The Great Re-Think:

What is agriculture for, really?

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Colin Tudge has been writing about food and farming for a long time in a series of thought-provoking books. His latest is The Great Re-Think, which examines the current state of the world and sets out the steps needed to get to where he (and many other people) think we ought to be. They include skill and craft over automation, complexity over simplicity, and diversity over monoculture. The start, though, is to really think about what it is that we want our food system to provide.

Colin Tudge: Well, I define enlightened agriculture, otherwise known as real farming, loosely but I think adequately – and I think definitions are best left loose, but we're not lawyers here – as agriculture that is expressly designed to provide everyone everywhere with food of the highest quality, both gastronomically and nutritionally without cruelty, without oppression or exploitation, and without wrecking the rest of the world. That's what it is.

One little point is that some people here who are seeing this definition will say, "Well, that's ridiculous, and we've never provide good food for everybody, et cetera, et cetera." My argument, the whole argument of most of my books, and certainly the most recent one, The Great Re-Think, is that actually, if only we, i.e human beings, did conceptually simple things well, then we really could fulfil that dream. The fact that we fall so far short – a billion under nourished, 2 billion over nourished, and the natural world wrecked – is a tremendous indictment of the strategies and policies that we bring to bear.

Jeremy: Okay. I'm going to come back to that, but just one thing gets me at the moment, which is you say – I think you said something like – all people everywhere,. But it's quite clear that the nature of

food production, the nature of real farming depends on where you are. For somewhere like England, what would real farming look like?

Colin: Yes. Well, if you follow the … Go back a step; real farming or enlightened agriculture is a new term which I coined, but it's rooted in two very well-established ideas. One of those is agroecology, which is treating all farms as ecosystems, treating agriculture as a whole as a positive contributor to the biosphere. That's agroecology. The second great idea, which comes out of the Peasants Movement, Via Campesina, is the idea of food sovereignty, which basically says everyone should have control of their own food supply. Now, both of those ideas, agroecology and food sovereignty, lead you, in general, wherever it's possible. …

Well, first of all, according to the principle of agroecology, we should be trying to emulate nature in our farming, and emulation doesn't mean slavish emulation. I mean, nature does a lot of bad things like volcanoes and earthquakes and tsunamis, but we don't want to emulate that. The real point is that we're looking for a system of farming, which on the one hand is sustainable, a horribly overused and misused word, but also more to the point resilient. In other words, can bounce back from disaster or change direction, if that's necessary.

Now, if you ask what systems in the world are there that are, on the one hand sustainable, on the other hand resilient, and then just look at wild nature. Nature has been productive enough for practical purposes continuously without interruption – no, no, with interruption, but continuously – for the last nearly 4 billion years. That's pretty damned sustainable. It suffered enormous setbacks, including six mass extinctions along the way, but always it's come bouncing back, and usually, although these terms are difficult to justify, in a better form, more diverse than it was before. You can argue with that, Jeremy, I know, in your philosophical hat.

Jeremy: No, it's not a question of philosophical hats, Colin, it's that nature doesn't care about people. Only people care about people.

Colin: Well, this might be true, but my point is not whether nature cares about people or not at this stage, but how does nature manage to be so sustainable and so resilient, and how do we emulate that.

Jeremy: By not caring about the dinosaurs, by … Nature has no … Anyway, I don't want to get distracted, but …

Colin: Leaving aside that, because I actually disagree with that, but we can get onto that much later. My only point is how do we achieve sustainability and resilience? What does nature do that makes it possible? Well, one, nature is … You look at any natural ecosystem, it's extremely diverse, so we might say, "Well, diversity is a good idea". And it is.

And it might be said, all wild ecosystems are on the whole low input. There can be high input hotspots like estuaries, where all the nutrients come flooding down, but on the whole, it's low input.

Let's translate those two great principles of diversity and low input into practical farming terms. What does it imply? Well a diverse farm, one fundamental is that it is mixed. Lots of different kinds of livestock, different kinds of crops. Low input in practice translates into organic. So I would say you want your farming, in general, to be as diverse – mixed – as possible, and as far as possible, organic.

