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brahim Ouedraogo Many farmers in the developing world think of farmers in the North as prosperous, but that isn't the experience of Canadian farmers since the mid-1980s, is it?

No, it isn't. The 1960s and 1970s were pretty good for Canadian farmers. The crash in farm income came in 1985 concurrently with the rise of corporate concentration and the spread of massive input dependence. Canada adopted a model of high-output, high-tech, high-input, high-energyuse, high-cost farming. The US, Australia, EU, Japan, and some other parts of the world did likewise. Canada now spends about US\$4 billion per year on farm support payments. While some of this money goes to livestock producers, most goes to farmers growing grains, oilseeds, or other crops. These payments work out to roughly US\$50 per acre, on a gross basis. On top of these publiclyfunded payments, farmers also support their farm losses by working off-farm – one spouse or both take jobs in local towns or cities to earn money to support the farm. Farmers also have utilised increased debt as a way of keeping their farms afloat; debt today is triple its mid-1980s level. On a per-acre basis, debt now stands at US\$675 per acre - more than land sells for in many areas. In order to stave off insolvency ,as well as using subsidies, offfarm income and debt, farmers have also begun to draw down their equity - not replacing machinery or fixing buildings. And many have borrowed against their farms' intergenerational future - using for living expenses money that would otherwise be

used to finance the entry of the next generation of farmers.

What is happening in Canada is happening around the world. Those countries that similarly use the high-tech model – the US, EU, etc. – similarly dispense billions in subsidies. Big-acreage, big-input farming *goes with* big subsidies. The former seems to require the latter, contrary to rhetoric about "efficiency."

Getting back to Canada, on a rough, per-acre basis, crop producers here are probably losing about \$50 to \$100 on every acre – as reflected in subsidy and debt levels. Canada's high-input, high-tech, high-cost food production model is probably the least profitable in the world.

Peasant farmers using traditional, knowledge-intensive systems are much more profitable. While Canadian farmers are consistently losing money, it's certain that the same is not true in more traditional systems in Asia or Africa. Those systems must generate positive returns or they will very soon cease – there are no multi-billion-dollar subsidies available to paper over the losses. Speaking generally, a peasant using traditional methods – hoe, draft animal, or small tractor tillage, locally suited and diverse farm-saved seeds, dung or other naturally sourced fertility – is much more profitable than a Canadian or US farmer racing to cover ten thousand acres in a satellite guided, 400-horsepower tractor. The latter may live in greater



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luxury and privilege than the former, but that is not a reflection of the efficiency or profitability of the food production system each employs.

You say that Canadian farmers are consistently losing money, but we know that the whole industrial food system generates billions of dollars. Who is making the profits?

To understand industrial agriculture, think about our food production system as a chain, one stretching from oil fields at one end, to the drivethrough window at the other. At one end of the chain, oil is made into tractor fuel and natural gas is made into nitrogen fertiliser. This energy supply is the absolute basis of our food supply. In a fertiliser plant, a big natural gas pipe goes in one side and a big anhydrous ammonia (nitrogen fertiliser) pipe comes out the other. Fossil fuel is our primary source of fertility – we are, as some have pointed out, eating oil.

At the next link in the chain, still more petroleum is used, to make farm chemicals – weed and insect killers. Then comes a farm machinery link. Next comes the seed company link and a veterinary drug link. Then the bank link, where we get our operating capital. In the middle of this chain is the farmer. Past the farmer, we find grain company links, food processors and packers, retailers and restaurants.

Three things stand out about this chain: first, each link is dominated by a tiny number of companies. In Canada, four or five corporations supply farmers with their fuel, four make most of the fertiliser, two-and-a-half dominate machinery production. On the other side of the farmer, the numbers are the same: two companies dominate beef packing, four make most of the flour, a tiny number make cereals or crackers. Five companies control grocery retail. And a declining number dominate the restaurant link. The only exception to this observation that every link in the chain is dominated by a handful of companies is the farmer link – there, in Canada alone, we find over two hundred thousand family farm production units.

The second thing that stands out about the chain is the size of the players. Farmers get fuel from Exxon, Shell, and similar giants. Farmers get their fertiliser from multi-billion dollar companies, including a division of Cargill. They get their tractors and combines from global companies CNH and Deere. They get their seeds from Monsanto and Bayer. Downstream are Cargill, ADM, Tyson, Nestlé, Coca-Cola, Wal-Mart, and MacDonald's. The food production chain is populated by some

of the world's largest corporations. Again, the sole exception is the farm link. Compared to Cargill, Nestlé, or Wal-Mart, even the largest Canadian farms – monsters, covering tens of thousands of acres – are one-ten-thousandth the size of the dominant players. The *average* Canadian farm is one-millionth the size.

