

This free monthly newsletter 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. Comments and contributions are welcome, or if you find an item of news that you think should be included, please email [news@organicfqhresearch.org](mailto:news@organicfqhresearch.org)

Quote of the month:

**“Organic food contains fewer residues of pesticides used in conventional agriculture, so buying organic is one way to reduce the chances that your food contains these pesticides”**

Sir John Krebs, (anti-organic) Chair of UK Food Standards Agency, after much criticism from the environment minister for not acknowledging the known benefits of organic.

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# PESTICIDES

## **US: Pesticides linked to poor sperm quality**

Three chemicals in farm pesticides have been linked to poor sperm quality in rural midwesterners. Missouri men exposed to high amounts of the bug spray diazinon and weed killers alachlor and atrazine are far more likely than men with less contact to have diluted or deformed and sluggish sperm, are among the findings of a study published in the Online June 18 edition of "Environmental Health Perspectives." "These chemicals are among the most commonly used throughout the Midwest," said research leader Shanna Swan, an expert in reproduction and the environment at the University of Missouri. The chemicals most likely reach men through the water supply, the researchers said.

A previous study by the group found that more rural men than city dwellers had underperforming sperm, and Swan suggested the connection might involve exposure to pesticides. This time, she and her colleagues identified the particular substances within farm chemicals that appear to be causing problems with semen. Missouri men exposed to high levels of each substance in their urine were many times more likely than those with less exposure to have abnormal sperm. <http://ens-news.com/ens/jun2003/2003-06-18-09.asp#anchor3>

Reference: Swan SH, Kruse RL, Liu F, Bar DBr, Drobnis EZ, Redmon JB, Wang C, Brazil C, Overstreet JW, and The Study For Future Families Research Group. 2003. Semen Quality in Relation to Biomarkers of Pesticide Exposure. *Environ Health Perspect*: doi:10.1289/ehp.6417. [Online 18 June 2003] <http://ehpnet1.niehs.nih.gov/docs/2003/6417/abstract.html>

## **Australia: Organic food virtually pesticide free**

"Most consumers have always believed that organic fruit and vegetables are free of chemicals and pesticides. And now there's proof." So reads the Victorian Minister for Agriculture's press release of Australia's most comprehensive survey of its kind, showing that certified organic produce from Victorian farms has virtually no chemical or pesticide residues. In mid 2003, the Government of Victoria released results from the most comprehensive survey of its kind ever conducted on Australian organic produce. Three hundred samples of organically certified fruits, vegetables, nuts, herbs and grains were collected from Victorian wholesale outlets. A total of 65 types of organically certified herbs, fruits and vegetables underwent an independent and statistically valid scrutiny for pesticide residues and other contaminants. The survey, conducted according to international standards by the Victorian Department of Primary Industries (DPI), found that 100% of certified organic and biodynamic produce met national standards for residues and heavy metals in produce. In fact, more than 99% of tested produce showed no contamination at all from chemicals. The results provide assurance that organic and biodynamic produce is clean and uncontaminated. This is reassuring news for consumers who choose to eat organic

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fruit and vegetables because they want to minimise their dietary exposure to pesticides.

Overall, less than 1% of samples tested contained any chemical residues. Only two samples out of 300 had any residues, and these were at very low levels - well below the maximum permitted by legislation and much too low to affect health. The residues were traced to environmental contamination from historical practices; and once identified, the problems were addressed. This new data shows that Victorian organically-certified produce has fewer pesticide residues than conventional food crops – lower, in fact, than that found in organic produce surveyed overseas. For further information on the DPI Survey of Victorian organic and biodynamic produce, please contact: Ruth McGowan, State Coordinator, Horticultural Residue Management, DPI +(613) 56 24 2222, fax: (613) 56 24 2200, Post: DPI, RMB 2460, Hazeldean Road, Ellinbank, 3821, Victoria, Australia or email: [ruth.mcgowan@dpi.vic.gov.au](mailto:ruth.mcgowan@dpi.vic.gov.au) (11 July, OFA Organic Industry Update, OrganicTS)

## ANTIBIOTICS

## ADDITIVES

### **US: 'Trans fat' to be added to nutrition labels**

The US Food and Drug Administration has announced plans to require that nutritional labels on packaged foods carry information about how much artery-clogging "trans fat" they contain. "This label change means that trans fat can no longer lurk, hidden, in our food choices," said Dr. Mark McClellan, FDA commissioner. Trans fat has never gotten as much attention as saturated fat, but nutritionists consider it at least as dangerous and maybe worse. Saturated and trans fats are considered bad fats and can cause heart disease, which afflicts 13 million Americans. Polyunsaturated and monounsaturated fats, such as in olive oil and canola oil, have good effects. While saturated fat is found in meat and other products containing animal fat, the most common source of trans fat is partially hydrogenated vegetable oil. Such oil is turned into a solid form -- typically, the harder it is, the more trans fat it contains -- to prevent rotting and maintain long-term flavour. Trans fat is most commonly found in butter and margarine, baked goods, and fried foods.

