**John Steel:** Welcome to the Building Better Business Podcast. I’m John Steel from Cafédirect, and today, we're going to talk about agriculture, and we're going to talk about agriculture and its effect on our planet. The one thing for sure is that all of the wonderful food that we eat, comes from our planet, comes from the earth, and I think sometimes we don't realise that, and realise how that's being done and the implications. And so, today, we're going to talk all about agriculture. We have two great guests to help us along the journey, and I’ll introduce them in a moment. First of all though, a few words of introduction, I can remember a number of years ago, as climate change has gained momentum, quite rightly and importantly, that people talked about aviation being a big impactor in terms of the amount of greenhouse gases, and I think if you look at it, aviation accounts for less than 2% of greenhouse gases, it's still important but less than 2%, whilst agriculture accounts for nearly a quarter of the greenhouse gases that we emit. And so, agriculture has to be solved in terms of its impact on carbon. I think also, and our guests will talk a bit about this, I’m sure, agriculture has changed, and to people who are fortunate enough to have a garden or an allotment, agriculture seems like quite a small thing. But a lot of the agriculture around the planet is actually quite industrial, and uses a lot of fertilisers, and is extractive, rather than regenerative. Not only is it about greenhouse gases, but also agriculture uses a lot of water, which is really important, and we'll come on also to talk about what seems to be really key, which is the way agriculture has been working over the years is damaging the very soil upon which it depends, which is really key, an increasing problem. So today to help us navigate this, I’m really pleased to have two fantastic [00:02:00] guests. First, I’d like to introduce everybody to Guy Singh-Watson, and Guy is the founder of Riverford Organic, which is an organic business that is renowned for supplying fruit and veg boxes and also other boxes as well. So welcome, Guy.

**Guy Singh-Watson:** Thank you.

**John Steel:** And secondly, I’d like to welcome Sam Fulton, and Sam is the Group Director of Corporate Affairs from a business called Nomad Foods. And for those of you that don't know that name, Nomad Foods, Nomad looks after some fabulous brands, including Birds Eye, Findus and Goodfella's, and is one of the largest frozen food businesses around. So welcome, Sam.

**Sam Fulton:** Thank you very much.

**John Steel:** So agriculture and climate change is what we're here to talk about. I thought if we could start off just to chat about the link between agriculture and climate change, I sort of started off with my crude introduction. But, I mean, Guy, could you just kind of bring to life, the impact agriculture is having and why it's having that impact?

**Guy Singh-Watson:** Well, I’m going to talk about first world agriculture in developed countries, which I think is probably very different to most of the agriculture I see in developing countries, so just to make that distinction. But yeah, talking about that first world agriculture is, for the most part, a disaster for our soils, it's a disaster for biodiversity; I would say, it is increasingly a social disaster in terms of the divorcing people from how and where their food is produced, and it's a disaster for our health, and looking at the whole food system, in terms of what people are eating, certainly in the UK, 50% of it being ultra-processed food. We have an epidemic of type 2 diabetes, coronary heart disease, and certain cancers could be called bowel cancer, and all as a result of our food system in a very avoidable way, and even the climate change aspects, I do believe to be avoidable, [00:04:00] really about all you can say is that it's cheap. In the UK, it amounts to 8 to 10% of GDP. At farm gate prices, it amounts to a measly 1.6% of GDP. When you consider that it accounts for 50% plus of biodiversity loss, certainly more than 50%, and perhaps 25% of climate change, you know, clearly that is a pretty poor state of affairs and to be designing a food system really, largely based on producing ever cheaper food when at farm gate prices, it's already 1.6% of GDP, just seems to be completely ridiculous. Slightly take issue with some of the figures you used earlier, John, but aviation I think is higher than that, certainly in terms of global change, and I think one needs to be [inaudible 00:04:46] without aviation, if you are talking about 90% of that will be the richest 10%. If everyone flew as much as the richest 10%, it wouldn't be 3%, it would be 30%. So let's not underplay the impact of aviation.

**John Steel:** I mean, so you really used the word disastrous a large number of times there Guy, and you also touched on the distinction between kind of...

**Guy Singh-Watson:** It threatens life on Earth, that's how disastrous it is.

**John Steel:** Yeah, exactly.

**Guy Singh-Watson:** There are plenty of civilisations that have collapsed as a result of poor farming practices, and we are threatened with the same.

**John Steel:** Sam, do you want to build on Guy’s comments there?

**Sam Fulton:** I mean, I think both of you, you make very well-made points. I mean, the facts are clear, completely to Guy’s point, if you look at how agriculture, at least, industrial agriculture has developed over the last 50 years or so, there's been huge loss of biodiversity. And in fact, I think the statistics actually show that biodiversity loss is increasing faster than ever at any point in our kind of lifetimes really, and clearly, that's not sustainable. I think the only positive thing, I would say, is I think there's much greater recognition of the fact that there needs to be a complete transformation in the food system. I’m not saying that everybody is definitely driving [00:06:00] in the right direction, but I think their awareness is much greater, and I think there is a recognition that we're talking about systemic change here. It's not piecemeal, it needs everybody to work together for a total transformation of the food industry, but not just for the benefit of the planet, but actually for the benefit of humans. We do need to feed more people, and we need to find ways to do that much more sustainably.