The first two things you recognise about the chain is that each link is dominated by a tiny number of firms and that the dominant firms are very large (in both cases, the sole exception is the farm link). The *third* thing you notice is that every link is characterised by massive profits ... again, however, with the sole exception of the farm link.

The year 2004 was one of the three worst in history for Canadian farmers in terms of the net incomes they were able to earn from the markets - losses were more than \$2 billion. But 2004 was the most profitable year to date for the agribusiness corporations that make up the rest of the agri-food chain. The vast majority of the firms posted record or near-record profits (see The Farm Crisis and Corporate Profits). When we look at the agri-food chain, we see record losses for family farmers at the same time as record profits for the transnationals that dominate the rest of the chain. Another way to characterise this data is this: profitability correlates directly with large size and low competition. At the link where many small firms compete vigorously - the farm link - profits are small, or non-existent. But where a tiny number of huge firms dominate - where competition is, thus, more restrained - profits are extremely large.

Canadian family farmers are going broke even as they form the central link in an agri-food chain awash in billions in profits. If the profits within that chain were distributed properly, if the market power of huge transnationals didn't allow them to snatch away profit dollars that formerly stayed on our family farms, there would be no farm income crisis. Profit distribution mirrors power – the powerful players in the chain reap profits and the less-powerful do not. Farmers are making too little because others are taking too much.

But corporate power is only half the story. The other half is a set of government policies, now globally proliferated, that have thrust family farmers into the arms of these corporations. These policies include "free trade", deregulation, export-maximisation, overdependence on purchased technology, production maximisation and the attendant input- and energy- and cost-maximisation, and so on. Governments

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are not passive: they aggressively drive the process of corporate empowerment and farmer disempowerment when they advance Structural Adjustment Programmes, global "free trade" deals such as the World Trade Organisation Agreement on Agriculture, and when governments restructure global commerce to benefit transnational entities at the expense of the local.

The corporate drive for power, profit, and expansion has been supercharged by governments' over-aggressive measures to remove all obstacles to those corporations. Not surprisingly, corporate wealth extraction - mostly from rural areas and from smaller producers - has accelerated. What we call the "farm crisis" is simply the predictable outcome of corporate instincts and government policies that combine to bleed farm and rural wealth.

Farmers in the South often complain about facing unfair competition from the North. For example, small farmers in Mexico say they are being ruined by cheap corn/maize dumped by US farmers. So isn't this the case?

Our corporate and government leaders are eager to marginalise analyses like the preceding. So, these leaders foster a discourse of distraction that seeks to pit one set of farmers against another. Canadian farmers have long heard, and many believed, that the cause of our farm income crisis was subsidies in the EU - "those farmers are getting rich on subsidies and it's hurting us." US farmers were similarly encouraged to look to the EU countryside, and not to the Monsanto balance sheet, to find the source of their hard times. Similarly, farmers in Mexico are encouraged to see US farmers and their government as the problem. But are US taxpayers (who fund the subsidies) or farmers (who receive them) the real winners in the global food game? Cui bono? Who benefits?

Sure, millions of tonnes of cheap food sloshing around the world is the immediate cause of a lot of economic pain and dislocation for farmers - cheap corn and tortillas pouring into Mexico cause economic hardship. But behind that cause is a more important, underlying cause. A loss by a Mexican farmer is not a gain for the US farmer - that farmer requires tens of thousands of dollars in subsidies simply to continue. No, the losses of Mexican and American farmers collectively are the gains of the transnational agribusiness giants who have positioned themselves (with governments as their willing accomplices) to be the primary beneficiaries of the global food production system.

What is your position on GMOs? Aren't a lot of farmers growing GMOs in areas where the NFU is active?

Genetically modified (GM) seeds are a key part of the maximum-production, max-technology, maxinput, max-energy-use, max-cost system outlined above. Canadian net farm income over the past 20 years has been falling. Today, it stands at its lowest level ever. Were it not for massive taxpayer-funded support programmes, off-farm income, access to credit, etc., farming in Canada would have to cease. The transnationals that dominate the rest of the chain - energy, chemicals, seeds, processing, retailing - have managed to set themselves up to reap 110 per cent of the profits that would normally remain on our farms. Let me explain it this way. The price of wheat is now about \$5. Let's say the cost of production is \$7. If the selling price were to rise to \$7, the input suppliers would use their market power to increase input prices to capture all the profit from that \$7 wheat. Thus, the cost of production would rise to \$8 or \$9. If the world price rose to those levels, we'd see another round of input price increases. This is not true for all price levels – Monsanto et al. could not raise input prices high enough to capture all the profits from, say, \$20 wheat. But the situation holds for nearly every price level we can reasonably expect. There is a structural aspect to the current system wherein it becomes nearly impossible for farmers to meet costs of production because companies can use market power to ensure that costs rise with prices. So, as technology use has gone up, profitability has gone down.