Although the rule won't take effect until 2006, the effects of the new rule are already being felt in the food industry. Frito-Lay has announced it has eliminated trans fat from its Doritos, Tostitos and Cheetos chips. Unilever Bestfoods announced Wednesday that its "I Can't Believe It's Not Butter" margarine spreads will be free of trans fat by next year. And Whole Foods Market, the country's largest retailer of natural and

organic foods, is eliminating all products with trans fats from its shelves. Hydrogenated fats, the most common source of trans fats, are prohibited in organic foods.  
(OrganicTS)

## GMOs

### **UK: Outgoing environment minister strongly opposed to GM**

Michael Meacher, the former UK environment minister has accused Tony Blair of suppressing damaging evidence to sell modified crops to the public. Reported widely in the UK media, Mr Meacher said the government had downplayed evidence that GM crops could present a health hazard. He described many of the tests carried out on GM crops as "scientifically vacuous", and noted that government-sponsored research that proved negative was "widely rubbished in government circles". Michael Meacher has become the most prominent spokesman in the anti GM cause in the UK, writing a piece entitled "Are GM crops safe? Who can say? Not Blair" in the Independent on Sunday

<http://argument.independent.co.uk/commentators/story.jsp?story=417687> Meacher said "Given that there is so much uncertainty, it might be expected that there would be routine testing of GMOs for healthy effects as a legal requirement. This applies to new pharmaceutical drugs which are subjected to lengthy trials so that all side-effects can be uncovered. However, whilst it is often claimed that all GMOs have been "rigorously tested", all that this testing amounts to is deciding whether a GM crop is similar in terms of its composition to the non-GM plant. This is justified under the rubric of "substantial equivalence", which was originally a marketing term, and is scientifically vacuous. It wholly misses the point that health concerns are focused, not on known compounds, but on the effects of the GM technology which are unpredictable.

It is really extraordinary that there have so far been virtually no independent studies of the health effects of GM. What there is has mostly been done by the companies themselves. We are constantly told that there is no evidence of any greater health risk from a GM crop than from its non-GM counterpart. What is not added is that there have been no health checks to find out. Indeed, the only Government-sponsored work ever carried on the health impacts of GMOs was Dr Pusztai's work on rats and GM potatoes, and then, when it found negative effects, it was widely rubbished in government circles, even though his paper had been peer-reviewed six times before publication.

As the Prime Minister said, we should act on the basis of science, not prejudice. Quite so. But since the science is still clouded with such deep uncertainty, that means deferring decisions till the science is clear and reliable, not rushing to desired conclusions which cannot be scientifically supported."

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Mr Meacher's successor as Environment Minister, Elliot Morley, acknowledged many "unknowns" surrounded the issue but sought to assure MPs that the government would not give "blanket approval" for commercial GM farming. Mr Meacher demanded, "Isn't it clear that on scientific grounds it is neither safe, nor necessary, nor desirable to commercialise GM crops at this stage, in this country until far more testing has been carried out?" Unsurprisingly John Bell, chief executive of the Foods Standards Agency (FSA) has played down Meacher's concerns of the effect of GM food on humans. He told BBC Radio 4's Today programme: "What the trial showed was DNA was fully broken down in the gut but in the early part of the gut it's only partially broken down and that's the same for conventional foods as for any other type including GM. "We don't consider it is potentially worrying." The FSA has published a statement regarding research into the safety of genetically modified food on its website <http://www.foodstandards.gov.uk> to back its claims that GM foods are safe. On Monday, Mr Meacher's successor, Elliot Morley, said GM foods had never been shown to pose any risk to human health.

Two official reports will be published within weeks claiming it is in Britain's economic and scientific interests to press ahead with planting GM crops and selling GM foods. The Prime Minister's strategic policy unit at Downing Street is expected to publish a detailed review of the economic case for GM foods on 11 July. This will be quickly followed by an assessment overseen by Mr Blair's chief scientific adviser, Professor David King, which has drawn heavily on research by the pro-GM Food Standards Agency. The two reports are understood to accept that there are still environmental and economic problems with GM crops, but both are expected to insist it is in Britain's long-term strategic interests to embrace GM technologies.

### **UK: Soil Association lists key concerns about GM**

There are many concerns about introducing GM crops into the UK and the Soil Association is particularly worried about the effects on people's health and the environment. GM food has already been rejected by UK consumers and as a result all the main supermarkets have stated that they do not use GM ingredients in their own-brand food.

Health: Unlike new drugs, there is no requirement for GM food to be routinely tested on animals or humans so scientists don't know what the effects are on health. GM food has been available in America since 1996, but no studies have been carried out to assess whether this has led to health problems. The only known trial on humans of GM food was carried out by the University of Newcastle in 2002 and commissioned by the Government's Food Standards Agency. Seven people were given a meal containing GM soya and it was found that in at least three people the GM material entered their gut bacteria. The accidental contamination of many US food products with GM maize in 2000 is believed to have caused allergic reactions in over 50 Americans, some serious.

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The environment: A number of worrying environmental impacts are developing in countries where GM crops are grown commercially. Widespread contamination of crops: in America and Canada contamination has caused major problems throughout the food and farming industry in just a couple of years, including the loss of nearly the whole organic oilseed rape sector in the Canadian province of Saskatchewan. Seeds that are produced to be GM-free are difficult to buy and sometimes are later found to be contaminated. Those who are successful in sourcing non-GM seeds risk having their crops contaminated by neighbouring GM fields.

