

BETTER THAN USUAL BUT NOT GOOD ENOUGH

By Colin Tudge

The Royal Society's new report, *Reaping the Benefits*, just doesn't spell out what needs spelling. Thus:

1: *The report accepts the received truths too readily*

The report takes as its premise what has become the official view – that the world needs to increase present food output by at least 50 per cent over the next few decades to cater for the projected world population of 9 billion by 2050, and to take account of changing food habits. But, it says, we should not cultivate any more land – we don't have the fresh water to support it, and more deforestation and the rest is too damaging. Conclusion: we must increase output per hectare, which means yield: and better varieties and agronomic research are needed to achieve this. Science isn't all, they stress, but it is vital.

All this seems sensible enough so why should alarm bells ring?

Well to begin with, as the report acknowledges, not everyone agrees that we need to produce 50 per cent more food. It may be a good idea in essence but it is not the priority. The projected population of 9 billion sounds huge but we are *not*, as Thomas Malthus suggested two centuries ago, embarked on lemming-like expansion that requires us forever to keep running to stay in the same place. This is what people thought 30 years ago but it no longer seems to be true. The percentage rate of population growth is going down – and should reach zero by 2050, and then should fall, so 9 billion is as many as we will ever have to feed. The task can be seen to be finite, in short, for the first time since large-scale agriculture began, 10,000 years ago. Fred Pearce has just written a book on all this – *Peopluquake* (Eden Project books, 2009). We will soon be reviewing it (or inviting Fred to write) on this blog.

In truth, it really should be fairly straightforward to feed 9 billion of us without frantic increases in yield – and feed ourselves very well -- if we go about it the right way. The deepest fault lies not with the science or the husbandry or the inadequacies of farmers but with the economy. It is absurd to do what the world has been urged to do this past 30 years and treat every crop as a commodity, to be sold on the world market to the highest bidder. Common sense suggests that this is asking for trouble for all kinds of reasons, and three decades of experience (plus some cogent

examples from the past, including the Irish potato famine of the 1840s) show that common sense is right. Simply to introduce policies of national self-reliance in all countries tempered by fair trade would, so sober calculations suggest, solve most of our problems at a stroke (and again as outlined on this blog).

It is ridiculous, too, to suppose that market trends in food *really* reflect what people want, except in the crudest way. Far more than human desire and need, the market reflects the ability of very clever commercial companies to promote their wares – especially when, as now, they are given carte blanche by governments who want a share of the profits. Above all, the market has promoted meat this past half century. But the world's great cuisines, from Italy via Provence and Turkey and India to China, make only sparing use of meat. People who truly appreciate food and cooking don't treat meat as the centre of every meal. It is promoted because it is profitable and easy to cook – the archetypal fast food. If we, humanity, simply made an effort to restore food culture – as the Slow Food Movement is doing – then we could halt the present trend. Since we now feed half of all the world's grain and well over 90 per cent of the soya to livestock, this alone would enable us to feed 9 billion – and with traditional cuisine, to do so to the highest standards both of nutrition and of gastronomy. To revert to traditional cuisines is *not* to advocate austerity, and to “condemn” people to poverty, but the complete opposite. The future belongs to the gourmet. But it is in the food industry's interests to suppress good cooking, and so long as we have governments who see themselves as extensions of the boardroom, we will make no progress. But we should be clear where the problem lies. The Royal Society insists that it is not asking for more of the same. But in the most important respects, it is.

Even if we do need to increase yields somewhat (and why not, if this is possible?) does the answer really lie with more science? Science can always be useful, of course – but context is all. It has often been pointed out by people who study third world agriculture at first hand (and indeed who practice it) that present shortfalls in third world yield are *not* brought about by lack of know-how or technique. I was told in India that farmers do not produce surplus milk for the local villages not because they cannot, but because the roads are impassable when it rains, so they cannot guarantee a constant supply, which means they can't do it at all (especially as the cows are milkiest when the rains come). Professor Bob Orskov who I hope will be featuring more and more on this blog points out that third world farmers do not invest in fertilizer not because they don't know what fertilizer is, but because they cannot spend money up

front unless the prices of the crops are guaranteed, so they know they will recoup. With guaranteed prices, he says, the farmers he knows could easily double their outputs – achieving what the Royal Society says is necessary without their specific assistance. If, as the economic dogma now demands, farm prices simply track the whims of the market –and it really is whimsical – then no-one who is not rich already or can rely on a nice fat US or EU subsidy or has collateral to borrow against can possibly risk the inputs.