Now if you look at a system which is organic and very diverse, it's going to be very, very complex. That complexity is built in. If you have any enterprise, farming or anything else that is very complex, not only is it very complex, but in order to make it work, you need a lot of skilled input, you need skilled labour. Not slaves and serfs, but farmers and growers who really know what they're doing. In other words, it's skills intensive.

If you have an enterprise, whether it's farming or anything else, which is very complex and also very skills intensive, there's usually no advantage in scale up. You want to keep them small so that they work. You can say, the ideal farm, the agroecological farm, enlightened farm, should be complex, skills intensive, lots of farmers, and on the whole small to medium-sized. They're the basic three that in Britain, where we're in a nice temperate climate, plenty of rain and all that stuff usually, you can do this, and the smallish, mixed, et cetera farm is, well, the norm, one might say.

If you go to somewhere like a very dry place, savannah type land, then obviously the mixed farming becomes difficult because crops, horticultural crops in particular, are quite thirsty. And rather than irrigate the whole thing, which is very expensive and not sustainable usually, you should think in terms of livestock, focus on livestock. On the other hand, in the same continent, if not in the same place, you'll find places that are wet where horticulture can be done.

To some extent, over all the world, in practice, you need some degree of specialisation, but you're always tending towards the small, mixed, et cetera, farm.

One last startling point, if I may, is that the small mixed, i.e, complex, skills intensive farm, is the very precise opposite of the big industrial farms that are now recommended by governments like ours and the United States and indeed, by FAO. The very opposite.

Jeremy: Sure. That's why we're talking together now, because we both feel that the food system that's being promoted is not in fact, doing us all that much good.

Colin: In fact, as I say, it's the precise opposite. We should be looking for small, skills intensive polycultures. What we're recommended is very, very simplified monocultures, very high input on the largest possible scale.

Jeremy: Yet, because of the way we measure things, it's quote … I don't know what. Cheaper? More efficient?

Colin: Efficient is the word they use.

Jeremy: How do you move in the direction you want to move if you've got economists and bean counters saying this is the way?

Colin: Yes, exactly. It comes down to the fact that agroecology as here defined – small mixed farm et cetera, – is, as I say, conceptually, straightforward, very complex, but it's something that human beings understand and have been developing for the last 10 … I would say the last 40,000 years. It's there, but it doesn't … nothing works well in isolation. Nothing can be put to rights *ad hoc*.

If you want enlightened agriculture, small mixed farms, et cetera, then you have to have an economy that is sympathetic to that. If you simply say, as the modern neoliberals say, that we must be trying to maximise profit, in other words, most money out with the least money in, which you achieve in practice, so long as oil is affordable, you achieve by maximising productivity production. So long as you go down that route you could never have enlightened agriculture and so you will continue to wreck the world as indeed we are now doing. In order to have enlightened agriculture, you've got to rethink the economy, and that's point one.

Then the principle that I discuss in my book The Great Rethink is that what we should be looking for is something that I call green economic democracy. However, you're not going to get green economic democracy unless you have a government that's sympathetic towards it. A government that's sympathetic towards it has got to say, "Well, actually, the idea of simply maximising wealth, isn't what we should be about. We should be about looking after human beings and the natural world."

Jeremy: We're straying into the policy changes and everything that I want to get to, but before we do that, as far as the small mixed farm – complex diverse – is concerned, there are a couple of things. One is, food people, and you included, have long said that an ideal diet is diverse and contains lots of different components. Is it just a coincidence that the kind of farming you're advocating for produces the kind of diet we might be better off eating?

Colin: I don't think it's a coincidence at all.

You're an evolutionary biologist. It's been a matter of co-evolution actually. Let's say farming is recognisable for, I would say it's at least 40,000 years old. The stuff that came along 10,000 years ago is the stuff that's big enough, widespread enough to show up in the archaeological record, which is not the same thing as saying, what was the origin? In 40,000 years, you've got a lot of co-evolution, and that's simply the case.

