Force Fed –
how our newly industrialised food system leads to environmental and human degradation

***Felicity Lawrence**, Guardian journalist and author of 'Not on the Label', delivered the 2004 Rachel Carson Memorial Lecture at the Museum of London on 3 December. This event also marked the annual 'Day of No Pesticide Use' on the 20th anniversary of the Bhopal gas leak from the Union Carbide pesticide plant in India. This day is held in memory of victims of Bhopal and other sufferers from pesticide exposure.*

It is a great honour to be asked to give the Rachel Carson Memorial Lecture tonight. I have a clear memory of reading her book *Silent Spring* for the first time and knowing when I put it down that I would never be able to think of the world in the same way again. I'm sure for many people here it marked a similar turning point. It was the book that put ecology on the political map.

It asked awkward questions of the scientific establishment. It explained to me why I had to be engaged with subjects that until then I had thought the preserve of experts, and put aside as too difficult, too remote. It was a passionate plea for all of us to make connections. But it was with considerable trepidation that I accepted the invitation.

I am neither a scientist, nor an economist, nor an academic. Many of you are specialists in the field I am going to talk about. I am just a journalist – one of that most reviled tribe of 21st century creatures. We fall somewhere above government politicians, estate agents and pond life on the list of people the public trust, but only just. My job is to observe. If I can honour a debt to Carson at all it will be by asking a few awkward questions about our food today. Unlike her, I may have to leave them for others, perhaps for you, to answer.

But I also hope I can make some connections that have not been made before, connections that seem obvious once articulated but from which we as ordinary consumers have become insulated.

Food ought to be one of life's great pleasures. For most people in the West it is more plentiful and varied than ever before and yet we suffer from a pervasive anxiety about what we eat. It is an anxiety that I think is justified.

Globalised and industrialised food

Our food has been industrialised and globalised in less than a generation with devastating consequences for the environment, for social justice and for our individual health. The money made from food has shifted dramatically from those at the bottom of the chain, the farmers and producers, to those at the top, the big transnational food processors, manufacturers and retailers who now dominate and control our food as never before. As barriers to global trade have been removed, inequalities in wealth have grown not diminished. Most of us in the West now depend on processed food that is routinely adulterated.

I hope to show that these different forms of crisis are intricately related. Food that is produced in a way that degrades the environment is invariably the product of human degradation too. Food grown without a thought for judicious use of the world's resources is nearly always food that is nutritionally depleted too; food industrially processed without recognition of labour rights or equitable distribution is often food stripped of its goodness. The way we eat today is not just ecologically unsustainable, but also morally, socially and even biologically unsustainable.

To understand why we need to do what Carson did all those years ago, track back, strip away the insulation created by clever marketing, sophisticated packaging, new cultures of consumption and corporate interests, to see how our food is really made. To do that I want to take you on a tour of some of the hidden processes behind things you and I eat everyday.

In my book *Not on the label* I started with salad. It could have been any number of other foods – essentially the story of modern production is the same, whether you are looking at strawberries or chickens, ready meals or bananas, or in this pre-Christmas period, chocolates and turkey. But the washed and ready to eat bags of salad seemed suitably symbolic.

Such packages of convenience did not exist before 1992. If you wanted a salad when I was young, you had to wash the slugs and mud out yourself. So they appear to represent great progress, particularly for the increasing numbers of women who go out to work but still have to provide the family meals.

They are also a fine example of that very recent phenomenon: a perpetual global summer. We can eat them anytime, not just in an English summer, but with our ham and balsamic vinegar on Boxing Day too. They seem cosmopolitan, so much more sophisticated than anything we had

even just a few years ago.

And like so much of our fresh food today, they have achieved cosmetic perfection. Each leaf is uniform, unblemished, small but perfectly formed. A miracle of modern technology, in fact.

Like most people I imagine, I had never really thought about how these bags of salad reached me, any more than I questioned why chicken breasts were now so cheap, or why strawberries were available at Christmas, or how prawns had got so large or why all processed foods seem to contain derivatives of corn and soya.

