

**CAN BRITAIN FEED ITSELF?  
SHOULD BRITAIN FEED ITSELF?**

*Colin Tudge of LandShare argues that the answer to both of these unfashionable questions is a resounding “Yes!” – and we should start the ball rolling immediately*

Could Britain grow enough food to feed its own people? Should we even try to do so – or rely, as now, on imports? Could other countries also seek to be self-reliant – and should they? If Britain and other countries did embark on a course of agricultural self-reliance, what other changes would result – to landscapes, economies, and ways of life? What kind of changes would be necessary, to enable self-reliance to come about?

A few years ago such questions would not even have been allowed on to the agenda – or not, at least, on to the agenda of the world’s most powerful governments and industries. The prevailing philosophy had it that only free trade and the global market could meet the growing “demands” of humanity. Applied to food and agriculture, this implied that every country should pursue David Ricardo’s principle of “comparative advantage” – treat all its crops as commodities, to be sold on to the world market. In turn this meant that agriculture in general should be monocultural – focused on those few crops and animals that in any one country could be raised at least cost and sold for the greatest return.

Self-reliance implies the precise opposite. It requires that each country should contrive to raise *all* the crops and livestock that its people need. Self-reliance does not mean total self-sufficiency and isolationism – the food trade will always be important. But individual countries ideally should import only those crops that in effect are luxuries, and export only what is surplus to home requirements. All trade should of course be fair, bringing real benefits to the producer countries and in particular to the producers. No crop should be traded between regions unless its value is high relative to the environmental costs of its production and transport – so it is reasonable and in principle highly desirable for Britain to import tea, coffee, and bananas. But it is highly undesirable to import French beans from Kenya by jumbo jet to sell in Solihull and Crouch End, or for Europe as a whole to import soya that is grown at the expense of the Amazonian rainforest or the Cerrado, just to bolster its pigs and cattle.

But to achieve self-reliance we need a quite different approach to agriculture and all that goes with it. Self-reliance requires not monoculture but polyculture. This in turn implies complexity of husbandry, which seems to require labour-intensiveness, which in turn requires a serious shift in economic policy and social structure. Clearly, then, to those steeped in the economic lore of the free market, the idea of agricultural self-reliance has been almost literally unthinkable.

But the events of the past few months have come as a terrible jolt. It has been obvious for many years that present-day, industrialized agriculture and monoculture is not catering for all of humanity -- one in seven people are chronically undernourished while another one sixth are overfed -- but the standard response has been to offer more of the same. Now it's clear that more of the same is not an option. We are reaching "peak oil" -- meaning that the oilfields just won't be able to keep up with demand. Fresh water will pose even greater problems. Human numbers continue to grow from the present 6.5 billion to an estimated nine-billions-plus by 2050. Hanging over all is the growing reality of global warming, exacerbated in several ways by the carbon-profligacy of industrial agriculture. Then, in 2008, the money market itself, on which all else now depends, began to look extremely rocky. It is not obvious that the present "recession" will ever end; whether we can ever return to the norms of the late 20<sup>th</sup> century, or whether it is desirable to do so.

In short, it seems hazardous indeed to entrust the world's food supply, and all that is affected by it, to technologies that do not seem sustainable, and to an economy that for many reasons need re-thinking. Suddenly, more and more people -- including people in positions of influence -- are beginning to suspect that we need to disengage our agriculture from the vagaries of the world market, and to develop agricultural systems that do not cause so much collateral damage. In January 2009 Britain's Secretary of State for Environment, Food, and Rural Affairs told the Oxford Farming Conference that Britain should strive to produce as much of its own food as possible. The question that a few years ago seemed simply to be beyond the pale is now perceived to be urgent.

What are the realities? Three months ahead of the Oxford Farming Conference, also in Oxford, a group of government representatives, academics, farmers and general thinkers met to discuss this very issue \*\*. I played some modest role in helping to organize the meeting and this is my personal impression of it.

## *Can Britain feed itself?*

If we, humanity, seriously want to provide good food for everybody then we have to design farming specifically that purpose – what in various books\*\*\* and articles I have called “Enlightened Agriculture”. This seems obvious, yet it has rarely been acted upon. Present-day British farming is designed somewhat schizophrenically to fit in with the European Common Agricultural Policy on the one hand and the global, ultra-competitive free market economy on the other – and to “compete” it needs to be maximally profitable in cash terms. Enlightened farming, intended to feed people well and to go on doing so without wrecking the rest of the world, must be designed according to basic principles of biology. Such a system is *not* intrinsically profitable, within the present global economy. Enlightened agriculture and maximally profitable agriculture are different concepts and must be structured quite differently.

