

ISSN 0827-4053

Reductionism in the Slaughter-House

You may have noticed, as we have, the gradual change in the media (previously known as "the press") as it tries to counter the loss of advertising revenue to the electronic media and maintain its commercial viability (corporate profits, that is). The two papers we read – the *Ottawa Citizen* and the *Toronto Globe & Mail* – have both, in recent weeks, reduced their size in terms of pages and reduced the amount of copy that might be described as 'news' to make way for a dramatic increase in the amount of aggressive advertising for airlines, automobiles, and luxury goods. More significant, and distressing, is the shrinking amount of 'hard'

news about the world we live in, and a radical increase in the number of 'human interest' stories. Essentially, it's a redefinition and individualization of the news.

For example, we have been treated to much text about personal depression, but without any consideration of the possible structural causes, such as unemployment and the increasing inequity in society. Similarly, younger and younger children are being 'diagnosed' as mentally ill and drugged, without any serious examination of the context of their lives and the possible structural causes of their 'illness', including lack of programs such as physical education, and increased demands on fewer teachers and facilities. On the contrary, the latest strategy appears to be to prescribe Attention Deficit Disorder drugs more or less wholesale to children in inadequately funded schools. "I don't have a whole lot of choice," said one pediatrician. "We've decided as a society that it's too expensive to modify the

kid's environment. So we have to modify the kid." -NYT, 9/10/12

The parallel to Intensive Livestock Operations (ILOs) using sub-therapeutic levels of antibiotics is obvious.

Now consider the mammoth recall of beef processed by XL Foods in Alberta as an illustration of what we have said above. Virtually all the reporting has focussed on the failure of the plant to turn out 'safe' meat and the failure of the Canadian Food Inspection Agency (CFIA) to identify the production of such 'unsafe' meat before it left the plant. There is no mention of the underlying reason for these failures: the structure of the beef industry in Canada and globally, and the absolute requirement to maximize profit for the corporation.



"THE NAME IS COLI. E COLI"

In the meat packing business this has meant intensification at every turn. The giant packing plants run by XL and Cargill are described as "disassembly lines": beef carcasses, hanging from a moving chain, pass in front of the workers, each of whom has a very particular cut or cuts to make as the carcass goes by. Profits are maximized by speeding up the

y. Profits are maximized by speeding up the line and increasing the number of cattle processed each day (4,000 at the XL plant). In an unsettling reflection of the horrors of the Chicago slaughterhouses described by Upton Sinclair in *The Jungle* (1906), not to mention Eric Schlosser's *Fast Food Nation* (2002), the stress on the workers is intense. Indeed, it is probably simply impossible to avoid contamination, let alone worker injury (and high worker turnover).

Bigger, Faster, Better appears not to be working, and not just at XL. Big Sky, the hog 'farm' turning out a million hogs a year with facilities (including 21 feed mills) scattered across Saskatchewan and Manitoba, has been put in receivership with a debt of \$76 million. Puratone, a Manitoba hog plant with a debt of \$41 million, has also entered creditor protection.

-WP, 20/9/12

... continued next page

Following is a dossier of media coverage and statements by various different actors in this drama which, as we see it, underline our concern about the dangers inherent in the system's reductionism.

Food inspection by press release ('alerts')

George Da Pont, president of the CFIA, in a letter to the editor (G&M, 10/10/12) wrote:

"Since the CFIA first detected E.coli on Sept 4 at the XL Foods facility in Brooks, Alberta, we have acted without hesitation to protect and inform consumers. The Sept 4 finding was traced and it was determined that there were no products that had tested positive for E.coli in the marketplace.... On Sept 16 the CFIA and XL Foods sent out alerts warning the public of potentially contaminated foods. The CFIA has since issued 16 more alerts. It also has issued four statements and updated its website daily. In addition, the Agricultural Minister has also held two press conferences. The CFIA strives to ensure the safety of Canadian food 24 hours a day. Canadian consumers expect and deserve nothing less."

Built-In Conflict of Interest

Former deputy minister Alan Nymark has pointed (OC, 5/10/12) to the contradiction of having the CFIA reporting to the Minister of Agriculture rather than the Minister of Health. The Minister of Agriculture represents the interests of Big Ag, including the processors, not the public. But this contradiction goes right back to the creation of the CFIA in 1997. It was set up primarily to defuse the growing controversy over Ag Canada's pro-biotech and pro-agrotoxin policies, including regulation. I assumed, as did others, that it would be a new and independent entity. I was therefore not amused to call the new CFIA and discover I was talking to the same AgCanada people at the same phone numbers and desks. If this is arm's length it is a very short arm indeed.