The preceding paragraph seems at odds with the reality that many, many farmers are adopting GM seeds. Let's look at that. First, the data clearly shows that GM seeds do not increase yields or profitability (see, for instance, GM Crops: Not Needed on the Island). If there is any correlation between farmers' expenditures on high-tech seeds and profitability (net farm income), it is an inverse one – over the past 20 years, as farmers' seed purchases have tripled their incomes have crashed. GM seeds do not increase profitability. They do not increase yield. They do not decrease costs.

So why do farmers use them? GM seeds allow you to farm massive acreage. Direct seeding and rapid application of weed-control chemicals allows farmers to cover thousands of acres where previously they could only cover hundreds. So one of the primary effects of GM seeds and the type of farming they facilitate is to reduce dramatically the

number of farmers. And farmers have to increase their acreage to survive. As input suppliers raise the price of their products such that per-acre profits drop from \$100 to \$50 to \$5, these same companies, conveniently, provide the technology to allow individual farmers to farm 10 or 20 times the acreage. Per-acre profit drops. Per-farmer profit can be maintained only by farming many more acres. And even then, profitability is elusive, witness the massive subsidies, rising debt, and the growing necessity of off-farm income, mentioned above.

It is clear to us in GRAIN that industrial farming causes a lot of problems – it destroys biodiversity, ravages rural communities, contributes to greenhouse gases, depletes soil, and so on. What do you believe will be the future of industrial farming?

Our global food system is unsustainable. In seven of the past eight years, the world consumed more food than it produced. We are in the fastest foodsupply drawdown in a generation. Most global fisheries have collapsed or will do so in the next 30 years. The primary feedstock for our fertility, natural gas, has peaked in production in North America and it will peak worldwide in about a generation. We are adding the equivalent of a North American population to the world every six years, on a static cropland base. We are trying to proliferate throughout the world our meat-based diet, one that inefficiently turns pounds of plant protein into ounces of meat protein. And we're intent on diverting ever-larger portions of our food supply into fuelling our cars. If you trace current trends into the future, you quickly see that that future, the one seen by agribusiness and our elected leaders, is impossible.

Solutions? Solutions to all the problems described above are close at hand. They are mutually reinforcing, and, to a significant extent, they are the same solutions. Solving problems for Mexican corn producers, problems of greenhouse gas emissions from food production, and the farm income crisis, all those problems have a set of solutions that share a common pivot.

We need to re-imagine our food supply, not as source of profit, but as a source of nutrition and sustenance. We have to re-link it to place, to water and soil and kitchen table and to traditional knowledge. These concepts may sound alien, fuzzy-headed to Nestle Board members or World Bankers, but such concepts are the root and ground of sustainability. The starting point is to see limits as a form of wisdom and to end the headlong race for increased production. The starting point is to re-

localise production, to reconnect circular loops of fertility, knowledge, seeds, labour, and community that have been severed by our max-production, max-input, max-cost, max-profit system. We need to remember that food production is biology, not just economics. And while economics can bend biology for a while, examples such as the cod stock collapse show that biology eventually trumps.

Solutions are already visible, bursting out like plants through cracks. Farm families across Canada are marketing locally, reducing and optimising energy and input use, producing organically, marketing into "non-conventional" channels, and pursuing sustainability. On the other side, non-farming Canadians are shopping at farmers' markets, seeking out local flavours and local suppliers, eating "in season", thinking about food miles, looking into a 100-mile diet, and asking questions about how and where their families' food was produced. Citizens are pushing ahead, but politicians are lagging behind. Our political leaders are spending too much time listening to supermarket, food processor, and agribusiness lobbyists.

The solutions to problems of farmer profitability and food-system sustainability are, like most solutions, part personal and part political. We need changes in our parliaments, in our boardrooms, and at our tables. Farmers and non-farmers need to set up mutually reinforcing systems of supply and demand – creating both push and pull for good food. And we need to work collectively, politically, and publicly to dethrone a too cosy cabal of agribizni-crats in Ottawa, Washington, Chicago, Brussels, and elsewhere.

Food is the most intimate of commodities. It enters into us and becomes us. Its production, preparation, and enjoyment define large parts of our civilisation and society, and our family homes. It is at the same time both the largest and the smallest parts of our lives.

Food is central to our economy. Its production affects our environment. Food is root and core. If we get our food policies wrong, it is very, very hard to get the rest of our policies right. And we have got those food policies badly, badly wrong. It is time for humility, to cease striving to "feed the world," to cease claiming we have "the most efficient food production system in the world." It is time to stop thinking we can re-engineer life. It is time to begin relearning, from land and water, from traditional producers, from farm families. It is time to restore some balance.



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