

PRECISION AND PROHIBITION

Following publication of our last issue, and a public debate between Simon Fairlie and George Monbiot, we received the letter below, which we are happy to print in full as requested. The following pages contain responses from editors and contributors to issues raised in Monbiot's letter, and in other recent writings of his calling for 'the end of most agriculture'.

Dear Friends

Before my book *Regenesi*s was published, I gave some thought to where the main opposition was likely to come from. I guessed it would take the form of an unintentional alliance between bucolic romantics and Big Meat. Just as the Southern Baptists in the United States, by pushing for Prohibition, opened the door to Al Capone and his chums, so the romantics would play John the Southern Baptist to the meat industry. It has played out just as I feared, especially in the pages of *The Land*.

The Southern Baptists had no solution to the demand for alcohol except temperance, eventually enforced by law. The romantics in these pages have no solution except temperance to a drive that's just as strong: the rising demand, as wealth increases, for energy-dense (especially protein-rich and fat-rich) foods. There's a term for this trend: Bennett's Law.

While I think we can all agree that a high-yield agroecology is the best means by which our grain, fruit and vegetables should be produced, there is no way it can meet the spiralling global demand for protein and fat. Nor should it try.

New sources, especially unicellular organisms, can meet the growing demand for fat and protein while using a fraction of the land, water and fertiliser required for meat production. I understand why you might instinctively reject this approach. But the question none of you will answer is what you propose instead. Your writers seek to rip down the only viable alternative I can see to an exponential rise in livestock production to meet the rising demand for energy-dense foods, without suggesting a replacement.

Rather than attempt an answer to the existential crises caused by the escalating demand for animal products, *The Land* retreats into fantasy. It proposes, in effect, a Neolithic production system to feed a 21st-century population with 21st-century appetites. You don't have to be John the Baptist to see how that will go. As so often in matters of food and farming, it's all about the pictures, while the numbers are either ignored or denied.

Far worse, just as David Bellamy and his ilk denied the radiative forcing impact of carbon dioxide because they didn't like the sight of wind turbines, some writers in your pages deny the radiative forcing impact of methane because they don't like the sound of alternative proteins. There are two ways of describing this tendency. One is motivated reasoning. The other is climate denial. You should be ashamed to entertain such claims in your magazine.

I now begin to wonder whether *The Land* is taking an even grimmer turn. The latest edition's lead editorial peddles two staples of the current wave of conspiracism. The first is its conflation of proposition with imposition. Some of us have proposed new means of producing protein. Somehow *The Land* translates this into subsistence pastoralists being "told ... to give up their livestock". This is a classic example of the conspiracy ideation now deployed against almost all proposed environmental measures. Induction hobs are greener? They're coming for your gas cooker! A 15-minute city? You'll be forced to stay in your home!

The second is the "dark forces" theme. Reboot Food is transparent about who funds it, what it is and what it wants. But, without advancing a shred of evidence, you accuse it of being "a sophisticated astroturf organisation, whose real job is to advance industry interests". The only parts you missed are the Great Reset and the Illuminati.

If you have a viable and realistic means of addressing the greatest of our environmental dilemmas – the vast and rising impact of livestock on all Earth systems – I would love to hear it. If it is better than the approach I've supported, I would be delighted to adopt it. But I go back to *The Land* again and again, and find nothing.

By attacking the only genuine threat to its hegemony, you are rolling out the blood-red carpet for Big Meat. It is time you asked yourselves some tough questions.

Yours sincerely

George Monbiot

NO TIME FOR HEDGING

MIKE HANNIS

Dear George

Thank you very much for your letter. Sorry that our publication schedule has left you waiting several months for a reply.

If there is an analogy here with Prohibition, the Southern Baptist role is played by those whose rigid ethical convictions blinker them into thinking they can impose a massive cultural shift in consumption patterns on everyone else. If they succeed, the part of Al Capone may be played by black market meat dealers, with supply chains even murkier than today's.

Demand for meat is demand for meat, not 'demand for energy-dense foods'. Few would deny that this demand has become unsustainable and urgently needs to be reduced. But few would agree that it can or should be eliminated entirely. The two claims are distinct, and their conflation makes sense only from a perspective distorted by dogmatic veganism.

Your proposed global transition away from agriculture is at least as utopian as the agroecological visions which you mock as 'romantic'. I respect and share your desire to free food chains from the poison of corporate manipulation. But the technologies you endorse, if implemented at the scale you suggest, are likely to further intensify the industrialisation and centralisation of food production, and thereby have the opposite effect.

