

Wealth, Status, Meat, and Superbugs

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SPEAKERS

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Maggie Fox 00:00

Hello and welcome to One World, One Health with the latest ideas to improve the health of our planet and its people. I'm Maggie Fox. Planet Earth faces some big crises—pollution, climate change, infectious diseases (both old and new). These problems are all linked and what humanity does is key to all of them. This podcast is brought to you by the One Health Trust with bite-sized insights into ways to help.

A growing source of antibiotic resistance—the rise of drug-resistant superbugs—is farming. For decades, farmers have given antibiotics to their animals to keep them healthy. But over time, it became clear that antibiotics also make many animals grow bigger and produce more meat and eggs. But just as with people, every time an animal is given an antibiotic, the bacteria in their bodies have a chance to develop ways to survive its effects. This drives resistance.

In many wealthy countries, farmers are being urged to cut back on antibiotic use. This means moving to less intensive farming. But in developing countries, this is a bigger ask. In fact, in some countries, farmers are encouraged to more intensive farming methods to help bring them out of poverty.

In this episode, we're chatting with Clare Chandler, Professor of Medical Anthropology at the London School of Hygiene and Tropical Medicine. Dr. Chandler's been looking at this problem. Clare, thanks so much for joining us.

Clare Chandler 01:28

Thanks for having me.

Maggie Fox 01:29

Farmers in developing countries are often trying to catch up in terms of making a living. Can you tell us a little bit about your work studying them?

Clare Chandler 01:38

So, it's interesting that we refer to them as farmers because actually, often what we imagine then is this traditional farmer who's, you know, been farming for generations and generations. Actually, what we're seeing is quite a rise in people who have never farmed before, who have had sort of jobs in the city who are moving into owning farms, owning, you know, pigs and poultry, predominantly, and trying to kind of expand their portfolio of activity to include doing some farming, and they might employ some other people to do some of the work or do it themselves.

So actually, even understanding who the farmers are, is a starting point that helps to orientate our analysis of what they're doing in relation to antibiotics and antimicrobial resistance.

Maggie Fox 02:23

So, tell us. You're a medical anthropologist. How do you go about studying this issue?

Clare Chandler 02:29

So, I think medical anthropology has a lot to offer in the field of antimicrobial resistance, because we really try to get into the understanding of the social world. And in the case of antimicrobial resistance, that's kind of a bio-social world. That's how we, humans, are in the world, and how we are with microbes and how we are with other animals and other non-humans that we're in the world with.

So, in anthropology, we're really trying to understand how we've come to be where we are. And that means if we do a study of farming and the use of antibiotics, we want to understand the history of how we've ended up where we are, and what are the cultural phenomena. What are the social and economic parameters that mean that we've ended up where we are, for example, using antibiotics in the way that we're doing.

Maggie Fox 03:14

And so, what's going on in some of the places you've studied? You've seen kind of a change.

Clare Chandler 03:19

That's right. So, what we've seen is a change in how we've realized how widespread antibiotic use is because actually, antibiotic use has been part and parcel of everyday life now for the last few decades. But really, it's been so effective. It's become part of the furniture, part of the infrastructure. We started to use them across lots of different areas that are enabling our productivity, enabling people to go to work. It's enabling our social systems and our systems of livelihoods in ways that actually we hadn't really realized until antibiotics started to lose their efficacy, until antimicrobial resistance arose. And then we really realized, gosh, we're using antibiotics all over the place for many different things.

Maggie Fox 04:00

I've seen you use this term--quick farming. Can you tell us a little bit about that?

Clare Chandler 04:07

So this term, ----- our field work with farmers in peri-urban Kampala in Uganda. And this is really referring to the way that they are trying to quickly raise birds and pigs for market and quickly produce good eggs. And the emphasis on quick really led us to explore the contrast with slow farming and what

orientates things to be so fast. Why are we trying to quickly raise these animals and produce these eggs, of course, that in that quickness, antibiotics become part of that picture, because antibiotics are enable you to have animals that perhaps might not fit so well in your environment. There have, for example, we were studying these exotic animals—they're called exotics that have actually come from outside.