**Guy Singh-Watson:** I just wanted to add, I said a disaster, of course, it does produce a huge amount of food very cheaply, one shouldn't estimate the absolute phenomenal achievements of agriculture in terms of feeding a larger population, it is a great achievement. I just think it could be done at a much lower environmental and social cost.

**John Steel:** You touched on the difference between industrial agriculture and, I suppose, smallholder agriculture or farming. What percentage of the agriculture is big agriculture versus small agriculture?

**Guy Singh-Watson:** It's quite contentious, actually. The FAO used a figure of 70% of the food produced from smallholder agriculture, which they define as being less than two hectares, five acres. I’ve always found that figure a little bit hard to believe, and I think it has been contested, and it seems likely that it's more likely to be in the range of 30 to 40%, but it's still, you know, very substantial.

**John Steel:** Yeah. No, we had the same, because we'd heard the same 70%, and we – all our coffee comes from smallholder farmers, because coffee is predominantly a smallholder farmer industry. And yeah, I think it's more like 34-35% and that's [inaudible 00:07:28].

**Guy Singh-Watson:** Yeah.

**John Steel:** Still very, very significant, and very key.

**Guy Singh-Watson:** And particularly key in where there is food insecurity, and inadequate food supplies there, it is largely been produced by smallholder – the farmers. So you might say, in some ways, they're the most important [inaudible 00:07:44] of the food system.

**John Steel:** So we work with smallholder farmers, growing coffee at high altitude. Help us think about though what industrial agriculture looks like, and how is big agriculture, if smallholder farmer agriculture is literally a family in a couple of hectares, [00:08:00] creating a small enterprise, what does big agriculture look like?

**Guy Singh-Watson:** Well, okay, I’m going to talk largely about the UK. I mean, I do also farm in France, a little bit of experience of Europe, and less of the US, but I think probably the story is the same throughout the developed industrialised world is the – throughout, since we've all had our industrial revolutions, a proportion of people working in agriculture has fallen to certainly less than 2%, from probably 70% pre-Industrial Revolution. And that has meant, and it now represents 1.6-1.7% of GDP in the UK, which now means that some, you know, perhaps a farmer has to be 60, 70, and a 100 people, we could do the logical follow-through of that. And that can only be achieved in a pretty industrialised model. And so, the drive has been towards scale, towards specialist farms. So most farms in the UK are either specialists combinable, crops, grain, and so on, or they're specialist dairy or the most acute areas are specialist poultry and especially pig production, which really has become factory farming. And dairying is going down the same route, it tends to be one enterprise farms, I would say sheep and beef are the only people that really managed to escape that. And not only are they specialised, they are incredibly increasingly really quite large scale. So in my parish, there used to be 10 small dairies, even 20 years ago we would have been milking most of them less than a 100 cows. Now they're two [inaudible 00:09:35] milking over a 1000 cows, cows almost never go outside. It's feedlot production, and getting increasingly more likely in the US. So that is the reality of agriculture in this country, I mean, most of the work in my sector, horticulture, is done by non-UK nationals, a sort of underclass, I’m afraid, I hate to say it, but that is the reality. You don't get much English spoken on in horticultural fields. You do Riverford [00:10:00] but you don't on most farms. So I think the sort of social contribution that agriculture can make in rural areas has been lost, to a large extent, and I think the cultural contribution that comes from feeling a connection with where your food comes from has also been lost. I mean, quite a lot of that has been driven just by basic kind of economics, and some of it I find a little bit too hard to understand just how fast the rush to scale and simplicity has taken place, and just how quickly it's changed. I think most people are probably unaware of how this is changing, but I would just ask you, as you drive through the west of Britain, within southwest, just look out the window, and ask yourself, where have the cows gone. Because you don't see a lot in the fields, you know, they're all showing up on concrete, being fed soya from Brazil, and it's a completely unsustainable system.

**John Steel:** It sounds like we're all very agreed that the way it is now is not going to be sustainable, and therefore, we're running out of time. So it's hugely important, but it's incredibly urgent to change. And Sam, you were saying to transform the industry, where do you start?