If we did farm as if we really wanted to feed people, then *of course* Britain could be self-reliant. We could easily produce enough temperate crops to keep us all well nourished in times of crisis – enough, that is, to feed the 70 million people who may well be living here within a decade or so. Even more to the point: *most* countries worldwide could be self-reliant if they chose to be, including most of those that have appeared on the news in recent years as basket cases.

This can be shown with a few back-of-the-envelope calculations – and they need to be back-of-an-envelope because although the question is of extreme importance, there have been no formal studies. To make things easy, let’s just first focus on the macronutrients – energy (“calories”) and protein. Macronutrients, above all, means cereals – grown on the field scale, in arable systems. Cereals provide calories and protein in roughly the proportions that human beings require and in practice human beings worldwide derive half of all our energy and two thirds of all our protein from just three of them – wheat, rice, and maize; astonishing statistics, but apparently the case. Overwhelmingly, in Britain, cereal means wheat. So if we grow enough wheat, we are at least halfway to our target. Indeed, for the purposes of calculation, we might reasonably ask if it is possible to produce *all* of our energy from wheat (and hence all our protein too). Could we, in fact, grow enough wheat to feed all of the 70 million people who could well be living here within a decade or so?

The answer, it seems, is “Easily!” Let’s assume that each and all of us should have 3000 calories every day. In truth, men who are not labourers or athletes generally need about 2500 calories a day, while women need

only about 2000 and children need even less – so 3000 a day leaves plenty of leeway. But it's a reasonable starting point.

Three thousand food calories is contained in just one kilogram of wheat. So one kg per head per day is enough. That means that each of us would need around 365 kg of wheat per year – just over one third of a metric tonne (which is roughly the same as an imperial ton). So one tonne can feed three people for a year. The average yield of wheat in Britain at present is around 8 tonnes per hectare. So one hectare can feed 24 people for a year – meaning that it could in theory provide them with *all* of their protein and energy. So to feed 70 million people we would need 70 million divided by 24, which is roughly 3 million hectares of wheat. This is almost exactly the amount of land which, in practice, Britain now devotes to arable farming (which isn't all wheat, other cereals are nutritionally roughly equivalent). In short, in theory, we already have enough arable land to provide us all with all our most basic provender.

But human beings do not live by bread alone, or by wheat alone. We also need various essential fats and a range of micronutrients – minerals, vitamins, and what might be called “paravitamins” which do not all occur in cereals. To supply these we also need horticulture – fruit and vegetables; some oilseeds (grown on the arable scale); and, preferably, at least some livestock. Have we got room for these too?

Plenty, is the answer. Eighteen million hectares of Britain is now deemed to be agricultural. With three million for wheat that leaves 15 million for fats and micronutrients. In practice, in present-day Britain, in addition to cereals we also produce 1.17 million tonnes of non-cereal arable crops, and devote 140,000 hectares to potatoes, and 69,000 hectares to horticulture. For good measure we raise ten million cattle, 34 million sheep, five million pigs, and 167 million poultry. So what's the problem?

Ideally, the different forms of agriculture – arable, producing staples such as wheat; horticulture, for fruit and vegetables; and livestock – should be mixed, with each kind of crop and animal played off against all the others, in imitation of a wild ecosystem. Even more broadly, scientist and organic farmer Professor Martin Wolfe argues that *all* farming should be conceived as an exercise in agro-forestry – crops and livestock should always be integrated, in many different ways, with trees. But we will come to this later.

Whatever the details, Enlightened Agriculture must focus on arable and horticulture, with the livestock slotted in as and when – cattle and sheep

feeding mainly on grass, and usually in places where arable is difficult; while pigs and poultry live on leftovers and surpluses. The result is to provide plenty of plants, not much meat, and maximum variety. And here we encounter two wondrous serendipities. First, “plenty of plants, not much meat, and maximum variety” encapsulates, in nine words, the essence of nutritional theory of the past 30 years; and it also captures the essence of all the great cuisines of the world from Italy via Turkey to China and India. In short, farming that is designed primarily to provide *enough*, sustainably, also provides us with excellent nutrition and the best possible cooking. So we would eat much better than we do now if only we farmed as if we really wanted to feed people. One of my own little slogans, indeed, is that “The future belongs to the gourmet” – a sentiment very much in line with the Slow Food Movement, founded in Italy by Carlo Petrini in the 1980s and now with a presence in 122 countries. In short, to secure our food supply well into the future we don’t even need to be austere -- and this would be just as true even if we grew all our basic crops at home.

