



# THE RAM'S HORN

A MONTHLY NEWSLETTER OF FOOD SYSTEM ANALYSIS

No. 272, April 2010

ISSN 0827-4053

## World Fertilizer Cartel

*Spring has come early to eastern Ontario, and as the grass greens and the birds start nesting, fertility is much on our minds – though we respond differently. Cathleen sets off with a friend in a borrowed truck to fetch a load of sheep manure for the garden from her brother-in-law's farm in Quebec. Brewster researches the fertilizer cartel ...*

It's not a particularly glamorous commodity, and easily overlooked, but synthetic fertilizer is an absolute necessity in the production of large monoculture industrial crops. They are 'synthetic' because although the base minerals occur naturally, they require large quantities of energy to mine and process, whether it be nitrogen (N) fertilizers produced from natural gas, strip-mined phosphate (P) or potash (potassium/K) processed into granular form. The synthetic character of these fertilizers is underscored by the absence of trace minerals and organic matter.

Synthetic fertilizer is key because monoculture commodity production – whether for food, feed, or agrofuels – is really an extractive industry, and plant nutrients have to be fed to the crops one way or another. The application of mined minerals is one way of doing this, though obviously it cannot compensate for the great biological and mineral diversity extracted.

### ***A bit of history and context:***

"In the 19th century, densely-packed countries like Germany and Britain began to improve the fertility of their soils by importing nitrogen in the form of guano from the Pacific islands of Peru, and saltpetre mined in Chile. Geological nitrogen was a geopolitical resource as vital as oil today." Then in 1908 Fritz Haber, a German chemist, discovered how to make ammonia by capturing nitrogen gas from the air. This synthetic fertilizer enabled Germany to maintain food production during the first World War when a British naval blockade prevented it from receiving shipments of guano from South America.

– Fred Pearce, *Yale Environment* 360, 5/11/09

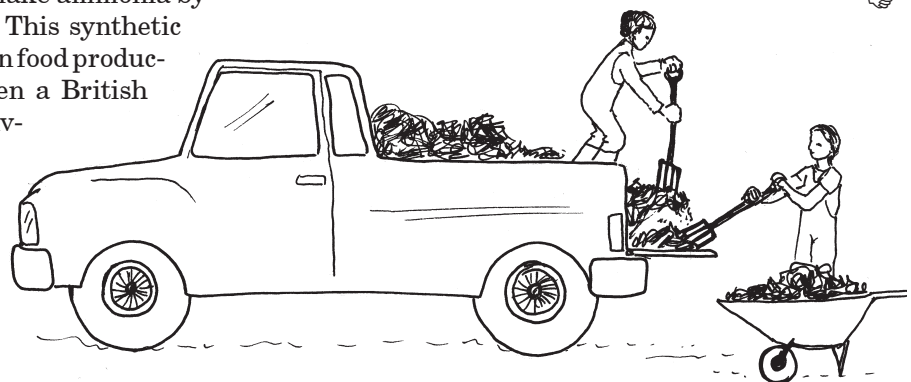
During the second World War, the massive production of synthetic compounds, particularly ammonium

nitrate, to make munitions for the war effort firmly established the 'modern' fertilizer industry. It is oddly logical that the material for explosives has become the basis of our industrial agriculture, since both are essentially violent: the point is to force the land to produce high yields of monoculture crops beyond its natural and sustainable capability.

It is therefore ironic, to say the least, that Afghanistan's President, Hamid Karzai, has banned the production, storage, sale and use of ammonium nitrate fertilizer. NATO officials estimate that just 5% of the ammonium nitrate fertilizer that enters Afghanistan through Pakistan and Iran is currently being used for farming. The rest, it is assumed, is being used to make roadside bombs. Eighty-one of the 139 Canadian soldiers killed in Afghanistan have died from improvised explosive devices (IEDs). (*GM*, 27/1/10) Of course, this displeases the farmers who are urged to use ammonium nitrate by agencies such as USAID and the fertilizer industry.