– **B.K**.

ControlOverLivestockPrices

"Federal policy focused on production for export has encouraged high through-put plants that compete by cutting costs and ramping up production. Most of Canada's regional meat packers have shut down as the biggest companies grew via take-overs and by becoming vertically integrated. . . Today XL and Cargill process well over 80% of the beef produced in Canada. Each company is able to exert control over the price of livestock. On any given day, they can decide whether to buy at auction, through contracts that allow the company to control both the price and the timing of slaughter, or in the case of XL, to just kill animals from its own herds. This is called a "captive supply" system. Nilsson Bros. Inc., owners of XL Foods, also owns most of the auction markets in western Canada." – NFU 11/10/12

Who Are the Owners?

2000-2500 workers, 4000 cattle per day, a host of livestock yards and auction facilities, and co-CEOs Brian and Lee Nilsson are part of what makes up Nilsson Bros. Inc. Their website says,

> "Nilsson Bros. Inc. is a group of livestock-based agricultural businesses located in the province of Alberta, Canada. Nilsson Bros. own and operate a diverse group of agri-business ventures including meat-packing plants, food-

processing facilities, auction markets, livestock feeder buying services, satellite auction sales, livestock commodity trading, livestock financing, farm & ranch insur-

EAT THE PAPERWORK: IT'S BEEN INSPECTED

ance, and cow/calf ranches." - nbinc.com

The Nilsson brothers may be the biggest players in the western Canadian beef industry, but their days appear to be numbered (see "Breaking News", below). They are highly secretive about their lives and businesses, as indicated by this (lack of) information on the website of Bloomberg Businessweek:

"Mr. Brian Nilsson serves as Co-Chief Executive Officer at Nilsson Bros. Inc.

Corporate Headquarters 13220 Saint Albert Trail Edmonton, Alberta T5L 4W1, Canada

There is no Board Members Memberships data available. There is no Education data available. There is no Company Affiliations data available. There is no Annual Compensation data available. There is no Stock Options data available. There is no Total Compensation data available. There is no Competitor Compensation data available."

The website of XL Foods itself is a model of revealing nothing. The only specific information about the operations of the company is this: "Producing worldclass beef means you need to start with the world's finest beef cattle. That's exactly what you'll find in western Canada. XL Foods is owned by Nilsson Brothers Inc., a Canadian-owned company with a network of livestock-based businesses including auction marts, feedlots and cow-calf ranches throughout western Canada." -xlfoods.com, accessed 14/10/12

For years now, in Canada, anything to do with agriculture, particularly policy, has been built on a few "pillars". XL is no exception. According to its website,

"Our business is built on four pillars:

Our People.

We hire great people

We're experienced in all aspects of the meat and livestock industry

We invest in our people at all levels of the organization Our Products.

We produce high quality, competitively-priced, Canadian-sourced beef to meet the demands of a global market

Our Performance.

We invest in the future, building and maintaining state of the art facilities that compete on a global stage

Our Passion.

We're committed to excellence. We are passionate about doing the very best we can in everything we do. We stake our reputation on it."

You didn't think we could get through this without discussing Cargill, did you?

The Nilsson Brothers' XL Foods plant in Brooks, Alberta, is the second-largest meat packer in the country and slaughters and processes a million cattle a year, more than one-third of Canada's beef. The largest meat packer in Canada is Cargill.

"Under the name Cargill Meat Solutions, the company operates two Canadian integrated beef processing facilities, including Case Ready operations... The High River, Alberta plant is a fully integrated beef processing facility where 2,000 employees process 4,500 head of cattle per day. In Guelph, Ontario, the Dunlop facility employs 950 people and processes 1,500 head of cattle per day. Dunlop is the only large scale Halal facility in Canada that operates 100% Halal quality beef. Combined, these facilities make up 55% of the beef processing market in Canada." -cargill.ca

About the Labour Force

In 2005, the employees of the Brooks plant joined the United Food and Commercial Workers union. The owner of the plant at the time, US-based Tyson Foods, refused to negotiate a first contract. Many of the workers were new immigrants or refugees from Sudan, Somalia and Philippines; others had been recruited from across Canada but they voted to go out on strike. To keep the plant operating, Tyson bused in replacement workers – legal in Alberta. After three weeks, the union and Tyson struck a deal and the workers returned to their jobs. Michael Broadway, a U.S academic and author, maintains that it was after the 2005 strike that the plant began recruiting temporary foreign workers from China, Philippines, El Salvador and Ukraine.