Environmentally unsustainable

The type of production that has made these things newly available is ecologically unsustainable – it involves the intense use of agrochemicals, the extravagant use of limited water resources, a profligate degree of waste, mountainous consumption of packaging and a system of transport and distribution that makes a major contribution to climate change.

Let's look first at the agrochemical use. Most salads today are the product of intensive monoculture with extended seasons of cropping. Cosmetic perfection in these conditions can only be achieved with a little high tech help. This sort of agriculture allows the build up of pests and diseases in the soil. There's a sort of fungus called *Sclerotina* for example that can flare up suddenly and rip through a field of lettuce so that you lose half your crop in a matter of days. Most pests and diseases are quite specific to particular crops, and their lifecycles can be broken by growing different crops on the same spot, in other words by the traditional rotations that farmers used to use as their insurance policy against devastating disease. Today the farmers' insurance policy is to apply chemicals.

Most salad crops are sprayed every week during their two and a half to three month growing period except for the last two weeks, with a fungicide and insecticide, as well as fed with artificial fertilisers. The UK government's Central Science Laboratory records the overall usage of pesticides in this country. Its most up to date figures, (1999) show that outdoor salad crops received on average four insecticide sprays, two fungicide applications and two herbicide doses. Soil sterilants were also heavily used to control weeds and the recurring problems with fungi. Lettuces grown indoors were treated with even more fungicides. In fact 11-12 doses of agrochemicals for each crop is typical.

The UK government's Central Science Laboratory records the overall usage of pesticides in this country. Its most up to date figures, (1999) show that outdoor salad crops received on average four insecticide sprays, two fungicide applications and two herbicide doses.

No surprise then that government tests for residues in salads on sale in our shops reflect this intense use of agrochemicals. The Pesticide Residues Committee monitoring report in 2002 found that half the lettuces bought from major British supermarkets contained residues and one third contained residues of more than one pesticide.

Salad leaves are in fact particularly likely to contain pesticide residues. Lettuce appears on the 'persistent offenders list for pesticide residues' compiled by the Consumers' Association from government data. But the problem is not confined to salads. The list also includes other products of intense large scale industrial production: apples, celery, grapes, fresh salmon, pears, peaches and nectarines, strawberries and wholemeal flour.

Because lettuce has been such a persistent offender, the Pesticides Safety Directorate has been conducting special tests on it. Its survey for 2001/2 showed nearly one in five lettuces exceeded the statutory maximum residue levels and 6% contained pesticides not approved for use on the crops. The particular pesticides found in this survey were an organophosphate, one of the group of chemicals under review because of concern about the way they work on the nervous system, and carbamates, which work in a similar way to organophosphates. Other residues found in government tests have included pesticides that are endocrine disruptors, the class of chemicals that interfere with the delicate balance of the hormone system that regulates growth and development.

Because lettuces grow first from a few outer leaves, with the hearts developing later, the outer leaves are where the nitrate fertilisers and pesticides are most concentrated. Go to a field in East Anglia or Sussex where the lettuce has just been harvested and you will find a carpet of green a couple of feet thick remaining. Most of the outer leaves are cut off and discarded in the field, perhaps as much as a third of the crop being abandoned in this way. These leaves will appear pristine and certainly look good enough to eat. But they are not. Removing the most contaminated outer leaves is necessary to keep the crops within safe residue limits.

I met a quality control supervisor at an English salad packing factory recently who told me that one of the most important instructions he gave was, 'take off more leaves'. His factory used a lot of migrant workers and he knew how to say 'take off more leaves' in a dozen languages. When you next pay a premium price for a 'heart of lettuce' in the supermarket, you might want to question whether it is your convenience or someone else's that drives this sort of production.