**Sam Fulton:** I think just to add to what Guy said, I mean, our brands are eaten by millions of people, so automatically, we're very focused on how do we actually work with the farming community and work in agriculture, but actually do it sustainably at scale. I think just to give a bit of context, so about 40% of the volume of goods that we source in total are actually vegetables, so that equates to about 400,000 tons of vegetables a year, and about half of those vegetables are actually sourced directly from different farming communities. One example of that is actually the group of pea farmers that we work with in Hull in the UK, so some of it's actually quite regional. But for us, it’s very much about how can we actually look at our total supply chain, and then, apply sustainable agriculture principles [00:12:00] to that total supply chain. So our target is 100% of our vegetables will be sourced by 2025 to sustainable agriculture standards, and then, it's very much about making sure that there's a really solid framework that sits behind that. So our base level is to start with the sustainable agriculture initiatives, FSA farming principles. Our initial target is to make sure that all of the farmers are at minimum Silver level, and ideally that they're going beyond that. But the idea then is to kind of use that as a baseline, so we then build on top of that, and there are a couple of areas where we're particularly focused on top of FSA around, for example, carbon and biodiversity, but our focus very much is on taking 100% of our agricultural supply chains to at least FSA Silver and beyond.

**Guy Singh-Watson:** Do you mind me asking what that means, I mean, are they using nitrogen fertiliser, where's the fossil fuels coming from to make their – I wouldn't even call my own farming sustainable. I just like to grow into that a bit, Sam.

**Sam Fulton:** The FSA, the actual framework is quite detailed, so there's different criteria. That includes things, for example, if you look at soil health, so the top criteria is around things like soil health. It includes, for example, criteria around things like biodiversity, and we work with them on that. Each farmer needs to have a biodiversity strategy and plan for their farm, and then, as I said, like, some of it is very much kind of, you know, there's a total farm plan really – part of the work of our agriculture teams, and I’m definitely not, especially on this call, I’m going to pretend to be a farming expert, but a lot of the work of our agricultural teams is actually to partner with different parts of the farming supply chain and SAI, look at how we can actually ensure each farm actually has a plan. And then, on top of that, there are pilot projects around things like carbon, biodiversity – biodiversity is something, for example, that we've worked with for a long time. So in Germany, for example, we've worked with a group of Spanish farmers and Bonn University on biodiversity projects, that includes things like flower [00:14:00] corridors, and the farms to kind of increase biodiversity. There are projects in the UK, where we've looked at the use of cover crops and between pea crops to look at how that actually can help with things like carbon sequestration. So the SAI framework is actually really comprehensive. But then on top of that, we're looking at pilot projects to look at how we can actually take that to the next level, and a lot of those projects are where we will actually work in with additional expert partners. So we've had projects, for example, that we've just finished with WWF. There are a number of universities that we're working with on various pilots. And then, the idea of the pilots is to take the learnings and see if we can apply them at scale, either in the UK or actually much more broadly.

**Guy Singh-Watson:** I still don't feel any of the wiser, Sam, after that. But there have been certification schemes beyond, you know, for wildlife or wherever, ever since I pulled my first wellies on. I don't see them improving things very much. We used to supply supermarkets and went through some of these auditing procedures. I’m sure they've improved, but I’ve just heard a load of acronyms from you that mean absolutely nothing to me. That may be unfair, I mean, I haven't done research to find out what they do mean. But in the absence of that, I’m afraid, I will keep a degree of cynicism, because I don't see anything like the changes, being driven anything like fast enough by any of the schemes that I’ve heard of, and it's incredibly, you know, you have an uphill struggle, because to quantify and validate biodiversity measurement and so on is extraordinarily difficult. I mean, someone has to decide the relative merit of a barn owl and an earthworm. I mean, it's a very, very difficult thing to do, and subject to any of corruption and greenwash along the way.

**Sam Fulton:** Yeah, I mean, I agree, there's definitely greenwashing. I mean, I think the other positive thing is, there's much more transparency in terms of the expectations of how companies need to report, a lot of that is third party verified, a lot of its interlinked to things like a company setting, [00:16:00] carbon reduction emission targets, things like net zero. So when you look at all of these things, I think the levels of transparency are definitely growing. And I agree with your point on biodiversity, in fact, one of the projects that we've actually gotten in Italy with the university in Tuscany, is looking at exactly that, but it's actually very difficult to measure biodiversity. So that's one of the projects that that's actually live currently is how can you actually do and what are the ways that you could then potentially replicate that in other countries.

**Guy Singh-Watson:** And one should absolutely try to measure it, but I don't think one should cheat yourself or your customers that you [inaudible 00:16:35] in any way a perfect measurement. And this, with carbon, at least, you have the unit, one kilo of carbon dioxide, or carbon dioxide equivalent is a recognised sort of unit. But when it comes to farm level, you know, measuring that and measuring what's going on in the soil, you know, I was three weeks ago, at Groundswell, the Regenerative Agriculture Conference, and there were lots of people selling their wares with regard to measuring carbon. And we may get to a point where we can measure it credibly, but we are certainly not there yet. And the farm carbon toolkit in my mind the most, the longest standing and most reputable and credible tool in the market. The guy who started that whole thing says, this is not an auditing tool. It's a management tool to help you farm better. It's not something to let allow you – we are not, you know, the coach is getting in front of the horses in terms of pretending that we have any precise measurements of these things.