Pastoralists

These themes will be addressed by others on the following pages, but first I would like to respond briefly to your comments on my editorial in issue 32. The implications of your proposals for subsistence pastoralists in the Global South are very real – there's no 'conspiracy ideation' involved. (We have published many articles criticising such thinking, including my own editorial in this issue on 15-minute cities, which I hope you'll agree with.¹)

Those rich in land and capital might well, as you recommend, adopt some combination of horticulture, rewilding, and growing feedstock for the hungry bioreactors. Big Food would simply shift resources from Big Meat to Big Fermentation. But pastoralists don't have these options. It is disingenuous to suggest they would not be impacted.²

Should governments and publics in richer countries further embrace the vilification of livestock keeping, the priorities of aid agencies, NGOs, and their donors, would shift accordingly. This would significantly increase existing pressures on the livelihoods of pastoralists, who as you know tend to depend on grazing marginal land they don't own, in countries where government policy is subject to the whims of such agencies. These pressures frequently result in people having to give up their livestock, with all the cultural devastation that involves. Often the land is then dishonestly reframed as 'pristine wilderness', to be profitably monetised by unsustainable and extractive tourism enterprises – including the archaic trophy hunting industry you inexplicably defend.³

Financiers and Ecomodernists

RePlanet are indeed transparent about the fact that they are funded from the very deep pockets of hedge fund Quadrature Capital, via its Quadrature Climate Foundation. QCF also fund 'Greens for Nuclear' (see page 27), and no doubt other groups engaged in the persuasion they describe as key to their 'mission':

'Our mission is to urgently shift the current global climate trajectory towards a better future through philanthropic giving and the persuasion of others to join in the effort.'⁴

Curiously this mission does not extend to Quadrature's own business. Their website explains that, like a medieval indulgence, transferring funds into QCF magically resolves any conflict between their purported values and the fact that they make their billions by investing in literally anything, including oil and arms companies.⁵ This epic greenwash bears quoting in full:

'In line with our desire to positively contribute to society, and with QCF's work focused on fighting the climate crisis, we evaluated the pros and cons of removing all stocks that are inconsistent with the Paris Agreement of limiting the global temperature rise to 1.5 degrees from our investable universe. We do not hold stocks for long periods of time, instead we trade in and out and are as likely to be short as long. The only impact we have is to make them more efficient by adding liquidity, and the value of this additional liquidity is negligible compared to the donations made to the foundation. We therefore look to trade all stocks irrespective of their underlying business model and so our regulatory reports may show long positions that don't align with our values.'⁶

Such people will clearly never fund any version of environmentalism that involves challenging economic growth or capitalist 'business as usual'. But their logic aligns perfectly with the ecomodernist project of 'persuading' governments to smooth the way for techno-fixes which promise to resolve inconvenient issues like climate change while opening vast new frontiers of profit for Big Tech and its investors. They therefore fund organisations like RePlanet, who promote such 'solutions'.

In this context 'trust the science' tends to become 'trust the market', which as you have done more than most to show, is a short cut to perdition.⁷ I look forward to reading your updated analysis of the agendas pushed by your new friends – not to mention some of your old ones.⁸

1. see also eg www.thelandmagazine.org.uk/articles/take-breath

2. <https://geographical.co.uk/wildlife/pastoralism-under-threat>

3. www.thelandmagazine.org.uk/articles/hunting-africa-trophy-hunting-neocolonialism-and-land

4. <https://quadrature.ai/foundation/>

5. Details of Quadrature's holdings in companies including Chevron and Northrop Grumman are listed in monthly regulatory filings. See <https://uk.investing.com/pro/ideas/quadrature-capital-ltd>

6. <https://quadrature.ai/corporate-social-responsibility/>

7. www.theguardian.com/environment/georgemonbiot/2015/sep/24/meet-the-ecomodernists-ignorant-of-history-and-paradoxically-old-fashioned

8. www.thelandmagazine.org.uk/articles/another-god-delusion

BETWEEN TWO EVILS

SIMON FAIRLIE

Dear George

Thanks for your letter which gives us an opportunity to explore the rifts that exist within the green movement on these issues. But first, some of the allegations you make about the stance taken in *The Land* are wrong. Take for example this statement:

Your writers seek to rip down the only viable alternative I can see to an exponential rise in livestock production, ie unicellular organisms, to meet the rising demand for energy-dense foods.

I don't know who you are referring to. In my review of your book *Regenesi* I stated that the strongest argument for stodge, as some of us call it¹, is an environmental justice one, to meet the rising demand for high protein in poor countries; and that, provided there is sufficient available renewable energy, then 'it is not hard to imagine the new diet being accepted by inhabitants of the vertical metropolitan sprawl that already exists in countries such as China and South Korea.'

