



Organic Food Quality & Health

Organic Food Quality News

This monthly newsletter, edited by nutritionist and independent organic researcher Shane Heaton, is provided by the FQH association to keep researchers, the industry and other interested parties abreast of the latest news in organic food quality, research, health, diet and other relevant issues. Thank you to those who've completed the feedback questionnaire. If you haven't, please visit www.organicfqhresearch.org for a copy. Comments and contributions are welcome, or if you find an item of news that you think should be included, please email shane@dontjustsurvive.com

Quote of the month:

"The only way to accurately predict the future is to create it." anon

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1. PESTICIDES

EU: Pesticide Parkinson's link strengthens

Exposure to pesticides could increase the risk of developing Parkinson's disease, researchers have warned. The European study, featured in New Scientist magazine, led by a University of Aberdeen expert, said gardeners should wear protective clothing. The Geoparkinson study looked at almost 3,000 people in Scotland, Italy, Sweden, Romania and Sweden, including 767 with Parkinson's. Those interviewed had an average age of 62. They were all asked about their professional and leisure activities, and whether or not they had regularly used pesticides. It was found that people with Parkinson's disease were more likely to have used pesticides regularly during their lives. People classed as "low level" users, such as amateur gardeners, were 9% more likely than non-users to develop the disease. High level users, such as farmers, were 43% more likely to do so. Dr Finlay Dick, of the University of Aberdeen who worked on the study, said it was true other factors were linked to a higher increased risk of developing Parkinson's. He said: "There is a moderate increased risk linked to exposure to pesticides. I wouldn't want to over-emphasise the significance of the effect. But it's important that there are things people can do to reduce that risk - you can't change your parents." Dr Dick said the study did not look at specific pesticides because people were unable to remember which they had used.

Dr Anthony Seaton, of the University of Aberdeen, who led the research, told New Scientist: "It considerably strengthens the case for pesticides being relevant to occupational risk of Parkinson's disease. But David Coggon of the University of Southampton, who is also chairman of the Advisory Committee on Pesticides, said the study did not identify which pesticides were linked to an increased risk of Parkinson's. Robert Meadowcroft, of the Parkinson's Disease Society, said the link between Parkinson's and pesticides had been recognised for some time. "This research shows some evidence that head injury, pesticide exposure and family history of the disease are all risk factors in the development of Parkinson's." A spokeswoman for the Department of the Environment, Food and Rural Affairs said the government's Advisory Committee on Pesticides had considered the evidence of a link between pesticide exposure and Parkinson's disease last year. Its Medical and Toxicology Panel identified a "correlation between individuals' memory of exposure to pesticides and Parkinson's disease", but it did not establish a "specific link" between exposure and the development of this illness.
Andy Coghlan, New Scientist magazine, issue 2501, 26 May 2005, page 14

Germany: Organic food virtually pesticide free

A report published by the "Chemical and Veterinary Inspectorates Baden-Württemberg" illustrates the advantages of the organic food industry: The report states that the average pesticide contamination in food from conventional agriculture is over 60 times greater than in organic food. Organic products containing traces of pesticide contamination are found in only a minimal number of cases, which stem from the use of pesticides on neighbouring conventional fields. On the other hand, there are hardly any samples of fruit and vegetables from conventional production without pesticide contamination – in an alarming number of cases products are even sold with pesticide contents exceeding the legal limits (example: lettuces 15 %, peppers 38 %)

Biofach newsletter 97

US: Atrazine Causes Brain Cell Damage

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A new study conducted by researchers at the University of Medicine and Dentistry of New Jersey has found the minute amounts of atrazine damage the critical areas of the nervous system that are involved with understanding, intelligence, movement and most importantly over all body function. The Authors stated "Collectively, these studies demonstrate that ATR [atrazine] can produce neurotoxicity in dopaminergic systems that are critical to the mediation of movement as well as cognition and executive function."

