



Organic Food Quality & Health

# Organic Food Quality News

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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. Comments and contributions are welcome, or if you find an item of news that you think should be included, please email [shane@dontjustsurvive.com](mailto:shane@dontjustsurvive.com)

## Quote of the month:

**“These are nasty diseases: people are getting more of them and they are starting earlier. We have to look at the environment and ask ourselves what we are doing.”**

*Professor Colin Pritchard of Bournemouth University, discussing his paper in the journal Public Health, which shows that the numbers of sufferers of brain diseases, including Alzheimer's, Parkinson's and motor neurone disease, have soared throughout the western world in the last 20 years. The causes, the paper says, were most likely to be chemicals, from car pollution to pesticides on crops and industrial chemicals used in almost every aspect of modern life.*

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# 1. PESTICIDES

## **India: Pesticides causing cancer**

A study conducted by the Chandigarh based Post Graduate Institute of Medical Education and Research (PGIMER) on behalf of the Punjab government has once again revealed that excessive use of chemical pesticides is the cause of a series of deaths due to cancer in Talwandi block in Bhatinda district in Punjab. Bhatinda district grows largely cotton and rice and is infamous for excessive use of chemical pesticides. The PGIMER study conducted under the leadership of Prof Rajesh Kumar, head of the department of community medicine, cytology and gynecological pathology confirms the findings of the earlier two studies conducted by the local NGO, Kheti Virasat - one in collaboration with Greenpeace India. Kheti Virasat is convincing farmers to switch over to organic farming.

The IPIMER study compared Talwandi Saboo in Bhatinda district with the control area, Chamkaur Sahib in Ropar district. The study covered a population of 85315 in Talwandi Saboo and 97928 in Chamkaur Sahib. A total of 7,441 deaths were recorded in the last 10 years (1993-2003). Age adjusted cancer death rate per 1,00,000 population per year at Talwandi Sahib was 51.2 while that at Chamkaur Sahib was 30.3. Age adjusted prevalence of confirmed cancer cases per 1,00,000 was 125.4 in Talwandi Saboo and 72.5 in Chamkaur Sahib. Five most common sites in confirmed cancer cases were breast, uterus, leukemia/lymphoma, oesophagus, skin and ovary. There were 107 confirmed cancer cases in Talwandi Saboo out of which 27 were males and 80 were females. There were 71 confirmed cases of cancer deaths in Chamkaur Sahib out of which 25 were males and 46 were females. Death rate in Talwandi Saboo was 4.48 as compared to 3.69 per 1000 in Chamkaur Sahib.

<http://www.gmwatch.org/archive2.asp?arcid=4254>

## **UK: Pesticides linked to leukaemia**

Pesticides and pollution may play a role in rising rates of childhood leukaemia. A study from Bristol University's medical physics department found that environmental agents can affect the immune system of unborn children by crossing from mother to foetus through the placenta. Leukaemia accounts for a third of all cancers in children and the numbers of new cases each year has been rising for the last 40 years. It is known that cancer starts in the womb and scientists are now investigating if genetic, environmental, dietary or other factors are causing more children to be struck down. (SoilAssociation - Daily Express, Daily Mail)

## **US: Monarch butterflies decline now linked with herbicides**

Research by the Monarch Larva Monitoring Project at the University of Minnesota shows that the numbers are below average and at their lowest level since 1998. Milkweed is the only plant on which monarchs will lay their eggs, and also serves as the sole food source for larvae.

Percentage of milkweed plants carrying Monarch butterfly larvae:

- \* 2001 - nearly 25%
- \* 2002 - about 7%
- \* 2003 - about 8%
- \* 2004 - under 5%

In the same period a massive increase in the use of herbicide-tolerant GM soya beans occurred."...one factor in the decline in the number of egg-carrying plants could be the growing use of herbicide-tolerant soybeans, which are genetically engineered to permit larger amounts of weed-killing chemicals to be applied without hurting the crop. This method may have

increased the spraying of herbicides and thereby the destruction of milkweed, which can be common in farm fields." Extract from "A butterfly mystery", Chao Xiong, Star Tribune, August 21, 2004 MONARCHS0821 <http://www.startribune.com/stories/462/4940059.html> Monarch