### ***Another downside:***

"Of 80 million tons spread onto fields in fertilizer each year, only 17 million tons gets into food. The rest goes missing, washing into ecosystems. This is partly because the fertilizer is wastefully applied, and partly



because the new green-revolution crops developed to grow fat on nitrogen fertilizer are also wasteful of the nutrient. The nitrogen efficiency of the world's cereals has fallen from 80 percent in 1960 to just 30 percent today." The 'green revolution' brought with it an eight-fold increase in global production of nitrogen fertilizer from the 1960s to the 1980s.

"Artificial nitrogen washes in drainage water from almost every field in the world. It is as ubiquitous in water as man-made carbon dioxide is in the air. It is accumulating in the world's rivers and underground water reserves, choking waterways with algae and making water reserves unfit to drink without expensive clean-up."  
 — Pearce, 5/11/09

With the 'food crisis' of the past couple of years and the push for biomass production for energy, the fertilizer industry has become a kind of bell-wether of industrial agriculture. (A bell-wether is a castrated ram, with a bell tied around its neck, that helps the shepherd keep track of the flock through the mountain passes in the fog and snow. They can't use a ewe, who might be led astray following her lamb, or a ram who might have other distractions.) Fertilizer prices and fortunes have risen and fallen with the food scare, with skyrocketing prices – up to \$1000 per tonne – followed by overproduction and falling sales, and then industry expansion and consolidation.

In February, potash fertilizer prices were running at \$350-\$370 per tonne for short-term (3-month) contracts, down from \$460 last year. This is a far cry from the \$1000 a tonne the industry was getting at the height of the 2008 food crisis, but at current prices, the industry is still finding it profitable to produce. In other words, there was something like \$500-\$650 per tonne being siphoned off in speculative profits.

While potash is essential for the industrial production of monoculture crops, a 'materials' website points out that "The strategic rationale for investing in fertilizers" is that "global crops used for food and fuel, where quality is critical, require significant amounts of potash. Corn, soybeans, sugar cane and oil palm are examples of high-potash intensive crops. Sugar cane – the feedstock for the Brazilian ethanol industry – consumes more than four times potash per hectare than soybeans."  
 — www.azom.com/new – posted 2/2/09



For the record, here are the major members of the fertilizer cartel:

**Potash Corp of Saskatchewan:** "World's largest fertilizer company by capacity, producing the three primary crop nutrients – potash, phosphate and nitrogen . . . world's leading potash producer . . . responsible for about 20 percent of global capacity."

—www.potashcorp.com/about/overview

**Mosaic:** 64% owned by **Cargill**, is the world's second largest potash producer behind Potash Corp of Saskatchewan. **Belarusian Potash Co** is a company representing Russian and Belarusian producers, with 30% of global potash sales. Canada, Russia and Belarus account for 80% of the world total reserves.

**BHP Billiton:** the world's largest mining company bought Athabasca Potash of Saskatoon for \$341 million in January this year and announced an expansion of its existing 'Jansen' potash project in Saskatchewan. BHP

Billiton was formed in 2001 with the merger of Australia's BHP and South Africa's Billiton. Then the giant company paid \$7.3 billion for WMC, an Australian nickel, copper and uranium mining company.  
 — GM, 4/2/10

**Agrium:** Vertical integration – In the last six months, Agrium has purchased more than 60 retail fertilizer and farm supply outlets throughout western USA and Canada. Operating under the name Crop Production Services, Agrium is now the largest agricultural products retailer in North America. —WP, 21/1/10

**Vale:** Vale is the world's biggest iron ore producer and second-largest nickel miner, including INCO in Sudbury, Ontario. The company was established by the Brazilian government in 1942 under the name Companhia Vale do Rio Doce and in 1997 it became a privately-run company. Although iron ore and nickel are at the top of its business interests, it plans to boost production capacity for copper, coal and fertilizers. The company says it will continue to invest heavily in railways, seaport terminals, shipping and energy generation.  
 — www.vale.com/vale

Vale has entered into a purchase and sale agreement with Rio Tinto Plc to acquire iron ore and potash

assets through a \$1.6 billion all-cash transaction. This includes 100% of the Rio Colorado project in the provinces of Mendoza and Neuquén, Argentina, and 100% of the Regina project in Saskatchewan, Canada.