US: Roundup Twice as Toxic as Glyphosate

An editorial in the latest issue of the peer reviewed scientific Journal Environmental Health Perspectives has commented on the important issue of testing the whole product due to a study that shows that both glyphosate and Roundup severely damage placental cells. The journal editorial stated "Roundup was nearly twice as toxic as the single chemical alone. Further, the viability of cells exposed to glyphosate was considerably reduced when even minute dilutions of Roundup were added." "The study showed that the effect of Roundup on cell viability increased with time and was obtained with concentrations of the formulation 10 times lower than those recommended for agricultural use. Roundup also disrupted aromatase activity at concentrations 100 times lower than those used in agriculture." The editorial stated "Virtually all previous testing of Roundup for long-term health damage has been done on glyphosate rather than on the full herbicide formulation, of which glyphosate makes up only around 40%." This study highlights the urgent need for product testing rather than only testing a single ingredient.

EU: Predicting the Effects of low dose pesticide mixtures

A study published in Environmental Health Perspectives has found that mixtures of minute amounts of chemicals can cause health and reproductive problems at doses where individually they have no effect. The paper was published by researchers from Brunel University, UK, The School of Pharmacy, London, UK, University of Bremen, Germany; Vrije Universiteit, The Netherlands and University of Venice, Italy. Most importantly the researchers have established a predictive model to determine effect of these mixtures. The Researchers stated "These findings demonstrate that estrogenic chemicals have the capacity to act together in an additive manner and that their combined effects can be accurately predicted by concentration addition. These findings highlight the potential for existing environmental risk assessment procedures to underestimate the hazard posed by mixtures of chemicals that act via a similar mode of action, thereby leading to erroneous conclusions of absence of risk."

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2. ADDITIVES

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3. ANTIBIOTICS/FOOD SAFETY

US: Nitrite-pancreatic cancer link

There has been pressure on the organic industry to allow nitrites and nitrates as preservatives in processed meats so that the organic products can have a redder colour. A recent study vindicates the organic industry's position and adds to the growing body of scientific evidence showing why organic foods are healthier. Research the University of Hawaii has found that people who consume processed meats have a 6,700% increased risk of pancreatic cancer over those who consume little or no processed meat products. The study was done over a period of seven years on nearly 200,000 people. The researchers concluded that sodium nitrite, a chemical used in nearly all processed meats was the cause of alarming cancer rates. Mike Adams the study's Author said "Sodium nitrite is a dangerous, cancer-causing ingredient that has no place in the human food supply." Sodium Nitrite is found in most processed meats, however it is prohibited in organic meats. Eating Certified Organic processed meats is a guarantee of getting food free of sodium nitrite.

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4. GMOs

UK: Global GM contamination register launched

The first register of GM contamination incidents across the world, which includes eight in Britain, is being published today as governments meet to discuss how to protect the environment from unauthorised releases. Details of all known contamination of food, feed for animals, seed and wild plants since GM crops were introduced in 1996 are available on a website launched by GeneWatch UK and Greenpeace. More than 60 incidents of illegal or unlabelled GM contamination have been documented in 27 countries. Cases of illegal releases of GM organisms and damaging side-effects such as the development of super-weeds are also included. Governments are meeting in Montreal, Canada, to try to develop rules to allow all GM products to be traced so that if they were accidentally or deliberately released into the environment the extent of the contamination among non-GM plants or animals could be tracked. The second thorny issue governments are dealing with is liability - who pays when either the natural environment is damaged by the spread of GM genes or organic and conventional farmers lose markets through contamination.

See www.genewatch.org

World: 4 Main Biotech Countries

The International Service for the Acquisition of Agri-Biotech Applications (ISAAA) has issued an annual report on the amount of global biotech crop acreage. The 2005 report indicates that there were 14 biotech mega-countries in 2004 – countries where more than 50,000 hectares of biotech crops are grown. The figures, however, are dubious. For instance, whereas the report claims that 500,000 biotech hectares are grown in South Africa, a report from Agricultural Biotechnology in Europe, an industry coalition, and a survey team from the University of Reading in the UK show that the ISAAA's figures are exaggerated by factors of 20 and 30 respectively, and a recent report from GRAIN demonstrates that out of 3,000 farmers who originally grew Bt cotton there, only 700 continue to do so, and many farmers who chose to grow the cotton are now perilously in debt. Also, 98 % of the world's GM crops are still grown in

only four nations – USA, Canada, Argentina and some in China, which has remained the same for the last five years.