### **UK: Variations in pesticide residue levels can lead to toxic exposures**

Children who eat an apple or pear a day may be exceeding the pesticide safety threshold because of residues on the fruit, according to research. Using Department of Environment data on pesticides on fruit collected from supermarkets, scientists calculated that each day some children would get a toxic level of pesticides. The research says the government repeatedly claims that the levels of pesticide are safe because, instead of measuring individual apples, researchers buy 10, mash them and take an average reading to see if they are safe. This is the internationally agreed method of checking residues. But government figures show that the pesticide is not evenly spread across the batch, and one or two apples could contain 90% or more of the pesticide in the batch. The research, published in the International Journal of Occupational and Environmental Health, is from Andrew Watterson of Stirling University, and Vyvyan Howard of Liverpool University. It used mathematical modelling to measure exposure to pesticides for children aged between 18 months and four years old. The pesticides involved can disrupt children's hormones and some are suspected of causing cancer. The study found that between 10 and 220 young children a day could be exposed to pesticide residues at levels which could pose immediate and long term threats to health. The good news for British fruit growers is that samples grown in this country had lower residues than imported fruit. The Food Standards Agency criticised the research, saying it could put parents off giving their children enough fruit to eat. The Soil Association's Alissa Cook is quoted in the Bristol Evening Post: "a lot of people are turning to organic food to be on the safe side." (The Guardian; The Times; Daily Mirror; Daily Express) SA 30/7

### **UK/World: Brain disease incidence soaring**

The numbers of sufferers of brain diseases, including Alzheimer's, Parkinson's and motor neurone disease, have soared across the West in less than 20 years, scientists have discovered. The alarming rise, which includes figures showing rates of dementia have trebled in men, has been linked to rises in levels of pesticides, industrial effluents, domestic waste, car exhausts and other pollutants, says a report in the journal Public Health. In the late 1970s, there were around 3,000 deaths a year from these conditions in England and Wales. By the late 1990s, there were 10,000. 'This has really scared me,' said Professor Colin Pritchard of Bournemouth University, one of the report's authors. 'These are nasty diseases: people are getting more of them and they are starting earlier. We have to look at the environment and ask ourselves what we are doing.' The causes were most likely to be chemicals, from car pollution to pesticides on crops and industrial chemicals used in almost every aspect of modern life, from processed food to packaging, from electrical goods to sofa covers, Pritchard said. Food is also a major concern because it provides the most obvious explanation for the exclusion of Japan from many of these trends. Only when Japanese people move to the other countries do their disease rates increase. 'There's no one single cause ... and most of the time we have no studies on all the multiple interactions of the combinations on the environment. I can only say there have been these major changes [in deaths]: it is suggested it's multiple pollution.' (The Observer) 16/8 SA

### **Japan: Effects of pesticides and other chemicals documented**

Japanese researchers are concerned about the impact of environmental chemicals on normal hormone functioning in mammals, including humans, according to a July article in The Yomiuri

Shimbun. The article echoed the concern of the Japan Society of Endocrine Disrupters Research that DDT, dioxin, PCB, plastics, BPA, nonylphenol, and about 65 other named substances can suppress normal growth, nervous system and cognitive development, and fertility, with abnormal behavior a likely outcome. The Society stressed the importance of the problem at its June 25 meeting, following the release of a report that rats fed Bisphenol A - a chemical used in the manufacture of wrapping paper, plastic bottles, and other products - found it more difficult to negotiate a maze and exhibited ADHD-like symptoms. Female rats born to mothers that had ingested Glufosinate, a weed killer used on golf courses, were extremely aggressive toward other rats. The chemical structure of Glufosinate mimics that of glutamic acid, which is indispensable to the human brain.

A national campaign to assess the damage caused by such substances has lost momentum of late, said the story. In Taiwan, an average drop of about five percentage points in IQ on average was reported among children aged 6 to 7 suffering from polychlorinated biphenyl (PCB) poisoning. Underactive thyroid function in mothers during the early stages of pregnancy has been linked to lower IQ scores in their children. Chemically, PCB resembles thyroid hormones and may inhibit their production. Studies conducted in the mid-1990s reported that small traces of an endocrine disrupter could lead to smaller testes in carp and smaller penises on crocodiles, while male fish exhibited more female traits. Japanese scientists have dubbed such chemicals "environmental hormones" because of their hormone-like behavior when ingested, a kind of toxicity that defies usual classification. Yoichiro Kuroda of the Tokyo Metropolitan Institute for Neuroscience said: "If something unusual happens to genes, any effects will take several thousand to several tens of thousands of years to become obvious. The abrupt changes in the past must have been caused by chemical substances."

