



THE RAM'S HORN

A MONTHLY NEWSLETTER OF FOOD SYSTEM ANALYSIS

No. 261, December 2008-January 2009

ISSN 0827-4053

Growth, Energy and Food by Brewster Kneen

The first issue of The Ram's Horn appeared in November, 1980. That means we are beginning our 29th full year of publication. Much has changed. Not enough has changed. Our governments and the economic wizards still believe in the mindless magic of 'productivity' and 'economic growth' (growth of the money economy as counted by the Gross Domestic Product). They appear to actually believe that economic growth is both good and absolutely essential if we are to survive as energy-bloated competitive individuals. They don't evidence much concern about the destruction of society and environmental collapse.

In 1989 my first book was published – *From Land to Mouth: Understanding the Food System*. After two sold out print runs I revised and expanded the book to take into account the changes that had occurred between 1989 and 1993, when *From Land to Mouth: Second Helping* came out. Since then, the distance between the 'family-community' side and the corporate side of the food system has grown into a grand canyon.

On the local food side we are seeing the construction of energy efficient, ecologically sensitive food systems that observe our slogan, 'feed the family and trade the leftovers,' while on the corporate side we now have three mega-corps (not the same three in all cases, and 20 years ago it was six) dominating and determining on a global scale seeds, fertilizers, agrottoxins, processing (from commodity to consumer end) and distribution-retailing.

While this corporate side claims to be efficient, it does not take more than a world map to observe the geographic distances that agricultural commodities move, from field to terminal (inland or seaport), from export terminal to import terminal to central distribution warehouse to retail. All this travel in high-energy transport (except by sea) is anything but efficient, nor are all the warehousing and processing facilities unless you really do believe in efficiencies of scale and ignore all the externalized costs of environmental destruction, energy source depletion, pollution, and social disruption and community destruction – worldwide.

Next time you visit – or drive by – a shopping mall plus superstore (or two), pause to consider the parking lot and what it contains and represents, besides a huge public subsidy for the mall owner.

'Distancing' was the term I came up with to describe the global food system in 1989, and it is distancing that I just described. When I finished the first draft of *From Land To Mouth*, our son Jamie said, so what's the alternative?

... continued
next page



I thought about that and came up with 'proximity,' and that is obviously descriptive of what is guiding developing local food systems around the world, from Japan's million-member Seikatsu Club Consumers' Cooperative (SCCC) to the farmers' markets in Ottawa. We can all be encouraged by the changes taking place on the one side even as we work against the consolidation and domination on the 'Dark Side'.

Now with the spectacular failure of the economy of capitalism, it should be easier to think about efficiency and sufficiency – what Maria Mies termed “the subsistence perspective” – or what we might describe as an economy of enough for all. This is the alternative to the global social and physical destruction being wrought by economic growth and the industrial food system. We – the world – can no longer afford to operate such an incredibly inefficient economic system that requires so much energy to produce too much for too few while profoundly disturbing the atmospheric climate we all live in.

Unfortunately, there is no evidence that the current government of Canada has any understanding of all this – that we must halt economic growth and instead start building a society based on sufficiency, ('enoughness'), greatly reduced energy consumption in any and every form, and ecological sensitivity.

Canada's Prime Minister Stephen Harper has insisted (when he was last addressing Canadians publicly) that environmental issues could not be dealt with at the expense of the economy: “we cannot separate environmental and economic policy.” His new Minister of the Environment, Jim Prentice, said that “balancing our responsibilities as stewards of the environment, on the one hand, and our responsibilities to protect and enhance the Canadian economy on the other” are the most challenging issues he's seen. A couple of weeks later he brightly said, “climate-change pressures are unlikely to fade.” Of course this does not mean that he will let those pressures affect government policy of putting economic growth first.