**Mosaic** has paid **Vale** \$385m for a 35% stake in the open-pit Bayovar phosphate mine in Peru. This will give Mosaic the right to buy 35% of the phosphate rock produced from Bayovar. Vale, which also sold a 25% interest to Japan's Mitsui for \$275m, will retain control of the project with 51% of the voting shares. In February, Vale bought Mosaic's interests in Brazilian phosphate group Fosfertil for \$1.03bn, and an option on fertilizer production and bagging business Cubatao, Brazil. Mosaic said that the Bayovar deal would spur the group on its quest to build up phosphate rock assets outside the US, where its Florida reserves are sufficient to cover 35 years' supplies. — *Agrimoney.com, 1/4/10*

Vale's latest move is its purchase of **Bunge Ltd.**'s fertilizer assets in Brazil for \$3.8 billion. Bunge owns phosphate mines in Brazil as well as holding a 42.3% interest in Brazilian fertilizer producer **Fosfertil**.

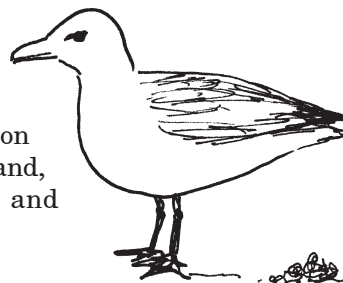
— *GM 28/1/10*

**Yara International**: the world's largest mineral fertilizer producer, based in Norway and 36% owned by the Norwegian government (North Sea oil money). In early February Yara made a play for **Terra Industries** of the USA for \$4.1 billion cash, but decided not to raise its offer after **CF Industries Holdings Inc.** offered more than \$4.6 billion in cash and stock and Terra accepted. Then **Agrium** pulled its hostile \$5.4 billion offer for CF. The outcome: CF will become the largest nitrogen fertilizer maker in North America and #2 globally behind Yara.

— *GM 13/3/10*

In Oct. 2008 **Yara** bought **Saskferco**, the joint **Cargill-Saskatchewan** Government (Investment Saskatchewan) (51% and 49% respectively) nitrogen fertilizer production facility in Belle Plaine for \$1.8 billion. The sale will provide approximately \$783 million to the province for its 49 per cent share in SaskFerro. Investment Saskatchewan has received more than \$209 million in dividends since its original investment. The province invested \$68.5 million in the company between 1989 and 1993.

Yara now has holdings — in various combinations of production, processing and distribution — in Australia, Brazil, Finland, Russia, Canada, Qatar and Libya.



NOT AN I.E.D.

## Supreme Leader?

The connections between war and food continue to haunt us. On Good Friday, PM Stephen Harper had a photo op at a Calgary food bank serving war veterans. The local newspaper reported that George Bittman, chairman of the Calgary Poppy Fund, said the fund is used by vets who feel too proud to ask for help from a civilian food bank. And with so many veterans without pensions, he said there is a great need for donations of food. "Like most Second World War veterans and Korean War veterans, if their problems weren't apparent at the time they were discharged, they were happy to get the hell out of the service and get on with life, just as I did when I got out of the navy," said Bittman. "Forty years later, when something comes up that something goes sideways, it's generally too late for them to make a claim with Veterans Affairs. Records are lost, memories fade," he said. — *Calgary Herald April 3, 2010*

Harper's 'let them eat food banks' posture is consistent with his shutting down Canada's prison farms which used to provide food and meaningful work for inmates of federal prisons. The reasoning? There aren't very many jobs in agriculture any more so the farms are not providing useful vocational training! The real reason is that he wants to use the land to expand the prisons, of course.

For those readers outside of Canada who might be puzzled by our reference to the government as encapsulated in the person of the Prime Minister — we do not, after all, have a Presidential system here — we need to explain that the current PM has made a religion of concentrating all power and decision-making in his own office, treating with contempt both Parliament and the public.

