



Land Use in England Committee

Corrected oral evidence: Land use in England

Monday 13 June 2022

4.40 pm

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Members present: Lord Cameron of Dillington (The Chair); Baroness Bakewell of Hardington Mandeville; Lord Curry of Kirkharle; Lord Goddard of Stockport; Lord Grantchester; Lord Harlech; Lord Leicester; Baroness Mallalieu; Baroness Redfern; Baroness Young of Old Scone; Lord Watts.

Evidence Session No. 15

Heard in Public

Questions 158 - 168

Witnesses

I: Matt Chlebek, Founder and Chief Agronomist, Harvest Farms; Russ Tucker, Founder, Ivy Farms; James Woodward, Sustainable Farming Officer, Sustain.

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Examination of witnesses

Matt Chlebek, Russ Tucker and James Woodward.

Q158 **The Chair:** Welcome all three of you to this evidence session of the Land Use in England Committee. We have Matt Chlebek from Harvest Farms. Did I get the pronunciation of your surname right?

Matt Chlebek: Near enough.

The Chair: Okay. Welcome also to Russ Tucker from Ivy Farm and James Woodward from Sustain. You have in front of you a list of interests that have been declared by members of the committee. The meeting is being broadcast live via the parliamentary website. A transcript of the meeting will be taken and published on the committee website. You will have the opportunity to make corrections to that transcript, where necessary.

My first question is to Matt and Russ. It would be helpful if you could describe the technologies that you use and are working on, and their potential, and what support you need to realise your aims for growth for your business in regulatory change or subsidies et al.

Matt Chlebek: I am the co-founder and chief agronomist at Harvest London. I look after the growing of the plants and the running of our facility. We are a vertical farming company, which, to put it simply, means that we grow plants indoors in a sealed environment as part of something called controlled environment agriculture, which also includes things such as advanced greenhouses and that sort of stuff.

The Chair: Can you describe the process?

Matt Chlebek: Yes, of course. Vertical farming takes advantage of a number of technologies and allows us to grow crops stacked up in layers, like on shelves. One layer on top of another means that we can take advantage of the height of a space, so we multiply how much productivity we can get from the floorspace. It uses something called hydroponics, which is growing plants without soil; all the nutrients the plants need are in the water we supply them. That water recirculates, so we are very water efficient. We use LED lighting, which is relatively energy efficient and gives the plants the ideal light spectrums they need to grow, and we use quite advanced climate control, which allows us to provide the plants with the perfect humidity, temperature and carbon dioxide for what they need to do.

That allows us to be more productive than traditional outdoor agriculture, especially per square metre. We can be more efficient with our inputs; for example, our fertiliser does not run off into waterways but is recirculated and recaptured. We do not use pesticides, because no bugs or diseases can get into our environment. We can grow our product very close to where it is consumed. The majority of crops that we grow are things such as soft herbs and leafy greens that are often imported, especially out of season in the UK. We grow it really close to where it is consumed. Our current farm is in east London and all our current customers are based in

London. None of the food we grow is susceptible to fluctuations in weather or climate, or to disease, as I said. Everything that we put in comes out; we know exactly how much crop we are going to get from the amount of seed we use, and all the crop comes out perfect, edible and sellable.

The Chair: What about the potential, or are you going to come to that?

Matt Chlebek: Yes. The potential for what we do is that, at the current stage of things, it allows us to improve the country's food security, because we are not relying on imports, or at least our customers are not relying on food that they would otherwise import. It is more productive, and in the distant future maybe, or in the next 10 years or so, there are a lot of opportunities for improving the crop beyond just quality. You can look at different cultivars and at ways of growing that improve nutritional quality. Obviously, because of how we grow, we are resistant to climate change, and we can grow in areas where crops are not normally grown, in urban and peri-urban areas, and so on. Those are the advantages of what we do.

The Chair: Thank you. Russ, do you want to talk now? Matt, we will come back to you on regulation in a minute.