**John Steel:** It sounds like we're all agreeing though that we need to take action that is transformative, not necessarily measuring stuff, and I got the impression, Sam, that you're saying so you're direct from farm goods, you've got a program, and you're moving towards – you want to be Silver in a thing, that [inaudible 00:17:50] got gold. What about the indirect sourcing that you have, how do you treat that differently – because you're slightly more distant from the farm, I guess, in that kind of situation?

**Sam Fulton:** Yeah. [00:18:00] So, I mean, in terms of the farmers that we work with directly, about 90% of them currently are FSA Silver, and then, I said, the plan is to go beyond that. So that's very much a baseline to get what we would describe as kind of like the mass to a kind of baseline level. And then, in terms of the sourcing indirect, the same target applies really. So overall, we're at about 88% Silver. Similarly, I mean, you know, doesn't really matter to us whether it comes from direct or indirect, I mean, clearly, we have much longer relationships, in many cases with the farmers that we've sourced with directly. So we've worked for pea farmers, for example, for maybe 20 or 25 years in some cases, but the target is exactly the same. So we expect it, whether it's direct or indirect, to be hitting the same level. And then, if we feel there are gaps, then we partner directly with different parts of the supply chain really. Obviously, we have less control as it were over indirect sourcing. So a lot of the projects that I’ve talked about tend to be with our, you know, the farmers that we work with directly, but the idea is to apply the learnings, and the insights to the people that we source from indirectly as well. I think at the scale that we source it, it's probably not possible to source all of it directly, but the actual target and the standards apply across the board. And obviously, part of this is about relationships. There are things that we also are learning from our suppliers from other companies. So I think if there's anything that's positive, there's much more recognition that this genuinely requires collaboration and sharing of information, like, nobody – that this is not a competitive area. Everybody wants, I think, to share things that work really, at scale.

**John Steel:** And that’s certainly the reason we're having these kinds of chats and podcasts, is it’s not a time for competing, is it, and going I do this and you do that, it's very much the time for working out how to act faster and more dramatically, and to learn from each other. I was going to say, Guy, I’m believing that at Riverford, it's very much a very small agriculture [00:20:00] world, so it's a very different world.

**Guy Singh-Watson:** I mean, in terms of scale, we buy probably about 30 million pounds of farm gate prices produced in the UK. So, it is – but they are largely from small and medium scale farmers, and we have a preference for that. I mean, when it comes to certain products, you know, potatoes and so on that really can only sensibly be done at scale we are – but even then, they are family farms, so, you know, relatively local to us. But yeah, I have mixed feelings about scale. I don't think it necessarily has to be bad. It's just that, in most cases, it turns out to be. And I think one might probe into why that is, but I don't think it necessarily has to be. And we do, do some auditing with our suppliers, and we are tentatively entering into environmental auditing, and working with the [inaudible 00:20:58] through the Soil Association, and also using the palm carbon toolkit. But I’m very reluctant to tell our farmers at this stage what they have to do, because I don’t feel I wouldn't know well enough, myself, actually. And I suppose, we are approach is, kind of, more one of hearts and minds, I guess, is that we tend to work with farmers who share our worldview, and part of that is definitely looking after the environment. And it may sound a bit prejudicial that if we don't like them, we don't buy from them on the whole. And we won't buy, we will look to find someone else, if we don't believe that there are – I went to a Spanish broccoli producer a couple of months ago, I was with him two hours, and he didn't mention the soil once, we will not be buying broccoli from him next year. He clearly is – he didn't – he gave a damn about anything other than making money, and those are not the people that we want to be dealing with. So we will then, and we encourage them, we have a certain amount of training, and we have forums where they will discuss [00:22:00] their environmental measures, and that – and we do actually pay for some things on their farms, for instance, in agriculture, and agroforestry scheme we've been financing for the last year. But we're not being prescriptive in terms of telling our farmers what they should be doing, not at the moment anyway. I just suffered too much of that from supermarkets 20 or 30 years ago when I used to supply them, and I really don't want to fall into the same trap of having some idiot coming around who doesn't know anything about my farm and telling me how to farm.

**John Steel:** It made me think, I should probably say a little bit about some of the things that Cafédirect does, even though we are – I’m usually trying to get you guys to talk rather than me. But then, I mean, I suppose, some of the things that we do thinking about the discussion, and we do have, what we call, centres of excellence in kind of four farms in Peru, and then, four in East Africa, where you're trying to achieve a certain change, and then, you have an exemplar farmer and all the other farmers come and see it and learn from it and chat about it, and stuff like that. So an example would be there's a farm just over the Andes, where leadership is very much about women, and it's very much about diversifying income. So they add value to things that they sell in local markets, like, creating chocolates and selling guinea pigs, because it's a source of protein and it's accepted more in Peru than it is in Putney or whatever. So although their main crop is coffee, if you go to the farm there, they're growing fish, they're growing guinea pigs, they're growing vegetables. They've got the shade, point that you're making there, Sam, in terms of helping to change the way that soil is being treated. I guess, we find those are quite a good way, because then you're not telling some – you're not telling a farmer how to do business. Farmers are learning together, I guess. And there’s other ones, I mean, some of [00:24:00] it's social because it's the role of women and the role of young people. But then, there are climate change ones, and kind of quality and yield stuff as well. But I think you made me feel when you mentioned Sam, it is important to find ways of transforming as well, isn't it, on the ground?