The official view of expert government committees remains that residues occur in

Pesticide canisters pile up on a dump near La Mojonera in southern Spain. The plastic greenhouses can be seen extending into the distance.
Photo: Stuart Fanklin

our food at such low levels, typically at parts per million, that they do not present a risk to health. A growing minority of experts however disagree. I am not going to dwell on the health risks posed by pesticide residues tonight. Last year's Rachel Carson lecture, given by American biologist Sandra Steingraber was an eloquent and persuasive account of how even the smallest exposures to certain chemicals or mixtures of chemicals, in parts per billion, at vulnerable times such as a foetus in the womb, at puberty or as our immune systems age and become less efficient, may disrupt the extraordinarily fine tuning of the endocrine system and lay down the potential for cancers or other malformations in development at a later date. Dr Vyvyan Howard, leading foetal toxicopathologist at Liverpool University and member of the government's advisory committee on pesticides has already asked those Carson type awkward questions about how far the astonishing 50% increase in incidence of cancers in the UK in the last 50 years is linked to our exposure to a cocktail of chemicals unknown to our grandparents. Others have a better grasp of the science than I do.

But it is worth asking why. Why do our farmers – most of whom are I believe generally honest and well intentioned – use chemicals on our salad that are not even legally permitted for use? Why do they insist on throwing away over a third of their crops?

They are just as caught up in this industrialised, globalised food system as we are. Despite vast subsidies in the West, they are going out of business in unprecedented numbers. Only the largest can survive. They have to operate within a market dominated by a handful of powerful retailers and food manufacturers, who decide what will be grown and dictate exactly how it will look and how long it must last.

Seed companies develop new hybrids to meet the supermarkets' constant requirements for innovation or to suit their production and distribution processes – a bland leaf with a red stem perhaps, a curly one but not so bitter, something that lasts much longer on the shelf. If you are a farmer and want to supply the supermarkets, that is what you plant. The seeds cost a lot. They are patented. If a lettuce turns up at a supermarket depot with an aphid, a small blemish, or heaven forbid a slug still on it, your whole batch may be rejected. The supermarket specification has become a tyranny. For every ten tonnes of carrots harvested, only three tonnes pass muster. In Kenya, some 35% of the bean crop grown for export is thrown away because it does not meet the supermarket specification which says that beans must be straight, must be of an exact diameter and length, as well as cosmetically perfect. And this in a country where people routinely go hungry.

If you are a farmer, once you have invested in those seeds you cannot afford to take risks. The seed companies give you a whole agrochemical recipe to go with them, so of course you follow it. Many seeds now come with a seed dressing of pesticides already applied, a major contributor to the increase in pesticide use.

The chemical process does not end there. Once harvested most conventionally produced salad is washed at factories in a solution of chlorine typically 20 times the concentration of that in the average swimming pool. This is supposed to disinfect out the bugs – actually it doesn't entirely – but it leaves chlorinated compounds on the surface of the lettuce. Some chlorinated compounds are known to be cancer causing, but there has been remarkably little research on those left on food treated in this way. The process seems to have just grown up in an ad hoc sort of way, as supermarkets and large scale farmers decided they needed to do something about the growing number of cases of food poisoning being traced back to ready-washed salads. (The use of chlorine is incidentally banned in organic production.)

The maze of plastic sheeting is hard to navigate, except by following the billboards erected by the agrochemicals giants that promote their chemical fixes. *Photo: Felicity Lawrence*

Today huge patches of white plastic rise like blisters around Naivasha's waters. These are the greenhouses and tunnels of the intensive farms.

The Spanish connection

The supermarkets have created a world in which no one is bound by the seasons. They buy globally depending on where is cheapest to guarantee a year-round uniform supply.

Much of our winter salad vegetables come from Spain these days. The agricultural strip where they are grown that stretches right along the southern coast, just behind the holiday resorts of the Costa del Sol and the Costa Brava, is not what most of us would recognise as farming country. This is an industrial wasteland of food production, in which there are few trees and still less greenery. It is a maze of plastic sheeting that is hard to navigate, except by following the billboards erected by the agrochemicals giants that promote their chemical fixes heavily to farmers here.