I suggested that peasant farmers 'might choose to eat it if times were hard; but otherwise they would probably find it more advantageous to feed it to their livestock and sell the resulting milk and meat to town dwellers'. This is a reasonable suggestion. Stodge is a potentially welcome replacement for soya protein from South America. Currently the bulk of soya protein is fed to animals, and I see no reason why that might not also be the case for stodge. This could provide a better way of injecting fertility into peasant soils, via animal manure, than through the acquisition of artificial nitrogen. This would help to keep two billion peasant households living and working on their land, whereas using stodge to replace farmed food, as you suggest, would force them off it.

A second accusation you make is that ***'some writers in your pages deny the radiative forcing impact of methane because they don't like the sound of alternative proteins. There are two ways of describing this tendency. One is motivated reasoning. The other is climate denial.'***

As far as I know nobody has written anything denying the radiative forcing of methane in the nearly 2,000 pages so far published by *The Land*. Most of the material we have published about methane has been written or edited by me, and I have never denied its global warming impact. In my main article on the subject (*The Land* 24 p24) I wrote: 'it is vital that livestock numbers do not increase around the world because that would generate more methane in the atmosphere and cause global warming'. Is it possible to be much clearer than that?

I come now to the remarks that begin and end your letter: that *The Land* has entered into '*an*

unintentional alliance between bucolic romantics and Big Meat' and that we '*are rolling out the blood-red carpet for Big Meat'*'.

This is a bizarre allegation given that we have written and published countless articles decrying industrial pig and chicken farms, opposing the import of soya protein, in favour of taxing meat, and advocating a decline in the consumption of both grazed and factory fed animals.

The charge that we are in cahoots with 'Big Meat' only makes sense when seen through the lens of vegan fundamentalism which chooses to view all forms of livestock rearing as equally reprehensible despite the widely acknowledged fact that the environmental impacts of different kinds of animal husbandry vary wildly. *Regenesi* makes no mention of default livestock.

As for comparing *The Land* with Southern Baptists, that really takes the biscuit. It is not we who are advocating prohibition, but proselytising vegans such as yourself. To pursue the analogy through the cartoon below, *The Land* is a voice of temperance, speaking out against intemperate meat consumption on the one hand and intemperate condemnation of animal husbandry on the other.

As you point out prohibitionists are in unconscious league with bootleggers, and the same is arguably the case for vegans and Big Meat. If all the six million or so vegans and vegetarians in Britain had instead demanded modest quantities of meat from animals that were humanely reared and fed from sustainable sources, and been prepared to pay for it, then the livestock industry would probably have shifted further in a benign direction than it has in response to mass abstention.



BETWEEN TWO EVILS.
THE TEMPERATE MAN:—“I want nothing to do with either of you!”

Bernhard Gilliam, 1882

If you have a viable and realistic means of addressing the greatest of our environmental dilemmas – the vast and rising impact of livestock on all Earth systems – I would love to hear it. But I go back to *The Land* again and again, and find nothing.

Demand for meat is increasing at an unsustainable level; but so too are air flights taken by a global elite, concrete skyscrapers, container loads of plastic crap imported from China, obsolescing computers, and all the other elements of the capitalist lifestyle, each of which will have its own ‘Benner’s Law’. We consider global warming to be a more pressing threat to human civilisation and to existing biodiversity, and that, in your own words, ‘curtailing climate change must become the project we put before all others’²

The Land does not, as you do, have a magic potion that will solve the world’s environmental dilemmas. Life on Earth is too complex for that. At best we have a bundle of proposals and ideas that we think point a way forward, and which, among other things, would reduce the impact of livestock. A list of some of these is provided below.

In any case, it is not the mission of *The Land* to promote a single solution to the world’s problems. We are a magazine committed to the land rights movement that you fired up in the 1990s, and as such we have a responsibility to scrutinise, in respect of environmental justice and access to land, the projects of those who put forward or try to impose solutions.

So, for example, we are by no means opposed to rewilding in principle, but we agree with you that ‘like all visions, rewilding must be constantly questioned and challenged’. We fully support your view that ‘it should happen only with the consent and enthusiasm of those who work on the land. It must never be used as an instrument of expropriation or dispossession’. And, like you, we ‘do not think that extensive rewilding should take place on productive land’.³

It now seems that you have abandoned these principles. By calling for ‘the end of most agriculture’ and advocating a vegan diet as ‘the best way to save the planet’⁴ you are threatening the livelihoods of some 600 million farming households, more than two billion people. You seem to be in a state of denial about this, but it is hard to see how the end of farming and

animal husbandry could mean anything else. Your brand of agribashing veganism is driving a wedge between the majority of progressive rural landworkers and a large cohort of progressive urban consumers, and threatens to split the green and environmental justice movement in two.