Increased use of chemical sprays: Contrary to claims from the biotechnology industry, farmers are now more reliant on herbicides (weedkillers). Certain crops have been engineered to be resistant to specific herbicides to enable farmers to spray weeds without damaging crops. However, weeds (sometimes referred to as superweeds) are developing resistance to these herbicides, and rogue GM plants that grow after a harvest (volunteers) have appeared and spread widely. In particular, GM oilseed rape volunteers– the GM crop most likely to be introduced in the UK – have spread quickly, and some plants have become resistant to several herbicides through cross pollination. As a result, farmers are making more frequent applications and reverting to older and more toxic chemicals. Resistant pests: Pests are also becoming resistant to some GM cotton plants crops in Australia and China (which have Bt genes inserted). There are many laboratory studies to prove this and the biotechnology companies have acknowledged that Bt resistance will develop.

The market: There is also no market for GM food as it has been rejected by all the supermarkets in their own brand food and British Sugar has said that it will not buy GM sugar. GM technology is driven by four commercial biotechnology companies (Monsanto, Syngenta, Aventis CropScience and Dupont ) none is British. For details about these issues, please visit <http://www.soilassociation.org> or call 0117 929 0661.

### **UK: Govt report on GM more cautious than expected**

The scientific report on the possible health effects of GM has struck a more cautious note than had been expected. Some members of the committee have objected to what they perceive as the gung-ho advocacy of the government's chief scientist, Sir David King, Sir John Krebs, chairman of the FSA, and Professor Hugh Dalton, chief scientific adviser to DEFRA. Instead of giving GM a complete endorsement the report says there are still gaps in knowledge and potential for nasty surprises. (The Guardian/Soil Assoc)

The Soil Association welcomed the fact that the Government's review of the science on GM crops has recognised the huge uncertainties, and major areas that have not been investigated, in connection with GM crops and food. Patrick Holden, Director of the Soil Association, says: "BSE should have taught us that absence of evidence of harm is not evidence of safety, particularly when no long-term feeding trials have been done." On possible health effects, the report admits that "there has been no

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epidemiological monitoring of those consuming GM food, and that as far as post-marketing surveillance to detect potential human health effects of food...there is nothing yet available for GM foods in any country".

In looking at the impact of the currently proposed GM crops, the report says that "the extent and possible severity of impacts on the environment are difficult to quantify and subject to much debate, and acknowledges that "an important uncertainty is how farmers will apply this technology in the field". On the most crucial question for organic farmers, contamination of non-GM crops, the report says that while for some crops it may be possible to control gene flow "in other cases it may be difficult, if not impossible, to grow certain crops or use some existing farming practices". This confirms the result of research on the impact of GM crops on organic farmers carried out by the Soil Association in North America last year. Finally, it contradicts the claim by GM companies that GM crops are being grown on a large scale in dozens of countries around the world. The report stresses that GM crops "occupy a relatively small proportion of the world's agricultural acreage" and that "Almost all (99%) of this was grown in only 4 countries". The report states that in fact 96% of all GM crops were grown in the USA, Argentina and Canada. Of GM crops grown worldwide 95% consist of just 3 crops, soybean, maize and cotton. Critically, a follow-up report in the Autumn is called for to consider comments from the public and further scientific developments including the results of the GM farm scale evaluations providing they are available.

### **Denmark: Review of studies of health effects of GM**

According to this most recent review, there have only been ten published studies of the health effects of GM food /feed. The researchers found that the quality of some of these was inadequate. Over half were done in collaboration with companies (fully or partially), and these found no negative effects on body organs. The others were done independently and looked more closely at the effects on the gut lining. Several of these found potentially negative changes which have not been explained.

Similar effects on the gut lining were found in the unpublished animal feeding study on the Flavr Savr tomato. In addition, there is the unpublished human feeding trial by Newcastle University which found that the transgenes transfer out of GM food into gut bacteria at detectable levels after only one GM meal. The biotechnology companies often refer to c. 100 animal feeding studies as proof of safety. However these were designed to test the commercial value of the animal feed, not safety, and many of these studies were duplicates, and not all were published.

*Pryme IF & Lembcke R (2003) "In vivo studies on possible health consequences of genetically modified food and feed - with particular regard to ingredients consisting of genetically modified plant materials", Nutrition and Health 17, p1-8.*

The Soil Association provide a link to the paper on the website

<http://www.soilassociation.org>

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## BSE

### US: Scathing report on US Mad Cow Safeguards

The US Organic Consumers Association (OCA) has released a report titled "U.S. Violates World Health Organization Guidelines for Mad Cow Disease: A Comparison of North American and European Safeguards," a comprehensive review of the inadequacy of U.S. government and industry safeguards against mad cow disease. The report reveals that the United States lags far behind much of the rest of the world by continuing to violate each of the key World Health Organization recommendations designed to keep this invariably fatal disease from spreading into the human population. It exposes the potentially risky widespread practices of weaning U.S. calves on cow blood protein, feeding the rendered remains of cows to poultry and pigs, and the subsequent feeding of poultry manure and swine remains back to cows.