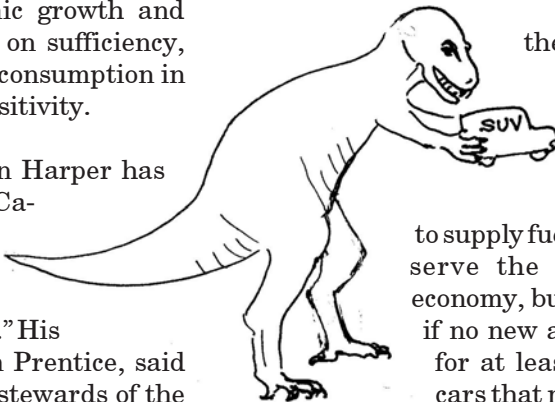
– G&M, 31/10/08, 30/12/08

“Sticking with an economic model that is driving toward ecological catastrophe will kill us,” wrote Peter Brown and Geoffrey Garver in the Toronto Star, “so it is essential to address the financial and ecological crises together.” They came to a rather different conclusion than Prentice, though: “We must recognize that the economy is part of the biosphere” and that “the global economy is a subsidiary of the natural order. . . Economic policy must promote not more affluence as currently defined, but more sufficiency for all Canadians.”

– www.thestar.com / 26/12/08

Noise output is one way to measure efficiency. Think of the noise a bicycle makes on its way to the farmers' market compared to that of an automobile – or the 18-wheeler full of produce from California headed to the supermarket. Of course, walking (especially barefoot) need not make any noise at all and does not require any equipment that consumed energy in its manufacture. In between the bike and the truck there could be electric trams and a subway. Remember, noise = energy. Can you hear your garden growing? Now think quietly about the energy it will produce when eaten.

Now, as our growth-economy crumbles, we are faced with a tremendous opportunity to trade it in for a model that works for everyone, not just an elite at the globe's expense. But we face a huge lobbying effort by energy interests, such as the Alberta oilsands investors and the automobile industry, including, sadly, the leaders of the auto workers union.



Offering bailouts to keep the dinosaur auto industry alive so it can continue to destroy our cities and pollute the environment, while offering massive subsidies to the oil sands to supply fuel for the cars may appear to serve the purposes of the growth economy, but we would all be better off if no new automobiles were produced for at least one year, and then only cars that meet the most stringent pollution controls and fuel economy standards. The 'buzz' about the new electric cars conveniently ignores where the electricity is generated. It's really only moving fuel consumption somewhere else. What we have to do is radically reduce it.

In the meantime, the auto workers could learn to repair machinery (including cars) and build interesting and useful new equipment just like farmers have always done. On the side, the auto workers – along with their neighbours – could engage in non-profit food production in their own backyards and community gardens.

The federal government, for its part, could redirect the corporate bailout funds to community projects such as all-weather bike paths so the former autoworkers could keep their aging autos in storage while auto-recycling facilities are developed with some of the federal funds.

The Seed Policy Project

About a year ago, wincing from the blunt shut-out by the Canadian Food Inspection Agency when a bunch of us tried to offer some substantial criticisms of the CFIA's proposed 'modernization' of Canada's seed regulatory policy (in its move to turn the whole business over to the corporate sector), a few of us decided we were through with having our energy siphoned off by such exercises. We began to talk about the need for a public seed policy – that is, a seed policy for Canadian farmers and gardeners that would be ecologically sound and in the public interest.

A letter we have just sent to Food Secure Canada asking to be recognized as a working group of FSC explains what we have in mind for the Seed Policy Project.

The SPP currently operates with a small steering committee and does not have formal membership. Members of FSC who are interested in the work of the SPP are welcome to be part of the network and to contribute to its work of building a seed policy for Canada from the ground up, rather than from the boardroom down.

The SPP was initiated in the spring of 2008 by Devlin Kuyek and Brewster Kneen to address the issue of seed policy in Canada, given that existing public (government) policy is dedicated to the welfare of the corporate seed industry and not the welfare of Canada's people, their food sovereignty, and biodiversity.

While there are many issues concerning seeds that need to be addressed – such as genetic engineering, patenting, and corporate control – the SPP is committed to the essential task of developing a public seed policy for Canada that expresses the needs and desires of farmers and gardeners, organic seed growers and the growing local/organic food constituency across the country.

To achieve this, the SPP is dedicated to avoiding what it sees as the distractions of CFIA regulatory processes and policy development, given the unequivocal statement of the CFIA that our concerns fall outside its mandate and interests, and the very important but distracting issues of seed patenting, which must be addressed by other bodies.