Recently two reports were published proposing a shift in the UK towards agroecological methods broadly similar to changes that *The Land* has been advocating.⁵ Given that they foresee a reduction in livestock numbers, lower methane and carbon emissions, and an increase in the land area devoted to nature, one would have thought that you would be supportive. Animal husbandry, however much you might wish it, is not going to disappear overnight and this a step in that direction. But instead of welcoming these reports, you publish agribashing and vegan propaganda, prompting a group of prominent agroecologists, who ought to be your allies in the fight against Big Meat, to write a letter of protest.⁶

As for studge, we have no problem in principle with what might prove to be a useful alternative to soya protein, especially in the tropics, where solar energy is more available. The thing we object to is the way you have weaponised it in your campaign against farmers. Please desist. And if you want people to stop calling it studge, then think of a better name.

George, we have huge respect for much of what you write, and for all you have done for the green movement, but in this case we think you are making a tactical blunder. You are letting your idea of perfection stand in the way of a commonly agreed good. We call upon you to join *The Land*, the Landworkers Alliance, the growing agroecology movement and green consumers everywhere in a united campaign against Big Meat.

1. Since no one has proposed a convenient generic name for it, some of us at *The Land* have taken to using the term “studge”, after the breakfast cereal Filboid Studge, that readers of Saki may remember was marketed on the basis that “people will do things from a sense of duty that they never attempt as a pleasure”. The laboratory that George Monbiot visits calls its product “solein”, a portmanteau word combining “solar” and “protein”, but, ominously, it is a registered trade mark.

2. G Monbiot, *Heat*, Allen Lane, 2006, p15.

3. All three quotes from G Monbiot, *Feral*, Penguin, 2014, pp11-12.

4., G Monbiot, *Regenesis*, p 187. and ‘The Best Way to Save the Planet? Drop Meat and Dairy’, *The Guardian*.

5. *Feeding Britain*, by the Sustainable Farming Trust, and *Modelling an Agroecological UK in 2050*, by the French think tank IDDRI.

6. ‘Demonising Organic Beef and Lamb Won’t Help Save the Earth’, *The Guardian*, letters, 25 Aug 2022

The Land’s Proposals for Livestock Farming

- Level down meat consumption (and indeed all luxury consumption) in industrial nations, so as to level up living standards for the bulk of humanity.
- Stop feeding animals inefficiently on grain that could be fed to humans. This will very likely happen if energy becomes scarce in the absence of fossil fuels.
- Grow nitrogen-fixing pulses such as beans and peas, and clover leys instead.
- Focus on default livestock, ie ‘animal products and services which arise as the integral co-product of a wider agro-ecological system’ – eg by consuming waste and surpluses, recycling fertility, wildfire prevention, conservation grazing, providing traction etc.
- Reduce the beef herd but maintain dairy production since it is far more efficient than

beef in terms of yield per hectare.

- Impose a VAT tax on meat, penalising large scale producers, and hence benefiting small-scale producers. Proceed to meat rationing if necessary.
- Keep food waste, processing waste, crop residues, meat and bone meal, etc in the food chain, rather than burning or composting it.
- Revert to a mixed farming system, where nitrogen fertility is derived from leguminous leys grazed by mostly dairy ruminants.
- Shift away from chemical fertilisers and pesticides and towards organic agriculture, based on obtaining nitrogen through legumes, and recycling other nutrients.
- Structure labelling, certification and licencing regulations to benefit organic producers and penalise chemical use.

- Focus plant breeding research on improving organic yields
- Investigate sustainable alternatives to artificial fertilisers; studge fed to livestock to produce more manure is one possibility.
- Stop the mass transfer of high quality nutrients, notably soya and palm oil from poor countries to rich countries
- In regions of high natural biodiversity, help pastoralists, forest dwellers, and other indigenous peoples protect their culture and environment from incursions by mining companies, loggers, agribusiness, fraudulent offsetting schemes, mass tourism and other threats.
- More human muscle power and brain power applied to the land, less monster machinery and data farming.

SEVEN FANTASIES OF MANUFACTURED FOOD

CHRIS SMAJE explains why further industrialisation of food chains should be resisted.

The *Land's* editors have been doing a good job of tracking and critiquing a disturbing new development in the mainstream food narrative, namely the trumpeting of food (principally protein) manufactured industrially via bacterial reproduction as part of a purported 'rebooting' of the food system.¹ I hope my new book will add strength to their analysis.² This article summarises some of my findings and highlights seven fantasies at the heart of the manufactured food movement that make it so problematic.