"Even though mad cow disease has now been uncovered in North America," said report author Dr. Michael Greger, "the U.S. beef industry continues to risk public safety and the U.S. government continues to protect business interests over those of the consumer." Michael Greger, M.D. is a Boston-based physician who has been publicly speaking about mad cow disease since 1993. Dr. Greger is a graduate of the Cornell University School of Agriculture and the Tufts University School of Medicine. In 1997 he was invited as an expert witness to defend Oprah Winfrey in the infamous meat defamation trial. He has contributed to many books and articles on the subject and continues to lecture extensively on this and other food safety topics.

The Organic Consumers Association promotes food safety, organic farming and sustainable agriculture practices in the U.S. and internationally. The full report is posted on the OCA website at <http://www.organicconsumers.org/madcow/greger060603.cfm>

## NUTRIENT CONTENT

The New York Times  
nytimes.com

### US: "Is Organic Food Provably Better?" by Marian Burros, July 16, 2003

*In this NY Times article focussed rather narrowly on nutrient content, Marian Burros documents the various opinions on the state of organic research:*

In the debate over whether organic food is better than conventionally raised food, advocates for organic produce say it contains fewer harmful chemicals and is better for the earth, and some claim that it is more nutritious. And recent preliminary evidence suggests that the levels of certain nutrients, especially vitamin C, some

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minerals and some polyphenols — naturally occurring antioxidants that may help bolster the immune system — are higher in organically grown crops.

As a result of this preliminary evidence and the Agriculture Department's adoption in 2000 of standards for organic foods, the Organic Trade Association has created the nonprofit Center for Organic Education and Promotion to finance research that could verify what small-scale research may suggest: organic food may provide greater health benefits than conventional food. "We want to take the knowledge to the next level until there is a solid body of research that we can stand behind," said Katherine DiMatteo, executive director of the association. "There needs to be more rigor."

A study in the January 2003 *Journal of Agricultural and Food Chemistry* found 52 percent more ascorbic acid, or vitamin C, in frozen organic corn than in conventional corn, and 67 percent more in corn raised by sustainable methods — a combination of organic and conventional farming. Polyphenols were significantly higher in organic and sustainable marionberries compared to conventionally farmed ones. A three-year study in Italy, reported in the August 2002 issue of the same journal, found higher levels of polyphenols in organic peaches and pears, and about 8 percent more ascorbic acid in organic peaches. And a study in the February 2002 *European Journal of Nutrition* found more salicylic acid in organic vegetable soup than in nonorganic soup. Salicylic acid is responsible for the anti-inflammatory properties of aspirin, and bolsters the immune system. Critics say these studies were poorly done, are biased and dealt with tiny differences in nutrients.

Alex Avery, director of research and education at the Center for Global Food Issues at the Hudson Institute, who frequently disputes claims for the positive health benefits of organic farming, said the marionberry and corn study did not involve proper statistical analysis and that the data came from a single year and a single farm. "This is a very, very shaky basis, given the differences that can occur," Mr. Avery said. Dr. Diane Barrett of the University of California at Davis, a researcher on the study, said: "We acknowledge it's very preliminary data." She added: "It was a real-life look at what happens in a grower's field. We did not expect such differences among organic, sustainable and conventional farming. We see it as an open door to doing more controlled studies at the university."

Charles Benbrook, former executive director of the Board on Agriculture at the National Academy of Sciences, who is a consultant on the impact of agricultural systems and technology on food safety and the environment, said the study's conclusions were not surprising. "This study extends and reinforces findings in earlier research," he said, referring to reports indicating that when plants are not treated with pesticides and are attacked by insects their levels of antioxidants rise to limit damage. "But it is new because it uses different crops under different circumstances. The study may have flaws, but it is a legitimate study."

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Mr. Avery said the Italian study showed very little difference in nutrient levels. "I don't think you are going to find any health differences," he said. And while scientists emphasize the importance of polyphenols and other antioxidants, particularly because they might help fight cancer, Mr. Avery said: "No one has a clue how much phenolics anyone needs to consume. Anyone who claims nutritional benefits from higher or lower phenolics doesn't understand." Dr. John Reganold, a professor of soil science at Washington State University, who has conducted research with organic farming systems systems, described the Italian study as good, and said the results were valid. The higher levels of vitamin C, Mr. Reganold said, are "biologically significant."

In 2001, the Soil Association of England, which sets organic standards, asked Shane Heaton, a nutritionist, to analyze available studies on nutrient differences between organically and conventionally grown food. He looked at 99 studies and discarded 70 because, he said, they examined growers who did not use certified organic practices, did not make relevant comparisons or were of insufficient duration. He found that in 14 studies of minerals, 7 showed a "trend toward higher contents" in organic foods, while 6 showed inconclusive or inconsistent results and 1 showed a higher mineral content for nonorganics. For vitamin C, 7 of 13 studies showed significantly higher levels in organics; they ranged from 6 percent to 100 percent. Six of the studies showed inconsistent or insignificant differences.