But alas, life is not quite so simple. I based these calculations on present-day yields of wheat – eight tonnes a hectare. But such yields are produced by industrial methods -- the kind that are now called “conventional”. But this, as is widely agreed, is not sustainable – not least because it depends so heavily on oil. For this and other reasons, more and more farmers and consumers are turning to organic methods – without recourse to oil-based fertilizers, pesticides, or herbicides. Organic farmers must practice rotations, leaving fields fallow (more or less) so although their maximum yields can be as high as the industrialist’s, when averaged over several years they are lower – perhaps only four tonnes per hectare. Now, too – although fashions change -- people in Britain are accustomed to high-meat diets. For these and other reasons Simon Fairley from *The Land Magazine* argues that we need to explore not just one, but many different models of future possibilities – depending on how we choose to farm.

As he is the first to point out, Simon Fairley’s own calculations are also back-of-envelope, although more detailed than mine. He has picked up on the thesis of Kenneth Mellanby’s book of 1975 – *Can Britain Feed Itself?* Sir Kenneth too emphasised that his book was only a preliminary sketch – and yet, more than 30 years later, it is still the most thorough assessment.

How many we can feed, and how easily, depends on what we are trying to do, says Fairley. The most difficult course would be to farm organically by which he calls “permaculture” (with rotation of crops and livestock) and to provide a diet relatively high in meat. But we could still be self-

reliant even then, although we would have to use just over 15 million hectares of the current 18 million available.

If the entire nation were to become vegan then, says Fairley, we would need only just over 11 million of the 18 million hectares to feed ourselves. This, of course, is not likely to happen – and on agricultural grounds alone I reckon that this isn't actually desirable. An all-plant agriculture is *less* efficient biologically than one that makes judicious use of livestock. The mistake at present is not meat *per se* but meat produced *at the expense* of crops that could feed people. Thus in Britain as in the world over about half the wheat is used to fatten pigs and even cattle – and so the animals are actually competing with us for food. This is profitable – but also illustrates why profitability *per se* is the enemy of sound farming. Clearly, however, as Fairley points out, a vegan diet is easier to provide than the high-meat diets that we now regard as the norm. We should also of course, he says, produce more timber, both for fuel and construction. Wheat, too, might be conceived as it commonly was in the past as a source of thatch (for which we would need some long-strawed varieties and not just the semi-dwarf kinds that are now the norm).

So in some details Fairley's conclusions seem very different from my own – but still he says, "It is patently obvious that Britain can feed itself". Now, surely, we need further study to reconcile and extend these two approaches: on the one hand starting with basic nutritional requirements and average production figures and working outwards, as I have done; and on the other, working through the different scenarios, as Simon Fairley has done. Surely the question is too important just to abandon for another three decades or so.

### ***What's going to happen?***

Times are changing beyond any doubt but what is *really* going on and how will things turn out? Observers steeped purely in economic theory – particularly that of the past 30 years – take it to be self-evident that in the end, markets will solve all and that what we see now is just a blip. Those of biological background see inexorable decline. At the Said Business School Hardin Tibbs is seeking to bring order to these wildly diverse opinions – to ask which is most likely and what might be done.

In his research Tibbs has floated four possible scenarios. The first is optimistic – it says that the present economic decline is "just a blip". But, says Hardin Tibbs, this would be justified only if the market behaves as standard theory says markets do behave, and only if physical

conditions – notably the weather – remain favourable. Then, the economy would and recover and again would “grow”. Then, farmers would respond to the high food prices by producing more. Oil prices would fall – perhaps to around \$65 a barrel -- so there would be less investment in biofuels, which would free more land for food. Indeed, in the way these cycles go, the world would move back into overproduction – when prices would fall again, and farmers would contain their efforts, and so on.

In the second scenario the global demand for food continues to increase, partly because there will be more people and also because, in particular, Asians are consuming more meat. Indeed, demand could slightly outpace supply. Perhaps the weather will not be favourable, and losses will mount. Fuel prices could stay high, too – oil at \$90-100 per barrel – and then demand for biofuels would increase, and the price of fertilizer would also be high. All this ensures that food would remain expensive. This would contribute to inflation and lead us again towards recession. Food stocks would be reduced as attempts were made to reduce the price. The general state of the economy would be that of “stagflation”. This outcome is eminently plausible, says Hardin Tibbs – and indeed is already with us. But its stability depends on a critical balance between the contributing factors. So if, for example, oil prices rose too much above \$100 then the whole structure would begin to rock.

The third scenario envisages more fundamental change. We hit peak oil – where demand begins clearly to outstrip supply. The price reaches around \$150. But then, use would be restricted as climate change became obvious, international carbon prices would be agreed, and environmental regulations would be toughened up. But as the weather continues to change, crops would begin to fail. As time went on it would seem less and less possible simply to go on producing more and more, however clamorous the market became. In the light of all this, the world would start to adopt a more “eco-technological” approach (though if it did this too slowly we could still be overtaken by events. Farming cannot change course overnight). Yet in this scenario Tibbs is again envisaging economic recovery. Thus, after an initial rise, food prices would start to fall again.