Russ Tucker: Sure. Afternoon everyone. I am the co-founder of Ivy Farm. We are a spin-out from the University of Oxford, and we make real meat, but in a different way. You might have heard of it as lab-grown meat, cultivated meat or cultured meat. We take a small biopsy of tissue from an animal, such as a pig, cow or chicken, and we take the cells from that piece of tissue and replicate them. We do that in large steel tanks called bioreactors. If you were to look at a big factory of the future, it would be like a brewery. We replicate those cells in the perfect environment, where they are suspended in a liquid mix of nutrients. Over two to three weeks, we turn the small biopsy of meat that we have taken from the animal into kilos of meat.

Our process is much more efficient, because we have no waste, and we are very clear on the nutrients going in and the products coming out. That translates into improvements on greenhouse gas emissions, land use and water use. On greenhouse gas emissions for beef, as a comparison, there are potential savings of up to 92%. That is from an independent study by CE Delft in the Netherlands. I can share the details with you. On land use it is 95% efficiency, and on water use it is 95% because we recycle all the water we use in the process.

In terms of potential, at the moment in the UK we import about 60% of the pork that we consume, so there is a big opportunity to produce cultivated meat in the UK to improve our food security. The process is not regulated in the UK yet, and we need to work on getting approval for it. It is much better for animals: no animals are slaughtered in our process, and the cells, which are ultimately the cultivated meat that is consumed, grow exponentially—they double every 24 hours. In the large brewery-type tanks that we create, every 24 hours we are doubling the amount of

meat. We can put these facilities anywhere there is a water supply, so we really reduce the logistics required to get this to people who ultimately consume the meat.

The Chair: To be clear, you are using 5% of the land. Is that correct?

Russ Tucker: That is right, and the reason for that is calorie conversion. It depends on the animal; it is about 95% for beef, and 70% for pork. We are not sustaining an animal throughout its life; the entire animal does not have to grow and then sustain and build up all the different components that ultimately are not consumed. We are making only the meat that is consumed, and any nutrients that are not used in the process are recycled. We recapture them and put them back through the process.

The reason for the 95% saving is not just the facility where we house the brewery of the future that makes this meat, but all the fields required to grow the crop. The ingredients that go into our cultivated meat still come from arable farming. We need to put into the process the nutrients, amino acids, carbohydrates, glucose and so on that the cells ultimately use to make more cells—to duplicate—but we do not need as much in our process as you would need for a traditional cow or pig.

The Chair: What about the support you might need now? You talked about getting regulatory—

Russ Tucker: It is great to see that the national food strategy came out today, and there was mention of looking at the novel foods authorisation process. In the UK, we follow that process. It is EU legislation that has been lifted and shifted over to the UK from 1997. The process for novel food authorisation is a bit of a black box for any company entering it. It is at least an 18-month process. You submit a dossier of information that you believe is all the information required to provide to the regulator to prove that the product is safe, and then you wait. At the end of the 18 months, you will likely have some questions and ultimately lead towards approval.

There is a big challenge for a company that is doing that, in that it is very difficult to recruit people, deploy capital, train people and put contracts in place with supermarkets and so on when you are just waiting. It is much more attractive in other markets such as the US and Singapore where they have an iterative approach to regulation. That does not mean that they are reducing standards; the standards are still really high, and we want the standards to be high because we want consumers to have confidence in our product. It means that we have a sense of what is coming down the path in the discussion with the regulator, and we understand how our application is progressing so that we can start to deploy capital and raise funds and have confidence that, ultimately, we can launch it.

The other way to think about food technology is that it is a little bit like the smartphones of the future; they are constantly being developed and

iterated, so when we submit a dossier of information and we wait 18 months, 18 months later our team of 50 engineers and scientists will have come up with at least version 2.0 ready to go through the process again. It would be much better for companies, the industry and the regulator to develop an approach to regulation that is much more iterative and open, where we can share those advances and reduce the burden not only on them but on us.