In short: we may not really need these vast yield increases at all. If we do, then the good offices of western agricultural science may be somewhere down the list of desiderata.

All this raises the following:

2: *The report does not look seriously at alternatives*

The failure to see that we *could* make serious inroads into our food problems by focusing on food culture is one example of the report's failure to think, as the cliché has it, “outside the box”. But there are more. One of the most cogent contributions of the past few years has come from Graham Harvey who argues in *The Carbon Fields* that we could raise as much livestock as we now do, and hugely reduce its carbon footprint, by using grass more astutely (and browse, too). To be sure, we have been told by the food industry and our compliant government that grass-fed cattle produces more methane than grain-fed cattle and so it is bad. But as Graham points out, well-tempered grassland is a serious carbon sink, while intensive arable really is not. Again, if we did not grow almost twice as much grain as we really need just to fatten livestock then our food problems would not look half so serious.

When the report does look at radical alternatives it still falls short. Thus on page 29 it discusses the push-pull system for protecting maize in East Africa against the moth caterpillars known as stem borers. The maize is surrounded with Napier grass (*Pennisetum*) which lure the moth away from the maize, and intersown with the forage legume silverleaf (*Desmodium*) which actively repels the moths. But the report does not acknowledge, as it surely should, that such methods of control have been used in traditional African agriculture for many decades, and have been developed in the west by organic researchers –but horribly neglected by the standard agroindustry, meaning industrial chemists, and by mainstream funders. The report should emphasise that there is little new in this push-pull system, at least in principle – and that other people, who

for the most part have been marginalized, have had their eye on it for years.

Which brings us to the next point: that official reports of this kind are never truly radical. They never really criticize.

3. *The report does not explore the historical roots of the present disaster*

We have to look at the history if we are to understand the present. To paraphrase George Santayana, those who do not understand history are condemned to repeat its mistakes.

The practical point has been the drive, this past 50 years, to industrialize the world's farming in the interests of "progress". Many have sought to provide satisfactory and even noble descriptions of "progress" but in truth it has meant the replacement of labour with high tech; the maximization of money; the return of that money to shareholders (who don't necessarily have anything to do with the enterprise in hand); and above all, *control* – every aspect of human existence monitored, registered, accounted for, and demonstrably paying its way; fewer and fewer people doing the job, and more and more bureaucrats to look over their shoulders. Overall, progress has meant westernization.

This has been the case for some centuries, but in the past 30 years a new and even more pernicious force has arisen: that of neoliberalism, the unregulated, global market. Everything that everybody does these days, no matter how vital, has to be seen to be maximally profitable (or at least minimally expensive), and only then it is deemed to be "realistic". Accordingly, the idea of "progress" has been degraded even more: now it simply means "most profitable". The most expensive input in traditional farming is labour – so progress in agriculture, these past few decades, has meant getting rid of the people who actually work on the land. So it is that Britain now has only a tenth of the farmers it had in the middle of the last century (relative to the whole population), and the average age of those who are left is around 60. In the third world on average 60 per cent of people are on the land but Britain and others have been prowling the world this past few decades telling whoever would listen, or was obliged to listen, that they too should get rid of their farmers. We have been like the fox with no tail, telling all the other foxes that tails get in the way. In Turkey, 30 per cent of people now work on the land but the Turks are urged by the EU to halve this in the name of "efficiency". The fate of Polish and Czech agriculture under the good offices of the EU is discussed elsewhere on this blog.