In the fourth scenario, the most nightmarish of all conceivable chickens truly come home to roost. Crops and livestock fall foul of new diseases. The shortage of water becomes obvious, and critical. This leads to political disturbance, and oil prices zoom to unprecedented levels -- \$200 or more. Food gets dearer as inputs become dearer. To reduce the price, the grain stocks are released, which means they are run down. Governments control the price of food and ban exports. The weather

remains bad and harvests are below expectation. In many poor regions there are serious famines. All this leads to civil unrest and war, leading to even higher fuel prices, and so on and so on. The economy collapses. In short, scenario four looks very like tailspin.

But although this fourth scenario is the most extreme it is not, says Hardin Tibbs, the least likely. The least likely, it seems, is scenario 1 – the one that says the present troubles are “just a blip” and all can soon return to “normal”. Perhaps, says Tibbs, our ambition should not be to strive for more and more productivity, by means that are more and more “efficient”, which is now the norm. Rather, we should to learn to stay in the same place.

What does this imply in practice?

### ***The structure of farming to come: “the New Agrarianism”***

Hardin Tibbs’s suggestion that instead of trying to “grow” our economy we should perhaps try simply to reach a satisfactory point and stay there, is precisely what nature contrives to do. Wild ecosystems do change over time and they tend to become more complex if left to themselves but their overall productivity does not increase, and there is nothing in nature quite like the “efficiency” that is deemed so vital in engineering and in modern economies. Indeed, nature achieves its remarkable resilience by being extraordinarily *inefficient* by the criteria of engineering and the modern economy. For engineers and business managers are anxious above all to eliminate what they call “redundancy” -- any suggestion that any particular part of the operation might be repeated. All vital functions are performed by one section only, and only once, with no slack in the system at all. Nature, in absolute contrast, is modular, and it repeats each functional module a thousand, a million, or many billions of times. So it is that an ecosystem can lose 90 per cent of its species and still re-emerge in some new form – as clearly has happened many times in the Earth’s history. A human being may lose a limb or even half a brain and still function perfectly well. But a highly integrated, highly “efficient” machine or an economy will fail if any one part of it fails – which is why, once one of the world’s banks had collapsed in 2008, the rest followed like a row of dominoes.

Enlightened Agriculture does imitate the broad structure of nature. As in a wild ecosystem it is modular: based on small to medium-sized units. In detail, each of the units is unique, different from all the others. But all are

similar in principle. All achieve productivity and sustainability by matching many different crops and classes of livestock against each other.

But this in turn has huge logistic, social, and economic implications. Enlightened farming systems are necessarily complex. This means they must be labour-intensive – they require a great many farmers of high expertise. This means, too, that although enlightened farming may be technically highly advanced (there is nothing Luddite about it), the structure of farming overall is far closer to tradition than is the “conventional”, industrial kind. With lots of people on board in highly complex systems there is no obvious advantage in scale up. The default position, then, for enlightened farms, is to be small to medium-sized, and labour-intensive (and as high-tech as necessary – neither more, nor less). Because many different crops are grown in any one place, and to ensure the best possible quality and to minimize transport, as much food as possible should be produced locally.

In absolute contrast, today’s industrial farming is designed expressly to be “efficient” – where efficiency is defined in terms of cash. Modern farming is required like every business to maximize returns while minimizing costs. But these requirements militate against the obvious need for global justice and long-term sustainability. Maximizing returns means maximizing productivity and added value – and these are often achieved at the expense of sustainability, for example as tropical forests are felled to make pasture, which then declines into desert; and deserts are irrigated to make them yield but hence become salinated and so become barren.

Minimizing costs means, above all, reducing labour – because labour, in traditional systems, is the most expensive input. Now, in Britain and the US, less than one per cent of the total workforce is working on the land – and in Britain the average age of farmers is approaching 60. Labour is replaced with heavy machinery, industrial chemistry, and biotech. Capital outlay is heavy – but within the debt economy the necessary cash could be borrowed. The result is a treadmill -- the farmer must then maximize output while minimizing costs in order to service the debts; but so long as the cash economy holds up, the balance sheet can be made to look convincing. But since such systems must keep labour to a minimum so as to minimize costs, the husbandry must be as simple as possible. So the industrialized, high-capital, debt-economy approach leads naturally to monoculture. In addition, since machinery operates most economically on the largest possible scale – there are big advantages in scale-up. Thus in Lincolnshire, nowadays, we may find just one full time worker on a 1000

hectare arable farm. In such systems there is little or no scope for local production. Typically, different crops and classes of livestock are produced in different regions or even in different countries and transported across country or from one side of the world to the other. When oil is cheap, and with suitable tax breaks and subsidies, the figures add up, and that is all that is deemed to count.

