

Organic sales continue to grow

U.S. organic food sales totaled nearly \$14 billion in 2005, representing 2.5 percent of all retail sales of food, according to the *Organic Trade Association's (OTA's) 2006 Manufacturer Survey*.

Organic foods' share of total food sales is up from 1.9 percent in 2003. According to survey results, sales of organic foods are expected to reach nearly \$16 billion by the end of 2006. Meanwhile, non-food products, including personal care, flowers, pet food, fiber (linen and clothing), household cleaners, and nutritional supplements, grew by 32.5 percent overall to reach \$744 million in sales during 2005.

U.S. sales of organic products in 2005 totaled \$14.575 billion, according to survey findings.

Organic food categories experiencing the greatest growth during 2005 included meat (55.4 percent), condiments (24.2 percent), and dairy products (23.5 percent). The fastest-growing non-food categories during 2005 were organic flowers (50 percent), pet food (46 percent), and fiber (44 percent).

OTA contracted with *Nutrition Business Journal (NBJ)* of San Diego, CA, to conduct the survey and analyze the results. NBJ conducted the survey in March and April.

Copies of the report can be ordered from OTA (phone: 413-774-7511, Ext. 16; fax: 413-774-6432; e-mail: info@ota.com; www.ota.com/bookstore.html). The price is \$195 for OTA members and \$495 for non-members.

Global statistics

More than 31 million hectares of farmland are currently under organic management worldwide, a gain of about five million hectares in a single year, according to statistics presented at BioFach 2006 by IFOAM, the Swiss Research Institute of Organic Agriculture



(FiBL) and the Foundation Ecology & Farming. Much of the increase occurred in China, where nearly three million hectares were recently certified as organically managed.

Australia leads with 12.1 million hectares, followed by China with 3.5 million hectares and Argentina with 2.8 million hectares. Most of the organic land is in Australia/Oceania (39 percent), followed by Europe (21 percent), Latin America (20 percent), Asia (13 percent), North America (4 percent) and Africa (3 percent).

Amajit Sahota of Organic Monitor reported that the global market for organic food and beverages was worth \$27.8 billion in 2004, and was projected to have surpassed \$30 billion in 2005. The market is expanding by approximately 8 to 9 percent each year, with North American and Western Europe experiencing the most growth.

Study confirms ecological benefits

Confirming ecological benefits linked to organic farming, research findings published in the March online edition of the *Proceedings of the National Academy of Sciences* showed that fertilizing apple trees with synthetic nitrogen fertilizer caused more detrimental environmental effects than if composted manure or alfalfa were used.

Carrying out the research in an apple orchard in central Washington, Stanford University graduate student Sasha B. Kramer and colleagues compared the environmental factors related to trees raised with conventional synthetic fertilizers, trees grown organically, and trees fertilized using integrated farming, combining organic and conventional agricultural practices.

During the year-long study, organically grown trees were fed composted chicken manure or alfalfa meal, while conventionally raised trees were given calcium nitrate, a synthetic fertilizer used by commercial apple growers. Trees grown in the integrated system were given a blend of chicken manure and calcium nitrate.

Nitrate leaching measurements were 4.4 to 5.6 times higher in the conventional treatment than in the organic treatments, with the integrated treatment half way between the two levels. Air samples collected in the orchard after the fall and spring fertilizations showed organic and integrated soil emitted larger quantities of an environmentally benign gas, dinitrogen, than soils treated conventionally.

"These results demonstrate that organic and integrated fertilization practices support more active and efficient denitrifier microbial communities, which may shift some of

the potential nitrate leaching losses in the soil into harmless dinitrogen gas losses in the environment,” according to John B. Reganold, Regents Professor of Soil Science at Washington State University and co-author of the study.

“Conventional agriculture has made tremendous improvements in crop yield but at large costs to the environment,” the authors wrote, adding, “In response to environmental concerns, organic agriculture has become an

increasingly popular option.”

To see the abstract, go to www.pnas.org/cgi/content/abstract/103/12/4522. The final print version appears in www.pnas.org/content/vol103/issue12/#ECOLOGY.