They might be slightly fatter pigs or faster growing chickens, but they don't necessarily fit well in the environment. Antibiotics are one of the ways that you sort of protect those animals from the environment that they're in. And so, this idea of quick farming kind of refers to that very quick production. And the thing that we became very interested in is why do we need that quickness. And what's that a part of.

So, when I'm saying about kind of ----- making a comparison with slow farming, what we find is that it's really embedded in this wider idea of progress and modernity, that we need to be as productive as we can to be faster and better. And the promises then that you will earn enough to reach what we might see as the basics of life for your family, to get an education.

But that's a kind of a promise of the perpetual sort of trying to continue to be productive, and to have as many different things in your portfolio as you can of livelihood activities. And farming has become one of those.

Maggie Fox 05:50

What are you seeing in some of the places you're studying? What have you seen change?

Clare Chandler 05:56

So, the use of antibiotics by these farmers seems to be kind of a part of a much bigger story of progress. Progression, modernity, and part of this idea in Uganda is around entrepreneurialism. And this is something that, you know, it has been said that Uganda is the most entrepreneurial country in the world. And it's something to be very proud of to take opportunities. And taking kind of these opportunities to add in some farming as part of your kind of portfolio of activities is seen to be something that is part of being a good citizen.

And we found that there's quite a range of media that's used to engage people in farming. So, we have television shows that advertise a better life through that kind of investment. There are these big expos where people who are involved in the industry from feed concentrates to veterinary services promote the sales of their products that people come along, who perhaps haven't done farming before, and learn about how to do it.

And one of these is even called the Harvest Money Expo. So, it's this idea that if you farm, you'll literally harvest money. So, it's got this great appeal that you could (you too) could do that. And you can get some money out of it. But of course, the other side of that is the methods that you have to use in order to deliver on that promise.

Maggie Fox 07:11

And you've described some of the ways that people talk about this themselves. Can you tell us some of those stories?

Clare Chandler 07:16

I suppose one of the parts of this is that it's not a direct strategy to move the country towards a particular form of farming. It's not that we're seeing this sort of everybody must now go out and do quick farming, this is our country's strategy. But it really weaves together these different strands of entrepreneurial orientation for the population, the way that we will develop is through everybody being an entrepreneur, and the opening up of some regulations in particular zones in the hopes of investment, perhaps more foreign.

And so, this kind of weaving together of different things that are happening in society together with this idea of the livelihoods, that livestock revolution. And this idea is that people are going to be farming in a more intensive manner, which means that you have a double win of having more protein and nutrition for residents and farming as a means of income generation, so that there are these (this) double win. But of course, when -----microbial resistance into that, that creates more of a, you know, is there a different way to weigh that up.

When we spoke to farmers, they spoke of being often being unable to sell their animals or their eggs at a time that they wanted, that they were needing to compromise on the price or the timing of when they were selling or growing their animals. So, it was actually telling us that perhaps the notion of this great demand for protein was perhaps more of a social story than a reality. And was there really this demand. So, we started tuning into the ways that the demand was being created and seeing these things like the Rolex festival—a Rolex is a rolled up fried egg into patty that you can buy on the street. There were pool parties to sell, a pork pool party to sell pork at the bucket chicken festival. So, these new festivals and cultural forms were being created that celebrated the consumption of protein, which seemed to be required, as part of the picture of then being able to grow protein as part of this sort of industry model of having enough demand in order for the supply chain to work.

Because we, when we're seeing people actually really struggling to sell the meat that they've been growing, then we start to wonder whether that model of the livestock revolution really is holding there. And of course, then we're seeing the ways that people have to cut corners to try and compete in that marketplace. And again, then we start seeing those antibiotics starting to be woven back into the story of how people are managing to survive and the cycles of loss with their farming.

Maggie Fox 09:44

So, meat's almost like social status.

Clare Chandler 09:48

So, some people have said that so they're this sort of theory that if you have, you're eating meat, then that you know is somehow attached to people's social status. And that may well be true, but in some ways, I think our study was finding that perhaps that's a mental model of what's happening more than really what's happening on the ground.