The new intensive agriculture that has sprung up here to serve northern Europe with summer vegetables through its winter months has an extravagant thirst. This is the driest part of Europe and water is already at a crisis point. The ground water has become polluted with pesticides. The water table has been infiltrated by the sea as a result of over-extraction. Excessive use of chemical fertilisers has led to nitrate levels that are in some places ten times higher than World Health Organisation safety limits.

The nitrate and water problem is not confined to Spain. Intensive farming in England has also polluted groundwater, damaging the ecology of streams, rivers and lakes and ruining costal waters. Some 55% of the country has recently been designated as 'nitrate vulnerable zones' and the figure would have been much higher but for intense lobbying by the farmers union. Water companies estimate that over the next five years UK consumers will have to pay £25 a year each on their water bills to cover the cost of removing nitrates from drinking water. In the past utilities have diluted drinking water with high concentrations of nitrates with water that has lower levels to meet safety limits, but now they are finding it increasingly difficult to find uncontaminated supplies.

A closer look at Africa

You will find the same story in Africa where intensive horticulture has expanded dramatically in the last decade to produce top quality food for export such as green beans.

Lake Naivasha, in the Great Rift Valley is one of only two of Kenya's fresh water

lakes. Originally Masai grazing land, it was one of the first areas settled by white farmers, and was immortalised by the Happy Valley set as one of the most beautiful places in the world. Today huge patches of white plastic rise like blisters around Naivasha's waters. These are the greenhouses and tunnels of the intensive farms. The lake is shrinking and its southern shores are blighted with algal bloom. Although the big international firms dispute it, local environmentalists blame the water problems here as in other parts of Kenya on the country's growing horticultural activities – on excessive abstraction of water for the crops and on pollution from pesticide and fertiliser run-off, and on deforestation caused by migrant workers on the industrial scale farms cutting wood for cooking fuel. Some predict that without a radical change in practices, the area will not be suitable for farming in 15 years. Most of the productive land where people were growing food for local consumption has been turned over to land growing food for export in this way. In southern Spain, the government's head of agri-environment told me intense horticulture would have to move to virgin territory in northern Africa – it already has begun to do so – as the land and water become polluted and exhausted.

The blighted southern shores of Lake Naivasha, once the playground of the colonial 'Happy Valley' set and now surrounded by intensive farms.
Photo: David Levene

Packaging and transport

Then there's the packaging – new figures published just last month by the Department for Environment Food and Rural Affairs (DEFRA) reveal that 40% of household rubbish that ends up in landfill is packaging from supermarkets. We are rapidly running out of holes in the ground to dump all this rubbish. We never used to need so much packaging and it is the requirements of the supermarkets that have driven it, not our convenience. Fruit must be bagged to acquire a barcode for stock control, vegetables have to be packaged to survive the hundreds of miles they are trucked in centralised supermarket distribution systems.

Transporting out-of-season food around the world has a devastating environmental impact too.

I am indebted to Dr Andy Jones for a calculation which explains succinctly what's wrong with it. It takes 127 calories in the form of fuel energy to import just one calorie of lettuce from California to the UK. Flying food around the world involves the extravagant use of finite resources; it depends on that most politically charged of substances, crude oil. Our food chain currently contributes between 12% (according to conservative government estimates) and possibly as much as 22% of the UK's total greenhouse gas emissions.

Thirty-five to forty percent of the lorries on our motorways are involved in the production or distribution of food – 20 years ago most of them simply weren't there. Our roads are not built for them – although this unsustainable system of centralised supermarket distribution is driving much of our transport policy. Next time you spend hours stuck in a traffic jam of juggernauts on the M6 or the M25 you might want to think about how convenient that pack of salad really is.

It takes 127 calories in the form of fuel energy to import just one calorie of lettuce from California to the UK.