World politics, the law, logistics, and the whole, global, integrated industrial and financial system with all its banks and corporates now favours industrial farming. Countries that are still primarily agrarian – in the Third World as a whole and in India in particular 60 per cent of people work on the land – are urged to follow the western lead – primarily that of Britain and the US. The countries that are still agrarian should surely be encouraged and helped to stay that way at least until there is any convincing alternative employment – which, as oil dwindles, will not be any time soon. The task is not to destroy traditional systems but to build on them and to make them work. Britain and the US, perceived as global brand leaders, in truth have gone way out on a limb. Both countries, probably, need at least 20 times as many expert people on the land as they have now. If Britain is to be self-reliant in food and to go on being so then it certainly needs, as a matter of urgency, to increase the number of farmers. This, perhaps, would be the greatest social and economic shift that could now be conceived in Britain. But it makes perfect sense, and indeed is necessary, and urgent.

Yet such a suggestion goes completely against the received wisdom of the past half century, and the cards are stacked firmly against it. Legal problems include those of planning permission and of tenure. The new generation of farmers will need somewhere to live, and the traditional houses have been knocked down or bought up by city people as second homes. It is hard these days to rent land on the long term because landowners fear that they will lose out – but sound agriculture needs the long term. Logistic problems include the lack of expertise. Farming in its traditional forms has been run down partly as a matter of policy and partly through simple neglect. Small fields need to be re-created out of large and infra-structure installed for the small-scale. But above all there's finance. Farmland is now ludicrously expensive, to buy or to rent. The problem that does *not* seem to arise is the one that governments and economists insist is overwhelming. For received wisdom has it that country people have fled to the towns because they want to – because they hate the countryside. In truth, life on traditional farms has been made impossible, economically and logistically. People are leaving the land worldwide largely because they will starve if they do not. Many people

now in cities, given half a chance, would love to return to the country. Not everyone -- but enough to make agriculture work as it should.

Despite the odds, there are moves throughout Britain and in other countries to make the changes that are needed. Almost invariably these are *people's* movements: governments, big industry, and most banks have their minds on other things. The transition town movement is a general, growing trend. The Slow Food Movement has become a serious political force and is vital because the shift in farming cannot work without a commensurate recovery of food culture: consumers have to appreciate what local farmers produce and pay for quality and provenance as well as for bulk. There are many individual initiatives of many kinds, too, moving in the same, enlightened direction. The specific purpose of LandShare, co-sponsors of Oxford meeting, is to identify, coordinate, and encourage such initiatives. Here are some of them.

### *Paths to self-reliance*

On his 60-acre farm in Suffolk, Professor Martin Wolfe on his farm in Suffolk has developed a method of agro-forestry that could surely be adopted with suitable modifications the world over. He has divided the flat, otherwise prairie-like fields with rows of trees of various kinds: hazels and willows for short term use (not least for biofuel); hardwoods such as walnut and hornbeam for long-term investment – growing and increasing in value while the cash market fluctuates; and fruit trees. Particularly in an organic system, and perhaps surprisingly, rows of trees judiciously placed do not reduce the yield of crops grown in between. But they do provide wind-shelters, and “beetle banks” – predatory insects to reduce pests – while steadily increasing the capital value of the farm. The strips of land between lend themselves beautifully to rotations.

The logistic, legal, and financial problems of helping people back on to the land are being tackled in many ways but they generally have two outstanding features in common. First, partly to spread the costs and for other reasons too, the land is owned or controlled communally: either by communities as forms of social enterprise; or by cooperatives. Secondly, many of what might be called the new generation of farmers are part-timers. This should not be despised. Many of the most important farmers worldwide have traditionally been part-timers – including the crofters of Scotland who commonly combined farming with fishing. To a significant extent, communal ownership and part-time farming go hand in hand. Individuals can invest just part of their money and their time in farming while keeping their other interests intact – as writers, accountants,

plumbers, town councillors, what you will. Among other things, it's a good way of spreading options in uncertain times.