### **EU: Consumer protection commissioner issues pesticide warning**

Fruit and vegetables contaminated with pesticides are regularly sold and consumed in all EU Member States. This is shown by the new report on "Monitoring of Pesticide Residues in Products of Plant Origin in the European Union, Norway, Iceland and Liechtenstein", which was recently published by the European Commission. Of the over 46,000 samples of fruit, vegetables and corn tested in 2002, 44 % were contaminated with pesticides, which means the share of food with pesticide residues has distinctly increased throughout the EU in the last few years. "Only" 36 % of the samples were contaminated in 1999. The number of cases exceeding the limits and samples with multiple residues have also increased. According to the EU report, every fifth fruit and vegetable sample tested in 2002 contained a potentially hazardous cocktail of residues. The report even includes the official advice that in the case of some pesticide-product combinations "a health risk cannot be excluded for some products, especially for susceptible groups of consumers".

[http://europa.eu.int/comm/food/fs/inspections/fnaoi/reports/annual\\_eu/index\\_en.html](http://europa.eu.int/comm/food/fs/inspections/fnaoi/reports/annual_eu/index_en.html)

### **UK: Bio-pesticides to be studied**

The University of Warwick has received funding to study the science and regulation of bio-pesticides. The research aims for a greater scientific understanding of the operation of bio-pesticides and their impact on the sustainability of pest management. In particular they will look at whether bio-pesticides persist in the environment when released on a large scale and how they interact with local microbial populations. The researchers will also evaluate the effect of UK government regulations on the development and uptake of bio-pesticides. Contact Dr Dave Chandler, Warwick HRI, email [dave.chandler@warwick.ac.uk](mailto:dave.chandler@warwick.ac.uk) for further information.

### **US: Organic farming reduces groundwater pollution**

New research released by The Rodale Institute® and funded by the Pennsylvania Department of Environmental Protection shows that by composting manure, farmers can significantly improve the quality of water entering the nation's watersheds. The Rodale Institute® research also documents that the use of organic farming practices reduces agricultural water pollution by up to 75 percent, improves quality in surface and ground waters, and benefits water quality in downstream marine environments. The report, *Water, Agriculture and You* is available from <http://strauscom.com/rodale/way.pdf>

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## **2. ADDITIVES**

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## **3. ANTIBIOTICS/FOOD SAFETY**

### **US: Beef recalled over E. coli concern**

Packerland Packing Co. has recalled 26 tonnes of ground beef sold in seven states that may be contaminated with E. coli bacteria. Stores were asked to remove the product. Packerland recalled the meat after its internal testing showed the ground beef was possibly contaminated and mistakenly shipped. *MSN Health* Sept. 20, 2004

### **Spain: Food-borne carcinogen database launched**

Extending food scientists' understanding of potential carcinogens in food products and allowing food makers to quantify dietary exposure to these compounds, a group of researchers in Spain have compiled an extensive database of harmful compounds formed during food preservation and cooking. Led by Paula Jakszyn at the University of Barcelona in Spain, the researchers set out to develop a food composition database of nitrates, nitrites, nitrosamines, heterocyclic amines (HA), and polycyclic aromatic hydrocarbons (PAH) in foods. "An accurate assessment of dietary intake of such compounds is difficult, mainly because they are not naturally present in foods, and they are not included in standard food composition tables," said the researchers, reporting their findings in the August issue of the *US Journal of Nutrition*, (134:2011-2014, 2004). Polycyclic aromatic hydrocarbons are a group of over 100 different chemicals that are formed during the incomplete burning of coal and oil, or other organic substances like tobacco or charbroiled meat. Consumers might be exposed to PAHs by eating grilled or charred meats, contaminated cereals, flour, bread, vegetables, fruits, meats as well as processed or pickled foods.