This is evidenced in the silencing of all critics of government policy including those within Parliament itself, particularly regarding the State of Israel; blocking inquiries into issues such as the probable torture of detainees in Afghanistan; and ignoring Supreme Court decisions regarding environmental assessment of mining and other harmful activities. The Supreme Court may rule, but nothing is done for Canadian citizens faced with detention and torture overseas, or to curb massive environmental damage at home. So much for the rule of law.

All of which makes it increasingly clear, even in our polite and comfortable society, that the Canadian government is not going to meaningfully address, let alone take action to resolve, issues such as loss of biodiversity, pollution/contamination, energy production and consumption and growing inequity.



“Environment Minister Jim Prentice is signalling further delays in imposing greenhouse gas emission standards on the oil sector and other industries, saying Ottawa [meaning the Harper cabal, not the people of Ottawa] does not want to lose jobs and investment by driving activity out of the country. ... But when the opposition has managed to pass environmental legislation on previous occasions, the government has simply ignored it.”

– *GM, 16/4/10*

Of course there is resistance, in the environmental movement, among Indigenous peoples, in social justice organizations, and very concretely in the food movement which is leading the way in reconstructing some of the primary and dominant structures of our society. From seed savers to large organic farms, from urban community gardens to artisanal cheeses, sausages, and wine, from farmers markets to buy-local policies in restaurants and institutions, new structures of production and distribution are everywhere. Rather than waiting for, or calling upon, the government, the movement is declaring and building food sovereignty on the ground and creating its own public food policy. (*see www.peoplesfoodpolicy.ca*)

## Renewable Energy Scam

Dirty (tar sands) oil and ethanol are destroyers of the environment, even without their effects on climate change. Reduced energy demand is the only way to address this. Unfortunately, both for the public and the climate, the Harper regime now says it will enforce its promise to require that ethanol constitute at least 5% of all gasoline.

Renewable Fuels Regulations were published by the Department of the Environment under the statutory authority of the Canadian Environmental Protection Act, 1999, in Canada Gazette on April 10. The public has 60 days to comment on them.

The requirement that all gasoline must contain 5% ethanol is to come into force on September 1 this year. The proposed Regulations also include provisions requiring an average 2% renewable fuel content in diesel fuel and heating distillate oil, although this requirement will only be brought into force once the technical feasibility of renewable diesel fuel use under Canadian conditions has been demonstrated.

The summary of the regulations says, “The objective of the proposed Regulations is to reduce Greenhouse Gas emissions by mandating an average 5% renewable fuel content based on the gasoline volume, thereby contributing towards the protection of Canadi-

ans and the environment from the impacts of climate change. . . It is estimated that on their own the benefits of the proposed Regulations would be \$580.8 million using a carbon price of \$25 per tonne. Other benefits . . . include increased production of renewable fuels and related increased employment and income.”

The summary does point out that ethanol-blended gasoline will mean increased consumption due to its lower energy content compared to conventional gasoline and, in all likelihood, an increase in the price of fuel at the pump “if the fuel producers pass on their incremental costs down the supply chain.” This in spite of the massive subsidies already being paid out to the ethanol industry.

The \$25 figure cited above appears to be pulled out of thin air in order to quantify some imagined public benefit. There has been a great deal of critical analysis of the purported benefits of increased biofuel production from corn, sugar cane, jatropha, and oil palm. On balance, we feel safe in saying that this is yet another of the Prime Minister’s public deceits.

## Cradle-to-Grave Ownership?

Monsanto has encountered another setback in its campaign to control the global food system. The advocate general for the EU’s top court says that Monsanto’s patent on its RR soy seeds should not cover the meal processed from its patented seeds. In plain language, Monsanto should not be able to collect royalties twice on the same seeds. Monsanto has been after the European importer of Argentinian soy meal for several years, charging that it owes Monsanto for use of its patented seeds, even in processed form.

– *WP, 18/3/10*

Monsanto’s EU patent on its Roundup Ready soybean seeds should not extend to cover imports of processed soybean meal: “The protection for a patent relating to a DNA sequence is limited to the situation in which the genetic information is currently performing the function described in the patent” ruled EU Advocate General Paolo Mengozzi. The judgement must still be confirmed by the European Court of Justice in a final ruling.