In 2009 Tyson sold the plant to Edmonton-based Nilsson Brothers Inc. for \$105.5 million. (The plant was actually built in 1976 by Lakeside Farm Industries, which had been established by Garnet Altwasser and two partners in 1966.) The new owners continued to hire temporary foreign workers, adding recruits from Mexico and Colombia to the 2,400-strong multicultural workforce. By early 2011, temporary workers comprised about a third of the plant's labour force; immigrants and refugees already accounted for about 60%.

Workers recruited under Canada's Temporary Foreign Workers program can't change jobs and can't bring family with them. They can stay in Canada for up to four years but when their contract is up, companies such as XL can nominate the workers for permanent residency. The prospect of permanent residency for workers and their families is a powerful inducement to get along, no matter what the working conditions. "For temporary workers, the balance is firmly in favour of the employer, with the threat of deportation hanging over any worker who's considered disruptive," says Broadway. -CP, 1/10/12, G&M, 13/10/12

ARancher's Perspective

"When the beef leaves my farm, it is safe for Canadians to eat. It is only after the cattle leave my farm that safety issues enter the food chain, yet I am punished financially for mismanagement by others..."

– Neil Peacock, Cattleman and National Farmers Union member, 10/10/12

BreakingNews:

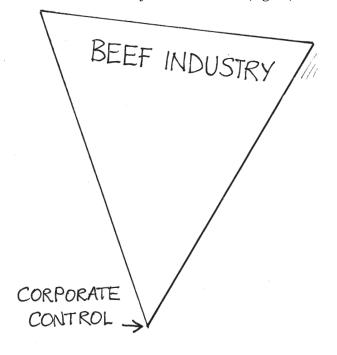
On October 18th, Brazil-based global giant JBS USA took over management of XL Foods' Lakeside plant, with an exclusive option to buy it, along with XL's beef-packing operations in Calgary and the US, and a feedlot and farming operation near Brooks, Alberta. JBS describes itself as "the world's largest producer of animal protein". As of 2011, it owned more than 10% of the global beef-processing business.

The Saga Continues

This is hardly the first outbreak of e.coli – or similar food-borne pathogen-from industrial meat production and it will not be the last. When animals are raised to slaughter weight in immense, intensive feedlots, fed a diet of grain for which their stomachs were not designed, and dosed with growth hormones and antibiotics to counter the stress, there is an open invitation to disease. As for the processing plants: there are inherent dangers of contamination in animal slaughter, but the scale and line speed of the mega-plants mean that bacterial contamination is probably inevitable. Given that the 'product' is distributed around the world, any contamination is also very difficult to contain. The plant's food safety goal is simply to manage risk effectively so that consumers, especially vulnerable populations, do not get sick (as with the outbreak of Listeriosis from a Maple Leaf plant in 2008 which killed 23 people).

The CFIA's Compliance Verification system (CVS) for monitoring and enforcement of food safety at federally licensed facilities like XL includes required facility standards at the slaughter and processing plant. The inspection system's primary focus is checking the plant's paper trail and writing up Corrective Action Requests.

When we suggest – as we have done, repeatedly, in The Ram's Horn and elsewhere – that such facilities should be dismantled in favour of smaller, more locallyfocused facilities, we are told that this will raise the price of beef. Presumably, if the animals are raised locally on pasture, it would also raise the price to the producer – not a bad thing – while the rest of us would likely eat less red meat, again, not a bad



thing, at least if we listen to all the dietitians. Local abattoirs, like other local food businesses, improve local economies, keeping money in the community instead of watching it leak out into corporate accounts. For sure, something may go wrong, though the risks are a lot lower if the plants are smaller, process fewer animals an hour, and the animals are healthy and robust to begin with (not to mention wages and working conditions for the staff). However, if a problem arises, the affected meat can be readily traced and a plague avoided.

In other words, it's essentially a structural problem, not a problem of food safety for individual persons.

Long-time Ram's Horn readers may recognize the front-cover graphic from its first appearance in RH #107, July 1993. Here's what we wrote back then – almost two decades ago – with reference to a bout of food poisoning in the US:

The responsible agent has been identified as e. coli 0157:H7, but no responsibility has been placed on the agent's handlers or the system that created the problem. The response has been to advocate a quality control process referred to in the trade as HACCP, Hazard Analysis Critical Control Point, which aims to establish at what points meat is most apt to become contaminated and then to focus inspection and remediation at those points. There will, however, apparently be no inspection of the system and its structures which provide the context, if not the cause, of food contamination.