StarLink corn, which was not approved for human consumption but nevertheless entered the food supply, prompting the recall of over 300 contaminated food products from shelves in the USA, continues to linger in the food supply. A recent publication of internal Monsanto documents reviewed by EU scientists revealed serious health damage to laboratory animals fed Monsanto's new genetically engineered "rootworm-resistant" corn. Rats that consumed the mutant corn developed smaller kidneys and exhibited blood abnormalities.

www.grain.org

China: GM rice contaminates food chain

"Greenpeace is calling for an urgent, international product recall after uncovering the illegal release of a variety of GM rice in China. The GM rice has not been approved for human consumption and may have contaminated Chinese rice exports." "The GE industry is out of control," said Greenpeace's Sze Pang Cheung. "A small group of rogue scientists have taken the world's most important staple food crop into their own hands and are subjecting the Chinese public to a totally unacceptable experiment. We're calling on the Chinese government to take urgent action to recall the unapproved GE rice from the fields and from the food chain, and to conduct an immediate inquiry into the source of the contamination."

Greenpeace discovered unapproved GM rice being sold and grown illegally in the Chinese province of Hubei. Interviews with seed providers and farmers indicate that GM rice seeds have been sold over the past two years. Testing by the international laboratory Genescan has confirmed the presence of GM DNA in 19 samples. The evidence from the lab, combined with field reports, confirms that some of the illegal GM varieties are Bt Rice. Greenpeace estimates that at least 950 to 1200 tons of GM rice entered the food chain after last year's harvest, and that up to 13,500 tons may enter the food chain after this year unless urgent action is taken."

In a survey carried out in Beijing, Shanghai and Guangzhou in 2004, 62 per cent of the 600 respondents know about GM foods and 57 per cent said they would not buy it - a big leap from 52 per cent and 40 per cent in 2003, respectively. A poll on the sina.com, one of China's portal websites, shows that nearly 82 per cent of the 6,937 respondents are against the promotion of transgenic rice, which might be planted in large areas for commercial purposes this year.

<http://www.gmwatch.org/archive2.asp?arcid=5100>

US: Experimental GM crops proliferate

The US is awash with poorly regulated experimental GM crops, a new report from the Texas Public Interest Research Group (TexPIRG) makes clear. More than 47,000 field tests were authorized between 1987 and 2004 by the US Department of Agriculture - a government agency many consider little more than the marketing branch of the industry it's supposed to be regulating. Crops tested include corn, cotton, rice and potato.

This casts new light on US plans to routinely allow unapproved GM proteins that contaminate US food crops and hence exports. The report, "Raising Risk: Field Testing of Genetically Engineered Crops in the US", also reveals that nearly 70% of all field tests conducted in the last year now contain secret genes classified as "Confidential Business Information," which means that the public has no access to information about the experiments being conducted in their communities.

<http://www.gmwatch.org/archive2.asp?arcid=5106>

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5. BSE

USA: New BSE case confirmed

US agriculture secretary Mike Johanns has announced that the US Department of Agriculture has received final test results from the Veterinary Laboratories Agency in Weybridge, England, confirming that a sample from an animal that was blocked from the food supply in November 2004 has tested positive for bovine spongiform encephalopathy. "The fact that this animal was blocked from entering the food supply tells us that our safeguards are working exactly as they should," Agriculture Secretary Mike Johanns said during a news conference Friday. Still, the emergence of a native-born case could cast a shadow over the nation's 96 million cattle, the largest herd in the world. The only previous U.S. case, confirmed in December 2003, was in a dairy cow that had been imported from Canada, where three other cases have been found. Even that 2003 case involving an imported animal prompted some 50 nations to ban U.S. beef imports.