The initial work of the SPP was carried out during the summer of 2008 by Sarah Martin, who interviewed some 35 people across the country (organic farmers, seed keepers, small seed growers and suppliers and organizations with an

interest in ecological agriculture and seeds) mostly by phone, to learn of their frustrations and dissatisfactions regarding seeds and existing seed policies and regulations and what they would like to see as seed policy in Canada. A report on these interviews is available at

<<http://forumonpublicdomain.ca/node/257>>

Under the leadership of Catherine Phillips and Sarah Martin, a well-attended workshop was held during the Second FSC Assembly in Ottawa last November under the title of Seed Sovereignty. The workshop not only significantly expanded the network of interested people, but provided further direction for the development of a seed policy for Food Sovereignty.

In the new year the SPP will be represented by various supporting organizations, such as Canadian Organic Growers, Seeds of Diversity, USC, Ecological Farmers of Ontario, who have welcomed the SPP as their policy advocate, at the Guelph Organic Conference and as many Seedy Saturdays as possible.

All of this should help the network grow in numbers and (bio)diversity and continue to develop the seed policy WE want and need for Food Sovereignty. We look forward to the day when we are strong and numerous enough to present to the people of Canada, the government, and the corporations, the seed policy we are practicing.

If you would like to be involved, please let us know, or send a message to Sarah Martin: <seed.policy@gmail.com>

GMO-free ice cream

Ireland's largest icecream manufacturer, Silver Pail Dairy, has secured a three-year contract with US ice-cream brand BaskinRobbins to produce 300,000 ice-cream cakes at its Fermoy plant for export to the Middle East. The cakes are high-end, premium and are hand-finished. In the Middle East, where most people don't drink, it is customary to bring a cake to someone's family lunch, so they are hugely popular over there, especially in Dubai and Saudi Arabia.

The company - which uses 70 million litres of fresh milk every year - was approached by Baskin-Robbins almost three years ago to produce ice-cream for its European market. It needed a European manufacturer for its ice-cream sold in Europe, or else it would have to label all its icecream shipped from the US as genetically modified. It didn't want that - it wanted a manufacturer that used natural ingredients from local farms, so it chose Silver Pail Dairy.

– *Sunday Business Post, Ireland 07.12.2008*



Guns and Peanut butter

Nicholas A Christakis, professor of medical sociology, Harvard Medical School

At this time of year many municipal elementary schools in the United States, including the one attended by my children, raise money by selling wrapping paper and candy. This year parents in our school were told that they could no longer pick up their purchases from their children's classrooms. Instead they had to pick up their orders from a loading dock at specified times, to avoid a danger to the children.

The danger? Some of the orders contained sealed tins of festive nuts. Out of an overabundance of caution the school decided not to allow any of the items on the premises. This decision came on the heels of another recent event: a peanut was spotted on the floor of a school bus, whereupon the bus was evacuated and cleaned (I am tempted to say decontaminated), even though it was full of 10 year olds who, unlike 2 year olds, could actually be told not to eat food off the floor.

The number of schools adopting such measures and even, like our school, declaring themselves to be entirely "nut free" is, by all accounts, rising. Not only are nuts and staples like peanut butter prohibited from campus, but so too are homemade baked goods or any foods without detailed ingredient labels. School entrances have signs admonishing visitors to wash their hands before entry to avoid contamination.

The justification offered for these measures is that children with nut allergies can react even to traces of nut dust in the air and that natural oils in nuts can leave residues that are difficult to remove with conventional cleaning products.

There are three problems with this charade. Firstly, these responses represent a gross over-reaction to the magnitude of the threat. Secondly, there is no scientific evidence that the particular restrictions being imposed are effective or that they warrant the costs incurred. And, thirdly, and most importantly, these responses are making things worse.

About 3.3 million Americans are allergic to nuts, and even more – 6.9 million – are allergic to seafood. However, all told, serious allergic reactions to foods cause just 2000 hospitalisations a year (out of more than 30 million hospitalisations nationwide). And only 150 people (children and adults) die each year from all food allergies combined.