And that model is more of an aspirational model for, you know, imagining that we are going to be a society that is going to be eating more meat as a social status thing. But in reality, perhaps there isn't enough money going around for people to have enough demand for this meat. In reality, people are struggling to sell it.

Maggie Fox 10:27

So, do these people in these various societies, do they really need to be trying to produce more meat? Have they created a problem that they're trying to solve, partly with this overuse of antibiotics?

Clare Chandler 10:40

We got conflicting stories about that from some of the much larger commercial farmers. They were saying that there's this huge demand for their meat. And perhaps that's because they operate on a scale that they can sell it much more cheaply. But these relatively small-scale, peri-urban farmers found it a lot harder to sell to make a profit, and to sell just at the right time and be able to get their animals and their eggs out onto the market and compete.

So, it may be that there is some demand there. But perhaps that this form of market of farming is still unable to quite compete. So, although it's quick farming, perhaps it's not scaled enough to really compete. I'm not sure, we sort of got some mixed messages on that. And I think that it really does open up some questions for the assumptions we make about whether on the African continent, we should inevitably see this expansion of protein demand and protein production, because then what we're seeing in many countries, not just Uganda, is this assumption that there is going to be a market for protein, and we should be creating more meat.

And we see those conversations interacting with climate change discussions as well as with discussions around infectious diseases. So, I think a lot of the assumptions that we make about dietary requirements and inevitable ----- models of economic development, and what people will demand in their diets probably do need to be questioned, and sort of rethought in terms of the realities that we face in the immediate future and the tradeoffs between those things that we imagined to be inevitable and required for a healthy body.

Maggie Fox 12:11

Sounds to me like these farmers are being encouraged to do the type of intensive farming that people in other countries are being asked to back away from.

Clare Chandler 12:19

So, I think they're not being asked to do it. But it's ending up being what they're doing because of the conflation of they're being asked to be entrepreneurs. And they're being encouraged to use particular methods often that are coming in and being marketed from overseas, often from Europe around using concentrates.

But at the same time, the AMR community are asking these people to do higher standard biosecurity. And, you know, (and) to look after their animals in antibiotic free ways. And people when I ask them that, they just laugh. The idea that we could do this without antibiotics seems absurd to a lot of people.

So, I think, you know, we really have to revisit some of those ideas about how realistic it is to address antimicrobial resistance with these sort of relatively simple models.

I think the reality is that antibiotics are so entangled with the systems that we're in that we can't simply remove the antibiotics for that without trying to address the things that they are fixing in the system. So, we started talking about the quick farming. And really, that idea sort of went in parallel with this idea that we've been developing antibiotics as a quick fix, that antibiotics are standing in for good infrastructure, that antibiotics are standing in for various other, you know, for speed for time.

So, we see sort of antibiotics being this device, or this part of the infrastructure such that you can't simply say, well, just stop using them. Because to remove them is to disentangle the system. We need to fix the things that antibiotics are standing in for, and then we won't need them in the same way anymore.

Maggie Fox 13:50

And what are some of those things that need to be fixed?

Clare Chandler 13:53

So, I think in this example, with the quick farming, we found that people were directly talking about antibiotics like an insurance. So looking at different insurance schemes for your—for your flock of birds, for example—would be one way forward. We did quite a lot of interviews with people about their insurance schemes they use.

Most people didn't have any insurance. Some cases, if you had a loan, which were very, very expensive loans, you were required to have insurance. But really, the idea that you would be able to get anything back from those insurance if these were not functioning particularly well, there isn't a competitive marketplace for the insurance scheme. So, they seem to work sort of not well for smaller, smaller scale farmers.

So, in reality, they're using other forms of insurance, such as antibiotics. So, if we could look at that system of why it is that they're operating on such razor thin margins in the first place, that they are dependent on antibiotics as one of several things that they're using. If we could look at that and try and change those conditions such they're not economic position to not use the antibiotics that would be the starting place for me.

Maggie Fox 14:58

Professor Clare Chandler, thank you so much for taking the time to join us.

Clare Chandler 15:02

Thank you for having me.

Maggie Fox 15:04

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