It is not just fresh food that makes this contribution to climate change. The ingredients of a ready meal may have come from a dozen different places. Thousands of tonnes of chicken are exported to Holland each year only for us to import a similar quantity of chicken. But salad neatly illustrates the absurdity of the system. In the summer of 2003 the record-breaking hot summer and drought, largely attributed to the effect of man-induced global warming, ruined much of the British salad crop. So farmers imported lettuce from California to make up the shortfall, by that most polluting form of transport air freight, thus contributing to yet more global warming. Many of them did so at a loss, for they were contractually obliged to do so or suffer financial penalties or loss of future orders from the retailers.

Morally and socially unsustainable

These sorts of foods are then clearly environmentally unsustainable, but they are also morally and socially unsustainable.

Their production depends on the use of large armies of migrant workers. Without their cheap flexible labour the system would collapse. If they were paid decent wages, housed in reasonable conditions, and treated fairly while they cut and trimmed our chicken, packed our tomatoes, topped and tailed our beans or washed our leaves, we could almost certainly not afford their services. So they live in large numbers in squalor and all too often fear all round the UK and right across Europe.

Southern Spain's economic miracle has only been possible because large numbers of migrants, most from North and Francophone West Africa, work the hothouses and packing factories there. In affluent modern Europe, they live in conditions reminiscent of the 19th century. Most of them sleep in makeshift cardboard shelters or in holes in the ground, on the wasteland and rubbish dumps between the hothouses. According to official estimates some 70,000 migrants live this way, within a stone's throw of the package holiday resorts of the Mediterranean. Over half of them have no access to drinking water or sanitation. Yet the valuable crops they work on have a constant supply of clean water from fat, sealed irrigation pipes that run alongside the settlements.

I interviewed dozens of workers there last year and was struck by their extraordinary dignity. Whenever I turned up, a stranger and a foreigner, they would offer me a share of what little food they had – they understood what we have largely forgotten, that it is in eating together that we

are bound together and socialised.

Most of them got up at dawn to queue by the road for work. The pecking orders were as brutal as those of the turn-of-the-century American docks. White eastern Europeans would be chosen first by the farmers who came to collect casual workers whenever they needed them, then Moroccans and black Africans last, if at all. Each morning, there would be many left standing with no prospect of money and therefore no hope of eating that day.

Abdel Majid was typical of those I met. He was struggling to survive in the ruins of an abandoned farmhouse along with 25 other Moroccans. He shared his cardboard room with a young man who was making bread when I arrived. His mother had taught him how before he chanced his life in the smuggler's boats. Many die each year trying to cross over the straits from North Africa. They insisted I drink tea with them. They worked long hours for very low pay whenever they were lucky enough to be chosen for work, but often there was nothing and they went hungry. Abdel was anxious for me to know they were decent people who did not live like this at home. He said he felt like a slave, and although he lived like a rat among the rubbish, he kept telling himself that whatever anyone else thought that he was a man.

Migrant labour in the UK – an eye-opener

In the UK, the majority of food factories and packhouses supplying our supermarkets also depend on migrant labour. New industrialised methods of production and distribution that created the need. Just as in the Industrial Revolution advances in technology and transport created a new class of unprotected urbanised worker, so today great leaps forward in information technology and logistics have changed the nature of the workforce. The system that is so environmentally unsustainable has also reduced the people who work for it to the status of degraded commodity.

It works like this: Supermarkets keep almost nothing in stock, instead changing their orders to producers by the hour depending on what their barcode scanning tells them they have sold. In this way they can eliminate nearly all financial risk from their end of the chain. The risk is passed down the line, to the farmers, processors and manufacturers who have to increase or decrease their production at short notice, and who therefore want workers they can turn on and off like a tap. The supermarkets are also using their buying power to drive prices down relentlessly. They use the threat of sourcing abroad where it is cheaper – from countries where labour conditions are Dickensian – if British farmers and processors do not oblige. So the farmers and factory owners pass the risk on down the line again to the workers at the bottom. They subcontract their labour to agencies or gangmasters, so that legal responsibility for employment is devolved and pay as little as they can.