**Sam Fulton:** As a basis, I don’t think there's any company, definitely not Nomad Foods or any of the brands, none of us want to have an unsustainable system. Ultimately, these are brands that people know and trust. We want them to be around for the next 100 years, so it's in our best interest to really make sure that we do everything possible that we can to actually ensure that we do have a sustainable supply chain for the future, but completely I think there's huge recognition of the challenges facing farming communities. If you're look currently, we're in a cost of living crisis, the whole Russia-Ukraine issue has made things on a whole other level of volatility really. So I actually agree with Guy, when he talks about that, this is not about auditing. The reason we've got agricultural teams is because they – it's about relationship building, so it's about making sure that we can actually work with the farmers and understand what their issues are, and look like where we can actually be part of the solution, that definitely, I think not telling them how to do things, but then very much kind of sharing those learnings because we do operate at scale. But some of it is around diversification really, in terms of business models.

**Guy Singh-Watson:** I think we have to be honest about green. It's cheaper to make a claim than it is to actually do the deed and be green, i.e., greenwashes can be the cheapest way of maintaining, you know, if we're going to say, trust, faith in your brand, rather than actually financing it to produce food well, with care for the environment, and future generations, costs more. Don't get away from that. You cannot produce food sustainably at 1.6% of GDP. It is just not possible, and to look after livestock properly, and really to have care for [00:26:00] future generations. I just think we have to be honest about it, you can't do it. I am skeptical about claims about sustainability, but they are fundamentally carrying on with the business as usual model of food and farming.

**Sam Fulton:** That's a genuinely not business as usual. I think there's a recognition that business as usual has got us to where we are today, which is to an unsustainable food system, and I genuinely think there is recognition that things have got to change dramatically. So this is not about business as usual, in fact, it's about actually doing business and agriculture differently.

**Guy Singh-Watson:** Business as usual, what do you think, when you're sitting around a boardroom table, what is the outlook in terms of, you know, how many years, I mean, return on investments, what people are talking about everything, if you get to five, you've done damn well, in my experience of sitting around the boardroom table, and three is more common. These are questions that are in longer term than that, and they're the basic model that most global organisations, most capital institutions are all about shareholder value. And that's the rule of the game, let's be honest about it, that's how capitalism works. And it delivers many wonderful things through that system, but it is going to take us to over the cliff, unless we are honest. And one of the main problems is the timeframes. We are talking about planting a tree – I’ve just been planting walnut trees, they may produce some walnuts in 10 years' time. It's going to take them 50 years to get into main production and their impact on the soil and soil carbon will be measured in decades, if not centuries. These are not the sort of timeframes that people are sitting around boardroom tables discussing, and even worse, they're not the sort of timeframes that people are sitting around cabinet tables discussing. But generally, the electoral cycle, you know, five years is just too short. So we have a combination of a political system, and an economic capitalist system, which is just patently ill-suited [00:28:00] to deal with the problems in front of us. And I just think, we are too much better to be honest about that.

**Sam Fulton:** I can't really comment on any other company. I think, for us really, some of the thinking is very long term. I mean, if you take the Birds Eye pea supply chain, this is a supply chain that's been running since the 1950s. The focus very much is on how do we actually make sure that that can continue for years to come. In terms of other sources, I mean, one of our other big portfolios is fish. Fish, again, is very long term, I mean, the reality is it takes a fish a certain time to grow.

**Guy Singh-Watson:** You shouldn't be selling fish. If you really care about the health of the oceans, you should not buy anything that comes up a beam trawler, and I’m damn sure that you do. You just shouldn't – you cannot call yourself a sustainable company, while you're selling that stuff. It is not sustainable.

**Sam Fulton:** There are a whole different level of certification for fish, but I think as an example, it's genuinely thinking about whether that's fish stocks or vegetables or whatever, you've got to think big picture.

**John Steel:** The point you're making Guy is the point that, I guess, we spend quite a lot of our time about, which is if organisations are owned to deliver profit, to pay shareholders that create short-termism, and it creates a focus it's about money, not about changing the system.

**Guy Singh-Watson:** Yes, it does, and I don't know, Sam, but I’m guessing that Nomad Foods isn't a listed company that is perhaps owned by long term, maybe family shareholders. Is that the case?