The researchers in Spain conducted a literature search of the nitrates, nitrites, nitrosamines, HA, and PAH compounds in foods from 1980 onwards using the Medline and EMBASE databases. The final database included 207 food items listing concentrations of nitrites, nitrates and nitrosamines, 297 food items giving concentrations of HAs, and 313 food items with listings for the concentrations of PAHs. The database gives the name of the food, cooking method, preservation method, how thoroughly cooked, temperature and time, quantity, analytical method



and sampling method, year of publication, author and country. In some cases different sources provided information concerning the same food item. "This database will allow investigators to quantify dietary exposure to several potential carcinogens, and to analyse their relation to the risk of cancer," conclude the Spanish researchers. But, they add that the potential limitations of the database are due to the 'quality of the information we could obtain through the Medline and EMBASE databases.' The database is available through [www.epic-spain.com/libro.html](http://www.epic-spain.com/libro.html)  
*Foodnavigator.com 05/08/2004*

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## 4. GMOs

### **EU: GM foods rare**

Food makers working on the European stage today are matching consumer concerns over genetically modified organisms, largely selecting non-GMO ingredients for their food formulations, highlights a new survey. Environmental campaigners Greenpeace state this week that, one hundred days after tough new rules on GMO labelling for food became applicable, only a handful of GMO-labelled products are on sale in European supermarkets. Greenpeace's 'gene detectives', who have been looking at food labels in large supermarket chains since 18 April when the rules were enforced, found only four products containing genetically modified ingredients in Germany, two in the UK and the Czech Republic, and none in Italy or Austria. The most GMO-labelled products - 14 - were found in France. "The market is practically free of products containing GMOs," said Eric Gall of Greenpeace European Unit.

Praised by consumer groups but criticised by the food industry, the toughest rules on GM labelling in the world mean that all foods which contain or consist of GMOs, or which are produced from GMOs, will have to be labelled, regardless of the presence of GM material in the final product. The system leans heavily on traceability, and as such has created an extensive paper trail. "Third, fourth, fifth generation food ingredients derived from genetically modified foodstuffs will have to be labelled. A glucose syrup, for example, derived from starch, that in turn hails from a GM maize, will have to be labelled as such," a spokesperson for the European food manufacturers body the CIAA told FoodNavigator.com recently, adding that the industry had argued from the outset that the legislation had gone too far. The new rules from Brussels - (EC) 1830/2003 on the Traceability and Labelling of GMOs and (EC) 1829/2003 on Genetically Modified (GM) Food and Feed – find their source in consumer suspicions of GM foods. The rules were set up to bring choice to the consumer – if they see 'GM ingredient' on the label they can decide to buy, or not. "Their rejection of GMOs in food has made major food producers and retailers ensure that their shelves are free of modified produce," added Gall yesterday. While the food industry now has to extensively label GM food products in Europe, in fact food manufacturers have been extremely reticent about using GM ingredients, knowing that ultimately it did not make sound business sense in a climate where the European consumer remains extremely suspicious of genetically modified foodstuffs.

*FoodNavigator.com 27/07/2004*

### **UK: GM foods “part of our future”, say food scientists**

Law makers, consumer groups and industry continue to clash over the use of GM ingredients in the European food chain, but a major UK-based food science body asserts this week that

genetic modification has the potential to offer strong benefits - quantity, quality and acceptability - for the world's food supply, reports Lindsey Partos. Claiming that scientists should be neither for nor against GM technology, but instead for 'scientific methodology', the Institute of Food Science & Technology (IFST) asserted in a statement yesterday that GM has a "huge potential for mankind in medicine, agriculture and food". "Genetic modification will not solve poverty or wars but with 30,000 people dying from diet deficiency diseases every day, foods of the future will not be solved without GM," Prof. J Ralph Blanchfield, chair of external affairs at the IFST, said to FoodNavigator.com.

An escalating global population in coming decades will put pressure on world food supplies, and for the food scientists GM food holds the long term potential benefit to not only develop crops with improved nutritional quality, and but also crops that will grow under previously inhospitable conditions. "In short, GM technology could provide the world with a greater amount of food," said Blanchfield. Although a food-rich Europe can probably manage without GM food, the debate will increasingly focus on whether the same can be said for the 850 million hungry in the world today. "It is frequently argued by some that there is more than enough food to feed the world and all that is needed is fairer distribution (which so far mankind has signally failed to achieve). Whatever may be done by way of improved yields through conventional methods, attempted population control and more effective distribution would, however, be inadequate for the future," said the IFST in its statement. "The important point is not only how to feed the world now but addressing and trying to solve the problem of 'How will mankind feed the world in a few decades from now?' Of course, the problem that has huge political and economic dimensions will not be solved by GM alone, or even by science alone - but will certainly not be solved without the contribution of science, including GM."