In doing so they outsource their illegality, for the vast majority of agencies supplying the food sector in the UK with labour now appear to be operating in a way that blatantly breaks the law. Abuse of workers is commonplace. Labour agencies that want to be honest say it has now become impossible to compete. Illegal activity ranges from breaches of health and safety and housing legislation to sophisticated VAT, tax and national insurance fraud and people trafficking. The latter is often accompanied by drug running and prostitution, although my research suggests gangmasters find the labour provision the most profitable of these.

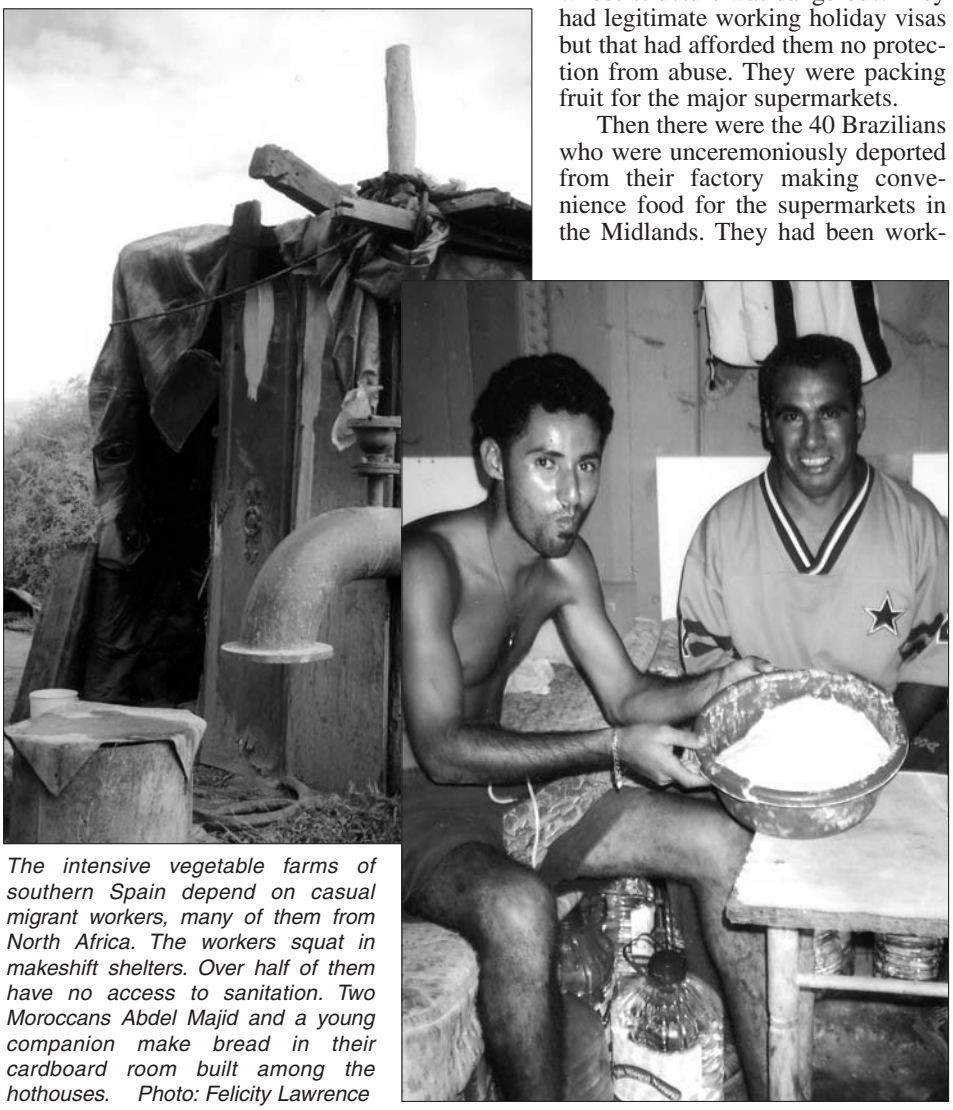
A recent survey by the Ethical Trading Initiative of leading suppliers to the supermarkets found every single one of them was using labour from gangmasters who were acting illegally.