**Sam Fulton:** So we are actually listed, yeah, we are listed, yeah.

**John Steel:** You are, right.

**Guy Singh-Watson:** Well, I mean, it's [inaudible 00:29:33] if you're listed and people are analysing your results into the next quarter and your predictions. I mean, that's the reality of the game. And if you don't meet the, you know, as the CEO, if you don't meet the targets, the expectation of your investors, you're out the door. I mean, it's very hard, you know, let's be honest, it is very hard under that structure. I know some family owned companies, particularly on the continent have a much longer term view, and they're able to, they're afforded that luxury by [00:30:00] not being beholden to shareholders who think about anything other than the bottom line. I just think we need to be honest, because we're not going to solve these problems, whilst we sort of pretend that these two – these systems and sustainability long term are compatible, they're just not.

**Sam Fulton:** I think the point you made though, I mean, our view very much is business can play a role, but genuinely, it requires collaboration across the whole value chain. So there's a role for government, part of the challenge is government is also quite some time short term, it requires expert partners, because we recognise there are areas that we're definitely not expert in. So therefore, we need to make sure that we're actually getting that input and expertise. But I think the reality is probably a recognition that everything is so interconnected that actually, I don't think there are really any supply chains where a business or one organization can drive the level of transformation that's required, as genuinely looking at what's the system change, and how can we create the right environment and bring the right people on board to do that.

**Guy Singh-Watson:** Which is kind of what I’m driving at. I think it's very difficult, you know, accepting that we live in a capitalist world, it's very difficult for businesses like ours or Sam's to find the solutions, without a government that has the courage to set a framework, a legislative framework, and yeah, I mean, to my mind, I mean, at least half of these problems would just go away, would be solved within a decade, if we had a realistic carbon tax or even better fossil fuel tax. And if so, the funds from that were redistributed per capita, so to make sure that the poor people didn't suffer, in fact, that they would be substantially better off. And studies by the IMF and the OECD, both confirm slightly different timeframes, that this would drastically reduce our carbon emissions globally. And if you order it, I think it was 30% in three years, one of them globally. I mean, it's so obviously the answer, and that's why I’m asking for honesty, [00:32:00] we live in a capitalist world, where large corporations that, to a large extent, share that – shape that world, exist to make profits. It's government's job to shape that world, so that those businesses can do what they do best, you know, it should be resources to deliver those profits, and you've got the right framework in place, and the most important part would be taxing carbon, the problem would go away. And I just find it infuriating that the power of the fossil fuel lobby, let's just have some honesty, this is just, in no way, a fit response for the situation that we're in. Let's hold our politicians to account, and if we don't, if we continue to elect a bunch of lying charlatans, then we have only ourselves to blame.

**John Steel:** Shall I bring us back down to earth a little bit and talk about soil, how about that? I mean, you talked about soil a bit earlier on, Guy, and what exactly is it that's going on with soil in big agriculture, how bad is it changing, and how do we stop it?

**Guy Singh-Watson:** Well, ever since we cut down the forest and started plowing the ground, we've pretty much been losing carbon. I mean, I’m guessing, that probably started somewhere around 10% probably. And you'll find most arable soils are down one to 3% now, I suppose, so we've lost a huge amount of carbon, I thought that's gone up in the atmosphere, almost all of it. And I think I’m right in saying prior to 1970 globally, there was more carbon dioxide emitted as a result of anthropogenic mankind's activities through changing land use, so clearing forests and so on in agriculture than through burning fossil fuels. So it has been huge, fossil fuels has since overtaken it, obviously. So yeah, so loss of carbon been a large part and loss of physical structure, because it is the organic matter in the soil that binds the soil particles together, and gives it a sort of stability and a resistance to compaction, keeps the structure open and allows water [00:34:00] to percolate, which, you know, less of that, you get more runoff, more flooding. And then, the microbial life in the soil, the incredibly complex mycorrhizal fungi, the bacteria, the invertebrates, the earthworms, which I think were only really, okay, Darwin wrote about earthworms, but the incredibly complex soil community ecology, we're only really just starting to appreciate and, of course, that's where most life on earth starts. And if you don't have that, you don't have voles; if you don't have voles, you don't have barn owls, kestrels, buzzards, and so on. And so, we neglect it because we can't see it. We abuse it, as a matter of cost, and it will very likely be our downfall. And it's a sort of buffer, I suppose, it's a buffer in terms of carbon, it's a buffer in terms of water. I mean, the better, the healthier your soil, the more ability it has to hold moisture so you can better withstand droughts, you'll have less flooding downstream. And the much quoted, you know, we only have 60 harvests left or something, I’m a little bit skeptical about those figures, because it's a gross oversimplification. I’m sure there are places in the world where it's probably less than 60 harvests. I’m pretty sure it's not on my farm. So it is a – but yeah, we are in dire straits, and I think there is, I mean, globally, but in the developed worlds, wheat yields have more or less plateaued. So however much cleverer breeding we do, we're not getting any more out of the soil, because we have abused our soils to an extent where it can't produce anymore, and I think there is a growing acknowledgment of that, I mean, way beyond the organic farming community, I think in the conventional farms as well. And that is driving some improvements in farm practices, I mean, the move towards min-till, minimal cultivations, less plowing and so on is definitely a great thing. It can come at the cost of increased agri-chemical usage, in particular, [00:36:00] the herbicide glyphosate, which I think needs to be viewed with a degree of caution. But on the whole, I think, yeah, there are encouraging signs, and I’m guessing that these are the sort of things that Sam's suppliers will be doing.