On the subject of GM food ingredients, the food technologists assert that the 'first generation' of GM food materials were those that were relatively easy to do, chosen for their likelihood of rapid commercial success by providing traits that would commend themselves to farmers. "Consequently, most of the 80-plus crops that have been modified and the 25,000-plus field trials that have taken place worldwide to date have involved crops engineered for agronomic traits. "However, these GM products did not offer consumers a readily perceivable benefit at the point of purchase, and with intensified campaigns and media amplification in the early part of 1999 and thereafter highlighting problems and uncertainties (some real, some pure speculation, some spin-doctored and some urban myths), the UK public became turned against GM. Reacting to their customers' views, major retailers and manufacturers decided to exclude GM foods and ingredients."

The full information statement issued by the IFST yesterday can be accessed on [www.ifst.org/hottop10.htm](http://www.ifst.org/hottop10.htm) *FoodNavigator.com 28/07/2004*

### **Japan: GM canola pollution reported**

Recent revelations show that imported GM canola seeds have been spilled around Kashima port in Ibaraki prefecture, and that the GM canola pollution has been spreading. The Japan Wildlife Research Centre and others have established 13 checking points near busy crossroads within a 5 kilometre radius of the port, at 3-5 points and at distances 50 metres times the width of the sidewalk. The tests were conducted for 2 years at a total of 48 locations. According to the MAFF announcement on 29 June 2004, a May 2002 investigation revealed that western oilseed rape has been growing wild at 25 of 48 locations. 15 cases out of 16 were confirmed to be imported canola, the one exception not being analysable. Moreover, 7 out of 20 seeds and 2 out of 7 plants were shown to be GM

varieties. According to an investigation in February, 2003, western oilseed rape was confirmed at 23 out of 48 locations (2 locations were different from the previous year). There was possible GM canola reseeding at 17 out of 23 confirmed locations. Consequently, the investigation will continue due to difficulties involved with identification.

Currently, the Ministry of Environment is also investigating the case. Presumably, the GM canola pollution is spreading throughout the Kanto district, and GM plants are possibly growing wild around other unloading ports, such as Kobe port. MAFF said that it was assumed that a situation like this would occur, so it is not an issue. Bio Journal 2004: <http://www5d.biglobe.ne.jp/~cbic/english/2004/journal0408.html>

### **World: GM wheat not dead**

In June 2004, Monsanto withdrew its GM wheat applications from all countries except the US. This means the development of Monsanto's GM wheat has virtually come to an end. However, GM wheat development is not yet over. GM wheat R&D is still being carried out by other corporations and universities (see Table 1). Among those competing in the field, Syngenta Seeds is the first player to enter the game with its fusarium fungus resistant GM wheat. In North Dakota, US, the Agricultural Research Service (ARS) of the U.S. Agriculture Department has started to develop a GM wheat with altered storage protein characteristics.

Table 1: Current situation on GM wheat R&D

Syngenta Seeds (Switzerland)	Fusarium fungus resistant GM wheat
Biogemma (France)	GM wheat with modified starch metabolism
Montana University (US)	GM wheat with modified bread-making traits
Montana University (US)	High yield GM wheat
Macquarie University (Aust)	High temperature stress resistant GM wheat
Idaho University (US)	Barley yellow dwarf virus resistant GM wheat
Gerten (US)	Protein reformulated GM wheat
Kansas University (US)	Dryness resistant GM wheat
Ventria Bioscience (US)	GM wheat with improved digestive characteristics
ARS (US)	GM wheat with altered storage protein
BASF Canada (Germany)	Herbicide resistant GM wheat
Monsanto (US)	Herbicide resistant GM wheat

Bio Journal 2004: <http://www5d.biglobe.ne.jp/~cbic/english/2004/journal0408.html>

### **UK: Public rejection of GM food mounts**

Despite tough new rules on GM food labels, food makers will stick to non-GM alternatives as new evidence from the UK shows British consumers will continue to refuse to buy foods containing biotech ingredients. In fact, a new report from consumer group Which? shows that consumers in the UK feel even more strongly about this than they did two years ago. "Consumers clearly don't want GM food and are hardening their stance against it. It's hardly surprising when questions still remain about the risks for health and the environment," said Malcolm Coles, editor of Which?. More than six out of 10 people (61 per cent) polled on behalf of the consumer magazine said they were concerned about the use of GM material in food production - up from 56 per cent in 2002. The survey of almost 1,000 people also recorded a



rise in the number who said they tried to avoid GM food and a fall in the percentage who backed the widespread growth of GM crops in the UK.