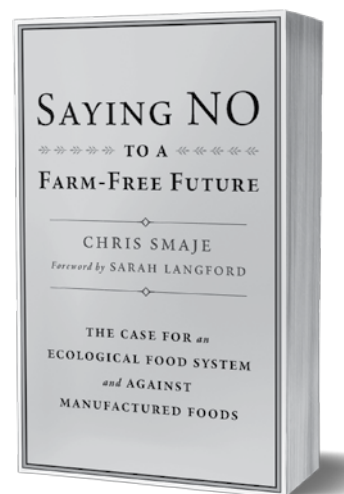
Manufactured food is the latest iteration of agricultural improvement ideology. This ideology has a long history, involving expropriation and enclosure of land and the dismissal of local and indigenous food and farming knowledges, in favour of expert-led high technology. Nowadays it's concentrated mainly in corporate hands via government enablement in the Global North – even if it's often justified as pro-poor, pro-nature and climate friendly.

If those pressing the case for manufactured food were just limited to the usual suspects, it would probably be wisest to ignore them. But since a farm-free future is being enthusiastically endorsed by political radicals and environmentalists seemingly oblivious to its fundamental defects, it seems necessary to speak out. Prominent among these endorsers is George Monbiot, whose recent book *Regenesi*s (reviewed in *The Land* 31) has played a key role in popularising the manufactured food agenda. My own book, and my analysis in this article, take aim principally at Monbiot's book, since it's the clearest and most detailed articulation of the arguments.

Energy Fantasy

The favoured candidates for the manufactured food future are hydrogen-oxidising bacteria which, when placed in a stainless-steel bioreactor and fed hydrogen, oxygen and various other chemicals, produce a protein-rich biomass slurry that can probably be made non-toxically edible for humans. The advantage from a nature conservation perspective is that the process has a lower land footprint than its agricultural equivalents, so it may in theory be able to spare more land for nature, if it can be made to work at scale.

But, as ever, there are downsides. One critical question is how to get hold of the hydrogen. You can obtain it from fossil fuels like natural gas, but that has obvious environmental drawbacks. Or you can obtain it by electrolysis of water using clean electricity. The problem with this is that it takes an awful lot of energy. If you make various assumptions about the energy costs of the bacterial protein route that are generous to it to the point of absurdity, it minimally uses around seventy times more energy per kilo of protein than the most energy-efficient large-scale agricultural method, soy cultivation. That comparison neglects the energy input into soy from sunlight, which I consider a justifiable omission because it highlights the key argument against manufactured protein – solar energy comes to us freely, whereas generated electricity doesn't.



Producing enough manufactured protein to feed all of humanity would, again making very generous assumptions, use almost all the world's present low-carbon electricity and more than nine times its solar-generated electricity, the latter being the most realistic option for future expansion of clean electricity worldwide. These figures ignore the energy costs arising from the fact that the industrial and solar energy infrastructure to produce the manufactured protein have an expected operational life of twenty-five years, meaning that the thousands of tonnes of stainless-steel and the nine million plus hectares of solar panels (a considerable land take in itself) required to meet humanity's protein needs would have to be replaced every two to three decades, at vast additional energy and other costs.

And all this is only to meet human food protein needs. To meet human food *energy* needs as well via food manufactured from hydrogen-oxidising bacteria would require well in excess of ninety times the world's current supply of solar electricity. If you believe there will soon be a global supply of cheap, low-carbon electricity orders of magnitude beyond present levels, then it's possible to entertain the notion that a farm-free future of manufactured food beckons. But there are few grounds for that belief. Currently, over 80 percent of global energy consumption and over 60 percent of global electricity generation is fossil-fuel based, and humanity is using more fossil energy per capita than ever before. It may be that those percentages will start declining, but it's hard to see where the rapid and massive surge in low-carbon electricity required for a farm-free future is going to come from. It's also hard to argue that food production should have priority access to low-carbon electricity, given that – unlike just about every other industry seeking to decarbonise by accessing clean energy – farming can make use of free solar energy directly.³

Industrial Fantasy

So it seems likely that manufactured food probably won't fly on energetic grounds – which is just as well, because if it does it's

likely to be disastrous on political and economic grounds. One of those grounds is corporate monopolisation of the food system. I suspect the key backers of manufactured food don't see this as a problem at all, but prefer to keep quiet about it. The political radicals who've rallied to the cause, however, surely do need to explain how to avoid corporate monopoly.