Organic news

- Organic to Go™, an all natural and organic café and corporate meal delivery service, has received organic certification from Quality Assurance International.
- Among other products, Amazon.com's new grocery section also carries close to 3,000 natural and organic products.
- Wal-Mart Stores, Inc., in March announced plans to double its organic offerings, including packaged salads, other packaged grocery items, dairy products and apparel made from organic cotton.
- Wegmans Food Markets, Inc., in Rochester, NY, has introduced its own brand of organic milk.
- Kellogg Co. announced plans to introduce organic Raisin Bran and Organic Frosted Mini Wheats to the market.
- Anheuser-Busch is test-marketing its first organic beer in the North Bay, CA, area, as well as in Santa Barbara and six other cities in the United States, according to a *San Francisco Chronicle* article.
- Organic sales in U.S. Defense Department commissaries are expected to reach more than \$10 million during 2006, according to a spokesperson for the Defense Commissary Agency. Organic milk, cereals and frozen pizzas and enchiladas are the top sellers currently. Larger commissaries in the United States now offer more than 250 organic items.
- Woodbury County, IA, Board of Supervisors has adopted a policy requiring food service contractors for the county to purchase locally grown organic foods as long as they are

competitively priced and of good quality. The Woodbury County Local Food Policy is intended to increase per capita income, provide job incentives, attract economic investment, and promote the health and safety of its citizens.

- The Department of Horticulture and Landscape Architecture and the Department of Soil and Crop Sciences at Colorado State University have announced an Interdisciplinary Program in Organic Agriculture, set to launch during the Fall 2006 semester and currently accepting students. For more information, go to



<http://organic.colostate.edu>.

- Washington State University has received approval from the state Higher Education Coordinating Board to offer a Bachelor's of Science degree in Agriculture and Food Systems starting with the fall 2006 semester. Of the five majors offered, one will be a major in organic agriculture systems, which will include a summer practicum at WSU's organic farm.
- Alfred State College in New York has announced a multi-million dollar Smart Farm plan to add an

organic dairy herd at the College Farm. The farm, which already has a conventional herd, will manage the new herd using organic practices with the aim of producing certified organic milk. In April, the college hosted a workshop on organic agriculture, dairy herd management and milk quality, and organic credit considerations in conjunction with Senator Hillary Clinton's office and the New York Agriculture Innovation Center at Cornell University.

- The University of California at Berkeley has received organic certification for a kitchen serving a salad bar at its Crossroads dining commons. California Certified Organic Farmers is the certifying agency. This became the first university to offer a certified organic salad bar.
 - Vanderbilt University in August will open Nectar, a 900-square-foot convenience store on campus to feature organic, natural and healthy products.
 - A Piazanos grab-and-go café on the University of Colorado at Boulder campus offers a menu of organic and natural foods.
- Arnold Creek Productions, Inc., has released a new DVD, “Good Food, Good Business,” that includes a spotlight on several organic growers. See www.arnoldcreekproductions.com.
- The Boulders Resort & Golden Door Spa in Scottsdale, AZ, incorporates organic products in its dining and spa facilities and is seeking to add organic linen products as well.