The Chair: Thank you. Matt, do you want to talk about your support?

Matt Chlebek: We are still growing plants, so from a food point of view what we are growing is nothing new. The genetic technology Bill would allow us—this is what my background is in, educationally at least—to develop novel crops more rapidly that could take real advantage of the environment we create. All the crops that we grow are crops that have been bred for outdoor agriculture. They spend energy being pest resistant in some cases, and we do not need that; the plant could be using that to be more productive or create bigger fruits and so on.

The technology we use is quite well established. A lot of it is technology taken from the glasshouse industry, but there is a huge amount of scope and R&D in things like data gathering, analysis, energy efficiency and sustainable packaging—plastic is a massive problem with our industry—and the continued support of the transforming food production scheme that we have worked with in the past would be great. A lot of the time, there is a lot of funding that we are made aware of from places like Defra, which are funds for helping out farmers, but things like vertical farming are not included in that. Technologies that we would take advantage of are not there; they are not listed, so we cannot take advantage of those opportunities.

One of the other problems that we face is business rates. We take over old industrial buildings, but we still have to pay business rates on them because they are not considered agricultural buildings. Our current borough has some agricultural buildings in it, but ours is not considered under that. Making local councils more aware that it is possible to grow food in urban areas would be massively advantageous to people trying to grow food in urban environments. We cannot be designated organic because we do not grow in soil, and that is one of the things that you need to be designated organic. A change of attitude towards what is and is not organic from our business would allow us to communicate to consumers quickly and easily that we do not use pesticides and that sort of thing. That is the level that we are at.

Q159 **Lord Curry of Kirkharle:** I have a quick couple of questions for both Matt and Russ. Have you done blind flavour tests on the products you are producing compared to the alternative, naturally produced products outdoors?

I have a specific question for Russ on the carbon calculation you referred to that was carried out by a company in the Netherlands. What basis did they use? Was it a global basis for carbon emissions from beef cattle, or

was it specifically the UK production systems that you used as the baseline?

Russ Tucker: First, I will answer the calculation on carbon and then come back to the taste testing. On the carbon calculation, CE Delft, the company that looked at that, considered cattle that had been from the western markets, and, in the best-case scenario, had been outdoors as well, and it looked at reductions in nitrogen emissions associated with being outdoors. It looked to compare the best-case emissions output for conventional farming versus cultivated meat. The cultivated meat savings require us to use renewable energy in our process, and we are committed to doing that. That energy is required for powering our bioreactors and maintaining them at a certain temperature; they have to be at 37 degrees, the temperature of the animal's body.

We are not allowed to do any sort of marketing taste testing in the UK because of the FSA. It would be illegal. If I wanted to bring some product here for you to taste, there would be a fine line as to whether it would be permitted or not, as it might be seen as marketing purposes. We have tasted it internally of course, and we are confident that we can replicate it and that the taste is the same. That is crucial, because I want to put it on the shelf in front of consumers and let them decide. That is all we are looking to do. If it does not pass the taste test with consumers—the taste as well as the texture and nutritional profile—we do not have a business.

Q160 **The Earl of Leicester:** I have a general question for both of you. There is a slow food movement now, which I suspect neither of your businesses would qualify for, that emphasises the importance of nutrition, quality of food and so on. It would be interesting to hear your comments. Matt, what about capital costs for you versus conventional agriculture? You mentioned rates and things like that. You do not have to buy tractors, but no doubt you have to buy various other things. Russ, are you concerned about what has been happening to Beyond Meat and that that might happen to you?

Matt Chlebek: On the capital costs side, there is quite a large upfront cost to starting a business like ours. With each facility that we build, especially as they get more and more advanced, the cost increases, but the running costs are much lower and they are productive very quickly. The life span of that equipment is quite long. Getting access to the money initially is hard, but if you have access to the money the facilities last a long time and are not inexpensive to run, so they are comparable.