– *Reuters, 9/3/10*

### *The cost of doing business*

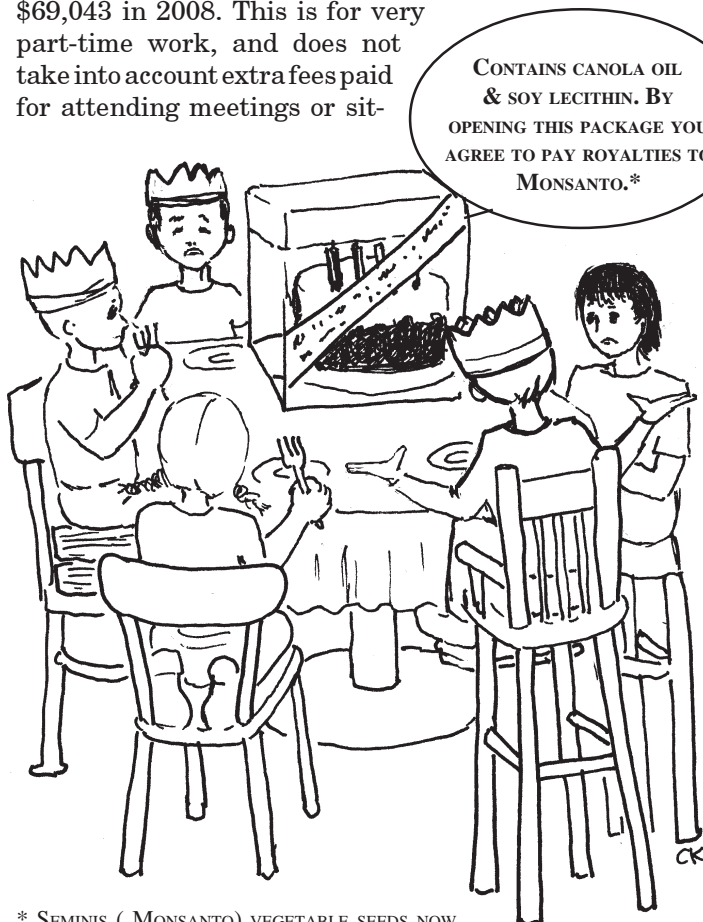
According to a disclosure report, Monsanto spent \$2.5 million in the fourth quarter, 2009, to lobby the US government on patent reform, clean energy, environmental litigation, global food security, international tax reform, labor issues, antitrust law, domestic and foreign trade and health care reform.

– *AP, 29/3/10*

## Inequity

In the March 8 edition of the *Globe&Mail's* Report on Business, under the heading "financial services" (see RH #271), the manipulation of rules for pensions of senior executives in the financial services sector (banks, insurance companies, etc) was discussed, outlining how the pensions of a number of top executives were increased up to \$1.6 and \$2 million per year. It is sickening to think that the Prime Minister is cutting public services on the grounds of having to reduce the fiscal deficit, while providing similar subsidies to corporate business, such as ethanol and oil sands.

The senior executives could probably pay off the government budget deficit out of their pension plans, to say nothing of their absolutely gross annual compensations. The Royal Bank of Canada's CEO, Gordon Nixon, was paid \$10.4 million for 2009. The CEO of Canadian Imperial Bank of Commerce, Gerald McCaughey, received a mere \$6.24 million. The co-heads of RBC's investment bank received bonuses of about \$13.8 million and \$12.75 million respectively for 2009. Corporate directors don't fare so badly, either. Top corporate boards paid their directors an average of \$69,043 in 2008. This is for very part-time work, and does not take into account extra fees paid for attending meetings or sit-



\* SEMINIS ( MONSANTO) VEGETABLE SEEDS NOW CARRY A "SHRINK-WRAP AGREEMENT" ON THEIR SEED PACKETS WHICH COMES INTO FORCE WHEN THE PACKET IS OPENED, STATING THAT THE SEEDS CANNOT BE REPRODUCED.

ting on committees. As recently as 2003 the average compensation was \$23,439. – *G&M, 9/10/2/10*