Mr. Avery said Mr. Heaton's study was tainted because of the Soil Association's interests. "A number of research trials time and time again have not found any significant differences," he said. "You need very large, carefully designed and carefully controlled studies to prove that there is a difference because of large natural variability." Pressed to be more specific, Mr. Avery whose organization has received financing from Monsanto, DowElanco and the Ag-Chem Equipment Company, which are involved in conventional agriculture and biotechnology, did not offer further criticism. Mr. Heaton said other researchers had reviewed his work and said it demonstrated "important differences between organic and nonorganic produce."

Dr. Joseph Rosen, a professor of food science at Rutgers, said the conclusions of the studies Mr. Heaton had focused on were less consistent than Mr. Heaton had claimed. Dr. Rosen said there were only two studies on phytonutrients — naturally occurring antioxidants — and only one showed higher levels in organic food. Actually, there are five studies in Mr. Heaton's report; four of them showed significant difference in phytonutrients.

Dr. Marion Nestle, chairwoman of the department of nutrition, food studies and public health at New York University, said that because there is so much variation in the soil, the amount of sun and rainfall, "It is difficult to compare findings of different studies."

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But she said of Mr. Heaton's study: "The investigators have gone to a lot of trouble, and there is no reason to disbelieve it." His findings, she said, "are consistent with studies coming out now on nutrients, phytochemicals and pesticides."

The debate is far from resolved. Organic foods, Mr. Avery said, "are clearly no safer, no more nutritious, no more healthful — there are zero advantages for consumers." Dr. Nestle said, "I don't think there is any question that as more research is done, it is going to become increasingly apparent that organic food is healthier."

### **Spain: Anti-cancer properties of Resveratrol confirmed**

Researchers at the Department of Food Science and Technology, CEBAS-CSIC in Espinardo, Spain have confirmed that the phytonutrient Resveratrol, previously found to be higher in organic red wine than non-organic red wine, possesses potent anti-cancer properties.

The effect of the naturally occurring polyphenol resveratrol (RES) on growth, cell cycle, and cyclins A, E, and B1 expression was investigated in a human melanoma cell line. In addition, the structurally related compound 4-hydroxy-*trans*-stilbene (4HST) was also assayed. Both RES and 4HST inhibited cell growth in a dose- and time-dependent manner and upregulated the expression of cyclins A, E, and B1 with subsequent irreversible arrest of melanoma cells. In addition, potent apoptosis-mediated cell death was detected. The present study suggests that the antimelanoma properties of dietary stilbenes, such as grape RES, cannot be ruled out, taking into account previous studies concerning the relationship between plasma and tissue concentrations and pharmacological activity of RES in animal models. *Mar Larrosa M et al. (2003) Grape Polyphenol Resveratrol and the Related Molecule 4-Hydroxystilbene Induce Growth Inhibition, Apoptosis, S-Phase Arrest, and Upregulation of Cyclins A, E, and B1 in Human SK-Mel-28 Melanoma Cells. J Agric. Food Chem. 51 (16), p4576 -4584. 10.1021/jf030073c S0021-8561(03)00073-6 Web Release Date: July 4, 2003*

*Levite D; Adrian M; Tamm L (2000). Preliminary results of resveratrol in wine of organic and conventional vineyards', Proceedings of the 6th International Congress on Organic Viticulture, 25–26 Aug 2000, Basel, Switzerland, p 256–257*

### **Spain: No differences found in antioxidant capacity of organic and conventional red wines.**

Researchers at Escuela Universitaria de Nutrición Humana y Dietética, Universidad Católica San Antonio, Spain have studied polyphenol content, free radical scavenging capacity, and changes during storage over 7 months in the dark in red and white wines. This study found no differences in either the initial total flavonol contents, nor the losses during storage in the ecological and conventional red wines. The flavonol level in white wines was very low, as expected since these compounds are found in grape skin. In contrast with other studies, the total concentrations of

phenolic compounds in conventional and ecological red and white wines were not related to antioxidant activity ( $p > 0.05$ ). In red wines, no significant differences were observed in the antioxidant activity of ecological and conventional red wine ( $p = 0.28$ ), while in white wine significant differences were observed in the antioxidant activity between conventional and ecological white wine ( $p = 0.006$ ). As the paper doesn't state the sample size it's not possible to assess the significance of these findings.

Zafrilla P et al. (2003) *Changes during Storage in Conventional and Ecological Wine: Phenolic Content and Antioxidant Activity*; *J Agric. Food Chem*, 51 (16), p4694 -4700. 10.1021/jf021251p S0021-8561(02)01251-7 Web Release Date: July 4, 2003

## HEALTH & DIET

### **Switzerland: Organic Food has positive effects on breast milk**

An investigation at two maternity hospitals in Switzerland concluded that pregnant women who eat predominantly organic products (more than 50 % of calories taken in) demonstrate a clearly higher content of valuable unsaturated fatty acids in their mother's milk. These acids are necessary for the healthy development of premature babies in particular. According to data, researcher Dr. Lukas Rist, said that the fatty acid content is, with a high probability, due to the different quality of the food eaten and that the differences in milk quality arose both after 4 and after 40 days after the birth. No differences could be proven in the content of iron, calcium, Lactoferrin and vitamin K. In further investigations the health relevance of these results will be examined for the process of pregnancy, birth and infant development ([www.soel.de](http://www.soel.de))