The Earl of Leicester: Presumably if you are doing salads, you can grow 10 lettuce crops a year—

Matt Chlebek: Much more than that. For example, our basil crop is 24 crops a year. Outdoors, it would be far less than that—four or five. What was your first question?

The Earl of Leicester: Slow food.

Matt Chlebek: I love the idea of having an allotment and growing all my own carrots and turnips and things. That would be fantastic. That is how I would like to eat. Unfortunately, the food system is set up so that everyone can have whatever they want all the time. It would be a massive job. It works in certain cases. Overall, there is huge demand for crops that are out of season in this country a lot of the time. We like to be able to provide people with what they want in the most sustainable way possible and as close as possible to where they consume it.

Russ Tucker: I come from a family of butchers and farmers. I want to bring cultivated meat to the UK as the solution for intensive farming and let the best of British farming breathe again, take the pressure off the margins on those businesses driving them down to industrial farming, which is a relatively new phenomenon in the world, and give the best farmers the room by providing cultivated meat as the solution for all the processed types of products.

We would make processed mince—people will still want to consume those types of products—and we can be really confident of what we have put into our process. We can be clear about the ingredients. We do not use any antibiotics, so we are not giving rise to antibiotic-resistant diseases. Our nutritional profiles that we have run match the pork that we take off the shelf in the supermarkets. We are better on saturated versus unsaturated fats and we are better on omega-3s and omega-6s in our latest tests. We are confident that we can provide a nutritional option to consumers and help support the best of British farming with this as a solution, if it is supported in the right way.

Regarding Beyond Meat, I have huge concern about carefully managing how cultivated meat is introduced to consumers. That is why we are quite vocal in trying to educate people. There is a role for us in the industry to do that in the right way and be transparent about how we are making the product, what the ingredients are, where the cells are taken from and so on. It also requires support and education by other actors, including government, about how it can help people and allow them to have a healthy diet as a suitable option.

Q161 **Lord Watts:** The technology you are talking about is not new, is it? I think I saw it about 15 years ago, so it has been going a long time. What is the potential for your industries? First, how much of our need could be met by your production? Secondly, what will the cost implications be for the customers?

Matt Chlebek: We match or beat the price of our customers' current suppliers. We currently sell in the majority to the food service industry, to restaurants; greengrocers also buy from us. We do not see the cost to the consumer being an issue. There are different ways you can price things. You can grow more expensive products. You can grow cheaper products. Our technology is not new—you are right—but the ways of using it are developing constantly. Adding automation and adding things like big data and machine learning help us get improved yields.

The crucial thing about the technology that we use versus the indoor agriculture technology that was used 10 or 15 years ago is its energy efficiency. As more people invest R&D money, and as more companies buy the products, the LED lights, the HVAC and so on, they will become more and more energy efficient, which allows us to drive the cost down further.

In theory, there should be nothing we cannot grow, whether that is herbs, tomatoes, wheat or potatoes, if it is needed. We see it in the same way. We can provide an alternative to importing from abroad and an alternative to growing crops with a lower margin in the UK, and maybe then farmers could use that land to grow something of higher value.

Q162 Baroness Redfern: Following Lord Watts's question, can you paint a picture of where you think technology in food production might take us in 20 or 30 years, and therefore what impact it will have on agricultural land?

Russ Tucker: A study commissioned by Ivy Farm and carried out by Oxford Economics said that by 2030, if cultivated meat is adopted in the UK, it could add £2.1 billion to the UK economy, add more than 16,500 jobs—more than 8,000 of those would be highly skilled jobs—and add £500 million to HMRC income. There is huge potential for this industry. What impact could that have? The demand for meat is growing globally, as well as in the UK, with rising populations.