Wall Street financial firms disbursed \$20.3 billion in bonuses in 2009. The average bonus for the 'industry' was \$123,000. – *G&M, 24/2/10*

In the US, the CEO of Goldman Sachs, Lloyd Blankfein, who received \$68.5 million two years ago, got only \$9 million for 2009. Goldman Sachs itself made a profit of \$13.4 billion last year. According to the US Census Bureau, the average median household income in 2008 was \$50,303. – *G&M, 6/1/10*

Goldman Sachs has been charged by the US Securities and Exchange Commission with committing fraud during the US mortgage boom by selling a complex housing-related investment that was designed to fail, costing a group of investors about US\$1 billion. – *G&M, 17/4/10*

The myth that skill, social value and income are intrinsically related continues to be perpetuated. Senior executives of major charitable foundations are receiving salaries of \$200,000-350,000. These charities include the Heart and Stroke Foundation of Ontario, York University Foundation, which paid its chairman Paul Marcus \$394,000, and quite a few hospital foundations. Don McCreesh, chair of Imagine Canada, an umbrella organization for charities, said capping salaries at \$250,000, as some people are calling for, is unworkable because "Some of these charities are big complex organizations and you need some skilled people running them. If I'm giving money to a big complex organization I want to make sure it is managed right and that may mean paying somebody more than \$250,000."

– *GM, 14/4/10*

## Genetically Modified Food Resistance

Peru postponed the debate on the Regulations for Transgenics due to the general opposition of most Peruvians to genetically modified products. Peru's Environment Minister, Antonio Brack, told the press that organic products are generating US\$1.2 billion in exports, and also giving jobs to more than 30,000 people, thus he also expressed his disagreement with the use of genetically modified corn or cotton seeds in Peruvian fields. He added that Cusco and Ayacucho have declared themselves "transgenics-free," and Huanuco will do so in the near future.

– *LivingInPeru.com, 3/3/10*



A moratorium on genetically engineered plants and animals in Swiss agriculture has been extended by three years to November 2013. The law was initially approved in 2005 for a limited period of time to allow a national research programme to examine the possible risks and benefits of genetically modified organisms.

– *Swissinfo.ch, 10/3/10*

The Bulgarian Parliament has passed amendments to the GMO Act which effectively bans GM crops from the country. GM crops will not be allowed to be grown within 30 km of the protected areas of 'Natura 2000' and national parks, within 10km of bee hives or within 7 km of organic farmland. The Parliament also decided that products in the market containing GMO should be labeled with letters twice as big as the rest of the text on the packages and with different colour and fonts.

– *Agrolink, Bulgaria, 19/3/10*

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## Prince Edward Island

The ongoing crisis in PEI's agricultural sector has prompted Island New Democrat leader James Rodd to call for a whole scale conversion to organic farming: "The industrial model of farming has been on the rise in Prince Edward Island and elsewhere for at least 50 years and if it isn't reversed, the agricultural landscape of this province will soon be limited exclusively to large scale farming operations owned or controlled by multi-national agrifood businesses."

In 1921, there were 13,701 farms in PEI, with an average size of 89 acres. The total area farmed was over 1.2 million acres. In 2006, the latest census showed only 1,700 farms; the average size of a P.E.I. farm had quadrupled to 369 acres and the total farming acreage had been cut in half to just over 600,000 acres.

"Our hog and beef industries are on life support and potato growers are suffering from a chronic inability to recover even the cost of production. Clearly, the current system isn't working and a significant change of direction is required," said Rodd.

The only solution is to implement a long-term plan to convert the entire provincial agriculture sector to organic production. Such an approach would support the development of a comprehensive Garden of the Gulf branding and marketing campaign, along with an enhanced Buy Local initiative. It would also involve co-ordination between producers and the provincial government and the investment of public monies to enable the conversion to organic farming on a province-wide scale. "The first step would be to ban genetically modified crops," Rodd explained. – *The Guardian, PEI, 10/3/10*

## Consumer Challenges

Why would you buy Cadbury's chocolate and biscuits in preference to Kraft's products? Maybe you actually liked them better. Maybe you thought you could rely on Cadbury more than on Kraft – more genteel, perhaps – you know, old English Quaker goodness. Or maybe you started boycotting Kraft back in 2001 because of its connection to tobacco giant Philip Morris, and just never got out of the habit. If so, you are in good company – again. A new boycott of Kraft has been sparked by Kraft's purchase of Cadbury for \$17.6 billion, with a promise not to close a British factory. No sooner was the deal concluded, however, than Kraft announced it would close the Somerdale plant in Somerset.