### **US/UK: Food, but not as we know it**

Michael Pollan is the author of 'The Botany of Desire: A Plant's-Eye View of the World' which is published by Bloomsbury, priced £8.99. He's written an interesting article in the Independent Newspaper about the evolution of food. An extract appears below, and the full article can be found at

[http://enjoyment.independent.co.uk/food\\_and\\_drink/features/story.jsp?story=416438](http://enjoyment.independent.co.uk/food_and_drink/features/story.jsp?story=416438)

In the 1960s, we dreamt that one day, meat and two veg would come in a pill and meals would be ingested in seconds. What none of us could have imagined back in 1965 was that within a few years, the synthetic food future would be overthrown in advance of its arrival. The counter-culture seized upon processed food, of all things, as a symbol of everything wrong with industrial civilisation. As an antidote to the "plastic food" dispensed by agribusiness, the counter-culture promoted natural foods organically grown, and whole grains in particular. Ever since, Big Food has been hard at work developing a counter-counter food future, one that borrows all that it can borrow from the counter-cuisine and then... puts it in a pill. The industry has evidently decided the future of food lies in so-called nutraceuticals and "functional foods":

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nutritional products that claim to confer health benefits above and beyond those of ordinary foods. We've moved from the meal-in-a-pill future to the pill-in-a-meal, which is to say, not very far at all.

It's hard to believe plain old food could ever hold its own against such sophisticated products. Yet while the logic of capitalism argues for the meal-in-a-pill food future, it is conceivable that, flaky as it might seem, the alternative food future has behind it an even more compelling logic: the logic of biology. The premise of the alternative food future - slow, organic, local - has always been that the industrial food future is "unsustainable". In the past, that word has mainly referred to the industry's impact on the land, which organic farmers insisted could not indefinitely endure the reductionist approach of industrial agriculture - treating the land as a factory, into which you put certain kinds of chemicals (pesticides, fertilisers) in order to take out others (starches, proteins, flavonoid phenols). Eventually, the land would rebel: soils would lose fertility, the chemicals would no longer work, the environment would grow toxic.

But what about the biological system at the opposite end of the food chain - the human body? It too is ill served by industry's powerful reductions. Increasingly, there is evidence that breaking foods down to their component parts and then reassembling them as processed food systems is also unsustainable - for our health. It is not clear that the "healthy" ingredients we're isolating function in isolation the same way they do in whole foods. Already we're finding that beta carotene, extracted from carrots, or lycopene, from tomatoes, (both thought to help prevent certain cancers), don't work as well, if at all, outside the context of a carrot or a tomato. Even in the pages of Food Technology, you now find nutritionists cautioning industry that "a single-nutrient approach is too simplistic".

Foods, it appears, are more than the sum of their chemical parts, and treating them as collections of nutrients to be mixed and matched, rather than as the complex biological systems they are, simply may not work. Which probably shouldn't surprise us. We didn't evolve, after all, to eat phytochemical extracts or flavour fractions or mycoproteins grown on substrates of glucose. Rather, we evolved to eat that archaic and yet astonishing array of plants and animals and fungi that most of us are still happy to call food. Don't write it off just yet.

## RESEARCH

### **Germany: International research association founded**

The International Society of Organic Agriculture Research (ISO FAR) was founded at a meeting in the Leibniz hall of the Berlin-Brandenburg Academy of Science on 20 June 2003. Around 100 researchers from all over the world came to Berlin as founding members, including agronomists, social economists, veterinary surgeons and dieticians. After approval of the statutes and election of a 12-member executive board from twelve countries, Prof. Dr. Ulrich Köpke was elected as president of

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ISOFAR. The vice-president is Dr. Urs Niggli (Switzerland) and the treasurer Dr. Erik Steen Kristensen (Denmark).

<http://www.iol.uni-bonn.de>

## PROMOTION

### **Italy: 20 million euros for promotion campaign**

Italy is to invest an additional 20 million EUR in a press and television campaign in favour of organic products. Until now, organic companies like Mustiola or Apofruit had different strategies for providing information about organic food. Whereas Mustiola concentrated on schools, Apofruit with the Almavede brand placed more advertisements in the press and TV. This is reported by the Italian Internet service Bio-Web.