At the moment, we import £6.6 billion of meat each year into the UK and we net import over £4 billion. There is an opportunity to improve our national food security by manufacturing cultivated meat in the UK, and we can make it wherever we want; it does not have to be in one city. I picture multiple factories across the UK right where we need to make it, limiting the logistics requirements. The fermenters can be the size of large breweries. At the moment, the bioreactors that are used for a lot of vaccine manufacture, which is a similar technology, are about 2,000 litres. A cultivated meat business in the US has just announced a 250,000-litre bioreactor that it is building to manufacture cultivated meat. The potential is absolutely massive.

If we do not act and support this industry, ultimately we might still have these factories in the future in the UK, but it will not be a British business that has developed that technology. We will be working with other businesses—US businesses and businesses from the Netherlands—that will set up their factories here. We will not have any of the highly skilled workers; they will all go elsewhere and work for those companies. We really need to act now and support this industry because there are several businesses globally that are working on the technology and fighting to be successful.

Matt Chlebek: Our views are very similar. We foresee a country whose agriculture is supported by a network of large-scale vertical farms in either urban or peri-urban areas, or perhaps even further out into the countryside. There are options for more local growing solutions, whether

that is the people who are currently trying it in office buildings or whether it is greenhouses on the roofs of new builds, et cetera, and there is potential to convert existing agricultural buildings into vertical farms to support open field agriculture. There is an unlimited possibility space for crops that could be grown using the technology that we use, replacing the 60% of fruit and vegetables that we import. We see how we could grow all of that in this country with the right technology, support and infrastructure.

The Chair: James, what do you think about all that?

James Woodward: I think it is very interesting, and I certainly can see a place for these ways of producing food in the UK. In one way, I quite like how Russ put it: being able to fulfil a market that takes pressure off some areas of food production in the UK, and allows what are now termed regenerative or agroecological-type farms to come more to the fore. I still think that type of farming has a really important place. It produces a very diverse range of foods and needs the support. At the moment, a lot of the support is skewed towards more intensive farming. Land-based, agroecological-type farming, which we know can also play a very key role in feeding the country, needs a lot more support.

Baroness Redfern: Where are we in relation to other countries that are doing just this?

Russ Tucker: Cultivated meat is regulated in Singapore. It is on sale in small quantities, but they are building a large facility right now. They have a very clear national strategy that 30% of their food must be local by 2030. That is a big challenge for Singapore with their land, so they are adopting these sorts of technologies to find solutions to do that. It is expected that the US will regulate cultivated meat before the year is out, and advances are being made in Israel as well.

It is a real shame in the UK at the moment, because we have everything that would allow this to be incredibly successful. We have consumers who are looking at their diet and thinking about where their food comes from, and how they can make choices that are better for the environment and better for animals. We have a fantastic set of talented engineers, biochemists and biologists who are raring to go in this industry, and we just need to take the action to let that flourish, otherwise we risk losing out on the opportunity.

Baroness Redfern: That is very interesting.

The Earl of Leicester: Are you knocking at a closed door with Defra? Are they not interested?

Russ Tucker: I would not say the door is closed; I would say that everyone is very open to the idea of making change. Certainly, from conversations that I have had with the Food Standards Agency, it is about having an innovative approach to regulation. The problem is speed and turning words into action, and the people who actually make the call

saying, "Okay, well let's do something about this", rather than all saying, "Yes, it makes sense. We should do something".

Today, the national food strategy was announced and it talked again about looking at novel foods regulation, but there was no timeline of when that would happen. Right now, the Food Standards Agency has a lot on with CBD applications and with the transfer of all the authorisations from Europe, so I am not sure whether it is equipped to deal with the incoming tide of food technology applications.

Q163 **Baroness Mallalieu:** You have spoken about having very talented biologists and scientists. Both of you, at both ends, have said that we need to act now to support this industry. Are the skills there? Do we have enough of them? If we do not, what needs to be done? What do we need to do right now to support the industry in which you are both involved at different ends?