Over time, evolution determined – for want of a better word – that we would finish up with the small mixed farm because they're the ones that actually work, and what works is what natural selection favours. We are adapted to what the small, mixed farm provides.

It is also the case, of course, that human beings are wonderful omnivores. We're not just omnivores, we're very versatile omnivores. In fact, we can live virtually on an all-meat diet, as the Inuit more or less do, to an all plant diet, as quite a few traditional societies have done, and anything in between.

In my book, I say enlightened agriculture can't really work – no system of agriculture can work – unless people at large eat or buy, but eat what the farmers actually are producing. If you ask what is the enlightened farm producing, the answer is it's producing plenty of plants because it focuses on horticulture and arable, wherever these

are possible, and not much meat because the meat is only ever … is fitted into, as it were, the spaces, the interstices, where you can't do horticulture and arable very well.

It's very varied, because you set out to be varied in the first place. Also, it's legitimate to import things, commodities you might say, that are very high value can travel easily and well. The cost of traveling is very small compared to the value of the thing. We've always (or for many thousands of years) imported things like cinnamon and cloves and stuff, which we can't grow ourselves. The point is, if you take enlightened farming and you combine it with a little bit of what you might call fair trade of a sensible kind, you finish up with plenty of plants, not much meat, and maximum variety.

Those nine words, I suggest summarise all the best of nutritional theory of the last 60 years, which I've been following quite closely.

One last thing. If you look at the great cuisines of the world on an axis from Italy to China, and I submit that all the greatest cuisines are on that axis somewhere – India, Persia et cetera, Turkey, wonderful – you find they all use meat sparingly. They use meat, but they only use it as a garnish or as a stock or for occasional feasts, like when your daughter gets married or trying to protect some god or something. That's where they use meat, very sparingly. They, all the great cuisines, actually conform to the nine-word principle, plenty of plants, not much meat, and maximum variety.

Jeremy: I'm intrigued that you talk about trading in things like spices that have high value and that travel well, absolutely. But so much trade is really low-value stuff that happens to travel well. The cereals, rice, wheat, crisscrossing the globe at minimal cost to us and maximal cost to the world. How do you get away from that?

Colin: Well, you've got to keep trade in proportion. Now, the great advocate of the commodity approach was David Ricardo, end of the 18th, getting into the 19th century. David Ricardo made it clear that you shouldn't do anything in the way of trade that is actually damaging to the people that are producing it or the people that are buying it. He didn't say, "Don't do anything that's bad for the natural world" because in those days, it wouldn't have occurred to them to say that kind of thing. There wasn't so much pressure then, but now there is, and we would say that.

You would say, "Look, trade is fine in things like wheat and maize, and so on, provided it genuinely benefits the producers and the producer country, preferably the small farmers who produce it." That's not just a few corporates who own the whole lot. Secondly, if it's genuinely good for the importers for whatever reason. And thirdly, if the production doesn't actually wreck the natural world.

You could fulfil those conditions, and still, for example, export and import rice. The way it's done at the moment is to maximise exports and imports, treat everything as a commodity and simply judge how much you're going to export or import according to how much money you can make out of it. It's not the actual import and export that's bad, it's the mindset behind it.

Jeremy: You've talked about your small mixed farms requiring a lot of skill, requiring a lot of knowledge. They also require a lot of bloody hard work. It does seem that part of the problem of work on the land is that for the vast majority of people, it seems to be that you are effectively a slave working for somebody else for money. That satisfaction I know you used to get, and I used to get, of growing food, not only for yourself but for those around you, there is something actually about that, which your small farms might be able to do better for people.

Colin: Undoubtedly. I think there's more than one way of achieving satisfaction or fulfilment. First of all, it is true that not everybody would get a great kick out of agriculture. We're not asking … I'm not suggesting that everybody should be a farmer, which would be rather silly. I think everybody should be a cook, which is somewhat easier. It's the cooks that drive the farmers. That's how it should be. Not everybody can be a farmer.

