cochran Program, and Section 108 funding. All programs provide funding to encourage international market development.

USDA's National Agricultural Statistics Service and Organic Agriculture

Contributed by Doug Kleweno USDA-NASS

The National Agricultural Statistics Service (NASS) (see *http://www.usda.gov/nass/*) conducts hundreds of surveys each year and prepares reports that cover virtually every facet of U.S. agriculture—production and supplies of food and fiber, prices paid and received by farmers, farm labor and wages, and other aspects of the industry. In addition, NASS's 45 State Statistical Offices (see *http://www.usda.gov/nass/sso-rpts.htm*) publish data about many of the same topics for local audiences.

Every 5 years, Congress requires NASS to conduct a Census of Agriculture. The Census of Agriculture is the most comprehensive source of data portraying U.S. agriculture. It is the only source of uniform data on agricultural production and operator characteristics for each county, State, and the United States. In the 2002 Census of Agriculture, questions on certified organic production commodities will be included for the first time, along with other new questions on computer/Internet use, production contracts/landlord shares, aquatic plants, acres treated with manure, grain storage capacity, new commodities (bison, deer, elk, llama, emus, and ostriches), and more detailed farm-related income. Report forms for the 2002 Census of Agriculture will be mailed to farm and ranch operators in late December 2002, and NASS will begin release of data starting in spring 2004 in both electronic and print media (see *www.usda.gov/nass/* and click "Census of Agriculture").

USDA's Natural Resources Conservation Service and Organic Agriculture

Contributed by Peter Smith, USDA-NRCS

The Natural Resources Conservation Service (NRCS) (see *http://www.nrcs.usda.gov/*) provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment. NRCS technical experts help land managers and communities take a comprehensive approach in planning the use and protection of soil, water and related resources on private and non-Federal lands. NRCS assistance is provided through conservation districts that are units of local government created by State law. NRCS works in partnerships with State conservation agencies and other State and local agencies such as resource conservation and development councils and local farmer committees, Federal agencies, tribal governments, and private sector organizations.

NRCS's technical and financial assistance resources are available to all producers, including organic. Almost all of NRCS's technical information, such as soil surveys and standards and specifications for erosion control, wetlands rehabilitation, and wildlife habitat improvement apply to organic and conventional farming.

The Farm Security and Rural Investment Act of 2002 increased the funding for the Environmental Quality Incentives Program, which is intended to improve conservation and sustainability on organic farming operations. In addition, funding for the Farmland Protection Program was greatly increased. This could be significant in protecting organic farming operations from development, especially those close to urban areas. The newly authorized Conservation Security Program can benefit producers who adopt conservation practices.

To highlight its assistance to organic producers, the agency entered into a memorandum of understanding with the Organic Trade Association (OTA). The memorandum establishes a framework for cooperation between NRCS and OTA on program activities that involve the conservation of natural resources specifically related to organic farming. Both the NRCS and the OTA agree to cooperate in developing and implementing farm plans for organic crop production, to encourage the use of demonstrations and field days with organic operations to showcase conservation and organic production, and to share training opportunities, conferences, and newsletters.

Main points covered in the memorandum of understanding between NRCS and the OTA:

NRCS agrees to:

- Provide technical assistance at the national level to develop guidance on natural resources conservation,
- Provide contact information at the State level for councils participating with OTA,
- Furnish conservation technical assistance for conservation measures in organic farm plans,
- Provide soil survey information, soil interpretations, and conservation planning assistance to develop and implement conservation plans consistent with the

grower's objectives to achieve sound land use and conservation treatment while producing quality organic crops.

OTA agrees to:

- Discuss conservation technical assistance needs of organic growers annually with NRCS and recommend priorities,
- Recommend conservation planning to growers to aid them in meeting the National Organic Program's crop production standards,
- Inform OTA members of the opportunities and advantages of developing a conservation plan and including it in their organic farm plan.

NRCS assembled and published a 950-page resource manual, "Alternative Enterprise and Agritourism: Farming for Profit and Sustainability," to assist its field staff and partners in helping farmers sustain their operations. A number of opportunities for producing and marketing organic products for direct sale to consumers and for sale to restaurants, wholesalers, and institutions are described. Other technical assistance products include a summarized version of the manual, a CD version of the entire manual, 21 success stories and four information sheets. These activities are coordinated with the NRCS outreach and small farms program activities.

USDA's Risk Management Agency and Organic Agriculture

Contributed by Sharon Hestvik, USDA-RMA

The Risk Management Agency (RMA) administers the Federal Crop Insurance Corporation (FCIC). RMA offers Federal crop insurance products through a network of private insurance company partners, oversees the creation of new products, seeks enhancements in existing products, ensures the integrity of crop insurance programs, offers outreach programs aimed at underserved communities, and provides risk management education and information (see *www.rma.usda.gov*).

Crop insurance is currently available for 116 different crops in a variety of risk management products to help producers manage the risks in their farming operations. New initiatives resulting from passage of the Agricultural Risk Protection Act of 2000 (ARPA) further contribute to producers' ability to protect their financial stability and comprise a major component of the safety net for agricultural producers. ARPA provisions placed a major emphasis on contracting and partnering for the purpose of developing new risk management tools and also provided for recognition of scientifically sound sustainable and organic farming practices as good farming practices.

Since 2001, RMA has provided coverage for organic farming practices as good farming practices by written agreement. All crops currently covered by RMA are eligible for coverage. Organic farmers are eligible for production losses from damage due to insects, disease, and/or weeds. Coverage is available for both transitional and certified organic acreage, in accordance with approved underwriting guidelines and procedures.

Organic farmers have signed up for written agreements in 19 States on the following crops: apples, almonds, barley, corn, cotton, cranberries, dry beans, flax, grapes, oats, pears, popcorn, sunflowers, soybeans, and wheat.

USDA's Economic Research Service is currently conducting research with RMA that will provide RMA with guidance on developing crop insurance and other risk management tools for scientifically sound sustainable and organic farming practices. Also, a unique new survey, part of a research partnership between RMA, National Agricultural Statistics Service, and several Land Grant Universities, is underway that will provide the data necessary to develop crop insurance products or programs targeted to specialty crop producers. One important aspect of the survey is the section geared to organic producers and their unique practices. Organic producers will be asked to identify the type and percentage of organic acreage planted in 2001, which will allow for comparisons to be made between conventional and organic producers in the ways they use risk management tools.

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Contributed by Mary V. Gold, USDA-NAL

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