Thus there is “great and growing” enthusiasm for Stroud Common Wealth Ltd, based in the Gloucestershire town of Stroud with its 24,000 inhabitants, and chaired by Martin Large. The overall set-up is quite complicated, with several different strands to it, but in essence it is a form of “community assisted agriculture”, or CSA. Among its initiatives is Gloucestershire Land for People, a land trust that specializes in acquiring land for community farming. Gloucestershire County Council owns around 9000 hectares (many county councils have a great deal of land) including many pockets that are doing nothing, although the council has not been keen to lease spare land to the community. Crucial to the development, then, has been to learn to lease and rent land, from landowners in general. Stroud now has its own Community Farms, and hopes at some point to deliver food at reduced costs. “Stroud 'food-co' -- not Tesco!” should be the hub of local food supply, says Martin Large. But the Common Wealth is talking to the five supermarkets in the area – and 80 per cent of their apples now come from local suppliers. There is a thriving weekly award winning farmers' market, and a veg-share scheme with 189 members, and even a bursary veg-share scheme worth £33 a month to qualifying members. Allotments flourish, too. Stroud overall is a vibrant Transition Town with a social enterprise centre, social enterprise workspace, and re-skilling classes in traditional skills from bottling fruit to hedge laying. The Common Wealth has links and works with many other associations. “In short”, says Martin Large, “it was a complete overhaul of the way we conventionally lived – and already it's a thriving, and mutually supportive community”.

But Stroud is a small town surrounded by countryside. Surely such schemes have nothing to offer to big cities? But they do – as is abundantly demonstrated these days in Havana, in the siege economy of Cuba; and indeed in Hackney, one of London's most urbanized of boroughs. There, Julie Brown and her associates have set up “Growing Communities”, a social enterprise group to grow food for Londoners in a sustainable, independent, localized system.

Julie Brown and her colleagues have approached their task formally. They first identified organic farmers and growers who were already within reasonable distance – and found about 40, including some urban organic market gardens. Then they set up a buying scheme, exclusively for produce that was seasonal, fresh, and minimally processed. The produce is distributed through a weekly organic farmers' market, an apprentice

scheme, a volunteer programme, a box scheme, a collection scheme, a community pick-up, with a community-led food trading system complete with management committee, staff, customers, members and volunteers. The whole operation is zoned with military efficiency as shown on the Growing Communities Food Zone Diagram; salad and perishables are grown closest to the centre of distribution, while potatoes and vegetables, which can be stored for longer, can come from further afield. In the spirit of enlightened agriculture (and indeed of traditional, commonsense husbandry) livestock is fitted in as and when. As is traditional (and commonsensical) acceptable waste is fed to pigs and chickens. The overall structure is patchwork – making use of what land there is. Starter farms have apprentice schemes. Now, farms and holdings within a radius of around 56 miles supply about 1500 customers week with an annual turnover of around £600,000.

Overall, the Hackney people in the scheme have a strong voice with direct influence over their own food supply – what there is, and how it is produced. As in Stroud, as in any place where such schemes have been tried, the community as a whole has discovered a new spirit, a new communal vigour. “We wanted to turn the present system on its head”, says Julie Brown. “We believe that a human-scale, low-carbon, mixed-farming food system, in and around urban areas, is the way forward. Growing Communities produces good food, good friends, good work, and enriches our lives,”

Some, of course, will see all these schemes merely as eccentricities; pleasant enough hobbies, but quite unable to make any serious contribution to the world’s all too pressing food problems. They are not, the sceptics will say, *realistic*. But, this means only that they do not conform with present norms -- and it’s clear that present norms have already failed. The world needs something that really is new. When we apply a little biological and social reality we see that what the world needs is precisely what these schemes provide: food produced as locally as possible, with maximal community involvement. People should know what they are eating.

It’s also clear that governments and the corporates are not going to take the necessary initiatives. Whatever is done to make the necessary changes, must be done by private or community initiatives. That the schemes do not fit easily with the economic status quo is obvious – but it’s the economic status quo that is unrealistic, producing an ever-growing pile of money that has no anchorage, either in moral or social aspiration or in the realities of biology and physics, which is the realest reality of all.

Clearly, too, anyone who tries to do anything that is *not* immediately in line with the economic status quo, has to be prepared to work for less than the market price. So the changes that really matter have to be pursued as hobbies, or subsidized by various social and other schemes. Indeed, farming can never be as instantly profitable as simple, urban, industrial pursuits – not unless it is itself turned into a simple industrial pursuit, as has been the ambition of the past 40 years. If we want good farming then we have to insulate the economy of agriculture by whatever means are necessary from the ups and downs of mere cash – again, the very opposite of current dogma, which sees the market as the arbiter of all. In short, today’s eccentrics and hobbyists are pioneers – bringing about the transition that the world now so desperately needs.

So what can we conclude? Where do we go from here?

### *Pointers to the future*

The answer to the specific “Can Britain Feed Itself?” seems to be a resounding “Yes”. My own arithmetic says that this is easy and even when Simon Fairley and others stir in the complications there are still no insuperable difficulties. “Should we?” is more controversial – although once we distinguish “self-reliance” from “self-sufficiency” it is less obvious why it should be. The advantages seem obvious. Security is surely desirable. Besides, the kinds of changes that would be needed to make Britain self-reliant – or any country – are the kind that the world needs anyway. They all lead towards greater sustainability – a shift from mere productivity and profit into systems that are firmly rooted in biological and physical reality. A strategy of national self-reliance would also help to define the kinds of changes that are needed globally in agriculture as a whole – agrarian, economic, political, and social.