"The government has ignored public opinion on this subject for long enough. It needs to rethink its policy before going ahead with growing GM crops commercially," added Coles. Igniting the wrath of consumer groups, the UK government approved the commercial growing of one variety of genetically-modified maize earlier this year. Environment Secretary Margaret Beckett gave a qualified green light to the herbicide-tolerant maize for animal feed but rejected commercial cultivation of GM beet and oilseed rape. The survey also highlighted problems relating to the labelling of GM material, new rules for which were introduced by Brussels just a few months ago. Foods that contain GM ingredients or derivatives should say so on the label, but foods can contain a small amount of GM material (0.9 per cent) without being labelled as GM if the manufacturer can show that contamination could not be avoided. "It's easy for soya and maize - used in a huge range of processed foods - to become contaminated with GM material. Tests by Warwickshire Trading Standards found soya mince that was more than 50 per cent GM material - even though the label didn't mention GM," said Which?. Shoppers are not only concerned about GM ingredients in food; 68 per cent want manufacturers to go one step further and source non-GM animal feed, so meat and dairy products would have no links with the GM process. "At the moment, all supermarkets' own brand milk and much of their meat comes from animals fed on GM feed. The only milks that make the grade are M&S milk and Sainsbury's Selected Farm semi-skimmed milk, and milk labelled organic," claims the Which? report.

*FoodNavigator.com 07/09/2004*

### **US: WTO calls for GM safety debate**

Friends of the Earth revealed that scientists have been called by the World Trade Organisation to debate the safety of Genetically Modified (GM) foods and crops. The move is a blow to the Bush Administration, which fought to stop any debate over scientific safety of GM, and means that the outcome of the US-Europe trade dispute on GM foods is substantially delayed and will not be known before the US presidential election. ([www.organicts.com](http://www.organicts.com), 27 August).

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## **5. BSE**

### **US: Scientists create first synthetic prion**

California scientists say they have created the first synthetic version of a rogue protein called a prion and used it to give mice a brain-destroying infection, evidence important in exploring whether these mysterious substances alone cause mad cow disease and similar illnesses. The report won't end the scientific controversy, as sceptics already are criticizing the research. But if the work ultimately is validated it could have far-reaching implications — such as helping to create diagnostic tests for mad cow disease. It also could help explain why normal brain proteins suddenly go bad and sicken some people who've never eaten mad cow-tainted food. Related diseases — including mad cow, scrapie in sheep and the human Creutzfeldt-Jakob disease, or CJD — are believed to arise when a protein the body normally harbors folds into an abnormal shape, called a prion, and sets off a chain reaction of misfolds that eventually leaves clumps of dead brain cells. But sceptics have long questioned if these bad proteins truly act

alone. Unlike viruses or bacteria, prions contain no genetic material, once thought crucial to cause infection. Repeated attempts at definitive proof of prion infectiousness have failed.

Now, UCSF neurologist Giuseppe Legname and colleagues report in the journal *Science* that they created a manmade prion, free of any brain tissue, that proved infectious. They grew fragments of harmless normal protein in bacteria, purified them and flattened them into the abnormal prion shape. Then they injected the substance into brains of seven mice. It took over a year, but eventually all got sick. Critics, however, are raising complaints. Among their concerns are that laboratory contamination with another prion strain may have sickened the animals, and that the synthetic protein was tested in genetically engineered mice that may have been particularly prone to illness. Genetically engineered mice show signs of mad cow-like illnesses earlier in life than regular mice, Legname responded, but he plans to test them, too. If the research holds up, the ability to work with synthetic prions in test tubes could help scientists develop early tests to diagnose mad cow-like diseases. Mad cow disease makes headlines because eating tainted beef is linked to 150 human illnesses worldwide, most in Britain, of what's been named "variant CJD."

