

Christian Engineers and Scientists in Technology Newsletter

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American Scientific Affiliation/Canadian Scientific & Christian Affiliation

IN THIS ISSUE

	page
From the Editor	1
We Have a Winner! Spring Challenge: Connect the Dots	1
Summer Challenge Problem: The Spider and the Fly	1
Comments on Feucht article in Spring 2014 issue	1
Response to <i>Technology news</i> item about making ethanol from CO using power from rooftop solar array	1
Dave Winyard Thanks ASA/CEST Newsletter for Help in Finding Job!	1
GC Science	2
Cell Phone in Microwave Oven Experiment	2
<i>Technology news:</i>	
Transport by Lighter-Than-Air Cargo Craft	2
How to Read IPCC Reports	2
Compressed Air as an Energy Storage Mechanism	2
Induction Light Bulbs	3
Daisy-chain your Smartphones to skip the phone company	3
Robots on the Highways	3
Response to comments on <i>Engineering in a Collapsing Civilization: ...</i>	3
CEST Contacts	9

From the Editor

This newsletter is intended to facilitate camaraderie and exchange of information among CEST members. Reader responses and other inputs are welcomed. Please send me **your** input for this newsletter.

- Send an account of a project you worked on.
- Send a note about something you've seen in the news that you think others would be interested in.
- Send a response to one of our math, physics, engineering, etc. challenges.
- Send a challenge question of your own.

- Send an article about something you've been thinking about.
- Send a photo you took.
- Send a comment on something you read here.

My thanks to those who contributed to this issue, i. e., Dennis Feucht, John Osepchuk, Harold Reed, and Dave Winyard..

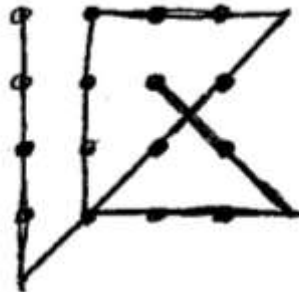
We'd be glad to hear from you!

BY ■

We Have a Winner! Spring Challenge: Connect the Dots

In the Spring 2014 issue I challenged readers to find how to connect the dots in a 4 X 4 array using the smallest number of straight line segments drawn without lifting the pencil. Harold Reed submitted the following:

I found a whole bunch of ways to solve this with 7 lines. Finally found a way to do it with only 6. Here is my solution:



So far as I know, this is the best possible solution. Thanks, Harold, for figuring this out.

BY ■

Summer Challenge Problem: The Spider and the Fly

In a rectangular room there is a spider on the floor and a fly on the ceiling. The spider wants to get to the fly via the shortest path across the floor, up the walls, and across the ceiling. (Don't worry, the fly won't get away; it's caught in a spider web!)

Question: Are there locations of the spider and the fly such that the shortest path will involve crossing the corner between two walls on the way up? If so, describe such locations. Or show why there are no such

locations. Please send your answer to lwyoder@ieee.org.

BY ■

Comments on Feucht article in Spring 2014 issue

John Osepchuk and Harold Reed sent in comments about Dennis Feucht's article *Engineering in a Collapsing Civilization: An Inventory of Ways Engineers Contribute to Dysfunctionality and What to Do About It* in the Spring 2014 issue.

John wrote

"I wonder if Feucht's latest article isn't an example of anti-industry bias,"

and in another email,

Dear Bill: I am beginning to wonder if some peer review should be applied to the article by Dennis. He seems to be making some sweeping conclusions about modern agriculture. Best regards, John

Harold's comments are longer and are included in Dennis's response, below.

Dennis's views are his own, not the ASA's or CEST's. His responses below show that he has some basis for what he says, but I am sure he will not satisfy everyone.

BY ■

Response to *Technology news* item about making ethanol from CO using power from rooftop solar array

Harold Reed commented on the news item in the Spring 2014 newsletter about making ethanol from CO using power from a rooftop solar array:

"Interesting article about solar power being used to produce ethanol from CO. But if it is feasible, the folks who install solar panels on their roofs to generate ethanol can expect to be paid a visit by some federal ATF agents."

BY ■

Dave Winyard Thanks ASA/CEST Newsletter for Help in Finding Job!

From: David Winyard

Sent: Thursday, June 12, 2014 4:41 PM

To: Randy Isaac

Subject: ASA CEST Winter 2014 Newsletter + Job Posting

Dear Randy Isaac:

I am very pleased that as a result of the [job announcement in the Winter 2014 ASA/CEST Newsletter] I applied for the teaching position at Mount Vernon Nazarene University (MVNU), they offered me a half-time job as an associate professor of engineering, and I have accepted. The half-time piece is perfect for me, as it will allow me to continue work on my Ph.D. dissertation at Virginia Tech.

So, thank you ASA!

David Winyard

P.S. After I start work at MVNU I will be able to stop freeloading with my student membership with ASA. :-)

BY ■

GC Science

If you have a Facebook account I recommend that you “Like” *GC Science*. Maintaining the *GC Science* FB page is a volunteer activity by people from the faith-science group at Grace Chapel, Lexington, MA, my home church. Some of the principals are ASA members.

The online description says: *GC Science is a network of scientists, who promote the compatibility between science and Christian faith.*

An amazing thing about *GC Science* is that it has more than half a million followers, most of whom are NOT in the USA. Most of their postings are similar to what you might see posted by the ASA, but on the average—not as “academic”.

BY ■

Cell Phone in Microwave Oven Experiment

In the Winter 2014 issue ASA/CEST fellow John Osepchuk asked readers to participate in an experiment intended to demonstrate that microwave oven RF seals are designed to be effective at the frequencies used by the ovens and aren’t necessarily effective at other frequencies such as those used by cell phones.