Given the control over the food system that is now exercised by a very few, very large corporations, what would seem to be needed is another form of HACCP. The hazard lies in the control and the power that accompanies it. . . . The critical-control points do need to be identified and analyzed, but they should be identified as the granting of a patent over a technological process that gives one company control over a vast resource; as the permitting of a large integrated corporation to dominate the [meat]

business; as the ability of a large corporation to define legislation and blackmail governments,

and so on.

Double Standard – Séralini and Monsanto

Monsanto always portrays itself as the good guy, and its science as beyond question, while any critic of genetic engineering is automatically the bad guy, accused of bad science, deceit, or even fraud. Monsanto and the biotech lobby are also very good at name-calling, knowing that they can afford legal battles over defamation that their opponents cannot. In this context, we are informed that Gilles-Eric Séralini and his colleagues in CRIIGEN at the University of Caen in France are not trustworthy scientists but trouble-makers looking for a fight with Monsanto and gang. Never mind the track record of Séralini and CRIIGEN as scientifically sound critics of genetic engineering.

The latest manifestation of this tactic is the reaction of the biotech lobby to Séralini's report in September of his recent research into the long-term health effects of glyphosate herbicide and animal feeds derived from genetically engineered glyphosate tolerant plants.

"The world's best-selling weedkiller, and a genetically modified maize of resistant to it, can cause tumours, multiple organ damage and lead to premature

death, new research published today reveals. In the first ever study to examine the long-term effects of Monsanto's Roundup weedkiller, or the NK603 Roundup-resistant GM maize also developed by Monsanto, scientists found that rats exposed to even the smallest amounts developed mammary tumours and severe liver and kidney damage as early as four months in males, and seven months for females, compared with 23 and 14 months respectively for a control group. . . .

"GM crops have been approved for human consumption on the basis of 90-day animal feeding trials. But three months is the equivalent of late adolescence in rats, who can live for almost two years (700 days)

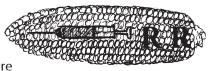
"The peer-reviewed study found that rats fed on a diet containing NK603 Roundup resistant GM maize, or given water containing Roundup at levels permitted in drinking water, over a two-year period, died significantly earlier than rats fed on a standard diet."

– The Grocer, UK, 19/9/12

In the current coordinated attack on Séralini and his research findings on the long-term effects of glyphosate, Monsanto and its sycophants accused Séralini of using a strain of rats that were particularly susceptible to tumors, that too few rats were used in the research, and that the trials were too short in duration. In fact, as Séralini pointed out, his team used the very same strain of rats used in all of Monsanto's (and others') trials and that he followed the same protocol as Monsanto did in the trials which won them approval of their GE crops – except that Séralini's trials lasted considerably longer and consequently produced significant evidence of harm that Monsanto did not want to recognize.

In January, 2011, the court of Paris concluded the lawsuit between Gilles-Eric Séralini, researcher in molecular biology at the University of Caen and President of the Scientific Council of CRIIGEN, and the French Association of Plant Biotechnologies (AFBV). The court sentenced the AFBV to a fine on probation of 1,000 EUR, 1 EUR for compensation (as demanded by the plaintiff) and 4,000 EUR of court fees. Séralini had challenged the association and its president before the court on the grounds that they had defamed his research work which called into question the harmlessness of several transgenic maize varieties of Monsanto. The AFBV had indeed on several occasions sought to discredit the work of Séralini.

-sciencescitoyennes.org/spip.php?article1807



Europabio, the industry lobby in Europe, spouted the oft repeated probiotech defense: "Biotech crops are rigorously tested for safety prior to commercialization. Approved GM prod-

ucts all go through a rigorous safety assessment by the European Food Safety Authority (EFSA) in Europe, as well as the national agencies in other national constituencies outside the EU."

Europabio also stated that "some of the researchers behind the study are closely associated with anti-GM campaigning groups" – as if Monsanto's hirelings are not closely associated with pro-GM groups – and referred to a Professor from the University of Edinburgh who spoke of "predetermined bias of the experimenters and the funding groups". All of the scientists voicing harsh criticisms of Séralini and his work are very well known biotech apologists capable of lies and outrageous generalizations.