A recent survey by the Ethical Trading Initiative of leading suppliers to the supermarkets found every single one of them was using labour from gangmasters who were acting illegally. In order to compete globally, we have imported the conditions of countries where labour rights are virtually non-existent.

Over the last two years I have interviewed dozens of workers of many nationalities around Britain.

The experience of a large group of young South African men I met in Lincolnshire was typical. They said they were debt bonded, having been given loans to travel here by an agency which was then charging them extortionate interest rates, so that even though they worked long hours, sometimes seven days a week, sometimes even back to back 12-hour shifts in different factories without overtime payments, they feared they would never pay back the debt. They were paid less than the minimum wage and the gangmaster was not paying tax and insurance. They had been threatened with legal action if they left their jobs, and they were physically afraid. They were living in utter squalor in a house whose structure was dangerous. They had legitimate working holiday visas but that had afforded them no protection from abuse. They were packing fruit for the major supermarkets.

Then there were the 40 Brazilians who were unceremoniously deported from their factory making convenience food for the supermarkets in the Midlands. They had been work-



The intensive vegetable farms of southern Spain depend on casual migrant workers, many of them from North Africa. The workers squat in makeshift shelters. Over half of them have no access to sanitation. Two Moroccans Abdel Majid and a young companion make bread in their cardboard room built among the hothouses. Photo: Felicity Lawrence

ing hard here for over a year and were owed two weeks' wages, but they were using fake documents bought from ID fraudsters in the UK and had no right to be here. They thought they had been shopped to immigration by their own gangmaster, since none of the other irregular workers at the same factory had been picked up on the immigration raid. This brutal method of keeping turnover high, so that gangmasters can charge new workers to be trafficked, was a common theme among those I met. So too was the use of violence to keep workers in order. The Brazilians' story of exploitation followed the usual pattern. They had been paid the minimum wage but housed 17 to a two-bedroomed flat for which they were charged extortionate rents as a way of clawing back their pay. Tax and insurance had been deducted from their wages but never received by the Inland Revenue.

As so often it was the workers rather than the criminal gangmasters or the factories where they worked who received the punishment. And it is the migrant workers, rather than those who turn a blind eye to abuses and employ them, who suffer the resentment that is manifesting itself in a rise of the far right across Europe.

A key factor in migration from developing countries has been the collapse of the value of agricultural commodities. Nearly half the world's population depends on income from agriculture for its livelihood. If they cannot make enough to survive they face the choice of hunger or migration. Industrialised globalised food production has created the need for the migrant workforce but also been the driver as multinational companies have captured the value in the food chain and as distorting subsidies to rich, large scale producers in the West have undercut poor farmers in developing countries.

Coffee and sugar highlighted

The example of coffee and sugar encapsulate the trends. Ten years ago coffee producing countries kept 30% of the retail value of the coffee we buy. Today they keep just 10% of it. When we buy a jar of instant coffee in the shops we pay 7,000% more for it than the farmer got for it. A handful of giant manufacturers take the vast majority of the money and have been able to do so because they control the market. Just five large companies control over half of the world's coffee beans.

One way developing countries could increase their share of the final value of coffee and other commodities sold would be to do more of the processing themselves. But breaking in to these so-called added value markets is almost impossible. Once processed or manufactured, agricultural goods generally face punitive tariffs when imported to the West. Moreover the top brands are so powerful and have done their marketing deals and discounts with the major supermarkets so that between them they control the distribution chains.