The results were disappointing in that John received responses from only three readers and RCP, a colleague in NJ—not enough to draw any conclusions. John thanks those who did participate, namely, John Tandy, whose response was quite detailed, Tim Wallace and Bill Yoder and RCP. Here’s John summary of the results:

Tests by JMO: 6 ovens tested in basement: 3 domestic, 3 commercial. Cell phones did not ring in any of these ovens. One oven (GE) was brought up to first floor and again cell phone did not ring. In a wall-mounted oven in kitchen—out of six phone positions only one resulted in a ring—phone had to be unhinged. Net result: 17% = percentage ring per oven

Before appeal in the CEST Newsletter I received the following result:

RCP (a colleague in NJ): cell phone rang in his oven.

Response to CEST survey request:

Out of ~200 recipients only three responses:

Jon Tandy in Kansas City (detailed): Cell phone rang in his oven

Tim Wallace: CDMA phone rang in his oven

Bill Yoder: Cell phone did not ring; cell tower close < 1000 feet

Conclusion: CEST community, not responsive.

Without going into detail, it is clear that the result of such tests depends mostly on the strength of cell phone signals at the test site and oven characteristics are essentially irrelevant.

BY ■

Technology news Transport by Lighter-Than-Air Cargo Craft

From Bloomberg Businessweek June 17, 2013

A company called Worldwide Aeros, now based in Los Angeles, plans to build helium-filled airships capable of flying 100 miles an hour and carrying loads of up to 250 tons. See story at <http://www.businessweek.com/articles/2013-06-13/worldwide-aeros-aims-to-turn-blimps-into-cargo-craft> .

BY ■

Technology news How to Read IPCC Reports

From The Economist May 10, 2014

The International Panel on Climate Change publishes reports every several years. Each report involves much effort by many scientists and is hundreds or thousands of pages. At the end a summary is written by the authors. Then it is edited by government officials. The process is described as follows: “The authors write a draft summary. Each sentence of the draft

is projected onto a big screen in a giant hall. Officials then propose changes to the text; authors decide whether the changes are justified according to the full thousand-page report. Eventually a consensus is supposed to be reached, the sentence is approved or rejected, the chairman bangs a gavel and moves on to the next sentence. . . . The details, arguments and numbers remain in the full report. But the summary is not necessarily a good guide to them.”

My conclusion: read the report, not the summary. Read the full story at <http://www.economist.com/news/science-and-technology/21601813-scientists-versus-diplomats-intergovernmental-panel-climate> .

BY ■

Technology news Compressed Air as an Energy Storage Mechanism I

From Bloomberg Businessweek June 9, 2014

Most renewable energy sources are intermittent, and their use could be furthered by development of practicable energy storage methods capable of storing large amounts of energy.

SustainX, a seven year old Seabrook, NH company, is developing a compressed air energy storage system that injects a special foam into the air being compressed to help reduce the temperature rise that compressing air causes. They refer to their system as *isothermal*. Read more at <http://www.businessweek.com/articles/2014-06-05/sustainxs-compressed-air-storage-may-boost-renewable-energy> and at <http://www.sustainx.com/> .

BY ■

Technology news Compressed Air as an Energy Storage Mechanism II

From IEEE Spectrum online, posted July 10, 2014

A Canadian startup called Hydroster “plans to sink several large balloonlike bags into Lake Ontario, and then, using electricity from Toronto Hydro’s grid to run a compressor, it will fill the bags with air. Later, when the utility needs electricity, the air will be emptied from the bags and run through a turboexpander, which uses the expanding air to drive a turbine.” Read the full story at

<http://spectrum.ieee.org/energy/renewable/s/hydrostor-wants-to-stash-energy-in-underwater-bags> and at <http://www.hydrostor.ca/home/> .

BY ■

Technology news Induction Light Bulbs

From Bloomberg Businessweek, June 2, 2014

A new company, Finally Light Bulb, is developing a light bulb that uses an electromagnetic field inside the bulb to energize a phosphor coating on the inside of the bulb. The light produced is said to have a much warmer quality than that produced by LEDs or compact fluorescents. Find out more at <http://www.businessweek.com/articles/2014-05-29/finally-light-bulb-is-energy-efficient-pseudo-incandescent> .

BY ■

Technology news Daisy-chain your Smartphones to skip the phone company

From The Economist, May 21, 2014

A San Francisco company, Open Garden, has created a smartphone app, FireChat, that takes advantage of the “multipeer connectivity framework” feature of Apple’s IOS 7. FireChat allows exchange of messages and photos directly between phones provided they are not more than about 30 meters apart. But a number of phones can be daisy-chained to extend the distance. Read the article at <http://www.economist.com/news/science-and-technology/21602990-how-link-smartphones-together-local-networks-daisy-daisy-give-me>

BY ■

Technology news: Robots on the Highways

From The IEEE Spectrum June 17, 2014

“The Netherlands has announced a five-year plan to make the country safe for autonomous vehicles and vice-versa.”

Read the short article at

http://spectrum.ieee.org/cars-that-think/transportation/self-driving/dutch-trucks-will-drive-themselves/?utm_source=carsthatthink&utm_medium=email&utm_campaign=062514 .

BY ■

Response to comments on *Engineering in a Collapsing Civilization*: ...

Here is Dennis Feucht’s response to comments on his article in the Spring 2014 issue, *Engineering in a Collapsing Civilization*: ... The comments are in red; Dennis’s responses are in black. The one about peer review is from John Osepchuk; the rest are from Harold Reed.

I am beginning to wonder if some peer review should be applied to the article by Dennis. He seems to be making some sweeping conclusions about modern agriculture.

Unless the writer would please identify the "sweeping conclusions", it is not possible to make any specific response. Peer review is impractical for a subject-matter involving such a diverse range of topics, both technical and social (political), unless a person has spent considerable time investigating the particular claims set forth in my article. I do not know anyone in ASA with this kind of background.

Dennis seems to be a real renaissance man. He is knowledgeable in many different areas, but in the area of agriculture, food supply, and health issues I think he is mistaken. Chlorine in our water supplies have largely eliminated the transmission of water-borne diseases. Fluorine in the water provoked a lot of resistance from folks who were sure the government was going to poison us all, and is still controversial to some. But it saved millions of teeth by improving their ability to fight decay. In fact in 1999 the Centers for Disease Control listed water fluoridation as one of the 10 greatest public health achievements in the 20th century.