The U.S. and Canada banned the use of cattle parts in cattle feed in 1997 following the mad cow disease outbreak in Britain. Officials haven't revealed the infected U.S. cow's age but said it was born before the feed ban. The only known way the disease spreads is through feeding infected cattle remains to other cattle. However, the feed ban has loopholes allowing cattle to be fed poultry litter, blood and restaurant leftovers, all potential pathways for mad cow disease. The Food and Drug Administration promised to close those loopholes last year but has not done so. *Source: just-food.com 27 Jun 2005*

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6. NUTRIENT CONTENT

Canada: Apple variety influences antioxidant content

Apples, and especially apple peels, have been found to have a potent antioxidant activity (scavenges free radicals) that can inhibit the growth of cancer cells, with the antioxidant activity of one apple equivalent to about 1500 mg of vitamin C. And recent animal and cell culture studies suggest there is an association between polyphenolic compounds found in apples and a wide variety of effects that may help prevent chronic disease. This supports the hypothesis that it is the phytochemicals found in fruits, especially apples, that impart healthy benefits. Red Delicious, Northern Spy and Ida Red have more potent disease-fighting antioxidants reflected in higher levels of polyphenol activity, claim researchers at Agriculture and Agri-Food Canada that tested a variety of different species.

Polyphenols — phytochemicals that act like astringents — are major sources of antioxidants in apples, but which polyphenols are most active in the fruit has perplexed scientists. Study leader Rong Tsao and colleagues used three different laboratory measures to evaluate polyphenol activity in apples that are popular in Canada: Red Delicious, McIntosh, Cortland, Northern Spy, Ida Red, Golden Delicious, Mutsu and Empire apples. All of the apples used in the study were grown on the same farm under similar conditions. They found that polyphenols were five times

more prevalent in the skin than the flesh of the apples and that two polyphenols, epicatechin and procyanidin B2, were the greatest contributors to total antioxidant activity of the apples. Procyanidins accounted for about 60 per cent of the antioxidant activity in the peel and 56 per cent in the flesh. Red Delicious apples had two times more antioxidant activity than Empire apples, which had the least activity of any of the apples studied.
29 June issue of the *Journal of Agricultural and Food Chemistry*.

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7. HEALTH & DIET

US: Pediatricians recommend organic milk

According to Dr. Alan Greene, one of the USA's leading pediatricians, children should drink organic milk. Dr. Greene gives seven reasons for his strong organic dairy dietary recommendation:

- 1) Produced without antibiotics
- 2) Produced without synthetic hormones
- 3) Produced without harmful pesticides
- 4) Higher levels of calcium per glass
- 5) Higher levels Conjugated Linoleic Acids (good fats)
- 6) No harmful additives like corn syrup, aspartame or synthetic dyes.
- 7) More humane animal treatment.

<http://www.organicconsumers.org/organic/seven052505.cfm>

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8. RESEARCH

EU: Better networking for organic research

The aim of the CORE Organic project is to develop synergy between national activities within organic agriculture research and to secure better access to research results. The rationale for the project is that in order to promote a more sustainable agriculture many European countries have initiated research in organic food and farming. However, in many cases the national research is characterised by small research communities, which can make it difficult to tackle the most comprehensive issues in the area. Increased transnational collaboration and coordination between national research programmes is seen as a way to improve the competitive quality and relevance of the overall research. The aim of creating a new electronic newsletter is thus to provide information, both on the national and European research activities and on the joint coordination activities in the CORE Organic project.

www.coreorganic.org

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9. PROMOTION

UK: Barriers to 'going green'

One in five people say they would like to be more environmentally friendly but are not acting upon their good intentions because they believe there are too many barriers to "going green". A poll by the Energy Savings Trust throws up some more disturbing trends. Almost half the people surveyed feel that green products and services are prohibitively expensive and that being green is too time consuming; 38% do not think they have adequate access to local green services, such as recycling facilities; and 34% say they do not have enough information. A further 17% do not think their individual actions could make a difference to the environment. (Eco Soundings - the Guardian)