Research updates

- The Leopold Center for Sustainable Agriculture has awarded a grant to an Iowa State University (ISU) researcher to determine how increases in organic crop production affect the local and regional economy. The grant was awarded to D. Swenson in ISU's Department of Economics, whose work will focus on Woodbury County, IA, which recently approved tax abatements for farmers transitioning to organic agriculture.
- Researchers at Penn State University have looked at sanitizing milking systems with saltwater. Electricity is used to separate the salt water into alkaline and acidic solutions, to replace a chlorinated detergent wash and acidic rinse now used. Researchers next want to conduct large-scale tests of the new cleaning method in a commercial dairy barn. Details: www.personal.psu.edu/users/p/spw103/researchewater.htm.
- Data collected by the U.S. Department of Agriculture show the nutritional content of fruits and vegetables has declined during the past 50 years. Donald Davis, a biochemist at the University of Texas, said six of the 13 major nutrients tracked in fruits and vegetables from 1950 to 1999 showed noticeable declines: protein, calcium, phosphorus, iron, riboflavin, and vitamin C. Davis hypothesized that the trend to raise crops that grow the fastest and biggest may be a reason for the decline. Faster-growing plants, he said, may not be able to acquire the nutrients that slower growing plants can get, either by synthesis or from the soil. Other changes in agricultural practices during this time include widespread use of pesticides, plant growth regulators, highly soluble sources of plant nutrients, and a decrease in use of humus-containing fertilizers. Recent studies looking at antioxidant content has found that some organic growing methods can increase the antioxidant content of produce.
- A British study analyzing nutrition data kept by the government from the 1930s and 2002 found that the mineral content of milk, cheese and beef had declined as much as 70 percent. The Food Commission, which published the results of the study, found parmesan cheese had 70 percent less magnesium and calcium, beef steaks had 55 percent less iron, chicken had 31 percent less calcium and 69 percent less iron, while milk showed a large drop in iron content and a 21 percent decline in magnesium. In addition, copper content declined 60 percent in meats and 90 percent in dairy products.
- Test results from an Institute for Agriculture and Trade Policy study showed brand name chicken products sold in supermarkets and fast food restaurants often contain arsenic. In the study, 155 samples from uncooked supermarket chicken products were tested, with 55 percent carrying detectable levels of arsenic. Labels approved by the U.S. Food and Drug Administration for arsenic products added to chicken feed allow arsenic to be added to speed up weight gain, improve feed efficiency and improve pigmentation. Many of the same products also can be used to prevent the parasitic infection *coccidiosis* in flocks. The survey showed that arsenic was more than twice as prevalent in conventionally raised brands of chicken as in certified organic and other premium brands.
- USDA has awarded \$1.2 million to a collaborative research effort to identify sources and risk factors for *E. coli O157:H7* contamination in fresh produce. The funds will also be used to inform growers about strategies to prevent pre-harvest contamination.
- The Northeast Sustainable Agriculture Research and Education program recently awarded about \$2.8 million in grants to help researchers, farmers, educators and organizations find ways to make agriculture profitable, environmentally sound and beneficial to the wider community. Descriptions of the projects are available at www.uvm.edu/~nesare/news.html.
- The Department of Agricultural and Resource Economics at the University of California at Davis has released "crop budgets" documenting standard organic management practices, their costs, and projected revenues for organic beef production, organic dairy goat enterprises, organic pear production, and organic raisin grape production.
- Organic corn hybrids grown in the 2005 Ohio organic corn performance test produced 13 percent more corn per acre than the statewide average yield, and topped the state average record high yield by four bushels per acre, according to an article posted at www.agriculture.purdue.edu/aganswers/story.asp?storyID=4174.
- A research study by USDA's Agricultural Research Service has found that high-output ultraviolet-C (UVC) lights are effective in improving the quality and shelf life of fresh-cut cantaloupe.

Consumer trends

- Almost three-quarters (73 percent) of the U.S. population buy organic products at least occasionally, up from 55 percent in 2000, according to a new report from The Hartman Group. Core buyers, who buy organic products at least weekly, represent 23 percent of U.S. consumers, according to *Organic2006: Consumer Attitudes & Behavior; Five Years Later & Into the Future.*
- A survey entitled "Healthy Eating: Impact on the Consumer Packaged Goods" by Harris Interactive™ conducted online in January among 1,040 adults projected that half of all U.S. adults say they sometimes buy organic food. The main reasons cited were taste, environmental responsibility, freshness, social responsibility, and a belief that organic products were better for their children.
- The Natural Marketing Institute has

listed “Organic versus Natural: The balance of price and benefits” among its top ten health and wellness trends for 2006.

- *The Future of Food Retailing*, a new report from market research publisher Packaged Facts, points out that major demographic, lifestyle and technological changes are creating conditions for the re-invention of food retailing. The report says supermarkets continue to see their share of the market fall into the hands of warehouse clubs, natural food chains, C-stores and even restaurants. However, the report found that supermarkets have been adding well promoted organic and private label choices to help meet consumers’ expectations.
- Shoppers are buying more organic products for health reasons, according

to “Shopping for Health 2005: Meeting the Needs of Family Health and Wellness,” a new report from the Food Marketing Institute and *PREVENTION* magazine. According to the report, shoppers most often purchase organic produce (37 percent), followed by cereals, breads and pastas (25 percent), dairy products (23 percent), packaged and frozen foods (21 percent), eggs (18 percent), meat and poultry (17 percent) and soups and sauces (12 percent). Shoppers are more likely to purchase organic products at supermarkets (48 percent), followed by organic and natural food stores (18 percent), supercenters (15 percent), and farmers’ markets (8 percent).