Thanks for the acknowledgement of my diversity of study, but I can only thank Yahweh that I have been able to spend literally years taking an investigative path few have traveled. The conclusion is that the world is not what it appears to be according to the familiar and widespread influences on the American mind, educated or not. My CEST Newsletter articles consequently appear “outside the box” of the usual mental framework of most Americans. I am obviously not preaching to the choir with the topics I have raised or they would not have much educational and awareness-raising value.

While a Newsletter article cannot become too mired in technical and social detail

(hence the value of references to scientific and social *evidence*), some high-points of critical detail are needed to avoid mere *proclamation*. What you are stating about fluoride has been proclaimed repeatedly to the point where belief in it is widespread. What has research found? Some of it has been kept out of the public purview and some has been suppressed or, more often, simply ignored. Some references to a little of it are as follows.

1. Fluoride embrittles teeth, causing chipping and cracking. Fluoride accumulates in bones. In recent years, pediatric bone specialists have expressed alarm about an increase in stress fractures among young people in the US. Paul Connett, Professor of Chemistry at St Lawrence University, New York and other scientists are concerned that fluoride - linked to bone damage in studies since the 1930s - may be a contributing factor. “50 Reasons to Oppose Fluoridation”, Dr. Paul Connett, Professor of Chemistry, St. Lawrence University, NY 13617; 315-229-5853 pconnett@stlawu.edu

Abstract: Water fluoridation is the practice of adding compounds containing fluoride to the water supply to produce a final concentration of fluoride of 1 part per million in an effort to prevent tooth decay. Trials first began in the US in 1945, but before any of these trials were complete, the practice was endorsed by the US Public Health Service in 1950. Since then fluoridation has been enthusiastically and universally promoted by US health officials as being a "safe and effective" for fighting tooth decay. However, even though most countries worldwide have not succumbed to America's enthusiasm for this practice, their teeth are just as good, if not better, than those countries that have. The "50 Reasons" offered in this article for opposing fluoridation are based on a thorough review of the scientific literature as regards both the risks and benefits of being exposed to the fluoride ion. Documentation is offered which indicates that the benefits of ingested fluoride have been exaggerated, while the numerous risks have been downplayed or ignored.

As reported by Barry Forbes, Mesa, in the *Arizona Tribune*: Recently, Dr. Hardy Limeback, Canada's foremost promoter of fluoridation, head of Preventive Dentistry, University of Toronto and President of the Canadian Association of Dental Research, told his colleagues and students that he

had unintentionally misled them. "For the past 15 years, I had refused to study the toxicology information that is readily available to anyone. Poisoning our children was the furthest thing from my mind." Among the findings that finally opened Dr. Limeback's eyes was a recent study at the University of Toronto which confirmed that: "Residents of cities that fluoridate have double the fluoride in their hip bones vis-à-vis the balance of the population. Worse, we discovered that fluoride is actually altering the basic architecture of human bones." Skeletal fluorosis is a debilitating condition that occurs when fluoride accumulates in bones, making them extremely weak and brittle. The earliest symptoms? "Mottled and brittle teeth," said Dr. Limeback. "In Canada we are now spending more money treating dental fluorosis than we do treating cavities. That includes my own practice."

Within ASA, see "Water Fluoridation in the 21st Century: Doing Justly in Public Health", ASA/CSCA Annual Meeting, Newberg, Oregon, August 3, 2008, Kathleen M. Thiessen, Ph.D., SENES Oak Ridge, Inc., Center for Risk Analysis, (865) 483-6111, kmt@senes.com

2. Researchers who have reviewed declassified documents from post-WW II atomic bomb development have observed that Cold War national security considerations may have prevented objective scientific evaluation of vital public health questions concerning fluoride. "Information was buried," concludes Dr Phyllis Mullenix, former head of toxicology at Forsyth Dental Center in Boston. Animal studies which Mullenix and co-workers conducted at Forsyth in the early 1990s indicated that fluoride was a powerful central nervous system (CNS) toxin and might adversely affect human brain functioning even at low doses. Epidemiological evidence from China adds support, showing a correlation between low-dose fluoride exposure and diminished IQ in children. Mullenix's results were published in 1995 in

Mullenix, Phyllis et al., "Neurotoxicity of Sodium Fluoride in Rats", *Neurotoxicology and Teratology*, vol. 17, no. 2, 1995, pp. 169-177.

During her investigation, Mullenix was astonished to discover there had been virtually no previous US studies of fluoride's effects on the human brain. Then, her application for a grant to

continue her CNS research was turned down by the US National Institutes of Health (NIH), when an NIH panel flatly told her that "fluoride does not have central nervous system effects". (This example of politics in science also emerges again and again in connection with the GMO issue and aspartame.) Declassified documents of the US atomic bomb program indicate otherwise. A Manhattan Project memorandum of 29 April 1944 states: "Clinical evidence suggests that uranium hexafluoride may have a rather marked central nervous system effect... It seems most likely that the F [code for fluorine] component rather than the T [code for uranium] is the causative factor." The memo, from a captain in the medical corps, is stamped SECRET and is addressed to Colonel Stafford Warren, head of the Manhattan Project's Medical Section.

Extracted from Nexus Magazine, [Volume 5, #3](http://www.nexusmagazine.com) (April-May 1998), PO Box 30, Mapleton Qld 4560 Australia. editor@nexusmagazine.com, www.nexusmagazine.com

Also see Dale, Peter P., and McCauley, H. B., "Dental Conditions in Workers Chronically Exposed to Dilute and Anhydrous Hydrofluoric Acid", *Journal of the American Dental Association*, vol. 37, no. 2, August 1948, pp. 131-140. Dale and McCauley were both Manhattan Project and, later, Program F personnel; they also authored the secret Manhattan Project paper.