Monbiot's argument is basically that we mustn't let it happen. The largely inglorious if noble history of trying not to let it happen in other industrial sectors doesn't inspire an awful lot of confidence on that front, but Monbiot turns this failure on its head to craft a kind of 'if you can't beat 'em, join 'em' argument in favour of manufactured food: when it comes to corporate monopolisation of the food system, the genie is already out of the bottle.⁴

That's true up to a point, but it's much less true of farming than it is of manufacturing industry. If you take a generous geographical slice of any country you'll find a plethora of gardens, allotments, and small or sometimes large farms producing food for local consumption. You won't find a plethora of small workshops producing cars, computers, mobile phones or more or less any other manufactured consumer item. Land for food production, while certainly subject to monopolisation and enclosure, is inherently *less* subject to this than industrial and energetic infrastructure, because it's harder to generate economic and political economies of scale.

Monbiot projects manufactured food as a kind of local cottage industry under community control. But he musters no structural arguments to explain how the sector would escape the logic of monopoly concentration that applies in every other industrial sector. This makes it hard to see his vision as anything other than an industrial fantasy. He emphasises the importance of keeping food prices low to mitigate poverty, but apparently fails to appreciate that, globally, low food prices support monopolisation and exacerbate poverty. Fighting food monopoly is indeed essential, but doing so requires widespread and secure access to productive land.

Agroecological Fantasy

The fantasy that manufactured food can evade corporate monopolisation begets a more surprising and worrisome fantasy, that this technology is compatible with agroecology and peasant lifeways. Unlike other environmentalists who have embraced expert-led, top-down techno-fixing and publicly repudiated previous commitments to grassroots localism and agroecology, Monbiot insists that his case for manufactured food remains compatible with them.

I find it hard to square this with the narrative drive of his book that lands ultimately on manufactured food and anti-pastoral as respectively the technical and cultural solutions to food



Henry J. Clintenkamp

system problems, and hard to square with his dismissal of what he's called 'neo-peasant bullshit' or with remarks such as this about intensive agriculture: 'the problem is not the adjective, it's the noun'.⁵ It's also hard to square with the visions of some of his associates in the Reboot Food movement who want to see a world of 90 percent urban residence, 75 percent farmland rewilding, and the elimination of most livestock.

By some estimates small farms of five hectares or less occupy the majority of the agricultural area in lower income countries – and Monbiot criticises the food sovereignty movement for insufficiently emphasising the need to not farm. Given this scenario, poor farmers in their multitudes who farm for their livelihood would therefore have to seek a different livelihood, and in our present world of agrarian and industrial underemployment that's a tall order. There seems no question that, if the proposals of the manufactured food movement were implemented, then poor small-scale farmers would be in the firing line for expropriation.

Agricultural improvement ideology has always been relaxed about small farm expropriation as the price of ‘progress’. But it’s troubling that someone with Monbiot’s impressive track record of opposing enclosure so forcefully denies this implication of manufactured food. His own earlier writings have shown as well as anyone how narratives around wilderness conservation and agrarian efficiency have been used against small-scale farmers, peasants and pastoralists who lack political voice, and who are clearly not the major culprits in the human assault on the natural world.⁶ Yet his indiscriminate fusillades against agricultures of all kinds in *Regenesi*s and the fantasy that manufactured food is a pro-agroecology initiative risk doing exactly this.

*Regenesi*s places an inordinate emphasis on yield increase as a way of cutting agricultural land-take. As well as betraying a one-sided approach to the evidence on land-sparing, this misses the way that often ecocidal but labour-sparing industrial inputs like pesticides have fed a spiral of arable overproduction, leading to the expropriation of poor farmers and the explosion of the grain-fed industrial meat sector. This over-emphasis on yield improvement indicates a lack of agroecological vision. It’s not that yield improvement is necessarily a bad idea, but in agroecological terms it’s only one factor among many that farmers and citizens must factor into complex decisions about how best to generate wellbeing for local human and biotic communities.

The excessive pursuit of yield improvement culminates in overproduction, corporate monopoly and inattention to other aspects of local ecological wellbeing. Asking big, global questions about how humanity can produce enough food cheaply enough on the smallest possible land area provides a framing only for big, global answers that cannot be agroecological. A better starting point is to ask instead how people and wildlife can live well locally and coexist.

Urban Fantasy

The manufactured food vision is radically urban. Even Monbiot, agroecological affectations aside, suggests that concentrated urbanism is a ‘simple mathematical’ reality, that will inevitably defeat local food movements’ attempts to negotiate terms with it. It would be more accurate to call it a complex historical reality, built on processes of enclosure, expropriation, monopolistic food price scouring and cheap energy. All of these are entailed in the case for manufactured food, but equally all are likely to be unravelled by climate, energy and economic crises. The urban fantasy of the manufactured food vision is that something like present patterns of global urbanism will somehow emerge unscathed from this.