Compare that number with the 50 people who die each year from bee stings, the 100 who die from lightning

strikes, and the 45,000 who die in motor vehicle collisions. Or compare it with the 10,000 hospitalisations of children each year for traumatic brain injuries acquired during sports or the 2000 who drown or the roughly 1300 who die from gun accidents. We do not see calls to end athletics. There are no doubt thousands of parents who rid their cupboards of peanut butter but not of guns. And more children assuredly die walking or being driven to school each year than die from nut allergies.

The issue is not whether nut allergies exist or whether they can occasionally be serious. Nor is the issue whether reasonable accommodation should be made for the few children who have documented serious allergies. The issue is what accounts for the extreme responses to nut allergies and what to do about the responses and the allergies themselves.

The responses bear many of the hallmarks of mass psychogenic illness (MPI), previously and quaintly known as "epidemic hysteria." MPI is a social network phenomenon involving otherwise healthy people in a cascade of anxiety. Outbreaks typically occur in small towns and in schools, factories, and other institutions, and they are most often prompted by fears of contamination. It does indeed provoke anxiety to imagine a hidden, deadly danger in so innocent a thing as having a snack in kindergarten. And being around others who are anxious heightens one's own anxiety.

Seeing the concern about nut allergies in schools as a type of MPI is helpful in two ways. Firstly, the wholesale avoidance of nuts contributes to the problem by resulting in children who, lacking exposure to nuts, are actually sensitised to them. Through a feedback loop the policy of avoidance ends up creating the epidemic it is trying to stop. One recent UK study of more than 10,000 children documented that early exposure to peanuts reduces, not increases, the risk of allergy (*Journal of Allergy and Clinical Immunology* 2008;122:984, doi:10.1016/j.jaci.2008.08.039).

Secondly, well intentioned efforts to reduce exposure to nuts actually fan the flames, since they signal to parents that nuts are a clear and present danger. This encourages more parents to worry, which fuels the epidemic. It also encourages more parents to have their children tested, thus detecting mild and meaningless "allergies" to nuts. And this encourages still more avoidance of nuts, leading to still more sensitisation.

The cycle of increasing anxiety, draconian measures, and increasing prevalence of nut allergies must be broken. The recommended treatment for outbreaks of MPI focuses on the social and psychological nature of the epidemic.



LICENSED TO KILL

Guidelines for an acute outbreak include “providing reassurance . . . [and] using a calm and authoritative approach” (*Epidemiological Reviews* 1997;19:233).

A similar strategy is needed for the chronic case of school based nut allergies we are facing. We teach our kids that honesty is the best policy. When it comes to nut allergies we should expect no less from ourselves.

– *British Medical Journal*, http://www.bmj.com/cgi/content/full/337/dec10_1/a2880

Global Sourcing

According to a spokesman for Smithfield Foods, US hog producers will be importing wheat from Britain and Brazil due to the high cost of US corn and feed grain. Hog producers will also import a cargo of wheat middlings, a byproduct of milling, from Nigeria. A dramatic drop in the cost of ocean freight has made wheat imported into the east coast more economical than US supplies from the mid-west. – *WP*, 4/12/08

GMO-free food and feed

Like the 600 or so other co-ops that flourish across Japan, providing food to more than 22 million people nationwide, Seikatsu Club Consumers' Cooperative (SCCC) is dedicated to offering wholesome, non-GM foods at reasonable prices. In search of non-GM products for its 1 million members, a 14-person delegation – comprised of pig, chicken, cattle, and dairy producers – traveled to the US mid-west last autumn in search of stable supplies of non-GM corn to feed their animals.

What they found was agronomists at the University of Missouri developing new, non-GM, conventional varieties of soybeans for livestock feed in response to an upsurge in farmer demand for non-patented, non-GM soybean seeds. Their newly developed Jake and Stoddard soybeans not only exhibit an adaptability to different soil types, but they also resist cyst and root knot nematodes, pests that have become problematic for farmers ever since Monsanto's Roundup Ready GM seed became the dominant soybean planted.