3. The fluorides added to water supplies are neurotoxins.

Fluorine has been found in studies to calcify the pineal gland. Research published in 2001 showed that fluoride (F) deposits in the pineal gland with age and is associated with enhanced gland calcification. Eleven aged cadavres were dissected and their pineal glands assayed: "There was a positive correlation between pineal F and pineal Ca ($r = 0.73$, $p < 0.02$) but no correlation between pineal F and bone F. By old age, the pineal gland has readily accumulated F and its F/Ca ratio is higher than bone."

www.greenmedinfo.com/toxic-article/fluoride-deposits-pineal-gland-age-and-associated-enhanced-gland-calcification

"Black tea ameliorates sodium fluoride-induced neurological changes in mice", *Acta Pol Pharm.* 2007 May-

Jun;64(3):221-5. PMID: [17695144](https://pubmed.ncbi.nlm.nih.gov/17695144/), Mrugesh H Trivedi, Ramtej J Verma, Niloufer J Chinoy, Department of Zoology, University School of Science, Gujarat University, Ahmedabad 390 009, India.

Oral administration of sodium fluoride (NaF, 6 and 12 mg/kg body weight/day) to Swiss strain male albino mice for 30 days caused significant dose-dependant reduction in the content of acidic, basic, neutral, and total protein in cerebral hemisphere, cerebellum and medulla oblongata region of brain. After 30 days of NaF treatment, followed by withdrawal of treatment for 30 days, partial but significant amelioration occurred.

www.greenmedinfo.com/article/black-tea-ameliorates-sodium-fluoride-induced-neurological-changes-mice

See also

<http://www.greenmedinfo.com/disease/fluoride-toxicity>

Results which were published in the journal *Environmental Health Sciences* showed a strong connection between exposure to fluoride in drinking water and decreased IQ scores in children. The team concluded that "the results suggest that fluoride may be a developmental neurotoxicant that affects brain development at exposures much below those that can cause toxicity in adults." Brooks, Megan. "Fluoride May Be Neurotoxic in Kids." *Medscape.com*. N.p., 23 Aug. 2012. Web. 11 Sept. 2012.

www.scoop.int/family-centred-care-practice/p/2524572531/medscape-fluoride-may-be-neurotoxic-in-kids

"Parkinson's disease may be a neuroendocrine disorder of circadian function involving dopamine-melatonin imbalance and pineal calcification", Gregory L Willis, The Bronowski Institute of Behavioural Neuroscience, Neurosciences Section, Coliban Medical Centre, Kyneton, Victoria, Australia. gwillbro@bigpond.com, *Nutr Neurosci.* 2009 Jun;12(3):135-40. PMID: [19145986](https://pubmed.ncbi.nlm.nih.gov/19145986/)

Four types of neurotoxicity associated with melatonin are identified and the susceptibility of various parts of the RDMP axis to undergo neuropathological change, the tendency for melatonin to induce PD-like behavioural toxicity, and the relationship of this to PD symptomatology are described. ... Concepts at the centre of understanding

pineal function in PD, including pineal calcification, melatonin deficiency, symptomatic versus protective features of melatonin and antioxidative effects, are explained in a counterintuitive context. ... For the first time, abundant evidence is presented describing PD as an endocrine disorder of melatonin hyperplasia.

www.greenmedinfo.com/article/parkinsons-disease-may-be-neuroendocrine-disorder-circadian-function-involving-dopamine-mela

4. *J Am Dent Assoc.* 2010

Oct;141(10):1190-201. "Associations between fluorosis of permanent incisors and fluoride intake from infant formula, other dietary sources and dentifrice during early childhood", [Levy SM](#), [Broffitt B](#), [Marshall TA](#), [Eichenberger-Gilmore JM](#), [Warren JJ](#), Department of Preventive and Community Dentistry, College of Dentistry, University of Iowa, Iowa City, Iowa 52242-1010, USA. steven-levy@uiowa.edu

The authors describe associations between dental fluorosis and fluoride intakes, with an emphasis on intake from fluoride in infant formula. ... The authors determined effects associated with fluoride in reconstituted powdered infant formulas, along with risks associated with intake of fluoride from dentifrice and other sources.

5. An ever-growing number of institutions and individuals are questioning the wisdom of fluoridation. At the fore of the movement are thousands of scientific authorities and health care professionals who are speaking out about the hazards of this damaging additive. As of November 2013, a group of over 4549 professionals including 361 dentists and 562 medical doctors have added their names to a petition aimed at ending fluoridation started by the Fluoride Action Network.

Among the prominent signatories are Nobel Laureate Arvid Carlsson and William Marcus, PhD who served as the chief toxicologist of the EPA Water Division. "Statement on Water Fluoridation." NIDCR Home. N.p., n.d. Web. 16 Nov. 2011.

<http://www.fluoridealert.org/professionals-statement.aspx>

"US EPA Admits Fluoridated Drinking Water May Be Harming Millions", George Glasser, Telephone 727.896.9050, gtigerclaw@worldnet.att.net, St Petersburg, Florida, USA, 10-23-00. (My source: Larry Becraft, Huntsville, AL)

In a September 5, letter from USEPA responding to a US House Committee on Science inquiry into the safety of artificial drinking water fluoridation, Charles Fox, USEPA Assistant Administrator, wrote: "There are no water quality criteria for fluoride either for the protection of aquatic life or for the protection of human health." The action on fluoridated water was prompted by the 1993 "Toxicological Profile for Fluorides, Hydrogen Fluoride and Fluorine" (US Agency for Toxic Substances and Disease Registry (ATSDR), 1993), page 112 statement:

Existing data indicate that subsets of the population may be unusually susceptible to the effects of fluoride and its compounds. These populations include the elderly, people with deficiencies of calcium, magnesium and vitamin C, and people with cardiovascular and kidney problems . . . Poor nutrition increases the incidence and severity of dental fluorosis and skeletal fluorosis." The EPA letter also revealed that 'at risk' populations for exposure to fluorides in drinking water are in the tens of millions of Americans.