If we can't buy Kraft or Cadbury, do we have to do without the 'food of the gods'? Not really, according to CBC journalist Carol Off. She wrote the book *Bitter Chocolate: Investigating the Dark Side of the World's Most Seductive Sweet*, after investigating what can only be called child slave labour in the Ivory Coast cocoa industry. Rather than boycotting all chocolate, she suggests that people stick to Fair Trade and Certified Organic chocolate, like our personal favourites Denman Island and Cocoa Camino.

Whose shirt on your back? For \$3 billion in cash and stock, Tommy Hilfiger has been 'acquired' by Phillips-Van Heusen Corp. The new entity will be one of the 10 biggest clothing companies in the world. . . "Investors cheered the transaction, which Phillips-Van Heusen expects will add up to 25 cents per share in earning in its current financial year and up to \$1 per share in the following year." – *GM, 16/3/10*

Now remember that much of the clothing sold is made by peasant farmers driven off the land to provide cheap labour in the sweatshops of Haiti or the Philippines, or driven off the land to make way for agrofuel production, as in Brazil and Paraguay.

High stakes for Pepsi: Currently, about 18% of Pepsico's revenue comes from product lines it describes as 'healthier'. This includes Tropicana, Dole, Quaker, and Tazo teas. Revenue from these products is running at \$10 billion per year and Pepsi wants to boost this to \$50 billion. "For a player who wants to play in this market intelligently, the opportunities are really incredible," according to CEO Indra Nooyi. PepsiCo is investing in science to improve nutrition by developing an altered salt – changing the salt's crystal structure and size so it dissolves more quickly in the mouth so people don't eat as much salt while flavour stays the same – and more low-or-no calorie sweeteners.

– *GM, 23/3/10*

## India's eggplant: The Drama of Bt Brinjal

On February 9th the Indian Environment Ministry announced its decision to impose a moratorium on the release of the transgenic brinjal hybrid developed by Mahyco, a subsidiary of global seed giant Monsanto. The moratorium will last “till such time independent scientific studies establish, to the satisfaction of both the public and professionals, the safety of the product from the point of view of its long-term impact on human health and environment, including the rich genetic wealth existing in brinjal in our country,” said Environment Minister Jairam Ramesh. “If you need long term toxicity tests, then you must do it, no matter how long it takes... There is no hurry. There is no overriding urgency or food security argument for [release of] Bt brinjal,” he said. “Our objective is to restore public confidence and trust in the Bt brinjal product. If it cannot be done, so be it.” The moratorium period should also be used to operationalise an independent regulatory authority and hold a parliamentary debate on private investment in agricultural biotechnology. “I don't believe India should be dependent on the private sector seed industry,” said Mr. Ramesh. “I believe seeds are as strategic to India as space and nuclear issues.”

– *The Hindu, India, 10/2/10*

“The main issue that seemed to have worked against granting clearance to Mahyco's Bt brinjal was that the tests undertaken for establishing its safety, both from the human consumption as well as the environment angle, were carried out by the developer itself and not in any independent laboratory. Apart from being the world's largest producer, India happens to be the country of origin for brinjal with the National Bureau of Plant Genetic Resources alone having a recorded collection of 3951 varieties.”

– *The Hindu Business Line, India 9/2/10*

Ramesh also announced a change of name of the government-appointed committee on genetic engineering from Genetic Engineering Approvals Committee to Genetic Engineering Appraisal Committee. “The whole idea of changing ‘approvals’ to ‘appraisals’ is that people should not assume that they are coming for approvals. If it is ‘genetic engineering approval committee’, you take it for granted that you are going to get approved.”