- A survey conducted by Sommers Organic™ found that 75 percent of consumers had purchased organic

foods at least once during a month, but that demand for organic meat was largely unfulfilled. In fact, over 60 percent of the consumers polled said that organic meats are not readily available; the majority said they would buy organic meats if they were accessible. Motivations cited for purchasing organic foods included concerns about health; fears about the use of growth hormones, antibiotics and other chemicals; and a desire to purchase the highest quality foods.

- Consumers are increasingly looking for quality seals and trust marks on food products, according to research conducted by ConAgra Foods. These include claims such as “heart-healthy,” organic and kosher, and zero trans fat.

Environmental news

- A review article entitled “Pesticides and Parkinson’s Disease—Is There a Link?” published in the February 2006 edition of *Environmental Health Perspectives* notes that there currently is enough evidence to conclude a generic association between pesticide exposure and Parkinson’s Disease, but it is insufficient to establish a causal relationship for any particular pesticide compound or combination of compounds.
- Soil is being swept away ten to 40 times faster than it is being replenished around the world, resulting in a loss in cropland the size of Indiana every year, according to a study by David Pimentel, professor of ecology at Cornell University, published in the *Journal of the Environment, Development and Sustainability* (Vol. 8, 2006). Study findings showed the United States is losing soil ten times faster and China and India 30 to 40 times faster than it can be replenished. About 60 percent of the soil lost ends up in rivers, streams and lakes, increasing the chance of flooding and leading to contamination with fertilizers and pesticides, Pimentel said, noting that there are many simple ways of controlling erosion, including planting cover crops when the land is not being used to grow crops.

- The value to farmers from wild insects equals about \$4.5 billion because insects eat pests on dozens of different crops, and insects also pollinate fruits and vegetables, delivering another \$3 billion in value, according to an economic study by conservation researchers Mace Vaughan of the Xerces Society for Invertebrate Conservation and John Losey of Cornell University. The researchers spent more than two years looking at all of the economic transactions, from agriculture to bird watching, that would have been impossible without insects, and published the findings in the journal *BioScience*. The study did not look at the contributions from domestically reared insects such as honeybees, which would have brought the tally higher. Because of the great positive impact of wild insects, the researchers said farmers should provide habitat for them.
- Pesticide residues are widely found in U.S. streams, according to data for 1992-2001 released in March 2006 by the U.S. Geological Survey (USGS). “More than 80 percent of urban streams and more than 50 percent of agricultural streams had concentrations in water of at least one pesticide that exceeded a water-quality benchmark for aquatic life,”

the study found. USGS analyzed 51 major river basins and aquifer systems as well as the aquifer system in the High Plains. The pesticides chlorpyrifos, azinphos-methyl, p,p’-DDE and alachlor were most commonly found in agricultural streams at concentrations that might affect aquatic life. USGS also said that most stream samples and about half of the well samples contained two or more pesticides. Because potential total toxicity may be greater with pesticide mixtures, USGS recommended that studies of mixtures should be a high priority. The report, “Pesticides in the Nation’s Streams and Ground Water, 1992-2001,” is available at <http://pubs.usgs.gov/circ/2005/1291/>.

- A meta-analysis of studies and the literature concerning the environment and cancer conducted by researchers at the University of Liverpool concludes that exposure to even small amounts of environmental contaminants such as pesticides may result in an increased risk of developing cancer, particularly for infants and young adults. Looking at involuntary exposure to chemicals such as organochlorines in the air, food and water, Professor Vyvyan Howard and John Newby recommended that efforts should

Continued on Page 12

Continued from Page 11

focus not just on preventative measures such as educating the public about the danger of tobacco smoke, improving diet and promoting physical activity but on trying to reduce exposure to problematic chemicals. Study findings are published in the *Journal of Nutritional & Environmental Medicine* in a review article, "Environmental influences in cancer aetiology."