Assistant Administrator Fox stated that in 1999, the EPA requested the National Toxicology Program to conduct studies regarding the neurotoxicity of [aluminum] and fluoride in drinking water, which had been observed in several earlier studies. Fox concluded by saying that adverse effects from fluoridated drinking water are based only on dental fluorosis which "is not an appropriate value to use for a human health criterion."

Links to EPA letters to Congressman Ken Calvert, Chairman House Subcommittee on Energy and the Environment can be found at the following site:

<http://home.att.net/~gtigerclaw/EPAresponse.html>

Some of the above excerpted from www.infowars.com/water-fluoridation-war-government-admits-dangers-experts-speak-out/

Medical ignorance of fluorides is appalling, while at the same time grandiose assurances are given that it is safe. The case of Mr. Dix illustrates this. See "Fluoride Poisoning: It's All Over" Mary Sparrowdancer, www.rense.com, 4-9-11.

For quite some time there have been a host of individuals speaking out against water fluoridation and its inclusion in foods, oral hygiene products, and as

psychotropic drugs. Foreign countries have banned its inclusion in municipal water supplies (www.actionpa.org/fluoride/countries.pdf), and U.S. states are progressively moving towards the same, as research continues to come out on the subject.

6. The safety precautions regarding sodium fluoride (www.cbwinfo.com/Chemical/Precursors/p42.html) are quite telling themselves:

Risk and Safety Phrases.

R25 – Toxic if swallowed.

R32 – Contact with acid liberates very toxic gas.

R36/38 – Irritating to skin and eyes.

S1/2 – Keep locked up and out of reach of children.

S22 – Do not breathe dust.

S36 – Wear suitable protective clothing.

S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)

Of course it is important to note that there is a difference between topical fluoride exposure and internal consumption. With topical fluoride exposure, the amount of actual internal exposure can be minimal. However, many forms of fluoride exposure are through the internal digestion of the substance that has been linked to reduced IQ in major studies. Fluoride tablets have been distributed to children in public schools, leading to the complete digestion of the substance, as opposed to topical use.

7. For those for whom the proclamations of government agencies and the judiciary carry more weight than laboratory results: "European Court Ruling spells an end to water fluoridation"

<http://www.infowars.com/european-court-ruling-spells-an-end-to-water-fluoridation/>

"Fluoridated water must be treated as a medicine, and cannot be used to prepare foods. That is the decision of the European Court of Justice, in a landmark case dealing with the classification and regulation of 'functional drinks' in member states of the European Community. (HLH Warenvertriebs and Orthica (Joined Cases C-211/03, C-299/03, C-316/03 and C-318/03) 9 June 2005)

The Court ruled that, where two different sets of rules appear to apply to a product, medicinal legislation must take precedent, and the product must be regulated as a

medicine. It emphasised that medicines regulators in member states do not have the power to exercise discretion on the classification of such dual-function products. The repeated refusal of the British and Irish Regulators to recognise fluoridated water as a medicinal product is therefore an unlawful misuse of their powers, and one that requires immediate reversal.

In 2013, Israel's Ministry of Health committed to a countrywide phase-out of fluoridation. The decision came after Israel's Supreme Court deemed the existing health regulations requiring fluoridation to be based on science that is "outdated" and "no longer widely accepted." Huff, Ethan, "Israel commits to ending water fluoridation by 2014, citing major health concerns."

http://www.naturalnews.com/042079_water_fluoridation_Israel_health_concerns.html (accessed November 21, 2013)

For an overview and source for some of the above references, see "Fluoride: Killing Us Softly", Dr. Gary Null (<http://www.globalresearch.ca/author/gary-null>), Global Research, December 05, 2013, www.globalresearch.ca

I don't know whether the "mutated wheat" that Dennis complains about actually has less nutritional value or not, but if it does, that may be a good thing. The biggest health problem in America is not starvation but obesity. People are looking for high fiber, low nutrition foods to help them lose weight! I wish I could find a bread that was low enough in nutrition that I could lose weight eating it, but as far as I know, wheat is still full of starch whether it is GMO or not.

Obesity is mostly caused by a lack of nutrition, by people filling up on junk food (excessive starch, carbohydrates) and feeling hungry because of a lack of nutrients in their diet, leading them to eat more junk food.

It is true that the control of these GM crops is in the hands of multi-national corporations, but so what? They are the only ones that can afford to do the research.

Not so. The MNCs have discouraged independent research. The research of Giles Seralini and Don Huber are but two examples. Monsanto and other large GM companies can also afford to suppress university grants for GM study, and Monsanto refuses to provide GM seed for research purposes and guards with legal contracts what it sells to farmers.

Nobody is forced to buy their seeds. The farmers chose to buy them because they can save money on pesticides.

The farmers buy them because they are promised higher yields. Yet that is proving to be a false claim. GM is "forced upon" those who do not want it. Neighboring fields downwind (or within the range of animal vectors) are sometimes pollinated by GM crops. Then Monsanto sues both the GM-buying farmer for contract failure to protect Monsanto's "property", and also the neighboring farmer for patent infringement!

There are lots of different seeds available, and if you want to buy a type that requires that you have to come back later and spray for smut or rust or mold or leafhoppers or blight or aphids or thrips or mites, go ahead and buy it. But if you buy the GMO that has been designed to survive these attacks without chemical pesticides, you will save money.

Is this a marketing pitch for GM seeds or a scientific-technical discussion? Increasingly, there are emerging disadvantages to all these "favorable" selling points for GM crops. There are also other ways to farm that avoid some of these problems.

By the way, the reason why some people brand Monsanto as the most evil chemical company in the world is because they make farmers sign a contract that requires that they not save some of their crop to plant the next year.

That is only the tip of the iceberg. Whole books have been written justifying the claim that Monsanto is the most evil corporation (that is, the people acting within the corporation) on the planet. Thousands of farmers in India have committed suicide due to bankruptcy because Monsanto promised them high yields from Bt cotton that did not occur.