But at present there are some alarming gaps in information, and in the efforts made at official levels to plug those gaps. The question, “Can Britain Feed Itself?” is obvious, and is obviously heuristic; by addressing it, we clearly must address a great many other related and equally cogent issues as well. Yet it seems that this question has never been formally addressed by people with the resources to do the job thoroughly. All the calculations so far have been back-of-the-envelope, even including Kenneth Mellanby’s and Simon Fairley’s.

There are even bigger and grander questions that again have been neglected. One of the biggest is – “How many people should be working on the land? What is the best ratio of agrarian people to urban?” Adam

Smith asked this in the 18<sup>th</sup> century but since then it seems to have been sidelined. In Britain and US the assumption of the past 40 years has been “The fewer the better” – since fewer means cheaper. As a result, farming worldwide is in dire straits. The former farmers and their families who have fled the countryside now swell the world’s urban slums which now, according to the United Nations, contain a billion people. I am more and more certain that all countries should have a strong agrarian base; that none – including Britain and the US – should have fewer than 20 per cent of its people on the land while the countries that are not already ultra-industrialized should realistically aim for around 50%. Farming is the world’s biggest employer by far and it is hard to see what else could usefully be done by about 2.5 billion people, especially in oil-strapped times. Again, this is back-of-the-envelope. But again -- where are the formal studies?

This brings us perhaps to the most disgraceful feature of all – that decisions of huge magnitude that affect the whole world are currently taken by default. The most far-reaching strategies are based on nothing more than dogma. One current dogma simply tells us that cheap is good. Another tells us that agrarian life is necessarily intolerable and that agrarian economies must be “backward” – and, contrariwise, that people flock to the cities because people really like cities. In truth city life can be foul, not just for the slum-dwellers, while agrarian life can be very satisfying and indeed enviable – but it has not been because the countryside worldwide has been neglected or systematically undermined, or handed over to the rich for their own purposes. If only we saw that an agrarian base for all is *necessary*, and set out to make agrarian living agreeable, then the dogma would surely fall away. The point is not to be nostalgic, and luddite, and seek to restore the agrarian past, but to create a *new* agrarianism, using the ingenuity of modern science and technology to make it work. Enlightened agriculture is an exercise in “science-assisted craft”.

Beyond any doubt, these are exciting times. The world’s troubles are of many kinds and all too obvious. They won’t be put right by more of the same, or by ad hoc tinkering. We need to re-think everything from first principles. Agriculture is a very good place to start. National self-reliance in food for Britain and most other countries is not the complete answer of course but it does concentrate the mind wonderfully. As things are, though, it seems that the serious initiatives that the world needs must come from private individuals. I helped to put together the symposium that inspired this essay at the personal invitation of Sir Crispin Tickell, as director of the James Martin Policy Foresight Programme. There are

many more questions to be addressed – formally, thoroughly, and urgently. I suggested long ago that Britain (and the world) needs a College for Enlightened Agriculture, to focus attention where it now so obviously needed. This seems the ideal time to get it started.

### **Author's acknowledgements**

*\*\* This article is a personal account of a symposium held in Oxford on October 15 2008 that brought together delegates from government, with academics, farmers, and policy makers from business and civil society . The meeting was hosted by the Policy Foresight Programme at the James Martin Institute for Science and Civilization and chaired by the Programme's director, Sir Crispin Tickell. It was organised principally by Colin Tudge, Ruth West, and Tom Curtis, all representing the LandShare organization. A formal, complete account of the proceedings by Sue Lee can be found on (ref).*

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*\*\*\* See, for example, Feeding People is Easy, Pari Publishing, 2007.*

New, shortened version is 6720 words

## OVERMATTER

\*\* [[[But while opinion seems to be veering towards organic farming, some organic farmers are contemplating the next stage. None has been more closely involved than Patrick Holden, organic farmer and for a long time Director of the Soil Association. In 2006, says Holden, he first became aware of “peak oil”, at a meeting convened by Rob Hopkins, founder of the Transition Towns movement. For Holden, this was an epiphany.

“Peak oil” is conceived in different ways. Some take it to mean simply that oil is running out – which of course it is, as a fossil fuel must. But not immediately, the zealots assure us. There seems to be oodles left under Alaska, for example. But peak oil has two other, far more pressing implications. First, there’s a limit on how quickly oil can be extracted, no matter how much there may be in the ground. From now on, output is bound to fall short of demand – and the gap must grow as India and China in particular build their industries (and industrialize their farming). But even if we could pull the oil out as fast as many would like, this would merely accelerate global warming – perhaps the biggest threat of all. So oil is “peaking” too in this quite different sense.