- The United Nations in February released a report entitled "Challenges to International Waters: Regional Assessments in a Global Perspectives," resulting from the Global International Waters Assessment project. Noting "pressures from human activities have weakened the ability of aquatic ecosystems to perform essential functions," the report looked at freshwater shortage, pollution, over-fishing, habitat modification, and global change. Pointing out that oxygen-depleted zones are present not only in enclosed seas such as the Baltic and Black Seas

but also in large coastal areas, the report states, "Globally, harmful algal blooms are considerably more widespread and frequent than they were a decade ago, a situation that is expected to further deteriorate by 2020 due to the increased application of agricultural fertilizers, especially in Asia and Africa." The project also found that reduced stream flow, inappropriate irrigation practices, and use of groundwater "have increased the salinity of freshwater throughout the world. As a result, agricultural land is becoming too saline to support important crops." The report recommends an integrated approach linking water management to land and economic management. See www.giwa.net/publications/finalreport/.

- A United Nations Environment Programme-commissioned report is recommending restoration of wetlands to help reduce the threat of avian flu pandemics. According to the report prepared by a team led by Canadian academic Dr. David Rapport, the loss of wetlands

around the globe is forcing many wild birds to visit farm ponds and paddy fields, bringing them into direct contact with domesticated fowl. The report also pointed out that the presence of intensive poultry operations along migratory wild bird routes increases the risk of transferring pathogens between migratory birds and domestic fowl. For more details, see www.unep.org.

- Research conducted by researchers at Oregon Health and Science University, the Oregon Child Development Coalition, and the University of Pennsylvania has found Hispanic agricultural workers in Oregon exposed to low levels of organophosphate pesticides have impaired neurobehavioral performance compared to nonagricultural Hispanic workers in California. Researchers said the findings, published in the May 2006 issue of *Environmental Health Perspectives*, add to the increasing body of evidence of the association between low levels of pesticide exposure and deficits in neurobehavioral performance.

Eye on Genetic Engineering (GE)

- Residents of Montville, ME, voted in March to ban genetically engineered seeds by changing the town's land use ordinances.
- Brazilian exports of genetically engineered crops will carry a label saying "Contains GMOs" within the next four years, according to a brief article carried by *Economist Intelligence Unit* on March 21.
- Delegates at the U.N. Convention on Biological Diversity's Eighth Conference of the Parties in March in Brazil called for a moratorium on the release of GE trees into the environment.
- North Carolina weed scientist Alan York has reported that weed resistance to glyphosate herbicide,

used on genetically engineered Roundup Ready cotton and other crops, poses a potential problem for U.S. conventional cotton growers. Of concern are the appearance of glyphosate-resistant horseweed and glyphosate-resistant Palmer amaranth in the Cotton Belt.

- A January 2006 technical report from the European Commission Joint Research Centre entitled "New case studies on the coexistence of GM and non-GM crops in European agriculture" highlights findings related to seed and crop production of corn, sugar beet and cotton. The reason for the study was to help advise farmers who plan to introduce GE crops on the farm management practices

needed to limit gene flow since such farmers will be responsible for any contamination above allowable levels. Among the conclusions, the report says that coexistence in seed production is technically feasible to meet a threshold of 0.5 percent GE adventitious contamination with few or no changes in current practices. Also, if GE presence in seeds does not exceed 0.5 percent, it is technically feasible to meet a target threshold of 0.9 percent contamination in crop production; however, corn production requires additional measures to prevent contamination. See www.jrc.es/home/pages/eur22102enfinal.pdf.

IFOAM news

- IFOAM is organizing the First IFOAM International Conference on Animals in Organic Production, to be held at the University of Minnesota Continuing Education and Conference Center in St. Paul, MN, Aug. 23-25. Conference objectives are to identify the best

practices in organic livestock production and marketing, advance animal health and welfare in organic production systems, and facilitate trade in organic livestock products. See IFOAM's web site (www.ifoam.org) for further details.

- IFOAM held its first International

Conference on Organic Wild Production in May in Bosnia and Herzegovina. The conference focused on the harvesting of wild vegetable products from forests, "natural" lands, pastures and uncultivated land. ■