Monsanto spent hundreds of millions of dollars developing dozens of different seeds and going through the process of eliminating all those that would not pass the government requirements for safety. If Monsanto sold the seeds one time and then farmers kept part of the crop to plant next year, it would lose a fortune!

That is worth contemplating. The crude state of genetic engineering - that of "shooting" cell nuclei and then sorting out the genetic characteristics - is why so much effort must be expended in GM

engineering. (Other methods of genetic modification are also used and all of them lack specificity of control.) Is this technology ready for introduction into the ecosphere without a Pandora's Box danger? Is it even sustainable? It was Monsanto executives who chose to spend their fortune this way, not the shopper who Monsanto wants to keep from knowing about the GM contents of commercial food items. This form of engineering is not *apoptotic*!

If you want to use their seeds, you have to buy them every year. If you don't want to buy them this year, then buy something else! Just because Monsanto wants to make a profit does not make it evil.

What they do to make a profit makes them evil. See for instance, "India files biopiracy lawsuit against Monsanto, says biotech giant is stealing nature for corporate gain", www.naturalnews.com/033714_biopiracy_Monsanto.html#ixzz1ZFnLL3gb.

You can watch the full France 24 video report of India's lawsuit against Monsanto here:

<http://www.france24.com/en/20110921>

"Farmers and active members of the public in India have been some of the world's most outspoken opponents of Monsanto's attempted GM takeover of agriculture. Besides successfully overturning the attempted approval of Bt brinjal [eggplant or aubergine], these freedom fighters have also successfully destroyed several attempted Monsanto GM test fields."

"The Seeds Of Suicide: How Monsanto Destroys Farming", Dr. Vandana Shiva (www.globalresearch.ca/author/vandana-shiva), Global Research, June 24, 2013, Theme: Biotechnology and GMO (www.globalresearch.ca/theme/biotechnology-and-gmo).

"Monsanto's talk of 'technology' tries to hide its real objectives of control over seed where genetic engineering is a means to control seed. "Monsanto is an agricultural company. We apply innovation and technology to help farmers around the world produce more while conserving more." "Producing more, Conserving more, Improving farmers lives." These are the promises Monsanto India's website makes, alongside pictures of smiling, prosperous farmers from the state of Maharashtra. This is a desperate attempt by Monsanto and its PR

machinery to delink the epidemic of farmers' suicides in India from the company's growing control over cotton seed supply - 95 per cent of India's cotton seed is now controlled by Monsanto. Control over seed is the first link in the food chain because seed is the source of life. When a corporation controls seed, it controls life, especially the life of farmers."

The statement about Glyphosate being toxic to humans is just plain false.

Evidence or proclamation? Substantial evidence is quickly accumulating that leaves little doubt about the ill health effects of glyphosate. Here are a few studies that show this.

"Glyphosate effects on diseases of plants", G.S. Johal, D.M. Huber, Department of Botany & Plant Pathology, Purdue University, 915 West State Street, West Lafayette, IN 47907, USA, *European Journal of Agronomy* (journal home page: www.elsevier.com/locate/eja), *Europ. J. Agronomy* 31 (2009) 144–152. From the abstract:

... this [glyphosate] relatively simple, broad-spectrum, systemic herbicide can have extensive unintended effects on nutrient efficiency and disease severity, thereby threatening its agricultural sustainability. A significant increase in disease severity associated with the wide spread application of the glyphosate herbicide can be the result of direct glyphosate-induced weakening of plant defenses and increased pathogen population and virulence. Indirect effects of glyphosate on disease predisposition result from immobilization of specific micronutrients involved in disease resistance, reduced growth and vigor of the plant from accumulation of glyphosate in meristematic root, shoot, and reproductive tissues, altered physiological efficiency, or modification of the soil microflora affecting the availability of nutrients involved in physiological disease resistance.

"Glyphosate's Suppression of Cytochrome P450 Enzymes and Amino Acid Biosynthesis by the Gut Microbiome: Pathways to Modern Diseases", Anthony Samsel (Independent Scientist and Consultant, Deerfield, NH 03037, USA; E-Mail: anthonysamsel@acoustictracks.net) and Stephanie Seneff (Computer Science and Artificial Intelligence Laboratory, MIT, Cambridge, MA 02139, USA; E-Mail:

Seneff@csail.mit.edu), Published: 18 April 2013, *Entropy* 2013, 15, 1416-1463; doi:10.3390/e15041416, ISSN 1099-4300, www.mdpi.com/journal/entropy

Excerpts from Abstract:

Glyphosate, the active ingredient in Roundup, is the most popular herbicide used worldwide. The industry asserts it is minimally toxic to humans, but here we argue otherwise. Residues are found in the main foods of the Western diet, comprised primarily of sugar, corn, soy and wheat. Glyphosate's inhibition of cytochrome P450 (CYP) enzymes

is an overlooked component of its toxicity to mammals. CYP enzymes play crucial roles in biology, one of which is to detoxify xenobiotics. Thus, glyphosate enhances the damaging effects of other food borne chemical residues and environmental toxins. Negative impact on the body is insidious and manifests slowly over time as inflammation damages cellular systems throughout the body. Here, we show how interference with CYP enzymes acts synergistically with disruption of the biosynthesis of aromatic amino acids by gut bacteria, as well as impairment in serum sulfate transport. Consequences are most of the diseases and conditions associated with a Western diet, which include gastrointestinal disorders, obesity, diabetes, heart disease, depression, autism, infertility, cancer and Alzheimer's disease. We explain the documented effects of glyphosate and its ability to induce disease, and we show that glyphosate is the "textbook example" of exogenous semiotic entropy: the disruption of homeostasis by environmental toxins.

All you have to do is look at a Material Safety Data Sheet to see that its LD50 is over 5000 mg/kg. At this level they don't even bother to try to find the actual value because the toxicity is so low. In fact it is officially listed as "Practically non-toxic".