The combination Amaverde Bio has just launched an information campaign under the name of "Biocertezze" (Organic Certainty), which is co-financed by the EU and implemented by an organic farming group in Cesena (Osservatorio Agroambientale). 800,000 EUR will be invested in this in three years. 80 advertisement pages have been booked in trade journals and 300,000 leaflets and posters printed for this campaign. Topics are the legal side, production methods and health aspects. Also planned are 3,600 days for tasting sessions in 2,000 sales outlets and information material for 100 school classes. (Biofach)

### **Switzerland: Co-op to invest 10 million francs a year in research and communication of organic benefits**

Organic products under the Coop's own brand label Naturaplan have increased by 20 % in the first five months of 2003, reports the magazine "Lebensmittelpraxis. The Coop is to invest 10 million SFR in this sector every year until 2012 in sustainable projects, research, quality improvements and long-term communication. (Biofach)

### **Germany: Organic motivation research**

What encourages or restrains consumers purchasing organic products? A research team from the Hochschule für Angewandte Wissenschaften in Hamburg looked at this question by means of group discussions with regular organic buyers and non-organic buyers. The investigation presented in the magazine "Lebendige Erde" is part of the European Union research project OMIaRD (Organic marketing Initiatives and Rural development). Under guidance of a trained moderator the participants discussed buying motives, obstacles and the future of organic agriculture. From this the following theses were formulated:

1. A positive attitude to organic consumption does not affect purchasing behaviour.
2. Organic products are not purchased because of their advantages, but because of personal experience, e.g. the birth of a child or diseases and/or personal values.

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3. Knowledge about organic produces unconscious resistance, information is little or not noticed. In addition the price is used as an argument, in order to avoid a conscious decision for or against organic.
4. Organic does not fit in the fast and convenient culture. Ever fewer consumers are ready to spend time and energy cooking. The consumption of organic products lends a rather negative image, therefore organic should adapt more: Same offer, same availability, similar prices, same degree of convenience.
5. Only a change of consciousness in large parts of the population will make organic consumption significantly increase, and this is not expected in the near future.
6. More organic only by organic dictatorship? An expansion of demand on a "free-will" basis is not expected: Only regulatory measures, which are seen negatively, could lead to more environmentally conscious behaviour e.g. subsidies or prohibitions for food transportation across larger distances.

The majority of the participants see a difficult future ahead for the "organic world", but with a steadily upward trend. Because: organic cannot grow faster than the consumer changes.

### **Denmark: Govt support for organic food**

The Danish Ministry of Food, Agriculture and Fisheries puts focus on ecology, launching a campaign in the media, shops and online. Mariann Fischer Boel, the Minister for Food, Agriculture and Fisheries says: "The Government views ecology as an important part of future farming. We want to continue improving the organic conditions by supporting research and development plus the transition from conventional to organic farming." It is important that the different links –producers, retailers and consumers- work together in order to succeed in the promotion and development of ecology. "It is in the cooperation between the three links, I see a large potential," continues the Minister. The campaign focuses on some of the significant rules that characterize organic production. It was launched in Denmark May 31st. For further information: The Danish Ministry of Food, Agriculture and Fisheries – <http://www.fvm.dk> (OrganicTS)

### **EU: Support for promotion of agricultural products**

The European Commission has approved 20 programmes in 9 Member States to provide information on and to promote agricultural products in the European Union. The total budget of the programmes is € 38.4 million, of which the EU will contribute half. Under a Council Regulation on information and promotion actions for agricultural products on the EU internal market, 10 Member States submitted 30 programme proposals. The Commission selected 20 programmes in 9 Member States (Belgium, Denmark, Germany, Spain, France, Ireland, Italy, the Netherlands and the United Kingdom) as eligible to receive financing. The programmes cover fruit and vegetables, organic products, flowers, wine, cheese, milk and protected denominations of origin or geographical indications (PDI/PGI). The organic projects receiving funding are: France: for Interfel Bio promoting Organic (fruit & vegetables) 1 year project. 276,200 Euros total funding. Belgium: for VLAM promoting Organic 2

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year project. Total funding 541,610 Euros. Italy: for CIA Promoting Organic 1 year project. Total funding 627,150 Euros. (OrganicTS)

## **POLITICS**

### **UK: Food row rumbles on: Soil Association vs Food Standards Agency**

In response to a letter in the Guardian newspaper from the head of the Food Standards Agency, Peter Melchett, Chair of the Soil Association, refuted that "no independent scientific evaluation" has ever shown that organic food "is healthier". His letter continues:

"No healthier, that is, than the chickens stuffed with water, beef and pig waste, and the chickens still laced with antibiotics, that you have revealed over the last few days. No healthier than non-organic beef, when 20 years ago the Soil Association banned the feeding of cows' brains to other cows, which kept organically reared cows free of mad cow disease. No healthier than the food that can contain residues of the 430 chemicals allowed in non-organic farming, compared to just four under Soil Association standards. No healthier than food that can contain any of 290 food additives approved for use across the EU, compared to only 32 permitted in organic food.

Sir John, in his determination to ignore government ministers such as Elliot Morley and Michael Meacher, also ignores numerous independent scientists in the UK and abroad. Dr Vyvyan Howard of the developmental toxico-pathology research group at the University of Liverpool says: "The best method of reducing exposure to potentially harmful pesticides would be to consume organically grown food". The Kings Fund, an independent medical charity, says: "Some pesticides are endocrine disruptors, and implicated in cancers and miscarriages. The use of synthetic fertilisers, plant breeding, and longer delays between harvesting and consumption have led to reduced trace element and vitamin content in food". Many research publications have shown that organically produced foods have higher amounts of beneficial minerals, essential amino acids and vitamins.