### **EU: Food authority raises US risk assessment on BSE**

Scientists at Europe's food watchdog have upped their assessment of the risk of finding mad cow disease in the United States, Canada and Norway following an extensive study of data collected between 1980-2003. In the early 1990s BSE - bovine spongiform encephalopathy - ravaged the UK beef industry with 37,000 clinical cases of BSE and about 60,000 of the highest risk animals entering the food supply, compared with less than one a year today. In late December 2003, for the first time the US identified a BSE infected cow in the state of Washington, leading to a ban from more than 20 countries on imports of US beef. The European Food Safety Authority (EFSA) said on Friday that the risk assessment for US and Canada were both raised from 'unlikely' to 'likely but not confirmed or confirmed at a lower level.' But the long-standing EU ban on growth-promoting hormones for cattle means it imports very little North American beef. Norway's reclassification from 'highly unlikely' to 'unlikely but not excluded' means its exporters will have to remove a more of the 'significant risk material' before shipping beef into the EU.

BSE, a transmissible, neurodegenerative, fatal brain disease of cattle, has been linked to the human disease variant Creutzfeldt-Jakob disease (vCJD). According to the World Health Organisation (WHO), from October 1996 to November 2002, 129 cases of vCJD were reported in the UK, six in France and one each in Canada, Ireland, Italy and the US. First identified in 1986, 180,000 cases of BSE have been diagnosed in the UK alone and only four out of the 25 EU member states have not yet declared any cases. BSE has affected the entire beef food chain, from producer to consumer. A recent report from the European Association of Animal Production has estimated the cost of BSE to EU15 (prior to accession) member states at more than €90 billion. In addition, the BSE crisis has had a significant impact on public trust in government and governmental scientific advice.

*FoodNavigator.com 23/08/2004*

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## 6. NUTRIENT CONTENT

### **UK: Food technologists claim higher phytonutrient content in organic produce**

New research shows some organic produce may have an added health benefit over conventionally grown counterparts, such as higher levels of secondary plant metabolites and higher levels of vitamin C, according to researchers presenting at the Institute of Food Technologists Annual Meeting and Food Expo. But inherent inconsistencies associated with organic farming make general comparisons inappropriate, they say.

Institute of Food Technologists' annual meeting in Las Vegas, Alyson Mitchell, a food chemist at University of California at Davis reported that she had found organic tomatoes had higher levels of secondary plant metabolites and higher levels of vitamin C. *"In looking at the (California) supermarket varieties of broccoli, we also found significantly higher levels of the flavonoids in organic broccoli,"* said Mitchell. Flavonoids, metabolites known to act in the body as antioxidants and found in a variety of plants, have been shown to promote several beneficial effects in the cardiovascular system, including decreasing oxidation of LDL cholesterol, inhibiting aggregation of blood platelets (which contributes to the risk of blood clots that produce stroke and heart attack) and decreasing the body's inflammatory immune responses, which contribute to atherosclerosis. Mitchell added: *"It is recognised that high-intensity agricultural practices can disrupt the natural production of secondary metabolites involved in plant defense mechanisms."* The study author said her findings add to a small body of literature that suggests higher levels of antioxidants exist in some organic produce. A recently published online fact sheet called *Organic foods in relation to nutrition and health key facts* discusses recent research and findings on this issue. See [www.medicalnewstoday.com/medicalnews.php?newsid=10587](http://www.medicalnewstoday.com/medicalnews.php?newsid=10587)

### **US: Food scientist queries organic food benefits**

Organic food is not necessarily better for our health than conventional equivalents, say food scientists speaking at a meeting of the world's largest science society this week in the US. The popularity of organic food is creeping up across the western world as retailers to farmers start to favour this pesticide-free way of food production on the back of growing consumer demand. In the UK alone a government boost to organic farming has helped the country to a 46 per cent rise in organic produce provided by UK farms. The market is projected to grow by 9 per cent per year until 2007. Claims that organic food may be healthier than conventional food products on the market could be partly responsible for the lift in organic sales, but Joseph D. Rosen, a food scientist at Rutgers University in the US, said at the 228th American Chemical Society (ACS) meeting in Philadelphia this week that "while many Americans believe that organic food is healthier than conventional fare, the scientific evidence does not necessarily support that belief. Consumers are drawn to the organic food movement and are spending unnecessary dollars on wishful thinking," said Rosen. He claims that 'seemingly authoritative sources', such as consumer reports, have fed false beliefs in the consumer.