People usually do not find what they do not know to look for. Who is "they" and why attribute toxicological authority to them? What involvement have the foxes had in guarding the Material Safety Data Sheet henhouse? Toxicology research has not stood still. Glyphosate was derived from Agent Orange, a defoliant used in the Viet Nam war. The health records of U.S. soldiers exposed to it were conveniently destroyed in the Murrah building in Oklahoma City. On the face of it, there is at least historical reason to

examine glyphosate more carefully. In the 1950s, tobacco smoking was given a clean bill of health just as glyphosate and GMOs are today. In the end, cigarette company propaganda was defeated by scientific truth.

A GM corn that can grow when exposed to Glyphosate that kills off all the weeds will be grown with less fertilizer use, which means less runoff that causes water pollution. This will also provide more food for the world at a lower price.

What I am hoping from my articles is that a few readers will stand back and try to see the larger picture of ag technology and ask whether the general direction of high-volume chemically-based farming is even wise. Increasingly, awareness is growing that it is not. Here in Cayo, Belize, there is a high correlation between farm families exposed to glyphosates, pesticides, and other herbicides - in short ag toxins - and chronic diseases and miscarriages. The correlation with miscarriages among the pre-high-school Mennonites (who readily swallow *salesman science*) is very high.

There are other ways to farm that do not destroy the earth. There are other farming criteria than yield, and other motives than maximization of profits (or even greed). "Organic" farming is the most popular label for methods that are more in harmony with the ecosphere and take into account its ecology. For instance, weak plants are more susceptible to attack by insects. Strong, healthy plants are a result of methods largely ignored by farmers mechanically growing crops in sterile soil within air-conditioned tractors. (See www.belizeagreport.com for articles on ecologically-based farming.)

The biggest problem with GM crops is that there are some people who have allergic reactions to them. Who will be affected by them cannot be predicted in advance, but we don't stop growing peanuts just because some people are allergic to them.

This grossly understates the actual findings. For instance, Seralini's rats, which were the same ones used in Monsanto's limited 90-day studies, developed tumors after a year of eating Monsanto GM corn. Monsanto, originator of glyphosate, is *active* in suppressing scientific findings that get in the way of their goals of control of the food supply and profits. The recent withdrawal of Giles Seralini's important paper exposing

the dangers of GM corn by a newly-installed editor from Monsanto is but one example. Seralini's work led to the banning of GM crops in several countries, including Russia. Seralini has been severely criticized by Monsanto and the GM propagandists from GM-company-funded science institutes with nonsense rebuttals aimed at the general public. The quality of his scientific work is thorough, as can be seen by actually reading his paper, the one that the ex-Monsanto editor pulled after it was published as Seralini et al. *Environmental Sciences Europe* 2011, 23:10

<http://www.enveurope.com/content/23/1/10>

"Genetically modified crops safety assessments: present limits and possible improvements", Gilles-Eric Seralini, Robin Mesnage, Emilie Clair, Steeve Gress, Joël Spiroux de Vendômois, Dominique Cellier; Correspondence: criigen@unicaen.fr Laboratory of Biochemistry - IBFA, University of Caen, Esplanade de la Paix, 14032 Caen, Cedex, France

<http://www.enveurope.com/content/23/1/10>

From the abstract:

Purpose: We reviewed 19 studies of mammals fed with commercialized genetically modified soybean and maize which represent, per trait and plant, more than 80% of all environmental genetically modified organisms (GMOs) cultivated on a large scale, after they were modified to tolerate or produce a pesticide. We have also obtained the raw data of 90-day-long rat tests following court actions or official requests. The data obtained include biochemical blood and urine parameters of mammals eating GMOs with numerous organ weights and histopathology findings.

Methods: We have thoroughly reviewed these tests from a statistical and a biological point of view. Some of these tests used controversial protocols which are discussed and statistically significant results that were considered as not being biologically meaningful by regulatory authorities, thus raising the question of their interpretations.

Results: Several convergent data appear to indicate liver and kidney problems as end points of GMO diet effects in the above-mentioned experiments. This was confirmed by our meta-analysis of all the

in vivo studies published, which revealed that the kidneys were particularly affected, concentrating 43.5% of all disrupted parameters in males, whereas the liver was more specifically disrupted in females (30.8% of all disrupted parameters).

Conclusions: The 90-day-long tests are insufficient to evaluate chronic toxicity, and the signs highlighted in the kidneys and livers could be the onset of chronic diseases. However, no minimal length for the tests is yet obligatory for any of the GMOs cultivated on a large scale, and this is socially unacceptable in terms of consumer health protection. We are suggesting that the studies should be improved and prolonged, as well as being made compulsory, and that the sexual hormones should be assessed too, and moreover, reproductive and multigenerational studies ought to be conducted too.

Background, aim, and scope: Recently, an ongoing debate on international regulation has been taking place on the capacity to predict and avoid adverse effects on health and the environment for new products and novel food/feed (GMOs, chemicals, pesticides, nanoparticles, etc.). The health risk assessments are often, but not always, based on the study of blood analyses of mammals eating these products in subchronic tests, and more rarely in chronic tests. In particular, in the case of GMOs, the number and nature of parameters assessed, the length of the necessary tests, the statistics used and their interpretations are the subject of controversies, especially in the application of Organization of Economic Cooperation and Development (OECD) norms. Confusion is perceived even in regulatory agencies, as in the European Food Safety Authority (EFSA) GMO panel working group and its guidelines. Doubt has arisen on the role and necessity of animal feeding trials in safety and nutritional assessments of GM plants and derived food and feed [1]. Based on the literature data, EFSA first admitted (p. S33) that for other tests than GMOs: "For 70% (57 of 81) of the studies evaluated, all toxicological findings in the 2-year tests were seen in or predicted by the 3-month subchronic tests". Moreover, they also indicated (p. S60) that "to detect effects on reproduction or development [...] testing of the whole food and feed beyond a 90-day rodent feeding study may be needed." We fully agree with these

assumptions. This is why we think that in order to protect large populations from unintended effects of novel food or feed, imported or cultivated crops on a large scale, chronic 2-year and reproductive and developmental tests are crucial.