<www.seikatsuclub.coop/english/>
– *Gristmill, USA*, 14/10/08

On the other (far-right) side of the great food divide we have the Western Canadian Wheat Growers. Kevin Bender of Bentley, Alberta has been elected to lead the industry-supported organization. The 38 year old farms 3800 acres with his father and brother north-west of Red Deer. Bender says market choice will continue to be a major issue, but another item of inter-

est is promoting the benefits of genetically modified (GM) wheat.

– *source: Western Producer*

Seaweed shortage

A shortage of seaweed from Asia Pacific is having a serious affect on supply and pricing in the hydrocolloids market, and may ultimately prompt some users to reconsider formulations or seek new assurances from their suppliers.

The world of hydrocolloids has changed much in the last two years – and especially in the last 12 months, Fabrice Bohin, global business director for hydrocolloids at Cargill Texturizing Solutions told *FoodNavigator.com*. “Right now there is one of the worst crises ever recorded in seaweed. It is affecting carrageenan and alginates.”

According to Leatherhead Food International, carrageenan is used mainly in dairy products (milks, creams and desserts), jellies, ham and chicken products, and bakery glazes; agar is used as a gelling agent in a range of products, including jams, confectionery goods, meats and noodles; and the broader category of alginates are used in bakery creams, glazes and fillings, ice creams, jams, and some beverages. . .

But what is driving the shortages is a matter for debate, said Bohin. One element is climate change on the seaweed-producing areas, such as the Philippines and Indonesia, which is affecting sea temperature. Seaweed farmers are finding they are collecting less and less and wild resources are shrinking or moving.

Some diseases and epiphytes are also increasing in incidence. While these do not have an affect on the safety of the food ingredient, they can affect growth. Moreover some seaweed farmers in the islands are using the same strain over and over, so it does not regenerate. This can limit quality and yield.

– *foodproductiondaily.com*, 12/9/08

Financial Crisis

“While Monsanto Company has had a better 2008 than the S&P 500 Index (SPX), MON has dropped more than 37% (compared to the 38% slip in the broad market index). The stock has plunged 51% from its June high. . . Monsanto estimates that more than 70% of the world's herbicide-resistant crops bear its stamp, but as the global recession deepens, the demand for bioengineered crops has shrunk.”

– *Schaeffer's Investment Research, USA*, 31/12/09

Cargill goes public, sweetly

Cargill, known for its behind-the-scenes approach to dominating the food industry, steps into the limelight as it introduces a new sweetener: Truvia. From advertisements on the Today Show to Good Morning America to “A Charlie Brown Christmas,” the agribusiness giant will appeal directly to consumers to try its new no-calorie sweetener made from the leaves of stevia, a South American shrub.

The \$20 million, nine-month campaign, timed for the busy holiday cooking season as well as post-holiday dieting, marks the largest-ever direct-to-consumer campaign for Cargill, which does most of its food business supplying the likes of McDonalds with eggs or Coca-Cola with high-fructose corn syrup. The coming months will see Cargill hawking Truvia in customer promotions, online with a website and in television ads with lines such as: “Your sweet tooth loves this little green leaf. It just doesn’t know it yet.” Cargill has never before launched a publicity campaign of this size for any other product.

– Matt Mckinney, *Star Tribune*, 16/12/08

Stevia gets US FDA go-ahead

The Food and Drug Administration (FDA) has concluded that it has no objection to rebiana, (Reb A), the sweetener made from the stevia leaf, at 95 percent purity or above, having GRAS (generally recognized as safe) status as a general purpose sweetener for food and drink, not just as a supplement. Two applicants, Merisant Company and Cargill, had submitted evidence to show that it is safe for use in the food supply. They both confirmed they have received official notification of ‘no objection’ from the FDA.

Coca-Cola partnered with Cargill to develop their rebiana brand called Truvia, and PepsiCo, along with Whole Earth Sweetener Company (a subsidiary of Merisant Company) and PureCircle, have their own product under the PureVia brand. The Malaysian company PureCircle, which boasts of being the world’s largest supplier of high-purity Reb A, also supplies Cargill with the ingredient.

It was important for PureCircle that FDA GRAS was for 95 percent purity because “it separates it completely from stevia extract, which doesn’t have the same purity level as Reb A”.