Reuters stated, "In an unusual move, the research group did not allow reporters to seek outside comment on their paper before its publication...." Séralini says that he won't make any data available to the EFSA until the EFSA makes public all the data under-pinning its 2003 approval of NK603 maize for human consumption and animal feed. He has also criticized the EFSA, and most other detractors of his study, for alleged conflicts of interest, claiming that he is "being attacked in an extremely dishonest fashion by lobbies passing themselves off as the scientific community".

-Nature News, UK 10/10/12



MICHAEL ISENOR AT THE ABATTOIR WITH NORTHUMBERLAMB'S TRUCK

Northumberlamb

We have written about the Northumberland Lamb Marketing Cooperative (Northumberlamb) in the Ram's Horn before. However, in the light of what is happening in the meat industry, and the fact that this is the International Year of the Co-Op, it seems worth while to take another look at the factors that have enabled this small farmer co-op to serve its members for 30 years.

In September, we went back to Nova Scotia to attend Northumberlamb's 30th Anniversary party and lamb barbeque. For us, this was not just an exercise in nostalgia (though it was great to catch up with some of the old-tim-

ers and meet a bunch of new young sheep farmers); it was an opportunity to explore the principles behind Northumberlamb. Unlike many co-ops which are owned by their members but which operate like any other capitalist business, Northumberlamb cannot accumulate capital at the expense of its members. It was set up to return all 'profit' to the farmers — beyond basic expenses of wages and upkeep of the truck and facilities. Despite the dire predictions when it started, Northumberlamb has proven that a viable business can in fact operate on the founding principles of integrity, respect, and trust, without seeking to maximize profit.

How does that work? In the early days, Brewster and Michael Isenor shared the management of the co-

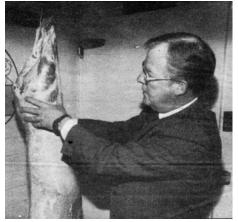
BREWSTER WITH LAMB SHIPMENT

op. Michael handled the meat side of the business, overseeing the quality of lambs going to slaughter, the management of the abattoir, and the relationship with the meat managers in the stores to which he delivered the lambs. Brewster was responsible for working with the farmers to ensure the supply, and to take care of problems when they arose. If orders were lower than expected, it was his job to negotiate which farmers would hold back their lambs for a week and which would ship. And should a lamb arrive at the abattoir which was not up to Michael's standards, Brewster would have to call the farmer to ask if he wanted it back live or carcass. On one occasion, the call revealed that the farmer's wife had just been diagnosed with cancer, which required some more calls to his neighbours to alert them of the need for help.

Now Michael is responsible for both sides of the business, but clearly from our conversations with cur-

rent co-op members, the respect and trust continue to be "the way we do business".

That includes the relationship



Ron Checking a Northumberlamb Carcass New Glasgow, NS Newspaper, 26/5/1982

with buyers as well as farmers. Again, at the beginning we had a great ally in Ron Young, head meat buyer for Sobey's (now retired). Ron had been a butcher in England and knew the meat business – and lamb – inside out. He was clear with his meat managers that if they did not buy consistently from the co-op, and took advantage of opportunities to buy "cheaper" lamb from Canada Packers or New Zealand, "these guys won't be there when you need them." It helped that Sobey's was a small regional chain at the time and its founder, Frank Sobey, wanted local lamb in his stores.

Part of Brewster's job was to negotiate the weekly price for lambs with Ron. This was tricky, because over the year the pricing mechanism needed to enable a farmer to hold back lambs for a week or two and still make the same amount per lamb, with the weight gain, the cost of feed, and the weekly price balancing out. Ron as a true professional understood all this, so eventually the price-setting process amounted to a chat over a beverage.

As for trust among the farmers, it was built slowly over the years before we started the co-op, with meetings that usually involved a visit to one another's barns, along with a potluck and story-telling session. So when the operator of the abattoir we used was selling out, Brewster was able to get farmers to sign for financing to buy the business without looking too closely at the fine print. They knew, as he did, that without the abattoir the co-op would be unable to continue.

Over the years, "the way we do business" had its rocky moments, particularly as the supermarkets grew and consolidated their ordering and handling. The only way Northumberlamb can guarantee the quality of its lamb – which is its real market advantage – is to retain control of the whole process. Michael has staunchly



BREWSTER AND MICHAEL, SEPT. 2012

refused to compromise on this, even when the stores would cancel their orders for weeks on end. "Eventually," he says, "the customers complain about the quality and they come back to us." And, he adds with a little smile, "we don't say anything, we just go back to delivering as before."