I know this sounds like a diversion, but I would like to divert slightly. No society that I know of has consciously, seriously, formally asked the question: "How many farmers do we need? What proportion of people should work on the land?"

Now at the moment, the range is something like 80% plus – maybe even 90% – in places like Rwanda, Angola, and so on. They might be coming down from that, but that's the order. If you have 80 or 90% of people working on the land, then you've got very few people to do anything else and you've got very few people for the farmers to sell their stuff to except by growing commodity crops, et cetera, et

cetera, which is not what we should be trying to do. We can all agree 80%, 90% is too many. But in Britain and in the United States, we're down to about 1% full-time farmers on the land. Now, that I submit is far too few.

In America, I'm sure you'll know the statistic, There are many, many times more people in jail than there are working full time on the land. Anyway, the question really that arises is what is the ideal number? One percent is obviously too few, you can't do enlightened agriculture with so few farmers. And 90% is obviously too many. Now, I would say as a top-of-the-head figure that in general, no country should have fewer than 10% of its workforce working on the land, but probably no country should have more than 50%.

Now, this means that a country like Britain, which prides itself on its so-called efficiency, has about one-tenth of the number of farmers it really needs, whereas a country like India, which probably now has about 60% of people on the land has almost probably the right number. Let's assume that in a country like Britain we have got, let us say, 10% on the land, ten times more than we've got. There's various ways in which you can get satisfaction from that depending on your temperament. Some people I know, are growers who really just want to be on their own. They really don't want to do anything else except that. There are other growers and farmers who really like to work as a team. This seems to be quite a common thing among young people. The farm used to be a very social place. That is another way of doing it.

I consider myself to be left-wing, but I like the idea of the small company. This is part of the, what do you call it, green economic democracy idea. Now if you run your farm as a small company, and it's very convivial, and you look after your workers, it doesn't seem to me to matter very much whether that farm is owned by a single farmer who is an enlightened and nice person, or whether it runs as a cooperative owned by everybody that's there, or whether it's owned by the community at large and employs people as employees. You can achieve conviviality within a small company provided it's a nicely run company.

Jeremy: We've got somehow … we're giving the workers an adequate recompense, in fact a good recompense, for the work they're doing. They have satisfaction, fulfilment. I call it contentment,

but there you go. And then we have government policy that divorces the ownership of land from what you do with the land, as a result of which it's very hard to get into the kind of small farming enterprise. How do you give people access to land when land itself is a commodity?

Colin: Well this of course is a crucial issue, which the world again is not facing up to, or indeed pulling us in the opposite direction to where we need to go. If we were giving a proper answer you would say we have to be seriously radical and the seriously radical thinker who I think is … many people have said this … but who captures the whole idea, is a chap called Henry George. He was a late 19th century American thinker and he said, basically nobody should own the land. Insofar as people lay claim to it, you can say that it belongs to the community as a whole or to humanity as a whole, and somehow rather it has to be held by the community as a whole on behalf of everybody.

Nobody would own land but what you would acquire would be the right to do something with a particular piece of land provided it's in the public interest, provided it's in the interest of the natural world. This is doable. It has been done in some places, but off course it goes right against the grain of private ownership and all that stuff. Overall we've got to have massive land reform over the whole world.

This is part of a much broader process of … not reform, but of renaissance … of when we started again. It involves everything. It involves how we farm, how we govern, how we check the economy. How we apportion land. What our attitude to science is. What our attitude to the natural world is. What our morality is. What do you really think is important, and I very much like to reinstate the whole business of meta-physics, which asks very fundamental questions like, "What is the world really like, and how do we know what is true? What is the basis of goodness?" and all those things.

This renaissance is not going to be brought about by the present powers that be. At the moment the world is ruled by an oligarchy. That oligarchy is wedded to the status quo. It created the status quo. It's not willingly going to change the status quo. So if we want this renaissance, then we human beings at large, people at large, have to make this renaissance happen. Basically it's a question of every human

being taking a proper interest in what's going on and, as it were, getting stuck in. In other words democracy.

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