An African sugar farmer could in theory sell his produce to the West at a competitive price since his costs are much lower than those of the big farmers in the West. The price of sugar within the EU has often been three times higher than that prevailing on world markets and the cost of production 80% higher. But to prevent surpluses in Europe depressing the price of sugar for its farmers, the EU encourages their export by giving exporters refunds on the difference between the higher EU price and the world price, so enabling farmers of one of Britain's most profitable crops to dump their excess at below the cost of production in developing countries.

While developing countries have been hit by the crisis of inequitable distribution of profits, the hardest, middle-income economies are also feeling the squeeze from concentrations in power in the food sector. I visited Poland just before it acceded to the European Union in May this year. A third of Poland's population still lives on the land. Its agriculture has used minimal agrochemicals in the past because the country has never been able to afford them. But rapid rationalisation and vertical integration of food production is now expected to take place as multinational manufacturers and retailers move in. EU subsidies will be paid to Polish farmers at only a quarter of the rate paid to those in old member countries. Only large, intensive producers are expected to survive. In fact the EC predicts that half the country's farmers will be forced out of business over the next few years. Many will migrate for work. Fear has already driven many into the hands of the far right. When I was there, the ultra nationalist party Self Defence, which had built its campaign on saving peasant farmers, was leading in the opinion polls.

Ten years ago coffee producing countries kept 30% of the retail value of the coffee we buy. Today they keep just 10% of it. When we buy a jar of instant coffee in the shops we pay 7,000% more for it than the farmer got for it.

So environmentally unsustainable and morally unsustainable. We consumers surely only carry on with this unthinkingly because it gives us what we want, a supply of cheap good food.

Biologically unsustainable

And yet, the evidence is that this system of production is have a devastating impact on our individual health too. Our industrialised diet is now known to be a major contributor to disease.

Agricultural subsidies have done little to prevent the collapse of average farm incomes in developed countries, but what they have done is deliver cheap ingredients to the food-manufacturing sector while also giving money to the handful of global giants that dominate trading in and processing of subsidised commodities. Corn, sugar, soya, palm and rapeseed happen to be among the most heavily subsidised crops in the world. Intensive production of these commodities has seen some of the worst examples of environmental destruction and loss of biodiversity around the world. But thanks to these distortions in the market, they, and their derivatives, the hardened fats and processed sweeteners and constipating starches, are what we get to eat. Look at the label on any ready meal or processed food and you will see them there. Additives will be there with them to disguise their presence and to mask the absence of real, more expensive fresh ingredients.

The WHO has agreed that 60% of deaths around the world are 'clearly related to changes in dietary patterns and increased consumption of fatty, salty and sugary foods. About a third of the risk of cardiovascular disease is related to unbalanced nutrition. 30-40% of cancers could be prevented through better diet', WHO says.

One third of children in the UK are now obese or overweight. For the first time in generations, experts are warning, our children will face the prospect of dying at a younger age than us.

As industrialised diets are adopted in developing countries, the same patterns of disease emerge. The dramatic rise in consumption of fats and sugars in China and India that has crept in with industrialisation and urbanisation is mirrored by an equally dramatic and alarming rise in cardiovascular disease, obesity, diabetes and cancer in those countries.

Even the fresh fruits and vegetables that play such a vital role in the prevention of disease are nutritionally depleted too. Food that is chilled and transported miles may look fresh but it suffers a loss of vital vitamins. Evidence is emerging that fresh foods grown in intensively farmed land also suffers a loss of vital minerals.

Going back to that bag of salad, for example, new research by the Rome Institute of Food and Nutrition has found that several antioxidant nutrients, that protect against ageing, degenerative disease and cancer such as vitamin C, vitamin E, polyphenols and other micronutrients seemed to be lost in the supermarket packaging processes that have made ready-to-eat leaves possible.

Look again at that bag of salad and what do you see? Pesticide spraying, semi-slave labour, food miles, global warming, waste, unfair trade. And all that to lose the very thing you thought you were buying it for, its goodness. Do you still want to eat this way?