**John Steel:** Yeah, because Sam, you touched on soil health being there on your agenda.

**Sam Fulton:** There are things we're doing as Nomad Foods, and in others where we're partnering, in terms of some of the, I suppose the resources that we've got. So we've got a global research centre in Sweden, one of the things that they're looking at all the time is basically soil. So some of that is looking at soil from different countries, see what some of the learnings are; again, see how we can maybe share that with some of the kinds of farming groups that we work with. There are other projects that I’ve talked about, so a couple in the UK, one of them called Project Echo. There's basically 600 hectares under – that we're kind of working with farmers, which use cover crops to really look at the impact on soil and stuff like carbon sequestration. There's another project where our agriculture teams are doing stuff like taking headlands out of production to really look at different pollinators, and again, look at the impact. And then, I think there's some quite interesting stuff again, very UK-specific, but through the Sustainable Soils Alliance, there's now actually a new industry platform that's looking at soil health. So I think that’s a good example of, A, there's recognition that this is an area where there needs to be more work and more collaboration. But also where there's very active alliances developing really to see how we can kind of like scale up some of that – some of the learnings really, making sure that we are looking at how we can continuously improve really.

**John Steel:** Because, I mean, Guy when you were talking about the way soil has been degraded, clearly then has an economic, a negative economic impact on businesses, isn't it, because if you can't get the yields, presumably then you're into these businesses that are about profit, you're into difficulty, aren't you?

**Guy Singh-Watson:** Eventually, yes. But over quite long timeframes, we have been abusing our soils for a long, long time, and have kind of [00:38:00] got away with it, by virtue of keeping the crops healthy by putting on more ammonium nitrate fertilisers, more fungicides and more insecticides. We managed to get away with, I think there is an acknowledgment that we are approaching the end of the road. So unfortunately, in the sort of timeframes that many people, you know, farmers probably have a – historically have thought in longer timeframes, but I’m afraid, particularly with arable farmers, that's maybe they've, you know, commercial pressures have pushed those long term considerations off the table. I still maintain that even farmers aren't thinking long term enough, so I think the commercial imperative is not really strong enough. When I went to Groundswell, as I mentioned earlier, festival of regenerative farming, and I asked every farmer I met there when I was queuing for the loos, the bar or food or whatever, why are you here. And they, all of them said, we're here because we want to farm better, we want to be part of the solution, not part of the problem. That's why they were there. And then, that would be closely followed up by, of course, we have to make it pay. But the actual primary driver was wanting to be part of the solution rather than part of the problem. And I think a lot of farmers – I wouldn't go as far as to say most, but I think a lot of farmers and a growing number are thinking like that, and I don't think, yes, it does have to pay, but I don't think we should be too kind of bashful or shy about appealing to people's better instincts. I think most people do want to do the right thing, and I think being honest about what the right thing is, is important, and there are a lot of things which people just refuse to talk about, I mean, dragging a beam trawler across the bottom of the ocean is in no way acceptable, and no thinking person should be eating or selling fish caught in that way. And that is the way 70% of fish that are landed in the UK are caught. There's certain things and certain use of neonicotinoids, [00:40:00] I’d be interested to hear Sam, if any of your farmers are using the neonicotinoids. You talk about preserving headlands to maintain pollinators, but if your farmers are using neonicotinoids, it's really, it's tokenism. I mean, neonicotinoids are always certainly the result – the cause of, or a substantial cause of the collapse in pollinator numbers, and they just shouldn't be used. And they have largely been banned in Europe, but our government has decided to, since we left to allow farmers to use them again, in many instances.

**Sam Fulton:** To be honest on that, that's something I’d need to check with our agri teams here obviously, you know, that's the kind of stuff that they're looking at day to day.

**John Steel:** The other thing that wasn't on the agenda, but it was touched on in the discussion, which is a good, lively discussion, is cheap food. And, I mean, if I was to worry about anything, we are clearly going into a period of incredible inflation, and probably consumers looking for cheap food, when we're trying to not have that situation, I mean, how do you feel about the current situation, Guy, in terms of the way consumers are starting to feel, and whether that will set us back or not?