### **USA: New phytonutrient database launched**

The USDA's Agricultural Research Service has launched a database for phytonutrients known as "proanthocyanidins", healthy compounds found in certain plant-based foods. For full details see [www.ars.usda.gov/is/AR/archive/may03/form0503.htm](http://www.ars.usda.gov/is/AR/archive/may03/form0503.htm)

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## 7. HEALTH & DIET

### **EU: Why we choose what we eat**

A vast array of factors influences our food choice. Our physiological needs provide the basic determinants of food choice. Humans need energy and nutrients in order to survive and will respond to the feelings of hunger and satiety. This article examines how our biological characteristics determine our food selection and the role of appetite, palatability and taste in food choice. Future articles will examine the socio-economic determinants of food choice, barriers to dietary change and models of behavioural change.

Click here to read more <http://www.eufic.org/gb/food/pag/food44/food441.htm>

### **UK: Organic feel-good factor**

New research suggests that buying organic food can make people feel better, even before they eat any of it. Supermarket chain Sainsbury's says simply making the choice to buy organic can induce a sense of well-being. Consumers told the company in focus groups that buying organic gave them more control over what they eat. (www.news.bbc.co.uk – 4 September)

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## 8. RESEARCH

### **US: OFRF releases organic farmers' survey**

The Organic Farming Research Foundation released the complete results of the Fourth National Organic Farmers' Survey: Sustaining Organic Farms in a Changing Organic Marketplace. OFRF's survey comprise the most detailed set of data currently available about organic farming operations in the U.S. The survey is available at <http://www.ofrf.org/publications/survey/index.html>.

### **EU: Organic research funded**

Researchers are celebrating after European Commission officials granted them 18m euros to study the European organics market. The cash will fund a five year project called Quality Low Input Food that will look into consumer and supply chain attitudes to organic produce.

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## 9. PROMOTION

### **UK: Government supports organic farming and research**

The Department for Environment, Food and Rural Affairs (Defra) is joining forces with the Soil Association to help organic businesses grow. The cash will help to market farms producing organic food as well as fund a directory of "organic" businesses, including restaurants and hotels. Phil Stocker, the Soil Association's head of agriculture, said: "This will provide vital

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support for organic farmers in the region and those looking to convert. "The Soil Association will have three offices in the North of England, as part of a five-year strategy to develop organic farming in the region." Cash will also be made available for a number of research projects. (www.news.bbc.co.uk) (SA 17/8)

### **UK: Majority of consumers believe organic food is better**

A new study says that 59% of British consumers think that organic food is better for you than non-organic food, with an overwhelming majority (97%) understanding what the criteria for organic is. The YouGov report, published today by Jordans, the natural food company confirms that British men (54%) are more sceptical than British women (64%) when it comes to believing that organic is better than non-organic food, which suggests that women have embraced the benefits of organic farming more willingly than their male counterparts.

### **US: 20% annual growth in organic food sales**

The Financial Times reports on the "fastest-growing US food retailer", Whole Foods Market (who own Fresh & Wild in the UK). Despite a slump in US retail spending with stores such as Wal-Mart suffering, sales of organic food are rising by 20% per year. With just 150 stores, Whole Foods Market is cornering a significant share of the market with \$5.3bn market capitalisation compared with Safeway's 1,800 stores at \$9bn.

### **India: Agriculture Dept sets up organic programme**

An Organic Farming Cell has been set up in the Indian Department of Agriculture and Co-operation to implement the National Programme for Organic Production, a new scheme for production, promotion, market development and certification of organic products. A number of horticultural products like fresh and processed vegetables and fruits and also tea, coffee, spices, cotton, oilseeds and pulses, etc., will be promoted under the Programme. More information is at <http://www.apeda.com/organic/index.html>.

### **US: USDA to defray organic certification costs**

10 Aug 2004, Source: Joel Ceausu. The US Department of Agriculture announced that US\$1m in federal funds is available to defray the cost of organic certification in 15 states. The Agricultural Management Assistance Program, authorised by the Federal Crop Insurance Act, will distribute money in proportion to the number of organic producers in each state. The states, in turn, will reimburse eligible producers for up to 75% of their certification expenses, up to the value of \$500. Eligible operations must be located within one of the designated states, meet USDA National Organic Standards, and have received certification or update of certification by a USDA-accredited agent between 1 October, 2004, and 30 September, 2005. The states are: Connecticut, Delaware, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wyoming.

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## 10. POLITICS

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