Russ Tucker: From my side, it is absolutely about regulation. That is the thing that needs to change, with a very clear signal. The funding is there. There are plenty of people willing to invest in the industry. They see the potential. In terms of talent, we can recruit worldwide. We had no issues in doing that with sponsorship and bringing people across. We brought people over from Singapore to work at Ivy Farm, and from the US. In terms of talent, we are attracting people in as well as home-grown talent in the UK. Everything is lining up very nicely except for regulation. As a British business, the risk therefore is that you start to say, "Actually, should I even be in Britain? Where else should I go to be able to get my product on the market?", and you start looking elsewhere.

Matt Chlebek: We are building on a country that is very good at growing produce. We have a lot of talented engineers who are experienced in glasshouse design, which is something that we sit adjacent to. There are world-class universities that produce people who know about plant science, data science, engineering and all the things we bring together. The automation side of our industry means that we do not need to rely on cheap labour. We can hire skilled people who know how to run the machines and manage the facilities. We are not short of talent, but we need support from funding bodies to help people get started. As we have already covered, these are expensive facilities to build.

There is an awareness piece that means that it is not just people like us, start-ups, who can do this. It is an achievable thing for people who are already involved in the agriculture industry. A big thing for us is that we are energy intensive. The decarbonisation of the grid or the ability to collocate our kinds of facilities next to energy generation is massive. If we can locate what we do near energy generation, the realities of being competitive versus imports are very clear to us. More renewable energy is key for us as well.

The Chair: Matt, give us an idea of how much energy we are talking about.

Matt Chlebek: I am trying to think whether I can do the sums in my head on how much energy we use. It is very dependent on the height of your building and the size of space. All I can say is that it is a lot more than running a supermarket. It is difficult to quantify what it is like versus open-field agriculture because we just use electricity. We do not use diesel. We use a lot less fertiliser, and that has downstream energy implications as well. We use a lot of energy.

The Chair: Thank you. We will move on to slightly wider questions now with Lord Harlech.

Q164 **Lord Harlech:** I declare an interest. I have known Matt for about 20 years, but unfortunately I have no financial interest in Harvest Farms.

This is for the whole panel. What do you think will be the main impacts of the Government's 25-year environment plan, the commitment to achieve net zero by 2050, and the 30x30 targets on land use in England? How might new technological incentives help support the Government's objectives?

James Woodward: Sustain certainly supports the Government's ambitions to restore nature and tackle climate change. Ultimately, those policies or strategies will have an impact on land use. Local communities will probably see landscapes changing as more trees are planted or more habitat is restored. Fundamentally, people might start to see changes in how land-based farming looks. We hope to see policies shift farming back towards more mixed farming. We know that there is huge potential for tackling climate change and nature loss through that way of farming. Through these policies, we would love to see, and I think we will see, more uptake of more innovative land-based farming such as agroforestry, and that will change how land will be used and how land will look.

The other thing we will see through these policies in land use is supporting farmers to reduce their inputs on land. The impact that will have on the environment will be positive. If we are aiming to restore ecosystem services such as pollination, natural pest predation, healthier soil full of earthworms and things like that, it will also impact on land use.

A slight concern in this space is about some of the potential mechanisms that government might use to deliver on things like net zero. We have a few concerns about the carbon credits and the biodiversity credit markets at the moment. They are very underregulated. We are seeing some potential negative impacts on land use through those mechanisms. Big businesses are buying up land and potentially pushing communities and farms off those lands and planting monocultural tree plantations, which is not necessarily the right way to go to deliver all that we need to deliver from land in the UK. That is something to be concerned about and is where something like a land use framework could be a key tool to bring all the policies and strategies together, so that government is delivering in a very coherent and joined-up way on this stuff.

Q165 **The Earl of Leicester:** My question, as I reread it, is pretty much the same as Lord Harlech's. You have answered already what impact you

think government policies to address the climate and biodiversity crisis will have on national food security, which is the slightly different angle. What you have been saying is that planting more trees and more land for biodiversity equals less than 70% of the land in Britain for agriculture, so that makes space for these two innovative types of agriculture.