– *Indo Asian News Service, 9/2/10*

Here in Canada, the Canadian Food Inspection Agency (CFIA) conducts an ‘approval’ process for ‘foods with novel traits’ which includes genetic engineering, using data provided by the corporate client.

## There is ‘science’ and there is science

“Debates over introducing Bt brinjal might have taken a different turn if the government had taken note of studies by its own Indian Council of Agricultural Research (ICAR), showing that indigenous methods of controlling the notorious fruit and shoot borer can be as effective, cheaper and more environment friendly than using chemical pesticide.

“Controlling damage by the fruit and shoot borer to brinjal and reducing the use of harmful chemical pesticide have been cited as the main benefits of Bt brinjal. Yet, two methods tested and cross-validated under ICAR auspices over a two- or three-year period suggest that there are low-cost indigenous alternatives to chemical pesticides with comparable yields and returns that could alter perspectives on the need for a genetically modified alternative. These techniques, which are several decades old, involve either spraying the crop with tobacco-soaked water or applying a compost of cow dung and urine with seeds and leaves of the kochila tree. Yet, scientists who conducted the validation studies confirm that neither method is widely used any longer.

“The initial experiments with tobacco-soaked soap water were conducted in two villages in Nawada district in Bihar. The technique, which has been in use in this area for 30 years, involves soaking tobacco in water overnight, mixing it with soap or detergent and spraying a strong solution on the plants. One seed bed of brinjal was given five sprays of endosulphan, the most commonly used pesticide to control the fruit and shoot borer, and the other a similar number of sprays of tobacco-soaked water. The results were tabulated on seven parameters that showed that the indigenous solution was as effective as the chemical one. The experiment also showed that the yield per hectare did not vary significantly.

“Significantly, however, the study also pointed out that, ‘The farmers informed that tobacco stalk was easily available at cheaper rate in the market. It is eco-friendly and has no side effects either on soil or human health. In most of the houses, people use tobacco for chewing purpose and the waste product is utilised in controlling the insect pest in brinjal. Hence, (there was) no additional monetary involvement.’

“Some scientists opposing Bt brinjal argue that technology that focused on killing insect pests is not sustainable

India happens  
to be the country of  
origin for brinjal



because insects constantly evolve and eventually develop immunity to prophylactic measures, whether pesticide or GM varieties. "You have to consider that all insects came before humans and will outlive us. So when humans invent something effective against pests, it remains effective for a very short time," said Professor P.C. Kesavan of the M.S. Swaminathan Research Foundation (MSSRF)."

– *Business Standard, India, 13/4/10*



*Editors' note: Much of our global news about genetic engineering comes to us from GENET-News, an amazing service of European NGOs for its members and others. If you want a whole lot of reliable information and up-to-date news, go to [www.genet-info.org/information-services.html](http://www.genet-info.org/information-services.html) – or of course you can continue to rely on our selection!*

## Triffid

The Canadian flax industry has reversed its decision to require Canadian flax growers to use certified seed for all flax crops planted this spring. The reversal was announced by the Flax Council of Canada after it learned that breeder seed samples from three more flax varieties have tested positive for CDC Triffid at extremely low levels (below 0.01%).

Despite the extremely low levels of contamination, the industry decided that reversing the certified seed requirement was the industry's best course of action. In a normal production year, about 75% of the country's nearly two million flax acres are planted with farm-saved seed. The Flax Council concluded that the only way to restore 'normalcy' to the Canadian flax trade is to convince European authorities to increase their tolerance levels, most likely to around 0.1% from 0.01%.

Rick White, ED of Canadian Canola Growers, repeats this delusional nonsense, saying that "by proactively developing a low-level presence policy, Canada could provide global leadership and encourage importing governments in major markets to develop better functioning regulatory systems and policies that would replace zero tolerance thresholds and facilitate Canadian exports."

– WP, 18/3/10



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Published 10 times a year by  
**Brewster and Cathleen Kneen**  
2746 Cassels Street  
Ottawa ON, K2B 6N7, Canada  
phone: (613) 828-6047

### **Subscriptions:**

Canada, \$25 (regular), \$50 (patron)  
United States: US\$27

outside North America: \$28 (airmail)  
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