– *Foodproductiondaily.com*, 18/12/08

The ABCD of Global Agriculture

This story of transnational control over China’s food supply was dated last August, so some of the details – such as the activities of Goldman-Sachs – may have changed, but the point remains the same: China’s recognition of the dangers of TNC control over their food.

The Chinese government is increasingly worried about the control that overseas food giants are exercising over a good portion of China’s food supply as they have expanded into every corner of China’s agriculture. Five years ago, “ABCD” (four international grain dealers: ADM, Bunge, Cargill and Louis Dreyfus) gained control of China’s soybean oil industry.

Agriculture occupies the largest sector of the Chinese economy, and its stable development is crucial to the development of the country as a whole. The recent

domestic inflation led by sharp price hikes for agricultural products, coupled with multi-national companies’ entry into the Chinese market, has triggered calls for protectionism. Now it is rumored that international investment banks, led by Goldman Sachs, may take a large stake in China’s hog industry. Goldman plans to acquire around 10 hoggeries, in provinces such as Fujian and Hunan, for \$200-\$300

million. These hoggeries will all be operated by other companies under Goldman’s supervision. Goldman already controls of Shuanghui and Yurun, China’s two largest meat processing companies. Meanwhile, Deutsche Bank is actively negotiating with Shanghai-based Hongbo, and Tianjin-based Baodi, seeking to acquire their large-scale hoggeries.

Wilmar International, with 71 food processing plants in China involved in oil pressing, protein concentration, grain and oil chemistry among others, currently holds a 50% share of China’s plant oil market.

Cargill, another international agricultural company controls or has taken a stake in 13 feed plants in China. The company also owns four fertilizer plants and two corn processing plants. In total the company owns 27 agricultural businesses in China. Other international giants are also getting in, seeking to get a share of China’s agriculture.

– *www.chinastakes.com/story.aspx?id=590*, 12/8/08



Need to Stretch

20 years ago it took 2500 egg producers to supply the USA. A large hen house contained about 100,000 birds. Today, about 250 businesses produce 95% of the nation's eggs from barns holding more than 500,000 hens.

Most cages used to measure 50-60 square inches. The sheet of paper this is printed on is 93.5 square inches. United Egg Producers, the industry's leading trade group, adopted a standard of 67 sq. inches and this is now the industry standard. Now there is pressure, in states such as California, to require that birds be able to spread their wings without touching the sides of their cages. New poultry complexes cost about \$20 million.

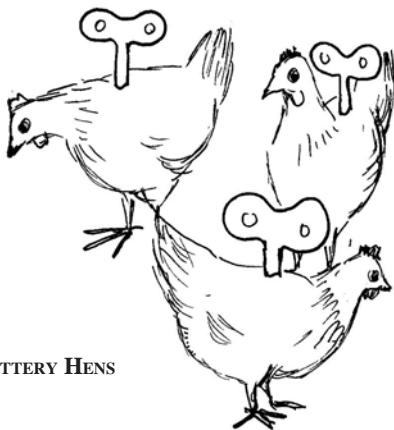
– ST, 7/12/08

In Europe, 'battery' cages for hens are being phased out and will be illegal by 2012. In Canada, battery cage systems continue, along with 'free-run' hens which are kept in barns but not caged, and 'free range' hens who are let outdoors.

For more information, see <http://chickenout.ca/>

In the development of the Canada Organic Standard, there was a lot of discussion on exactly how much space should be the minimum requirement. One committee member pointed out that it's a matter of ensuring overall well-being, not just room for a bird to stretch her wings. He commented that he had recently been at a conference centre where his room was exceptionally tiny. There was room, he said, to "stretch out in full lateral recumbency and engage in normal behaviours" but he added that he certainly did not want to stay there, and "if my wife had been with me I would probably have started to peck her".

The Canada Organic Standard also requires that all animals have access to the outdoors on natural ground (not concrete) whenever weather permits.



NOT BATTERY HENS

GM Crops Only a Fraction of Primary Global Crop Production

In 2007, farmers planted an additional 12.3 million hectares of genetically modified (GM) crops, bringing the total global area up 12 percent to 114.3 million hectares. Although they have been on the market for a decade, they currently account for a modest 9 percent of total land used for global primary crops. Four cash crops continue to account for virtually all GM production: soybean (51%), corn (31%), cotton (13%), and canola (5%).