Food Price Spike Loses Edge

Remember the uproar over rising commodity food prices due to adverse weather, primarily in the form of drought in various food growing areas of the world? We analyzed this in our last issue and pointed out that the price 'spike' was primarily a construction of speculators, the prime beneficiaries of price volatility.

Well, the uproar has died as quickly as it was created and the G20 has called off its "emergency food meeting" that was to discuss rising agricultural commodities prices. The cancellation comes less than three weeks after Francois Hollande, French president, and José Graziano da Silva, director-general of the UN Food and Agriculture Organisation, called a meeting of G20 agriculture ministers in Rome which was to be the first meeting of the Rapid Response Forum (RRF), created to "promote early discussion" about "abnormal international market conditions".

Washington, which this year chairs the new body, said that leading countries had decided food commodities markets were "functioning", and an emergency meeting of the RRF was not necessary.

-Financial Times, 4/10/12

Maybe what "functioning" really means is that the food industry is very profitable – at least for the major players, if not the farmers. According to a report from the right-wing Conference Board of Canada, what the Board refers to as "food manufacturers" and "the food manufacturing industry" should make profits of \$4.7 billion this year on a profit margin of 5.5%.

-WP, 11/10/12

Cargill Prescription

The term "food manufacturers" sends a bit of a chill up our spines. But there is a lot more bad language out there. Take, for example, these comments from Cargill CEO Greg Page. You could think of this as a primer in linguistics, the study of languages. Note how differently the words we have italicized are used here as opposed to what most people might consider their meaning.

"First, we need to honor comparative advantage and engage in *trust-based* free trade... If every country on Earth tried to pursue self-sufficiency, there would be less food. The role of trust-based free trade becomes increasingly important if we are going to exploit *the law* of comparative advantage....

"We need to move to more market-driven biofuels policies, not inflexible mandates, subsidies and tariffs. ... We have to make Africa part of the solution. . . The challenges seem overwhelming: unclear property rights; limited access to fertilizer, quality seed and mechanized equipment; inadequate roads and storage facilities; lack of market institutions; and prices that encourage farmers to invest in their operations year after year. . ." -ST, 8/8/12

In the first paragraph, 'trust' has a different meaning, clearly, than it does for, say, Northumberlamb. And which legislature has declared 'comparative advantage' to be a law? it's simply an element of the crude so-called 'economics' to which we are increasingly subjected. Then in the second paragraph we have a lovely example of what that stalwart imperialist, Rudyard Kipling, described as the White Man's Burden: "we have to make Africa ...".

Perils of GE: Wind Blown Canola

In early September, gusts of wind up to 100km/h blew the swaths of canola from field to fencerow and into neighbouring fields in Alberta and Saskatchewan. (A swath is a windrow of a crop cut and raked before the crop is totally dry, partly to avoid shattering of the seed heads during cutting. Swaths can then be picked up by a combine with minimal grain loss.) Not only were the swaths picked up and blown across the countryside, but the seed pods shattered, scattering the seed even further.

Farmer Nettie Wiebe commented, "A farm chemicals dealer worried out loud to me yesterday that Roundup Ready, Liberty Link and Clearfield resistant canola, planted on neighbouring fields are now all mixed together along fence lines with seed scattered over land. What variety will these growers be able to plant next year? The technology that was sold to farmers as increasing efficiencies by simplifying chemical control may just have become considerably more complicated for many."

Such a serious contamination of organic and non-GE canola further strengthens the corporate hold on canola in Canada.

Department of Shameless Promotion

If this is your first issue of **The Ram's Horn**, we urge you to go to our website, *www.ramshorn.ca*, where you will find an archive of issues from 2007 on, and the Tables of Contents of earlier issues. There is a wealth of information and analysis, along with free downloads of some key documents of food system analysis and the texts of several of Brewster's books: *From Land to Mouth*: Understanding the Food System; *Farmageddon*: Food and the Culture of Biotechnology; and *Invisible Giant*: Cargill and its Transnational Strategies.

You are also invited to subscribe (see below).



Published by Brewster and Cathleen Kneen phone/fax: (613) 828-6047 email: brewster@ramshorn.ca www.ramshorn.ca Subscriptions:

Canada, \$25(regular), \$50 (patron) United States: US\$25, CDN \$27 outside North America: \$28 (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.

"Annual" subscription = 10 tissues; subscriptions expire with the issue number on the label.