In any case, the Glyphosate issue is starting to fade. As Dennis says, the weeds are beginning to develop resistance to it. But this doesn't mean we should just give up on chemicals and go back to fighting weeds with a hoe. The companies that make these chemicals and GMO's are constantly doing research to stay ahead of the pests. The weed that becomes resistant to Roundup will be killed off by Callisto or by something else that will be developed to protect crops in the future.

The glyphosate issue is beginning to receive critical awareness globally. If engineers in other fields keep trying the same methods and they fail repeatedly, a few of them finally realize that they need to "think outside the box" of existing technology and find a new outlook on solutions. There is a whole world of agriculture that is going in a quite different direction and increasingly is succeeding. From a biblical standpoint, one also has to consider whether the large-scale damage being done by ecologically unsustainable chemical *pharming* misses the mark of God's target for human agriculture. (Revelation 11:16: [The time has come] for destroying the destroyers of the earth.)

As for Aspartame, the FDA called it "one of the most thoroughly tested and studied food additives the agency has ever approved" and its safety is described as "clear cut".

The FDA originally banned aspartame because it is a neurotoxin. It breaks down into methanol, which is neurotoxic and causes MS-like symptoms and fatal heart attacks in chronic aspartame (diet beverage) drinkers. Then an ex-CEO of the Searle Company that developed aspartame became head of the FDA. And guess what? The fox now guards the henhouse.

From "Diet Drinks: America's Passion for Poison", Charles Foerster, Global Research, Feb 9, 2012:

Early testing was conducted in the fall of 1967 when Dr. Harold Waisman, a biochemist at the University of Wisconsin, led aspartame safety tests on

infant monkeys on behalf of the Searle Company. Of the seven monkeys that were being fed aspartame mixed with milk, one died and five others had grand mal seizures. The entire file can be found online at

www.dorway.com/raoreport.pdf

On January 21, 1981, the day after Ronald Reagan's inauguration, Searle re-applied to the FDA for approval to use aspartame in food sweeteners, and Reagan's new FDA commissioner, Arthur Hayes Hull, Jr., appointed a 5-person Scientific Commission to review the board of inquiry's decision. It soon became clear that the panel would uphold the ban by a 3-2 decision, but Hull then installed a sixth member on the commission, and the vote became deadlocked. He then personally broke the tie in aspartame's favor. Hull later left the FDA under allegations of impropriety, served briefly as Provost at New York Medical College, and then took a position with Burston-Marsteller, the chief public relations firm for both Monsanto and G.D. Searle. Since that time he has never spoken publicly about aspartame.

The preceding was reported by the National Institute of Science, Law, and Public Policy, Washington, D.C.

While the components of the additive are well known, the team members that pushed the approval process were perhaps not quite as well known. Donald H. Rumsfeld was Chief Executive Officer at G.D. Searle from 1977 to 1985 which was during the aspartame approval process. As a hard-driving business executive at Searle he was awarded the "Outstanding Chief Executive Officer" in 1980 and 1981 for his efforts to reshape the company. He may have helped reshape America too with the help of the FDA and the diet food and drink industry. Cronyism scored a direct hit.

A team from the University of Miami (UM) Miller School of Medicine found that people who regularly drink diet sodas are 61 percent more likely than others to have a major heart event. Hannah Gardener, an epidemiologist from UM and lead author of the study, and her colleagues, surveyed more than 2,500 Manhattan residents on their eating and lifestyle habits. They also evaluated participants' health, including their blood pressure and cholesterol levels, and made comparisons. After taking into account all

relevant factors, the team found that diet sodas in particular are linked to heart illness.

From Kurt Nimmo, www.infowars.com, October 9, 2010:

Aspartame is made up of 50% phenylalanine, 40% aspartic acid and 10% methyl alcohol. Methyl alcohol inevitably affects vision. The late Dr. Morgan Raiford, a specialist in methanol toxicity, warned about the danger of blindness associated with the consumption of aspartame. "This product [NutraSweet] has some highly toxic reactions in the human visual pathway and we are beginning to observe the tragic damage to the optic nerve, such as blindness, partial to total optic nerve atrophy. Once this destructive process has developed there is no return of visual restoration," Raiford wrote in an [aspartame factsheet](#). "When this drug enters the digestive tract, largely the upper portion [of the] aspartame molecule spins off a by product known as methanol or methyl-alcohol."

A report produced by the Department of Health and Human Services (<http://aspartame.mercola.com/>) lists over 90 symptoms related to aspartame, including: migraine headaches, dizziness, seizures, nausea, numbness, muscle spasms, weight gain, rashes, depression, fatigue, irritability, tachycardia, insomnia, vision problems, hearing loss, heart palpitations, breathing difficulties, anxiety attacks, slurred speech, loss of taste, tinnitus, vertigo, memory loss, and joint pain. The following chronic illnesses are triggered or worsened by ingesting aspartame: Brain tumors, multiple sclerosis, epilepsy, chronic fatigue syndrome, Parkinson's disease, Alzheimer's, mental retardation, lymphoma, birth defects, fibromyalgia, and diabetes.

It mainly got its bad reputation from the "Nancy Markle" smear campaign. This internet hoax claims that Nancy gave a talk at a World Environment Conference about the dangers of Aspartame, including its causing methanol toxicity, multiple sclerosis, lupus, depression and anxiety. Nancy has never been found, but the legend lives on.

I have never heard of this person and this sounds like a straw-man argument. Scientific studies such as those done by the FDA themselves which led to the original aspartame ban and the abovementioned DHHS report list those

same dangers. To my knowledge, the name "Nancy Markle" does not appear in any of the above-cited information.

There are dangers associated with all of these products, but in most cases they are greatly exaggerated.

This is a vague proclamation. What does it claim? Have the above-cited researchers exaggerated their investigations?

The problem with all of these warnings about things that only pose minor hazards to the population is that people get used to hearing them and then do not respond when a real hazard comes along.

Worse yet, they are misled into believing that some of them are not real hazards!

Dennis Feucht, June 2014

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Bill Yoder, ed. ■

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