Twenty-three countries were growing GM crops in 2007. The global leader by far continues to be the United States, which accounts for half of all GM crop area. In 2007, GM crops were growing on 57.7 million hectares of US land, an increase of 6 percent over the previous year. Beyond the four standard GM crops, farmers there also grew small amounts of GM papaya in Hawaii, although that has been declining over the past few years, and GM alfalfa, which court rulings have suspended until further environmental review.

The second and third largest countries for GM crop area are Argentina, with 19.1 million hectares in 2007, and Brazil, with 15.0 million hectares. Other primary South American growers include Paraguay with 2.6 million hectares and Uruguay with 500,000 hectares. The main GM crop grown in this region is soybeans, followed by corn and cotton.

India is now ranked fifth in total GM crop area, with 6.2 million hectares in 2007 devoted to cotton. This includes 2.4 million hectares that were planted between 2006 and 2007, about the same amount of new area as added the previous year. Although China was the first country to grow a commercial genetically modified crop—transgenic tobacco in 1992—added crop area rates there have significantly trailed those of India. In 2007 China had 3.8 million hectares in GM crops, including 300,000 new hectares, about one eighth as much as India's new crop area for the same year. The main GM crop in China is cotton.

Two GM crop traits continue to dominate worldwide: herbicide tolerance (63%) and insect resistance (18%), with a combination of the two traits (called "stacked") accounting for the rest. For herbicides, most crops have been altered to tolerate direct application of glyphosate (Roundup).

In the United States, GM crop production actually increased pesticide use by more than 4% between 1996

... continued next page

and 2004, despite early signs that GM use might be tied to an overall decline. Reports of glyphosate-resistant weeds have been on the rise since GM crops started gaining momentum, and these weeds now total 15 species—up from 2 in the 1990s—that cover hundreds of thousands of hectares in the United States alone. In response, farmers have been encouraged to diversify herbicide applications or increase glyphosate applications.

Claims of potential benefits from GM crops include increased yields and nutritional value, although to date no commercially available crops have been modified for these purposes. . . And although nutrition-related traits have been promised over the last decade, they are still at least five years away from market.

. . . . In early 2008, GM proponents like Monsanto began promoting their technology as part of the global solution to an impending food crisis, even though there are no GM crops available to increase yields. . . Like earlier promises of higher nutrition, most of the “climate-ready” GM crops are not expected to be widely available for 5-10 years even if they turn out to be viable.

For the fully referenced endnotes and figures, one has to purchase the document. See <<http://www.worldwatch.org/node/5950>> – World Watch, 4/12/08

** We reported on the development of purple high-anthocyanin tomatoes through tradition plant breeding in our last issue. Now note the admission by Professor Cathie Martin, one of the developers of a GE version at the Innes Centre in the UK: “This is certainly the first example of a GMO with a trait that really offers a potential benefit for all consumers.”*

– foodproductiondaily.com, 9/12/08

Editors' note:

Back issues of The Ram's Horn, along with other resources, including From Land to Mouth: Understanding the Food System (Second Helping) are available for free download at <www.ramshorn.ca>

All our material is in the public domain, including Cathleen's original drawings, for readers to use in their own work. We do appreciate mention of the source!

Readers of The Ram's Horn are encouraged to support our work by subscribing. Information is below.

THE RAM'S HORN

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

Subscriptions:

Canada, \$24 (regular), \$50 (patron)
United States: US\$25

outside North America: €30 (airmail)
cheques payable to *The Ram's Horn*

If you would like a paper copy of *The Ram's Horn*, please subscribe (see rates and address above). You are also invited to support our work through a donation to help cover costs of research, writing, and circulation of the print version for free to people who cannot afford it, especially those in the 'global south'.

The publishers of The Ram's Horn do not claim copyright 'protection' for this material. It is in the public domain to be freely used and built upon. We appreciate mention of the source. Line drawings not otherwise identified are the work of Cathleen Kneen.