James Woodward: Yes, potentially. If government is trying to address climate change and the biodiversity crisis, that is a massive positive for farming, especially for the long-term resilience of farming. Farming needs healthy soils. It needs pollinators. It needs natural pest predators. It needs to reduce reliance on heavy inputs like synthetic fertiliser and pesticides. There are opportunities for certain government policies such as the environmental land management schemes to tackle those things alongside healthy, productive agriculture in the UK. I certainly can see a place for a more diverse innovative approach in farming where these types of approaches come into it as well. Tackling nature and climate is a positive for national food security, especially in the medium and long term.

The Chair: Thank you very much.

Q166 **Baroness Bakewell of Hardington Mandeville:** What do you see as the main challenges of opportunities of the new ELM regime, and does ELM pay enough attention to encouraging food production techniques that could result in freeing up land?

James Woodward: Certainly, we support the principles of public money for public good and we support the underlying principles of environmental land management schemes. There is still an opportunity for environmental land management, or ELM, if it is okay to refer to it like that from now on. There is definitely an opportunity to see more ambition embedded in it over time. Defra has committed to ratcheting up the ambition of environmental land management over the next few years before it is fully rolled out and implemented. There is certainly an opportunity for ELM to start to facilitate or catalyse a lot more collaboration on a landscape scale, bringing more farmers working together on that scale to deliver a wide range of multifunctional land use in their landscape.

Another opportunity with ELM is that, hopefully, it will engage with a lot of England's farmers. I know that Defra is aiming for an uptake of 70% of the sustainable farming incentive scheme in ELM and, hopefully, it will engage a lot more farmers in the idea of delivering more public goods. That is definitely an opportunity. As for some of the challenges, there is potentially a bit of a lack of ambition at the moment, especially with the sustainable farming incentive. There is very scant detail on the local nature recovery scheme at the moment, which is supposed to replace Countryside Stewardship. That will play an important part, hopefully.

The SFI, the sustainable farming incentive scheme, could be more ambitious in supporting farmers to transition towards agroecological regenerative farming systems and more diverse systems. There may be a

bit of a lack of vision coming through at the moment and not necessarily a clear set of objectives set by Defra yet. Hopefully, that will come through as the schemes are developed more and they understand more how they all fit together. It is important for government and Parliament to be able to monitor and measure what is happening on the ground, and whether ELM is achieving positive land use change.

I have already mentioned that there is still very little detail on the local nature recovery scheme, which is supposed to be quite an important element of ELM. There is the landscape recovery scheme, which is set to free land for nature restoration. There are projects that have already started, I believe, and there will be more coming through. There is an element of ELM doing that.

At Sustain, we would really like to see ELM supporting the farming sector to transition to agroecological-type farming systems. Modelling done by the French research institute, IDDRI, found that if the UK agriculture sector transitioned towards agroecology, it could feed the country as well as free about 7% of current agricultural land for other purposes. I really hope that Defra starts to embed that into its approach on agroecological farming.

Baroness Bakewell of Hardington Mandeville: The lack of information and detail on the ELM schemes has not exactly endeared them to farmers. They are not queueing round the corner to take part. How do you see that we might move that forward?

James Woodward: It is quite hard to say at the moment, because the sustainable farming incentive pilots are still ongoing. Defra has not yet reported on how the pilots are going and what feedback it is getting from farmers. As I am sure a lot of you have, we have spoken to a lot of farmers who said that this lack of detail is creating a lot of uncertainty for their business at the time the basic payment scheme is being phased out, but obviously the phasing of BPS is an important part of being able to fund ELM and its rollout. Defra needs to start putting out more information and to start being certain in what it has done already and to tell farmers what the schemes will do.