The fantasy has three elements. First, the unprecedented levels of urbanism across much of the world today are a product of the cheap fossil energy that enables cities to import water, materials, food and fuel, and to export their wastes. The notion that present levels of urbanism can be sustained, let alone increased, in the face of emerging energy constraints and the numerous challenges climate change poses to most large cities is fantastic enough. To suppose that this can be done while further devoting vast energetic resources to manufacturing food piles fantasy upon fantasy.

Second, urban workforces worldwide increasingly face economic precarity for much the same reasons that agrarian workforces do: the overproduction of high energy-input goods by price-scouring monopolies pushes people out of the manufacturing sector, and into low-paid urban service sector jobs unlikely to generate secure prosperity. Yet the manufactured food vision involves stacking the urban decks with countless more impoverished rural escapees in search of new work. This urbanisation fantasy is not a recipe for human wellbeing, or political stability.

Third, climate change, energy insecurity and capital vulnerability act as threat multipliers to a global trading and political system that large cities especially depend upon to function. It’s probably unwise to assume that current patterns of peaceful worldwide seaborne trade, built on large and vulnerable containerised vessels, will last long into the future. This makes it equally unwise to assume the long-term prospects are good for large cities that can’t source their needs within a realistic local hinterland, which is most of them. Proposals to increase non-local dependencies on the high-tech industrial plant and energy facilities required to manufacture food don’t seem well fitted to this emerging reality.

Climate and Livestock Fantasies

A major focus of the Reboot Food agenda and of *Regenesi*s is the need to reduce the planetary impact of livestock, including livestock’s climate impact. I won’t dwell on this point because it’s been so well covered in *The Land* by Simon Fairlie and other writers, although in my own book I do discuss livestock climate impacts in some detail.

Livestock do unquestionably have a climate impact, so of course there’s a case for reducing this. The bigger question is how to weigh that case against climate mitigation in other sectors. Monbiot has started using the term ‘denialism’ in respect of those who suggest the fossil energy sector rather than livestock should be front and centre of attention, but inasmuch as the livestock climate narrative implies there’s equivalence between the two sectors, such accusations rebound.

It’s impossible to discuss livestock farming (or farming in general) as if this sector were somehow wholly separate from fossil energy. Modern agriculture is a secondary industry enabled by and entirely dependent upon fossil energy. Without that enabler, it would have to be thoroughly reconfigured along local and agroecological lines, with low climate-impact livestock as a key component. Redressing the primary climate problem of fossil fuels intrinsically redresses the secondary one of livestock. It doesn’t work the other way around.

This tendency to frame agriculture as a malfeasant autonomous force is a recurrent problem in *Regenesi*s and in the broader manufactured food narrative. It leads to an emphasis on fanciful technologies to deliver a post-agricultural world, technologies that will be ineffective because they don’t address underlying problems like fossil energy and the integration of global markets around the demand pull of urban consumers. In other words, the main problem with capitalist, fossil-fuelled agriculture is not the noun, it’s the adjectives.

Nature Fantasy

Still, there's no doubt that present human activities are exacting a dreadful toll on wildlife, nor that agriculture, while not the only cause, is certainly in the forefront of this. Monbiot makes various totalising statements about this in *Regenesi*s which aren't well supported by his evidence, such as the claim that 'the great majority of the world's species cannot survive in farmed landscapes of any kind'. If this were true, then it might arguably suggest a need for a farm-free urban future for humanity.

But since the energetics and economics behind this are fanciful, we have little option but to continue farming while taking as little toll on wildlife as possible. How to do so is a complex matter involving philosophical as well as biological questions, which isn't reducible to simplistic nostrums like improving yields or cutting land take.