Australia: Organic Expo, Sydney, 30-31 July

The Organic Expo is shaping up to be a major industry event with a wide range of organic and environmentally friendly products on show. The Expo will be an excellent opportunity to showcase the diversity and quality of organic products to large numbers of Australian Consumers as it will be held in Darling Harbour Convention Centre. Tens of thousands of people are expected every day. www.organicexpo.com.au Ph: 02 9319 1228 Fax: 02 9453 3499 Mob: 0414 306 689 mary@shevents.com.au

Canada: Organic farmers struggling, report suggests

A new study from Statistics Canada outlines how organic farmers in Canada are having a difficult time surviving, although the market for such produce is increasing. Between 2000 and 2003, the number of organic farmers increased by less than two dozen, from 640 to 660, according to the report, Organic fruit and vegetable production. While there's more organic fruit and vegetables available, much of it is imported. One of the problems Canadian organic farmers face, says the report's author, William Parsons, is that the market for organic produce is still being developed, forcing farmers to create marketing plans of their own. Parsons says some end up getting less than the premium prices they expected to reap. "You're starting to see situations, especially recently, where the organic prices for fruits and vegetables are almost on par with the non-organic." Among his findings, Parson notes that up to 70 per cent of organic farmers ended up switching to conventional farming after just one to two years. "<http://ottawa.cbc.ca/regional/servlet/View?filename=ot-organinc20050429>

UK: ISIS sustainable world initiative launched

The Independent Science Panel (ISP) and the Institute of Science in Society (ISIS) are launching this Sustainable World initiative to engage with all sectors of civil society to make our food production system truly sustainable.

We are convening a special ISP group on Sustainable Agriculture (ISP-SA) - currently 18 strong - and a task force of sponsoring organizations and individuals who will make direct input into a comprehensive report on sustainable agriculture at the end of a year. The report will include a series of recommendations for government and inter- governmental agencies on the social, economic and political policy and structural changes needed to implement a sustainable food production system.

True costs of industrial food production system:

1 000 tonnes of water are consumed to produce one tonne of grain

10 energy units are spent for every energy unit of food on our dinner table

1 000 energy units are used for every energy unit of processed food

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17% of the total energy use in the United States goes into food production & distribution, accounting for more than 20% of all transport within the country; this excludes energy used in import & export

12.5 energy units are wasted for every energy unit of food transported per thousand air-miles

20% of all greenhouse gases in the world come from current agriculture

US\$318 billion of taxpayer's money was spent to subsidize agriculture in OECD countries in 2002, while more than 2 billion subsistence farmers in developing countries tried to survive on \$2 a day

90% of the agricultural subsidies benefit corporations and big farmers growing food for export; while 500 family farms close down every week in the United States

Subsidized surplus food dumped on developing countries creates poverty, hunger and homelessness on a massive scale

Some benefits of sustainable food production systems

2- to 10- fold energy saving on switching to low-input/organic agriculture

5 to 15% global fossil fuel emissions offset by sequestration of carbon in organically managed soil

50 to 92% reduction in carbon dioxide emission from the soil on switching from conventional tillage to no- till agriculture

5 tonnes of carbon dioxide emission disappear with every tonne of nitrogen fertilizer phased out

2-3-fold increase in crop yield using compost in Ethiopia, outperforming chemical fertilizers

Organic farming performs as well or slightly better than conventional industrial farming in the US

Small farms are 2 to 10 times more productive than larger farms

Organic farms support significantly more birds, bats, invertebrates and wild plants than conventional farm in Europe

Organic foods contain more vitamins, minerals and other micronutrients than conventionally produced foods

1 000 or more community-supported farms across US and Canada bring \$36m income per year directly to the farms

50-78m go directly into the pocket of farmers trading in some 200 established local farmers' markets in the UK

Buying food in local farmers' market generates twice as much for the local economy than buying food in supermarkets chains

Money spent with a local supplier is worth four times as much as money spent with non-local supplier

<http://www.i-sis.org.uk/SustainableWorldInitiativeF.php>

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10. POLITICS

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