**Guy Singh-Watson:** I feel quite angry about how the argument is framed, and we have a problem in this country with people not being able to afford food. I’m sorry, I don't think that means the food is too expensive. We have a problem of poverty in this country, which is a result of the unequal distribution of wealth, you know, I would say, expecting, even on minimum wage, whatever it is, 9.40 pounds or something an hour, you cannot live on 9.40 pounds an hour – even if you both work, and you have two children, you cannot live on that money. I would go as far as to call it modern day slavery, yet we have a government expecting people who are earning that sort of money, working in the NHS, working in the care sector, sometimes working in farming, and they're being asked to exercise pay restraint. [00:42:00] I mean, come on. I mean, we have a problem of poverty in this country. We do not have a problem – well, it results in food poverty, but the fundamental problem is poverty. No one's talking about, you know, it's like we're back in the Victorian times where people spent 70% of their disposable income on food. People spend 8% now. They spend – probably poor people, I’m guessing, 40-50% on rent. Where's the discussion about property prices and rent? Why are we talking about food? And anyway, even if you want cheap food, as I said earlier, only 1.6% of GDP goes back to farmers, people spend maybe 8%, so a fifth, a sixth goes back to the farmer. Don't talk about how we're farming. Talk about what's going on in the food chain, if you want cheap food. I mean, talk about how retailing works and so on. So because we have a poverty crisis in this country, the implication that somehow farmers have to abandon all environmental measures and just focus on cheap food is ridiculous.

**John Steel:** Yeah, that’s not where the issue is at all, is it, no. Yeah, I think I was with Oxfam, where they showed the distribution of value over 30 years between retailers, manufacturers, traders and farmers. And yeah, I mean, it's not only too small an amount going to the farm, but it's a declining amount over time. So it's not even that it's sustained in unsustainable, and at a point in time, it's been getting worse and worse and worse. Guy, you talked about legislation earlier, and I suppose, one of the closing things here really is what are the two or three big things that need to be done to really change the system rapidly, and drastically, what do we need to do?

**Guy Singh-Watson:** Well, I’ve mentioned that the game changer for me is a carbon or fossil fuel tax. I mean, that trumps everything else by a long, long way. Beyond that, I would say, [00:44:00] just ban neonicotinoids. Farmers will adjust. So let's do the simple things that are clearly wrong that shouldn't be happening. I’d be looking, really looking to reduce the amount of, and even remove the amount of soya and grain fed to ruminant animals. I think that's a madness. I think I would make heating greenhouses illegal, or, at least, make sure that fossil fuel is taxed appropriately for its environmental damage, which would have the same effect anyway. I just think we've got to look at legislation that is actually enforceable, that can work. I mean, I really hope that the ELM scheme can be made workable. I do worry, having sat around the table with two people to work for Riverford, and looking into all the schemes, I mean, my God it is complicated. The whole idea of public money for public goods is great in principle, but the practical reality of measuring those public goods and appropriating, distributing public money appropriately to the value is far more difficult than Michael Gove or any of his successors I think acknowledges. So yeah, a legislative framework, I’ve mentioned a few things, which would be top of the list. They may manage it with ELMS, but some relatively simple, quantifiable grant payments for things like planting trees, single trees, and where I farm, the mature trees, the oaks, the elms, [inaudible 00:45:25] the ash are now going, you know, the standard trees in pastures are an incredibly important part of our visual community, but also carbon sequestration and animal welfare. So I think simple payments for things like that, and hedge maintenance are a great, I mean – perhaps, I mean, carbon trading, I’m not an enthusiast, but it is coming, but it's already happening, and in a very, very dodgy way. And I think it is happening, and I think we have to have a government framework regulated. So I would say a regulatory framework for that would be pretty high on the list as well. There are a [00:46:00] few things.

**John Steel:** That's great. And Sam, what about yourself, thinking beyond Nomad Foods about the things that need to really change?

**Sam Fulton:** I mean, I would agree, I mean, I think there's a baseline support of legislative environment would be helpful. I think, on the positive side, the fact that there is now much more scrutiny and transparency of the various claims to be made, I actually think there's a direction where, just because of the level of reporting from businesses that that actually will drive scale on its own. And then, I think not just Nomad, but I think everybody, there are some strong targets. But what's more important is actually the action plans that sit behind them. So we need to make sure that we drive the action, not just make the commitment really, which sounds very broad, but I think that is the key thing is to keep focus on actually driving the change. [inaudible 00:46:47] actually is very challenging, but we need to keep continuing to do that, at the same time, as we deal with all the volatility and all the other things that are happening, and make sure we keep focused on, you know, ensuring that it's actually affordable and accessible for consumers.

**Guy Singh-Watson:**` It's the actions that count.

**Sam Fulton:** Yeah.

**Guy Singh-Watson:** And I am just not interested in reading another government, white paper with targets on it, which are just ignored. I mean, they've just been one after another after another, I’m not – it's the actions, it's a sort of enforceable legislation that I’m interested in, and it does have to be enforceable. I mean, we have a government that can't, you know, it has this antipathy to being called nanny state in any way, whatever. But if you have laws, you have to be willing to enforce them. And at the moment, no one has the resources to do that, whether it's trading standards, you know, we have some very, very bad labelling and just outright lying that no one – there's just no resources to do anything about it, if you want the free market to find the solutions, and I’ve already said that I don't think it will find the solutions, but to have any chance whatsoever, you have to have enforceable rules, which we just don't have at the moment.