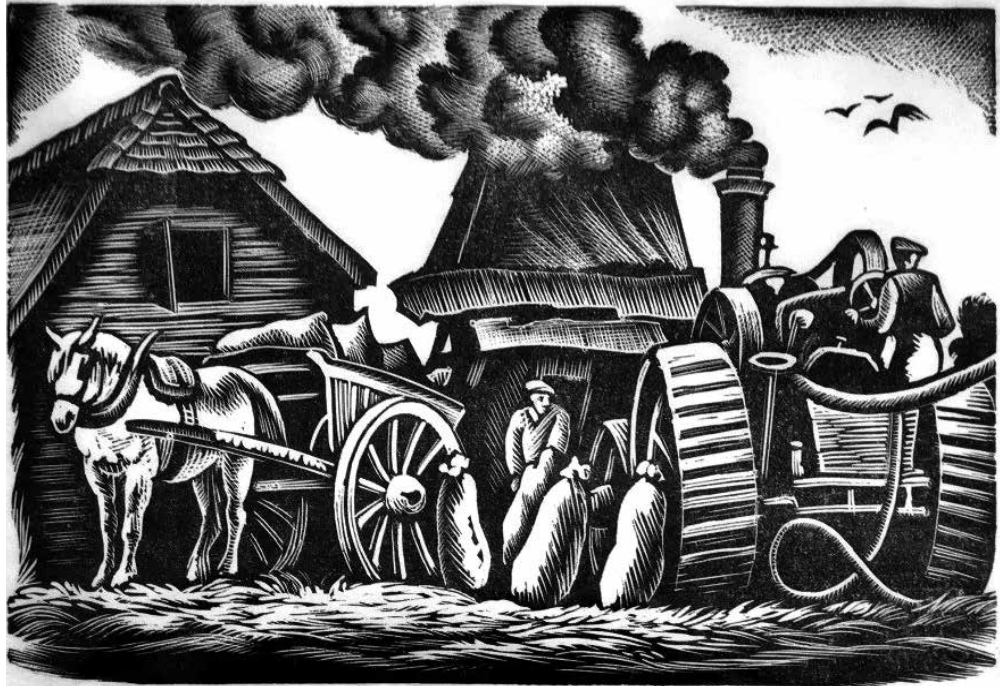
I try to negotiate this complex terrain in Chapter 3 of my own book, landing on the argument that the human impact on other organisms will only be lightened if we make ourselves true protagonists in our local biotic communities, by generating our livelihoods as far as possible from their ecological base. Perhaps this is my own nature fantasy, because we're a very long way from achieving that right now.

But the notion that humans can best protect nature by abstracting themselves from it through high-energy cities and food factories, making nature an object of wondrous contemplation rather than practical livelihood, strikes me as more fantastic still. Certainly, there's plenty of evidence to suggest that the pursuit of urbanism, energy increase and high-yielding agriculture brings little benefit to wildlife.⁷

Solutionist Fantasy

A common approach to contemporary dilemmas, much favoured by journalists and writers, involves presenting a litany of apparently intractable problems before pulling some dramatic solution out of the air (or, in the case of manufactured food, the water), like a conjuror pulling a rabbit from a hat, purportedly rescuing us and our high-energy, urban, consumerist ways in the nick of time. Usually the touted solution is hatched by people working in well-funded laboratories or research facilities in the Global North. The manufactured food vision in Monbiot's *Regenesi*s exemplifies this approach.

To reject this mythic structure invites the hostile question 'well, what's your solution, then?' To say that you don't have one as such, or that you reject solutionism, invites the derisive



Ethelbert White, 1938: Threshing

charge that you have nothing worthwhile to say, or that you've succumbed to empty despair. This is the self-legitimizing solutionist fantasy at the heart of the case for manufactured food.

I'd suggest instead that once you give up on the notion that any singular solution can save a high-energy, urban-capitalist consumerism that can't and shouldn't be saved, endless small local vistas open up for supporting human communities, livelihood autonomies and wild ecologies.

This is the essence of the peasant way, which has long had to pick up the pieces when grander schemes of world-redemption come crashing down. Not solving humanity's problems, but addressing human problems. Not protecting Nature, but living renewably within the dictates of the local ecological base. Not inventing a grand new system, but building local autonomies from the inevitable failure of such systems.

The most likely way the pressing problems that the food rebooters rightly highlight can be 'solved' is to iterate this endlessly at the local level, which will involve communities working out how to create their own plausible local 'we'.⁸ This is the main task that demands 'our' attention. It's plenty to be getting on with. But if the food rebooters get their way, I fear there'll be a lot more damage to undo.

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REFERENCES

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2. Smaje, C. 2023 *Saying NO to a Farm-Free Future*, Chelsea Green. <https://chelseagreen.co.uk/book/saying-no-to-a-farm-free-future/>
3. Figures mentioned in this section are detailed in Chapter 2 of *Saying NO*.
4. See *Saying NO*, Chapter 5.
5. *Regenesi*s p.90. Further examples in *Saying NO*, Introduction & Chapter 5.
6. Monbiot 2003 *No Man's Land*. See also 'Pastoral Care' in *The Land* 30.
7. See *Saying NO*, Chapter 3
8. See *Saying NO*, Chapter 7