Science has been vital to this process, an all-too willing accomplice. Labour cannot be replaced except with technology which increasingly means “high” – science-based – technology. Indeed, science is often equated with high tech and the introduction of science qua high tech is itself equated with “progress”, irrespective of whether anybody benefits, apart from the producers of the technology.

The push-pull, maize-with-Napier grass approach described above illustrates the nonsense of the neoliberal view of progress. For such husbandry is complex. It needs more farmers to make it work than wall-to-wall maize that is zapped at intervals with pesticide. In general, indeed, productive agriculture that is also sustainable must be polycultural and is bound therefore to be labour intensive. So if we are truly going to have more agriculture of the kind that really can go on feeding us all without wrecking everything else then we have to reverse, absolutely, the dogma which says that fewer people on the land is better because it is cheaper, and to re-define what we mean by “progress”.

This is crucial – in fact it’s the key to the whole thing. But the Royal Society has nothing to say on this. If it could bring itself to embrace the idea of labour-intensive polyculture on small to medium-sized farms, and if it would recognize that this means abandoning the dogmas of neoliberalism, and re-defining what we mean by “progress”, then it would truly be radical, and progressive, and deserve our praise, for then it really would be getting to the bottom of things. But it has not, and my discussions over the years with people close to the centres of power suggests that as things are, none of them is likely to.

Yet neoliberalism has been particularly bad for agricultural science – and indeed has seriously compromised the integrity of science across the board. The agricultural research that remains in Britain is mostly conducted or otherwise financed by big industry – transnational corporates – and used for the corporates’ own purposes, which do not necessarily coincide with the real needs or desires of humanity, and indeed are not likely to, for the market is not all that it is cracked up to be. The reason that agricultural science is in such mess is not that no-one realized the need for it. It is that successive governments over the past three decades have systematically trashed what there used to be. Thus the report calls for more publicly funded research, in publicly owned institutions, as if this was a wondrous piece of radicalism. But until well into the 1980s Britain had the most enviable network of such institutions in the world, under the auspices of the Agricultural and Food Research

Council (AFRC), plus Experimental Husbandry Farms, plus many training colleges, plus departments of agriculture and sometimes of forestry in all the greatest universities. But most of them have disappeared or been privatized.

All this was done in the name of neoliberalism and as suggested elsewhere on this blog, the destruction of this essential infrastructure has been one of the most outrageous exercises in state-sponsored vandalism in all of history – which, when we look at all those trashed libraries and monasteries and temples that litter our past, is saying quite a lot. We need to recognize this not in the spirit of vengeance but because it is true, and unless we acknowledge what is the case then we are all too likely – as now – to leave people in charge of our affairs who in truth are no different from the ones who got us into this mess in the first place. It isn't enough simply to suggest that we need more publicly funded research. We need to acknowledge, once and for all, that neoliberalism has been a horrible experiment that has horribly and all too predictably failed, and stop trying to prop it up.

This is pertinent to the Royal Society's present demand for £2 billion to spend on agricultural research over the next ten years. On Radio 4 chairman Sir David Baulcombe agreed with the interviewer that £2 billion is a lot to ask in a time of recession although, he said, it is only a few hundred millions a year. He might have pointed out that £2 billion is precisely the sum that Goldman Sachs is proposing to hand out to its employees this year, in bonuses. Such is our scale of values.

Will this £2 billion be forthcoming? Not without strings, we can be sure of that. To judge from the past few years (and there is no good reason to suppose that David Cameron will be any different) the cash will dribble down to us if at all as part of some “public-private initiative” – an invitation to private industry to fill its boots while taxpayers pick up the bills. And what will the money be used for? Will we see prices guaranteed for poor farmers, or research reports that recommend fixed prices for farm produce, or some new technique for poor farmers, or a new wave of high tech that does the farmers a favour by taking away their jobs all together?

I am not holding my breath. I remain convinced that if the world is really going to dig itself out of the present hole, then people at large have to do the digging. The powers-that-be just aren't doing it.