The other consideration is that, although the sustainable farming incentive will have its first year of proper scheme this year, it will still be a narrow set of all the standards that are supposed to come through. I am sure a lot of farmers are thinking, "This isn't the full scheme. What will the full scheme be? Will it suit my current approach to farming?", especially if they are doing things that do not fall into the conventional farming category.

It is crucial that Defra learns from some of the communication it has not achieved yet and really starts to communicate to farmers more on what these schemes will be doing, what they are going to look like and how they will integrate. It has not really shown how the three schemes in ELM will integrate, and I think a lot of farmers want to know that, because they will have to engage with more than one of those schemes.

Baroness Bakewell of Hardington Mandeville: Thank you.

Q167 **Lord Goddard of Stockport:** James, you touched on this a couple of minutes ago. Do you think that we really need a land use framework or strategy for England? Would an overarching land use process help deliver better outcomes for food, farming and the countryside?

James Woodward: Yes, absolutely. We certainly agree that we need a land use framework for England. We feel that it would be a critical tool to make sure that all the different priorities around food security, climate, nature, and even things like sustainable development and recreation, all come into a coherent framework, so we absolutely want to see one. It would deliver better outcomes for food and farming because it would help farmers and local communities, government and local authorities to make sure that the right support is getting to farmers and to understand what decisions farmers in those communities can make.

It was great to see the Government's food strategy commit to a land use framework to be published next year, in 2023. There is quite a big question about how that is done. There probably needs to be some national direction and there needs to be local development and decision-making to ensure that there is a coherent way to deliver all these outcomes for food farming in the countryside.

The other key thing is that a land use framework should include land in rural, peri-urban and urban areas. It was very interesting listening to Matt talking about vertical farming in urban areas. We feel there is also an opportunity to increase land-based farming in urban and peri-urban areas, especially to create more green spaces for communities to be able to access.

The other important thing that a land use framework can do is bring a more logical approach to land at the moment. It is all a bit of a free-for-all in what land is used for. We would love to see a land use framework being able to highlight better approaches for the use of land, other than, for example, growing crops directly for biofuel or anaerobic digestion or for industrial farming. It is really important to make sure that land can be used for what we would think of as better purposes, such as potentially increasing the horticultural productivity of the country and making more space for other purposes.

The other thing that could be massively positive with a land use framework, to coin a term from the sporting world, is that it could grow the game of farming by making more opportunities for new entrants to the sector. An important part of delivering outcomes for food and farming is to make it more open and create more opportunities to bring in people who may come with new and different ideas.

Q168 **Baroness Young of Old Scone:** The risk in the way the land use framework is described in the food strategy document is that it seems to be quite a narrow definition; it is about biodiversity, climate change, agriculture and food sustainability. You were describing something that

was wider than that, and included development land and other land uses and public goods. Who do you think should do this thing if it is not Defra?

James Woodward: That is a really tough question because, as I am sure you know, government tends to work in a very siloed way. There is not really one organisation or one body that could bring together farming, environment, sustainable development and recreation. It would probably require some cross-government body to bring all that together.

The other consideration is the involvement of local communities, and that would obviously involve the Department for Levelling Up, Housing and Communities, which would be another department to bring into it. It would require, potentially, some sort of cross-cutting body that can bring it all together in one place to provide national direction, but we feel that a land use framework would need to be developed at local level as well.

While there might be a need for the UK Government to provide a steer and direction, there is a question about whether a local authority is an appropriate body to create a land use framework. Hopefully, it would involve consultation with farmers, local communities, other land-based sectors and other people involved in using land in the local area. Sorry, maybe that has not answered your question. It is quite hard to think of one body or organisation that could do it.

The Chair: It is very noble of you to almost volunteer. That is the question that we are here to answer, so for us to expect you to answer it is probably asking a bit too much. Thank you very much all three for coming today. It has been a very interesting session. Thank you.

James Woodward: Thank you very much for having me today. I am very supportive of the work the committee is doing on land use. I think it is fantastic.

The Chair: We do our best.