Sir John's anti-organic prejudice is matched by his love of GMOs. The FSA's own consumer committee has described the FSA's GM literature as "biased" in favour of GM, and the FSA has been caught out deliberately suppressing a verdict of its own "citizens' jury" opposing commercial growing of GM crops in the UK. Sir John says the FSA only represents consumers' interests - in which case it seems a little careless to have lost the confidence of both the Consumers' Association and the National Consumers' Council over his pro-GM campaigns. And what about the interests of consumers who want to avoid pesticide residues, animals routinely treated with antibiotics and poultry adulterated with pork and beef DNA? Do they count, Sir John?"

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Peter Melchett  
Soil Association

### **UK: Food Standard Agency Chair's most recent speech on organics**

Speech given by Food Standards Agency Chair Sir John Krebs to the Cheltenham Science Festival, 4 June 2003:

“Organic food is a success story. If you think back to just 10 years ago, you hardly ever saw it for sale in supermarkets. Now all the main retailers sell organic fruit, vegetables and meat as well as processed food. It is estimated that the sales of organic food have gone up by about tenfold in the past 10 years. People who choose to go organic may do so for many reasons: because they think it tastes better, they believe that it's safer, more nutritious, better for the environment or better for animal welfare. Or perhaps simply because it's more 'natural'. This is great. By offering extra choice organic food has enriched the food lives of consumers. But our theme for today is 'Is organic food better for you?' In the next few minutes I want to share with you my thoughts on this question, but before that let me briefly explain the Food Standards Agency's role in relation to organic food. In the FSA we focus on the consumer. We are responsible for the safety of food, for healthy eating and choice. It is not our job to promote organic food production; nor are we responsible for animal welfare and environmental protection, except in so far as claims are made on food labels about these aspects.

Now for the question 'Is organic food better for you?' In our view the current scientific evidence does not show that organic food is any safer or more nutritious than conventionally produced food. Nor are we alone in this assessment. For instance, the French Food Safety Agency (AFSSA) has recently published a comprehensive 128-page review which concludes that there is no difference in terms of food safety and nutrition. Also, the Swedish National Food Administration's recent research report finds no nutritional benefits of organic food. The Consumers' Association in its report in Which? magazine for May 2003 concludes that there is 'no consensus' on reports linking organic foods to health benefits.

But, of course, scientific evidence is dynamic (dare I say 'organic'!) and therefore we must all be open to new evidence. To stimulate discussion and thinking about future research on organic food and consumer choice, the FSA hosted a workshop last November. The lively discussions in the workshop showed how devising the right research in this area is not that straightforward. Suppose, for example, you wanted to find out if organic food is better for you because it is more nutritious. Which nutrients should you measure? Should you compare the produce as it comes out of the ground or as it is sold in the shops? Would you count any nutrient difference as important, or only differences that can be shown to have an effect on health?

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I am not going to answer these questions now, although perhaps some of you will have views. But I can say that the Agency is prepared to fund further research on both nutritional and safety aspects of organic and conventional food, provided that appropriate questions can be identified. Research will inevitably take time. So, meanwhile, here are some thoughts, relevant to all food, whether or not it's organic. First, for consumers. Consumers are right to be concerned about their diet and health. Diet probably contributes as much as one third of the risk to two big killers – cancer and cardiovascular disease. This is why the Food Standards Agency, together with UK Health Departments, has made diet and health a priority. We aim to help to bring about the changes in diet that will improve people's health. This is why we have been working to reduce the salt content of processed food – we all eat too much salt – as well as encouraging people to eat more fruit and vegetables and less sugar and saturated fat. We know that these changes to our diets will bring real health benefits. And it is the overall nutritional balance of the diet that counts, rather than differences in the nutritional content of individual foods.

Second, for producers. The safety and quality of our food depends on the care and controls in place throughout the food chain – whether it is hygiene in the abattoir, in the restaurant, or in the home. There can be good and bad practice in conventional and organic production alike. Take pesticide residues, for instance. The safety levels for pesticide residues in food are assessed by independent scientific experts, and they take into account the uncertainties by including a large safety margin. But, nevertheless, many people would prefer not to have detectable residues in their food, even if they are not a risk to health. So the FSA is pressing for reduction of pesticide residues in food. Organic food contains fewer residues of pesticides used in conventional agriculture, so buying organic is one way to reduce the chances that your food contains these pesticides. But it is also possible to produce conventionally grown fruit and vegetables with minimal residues. In fact, residues are not detected in about 70% of produce sampled by the Pesticides Residue Committee. And remember that the committee tends to focus on problem crops. So, our view is that minimising residues is not just about organic versus conventional food: it's about good practice by producers, whatever method they use. The same could be said of veterinary medicines. And the Agency's view is that on a precautionary basis antibiotics should not be used as growth promoters. Authenticity is important for both producers and consumers. People want to know that the food they buy is what it claims to be and producers want people to have confidence. At the moment, the only way you can tell your food is organic is by the claim on the label. But we are developing chemical tests that will enable us to check for fraud.

Thirdly, for all of us. We all have a duty to our grandchildren to work towards more sustainable ways of producing our food. The Green Revolution has brought us plentiful and affordable food, but at an environmental cost. In the future we must develop ways of producing food that people can afford to buy in ways that give Nature more of a chance."

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