Holden carried out an energy audit on his own farm in Wales – and was appalled to realize how hugely dependent he was on an uninterrupted flow of oil. The task is not simply to create individual organic farms, demanding though that is. We need to create a total food system that is low-carbon and indefinitely sustainable. Holden himself farms in West Wales and sells most of his produce in big cities to the east – with huge, oil-dependent transport costs. Organic farming is surely part of the answer – but we also seem to need more and more focus on local supply. Local supply also implies local control and so is within the spirit of transition towns – bottom up, rather than top-down. The future of agriculture depends on re-localisation, and re-engaging people with food production and farming – and organic farming seems likely to be the default method of agriculture in the future, simply because the present “conventional” farming is liable to be less economically viable. So the Soil Association itself is “about transition”. To counter the manifold threats of the future we need a “war plan”. But the plan should not be not be “*de haut en bas*”. The initiative must come from people at large. Holden started the ball rolling in his own corner of Britain by calling a meeting of his neighbours. A lot of them came. The *zeitgeist* is surely shifting.

I have argued that the agricultural policies of British governments this past few decades – or indeed since the start of the 19<sup>th</sup> century – has been hopeless, and that there is little sign of improvement. As Britain’s only Professor of Food Policy Tim Lang, at City University, is closer to government and is somewhat less harsh in his judgment. After all, he says, in the 19<sup>th</sup> century Britain ruled top dog and saw no reason not to bring in as much or as little food from abroad as seemed expeditious. Indeed, governments avoided any particular tendency to self-reliance. But the two world wars showed the dangers of this and for a time after each world war governments focused on home production; yet in both cases they soon shifted back to a policy based on trade. Successive governments in recent decades have not seen self-reliance *per se* as a desirable aim – a feeling spelled out in recent years in reports and official papers from the Cabinet Office, the Treasury and DEFRA.

There are arguments against self-reliance, says Professor Lang – not least that it can be much dearer to produce at home than to import. We have consistently grown far less fruit and vegetables than many of our European neighbours. In the British countryside, too, farming must compete with many other demands. In any case, overall, the British food system is fairly resilient. We do seem able to withstand bad weather and limited water, and the high cost of energy and distribution.

Yet we remain vulnerable – because the supplies of foreign foods cannot be guaranteed, for all kinds of reasons, and people now rely heavily on supermarkets that can be emptied in days by the smallest interruptions in supply, including strikes by lorry drivers, and of course the whole system depends absolutely on oil which in general can only get dearer and eventually scarcer. All such threats, says Professor Lang, have “started to bring the issues of food supply to the top of many government agendas”.

There is a lot to sort out. Tim Lang suggests that Britain’s farmland has often been used for the wrong purposes. Local communities have been dying out and their skills have largely died with them. CAP directives have encouraged frank neglect of land. But the weaknesses are gradually being identified and addressed. The Government is poised to re-shape the food system and strengthen food security. The current financial crisis is an opportunity to rethink policy as a whole. Globally, many fear that Thomas Malthus’s prophecy from the turn of the 19<sup>th</sup> century is now coming true – that human numbers must soon out-strip the available food. But Malthus has proved consistently wrong, he says -- ‘So let’s not over-egg the Armageddon!’]]]

\*\* [[[In Lincolnshire, Karen and Nigel Lowthrop have re-created the ancient, sadly neglected Hill Holt Wood as an active centre for the local community – and in particular they run an apprentice scheme for 16-19-year-olds who have been thrown out of mainstream schools. “Our old woodlands are still there because they had a real value”, says Nigel. “They were worth *more* than the surrounding farmland. But we have lost that. These days ancient woods are valued if at all only for their aesthetic value.”

But the Lowthrops aim to show that even in the 21<sup>st</sup> century, ancient woods can still have economic and social value in a community. They began work on Hill Holt in 1995 and formed the Hill Holt Management Committee in 1997 to buy the woodland – as a local scheme in which the community shares the wealth and the control. Local people and in particular the apprentices are helping to clear the woodland, look after needy peoples' gardens, tend public and woodland footpaths, and organize a rubbish pickup. With the community on board, the scheme's committee found it remarkably easy to get planning permission for five staff houses in the middle of the wood – the plans were agreed first time round. It helped that the houses were architecturally interesting -- eco-built from innovative materials. The wood has thus become a true living environment -- “It is quite simply a better way to live”, says Nigel. If such schemes could spread – if legislation were eased to help them do so – then surely they would help to bring people back to the land.” And the people who were drawn back would “really want to be there”. ]]]