

Food For Thought Ep 3. Can Veganism help save the planet?

[00:00:00] **Redi Tlhabi:** Before I say anything else on the subject of veganism, you should know that I am not a vegan. You should also know that I have a huge amount of respect for anyone who is a vegan. And that I do want to do my part for the planet. It's just that... well, it's complicated. It's more complicated than I ever realised. And if you stick around for this episode, you'll find out why I say that.

[00:00:25] Of course, there are many different reasons for choosing veganism... the planet's wellbeing, animal ethics, personal health and many other considerations. In this episode, we'll be exploring whether veganism is the answer to climate change. I'm Redi Tlhabi and this is Food for Thought, the podcast designed to demystify the food landscape, brought to you by Woolworths.

[00:00:49] In this episode, we'll explore whether veganism is the answer to climate change. You'll hear from someone whose futuristic company grows meat – real meat – in a laboratory and discover more about the great protein flip. And, if you didn't already know, you'll learn why some vegan products are controversial, even though they protect the lives of animals.

[00:01:11] You'll also gain some insight into the heated legal debate in South Africa over whether a vegetarian sausage is legally allowed to be called a sausage at all. And hear about heme and non-heme iron, and why veganism can be healthy but isn't the only way to be healthy. I'll be sharing all the incredible complexity I uncovered as I explored the hugely popular shift towards veganism and asked myself

[00:01:39] whether this is the answer to help save our planet. With the United Nations predicting that world meat production will double by 2050, and the sobering reality of what that would mean for the earth, there's no doubt that

something needs to be done. And today you'll hear what I've come to believe I can do to make a difference, even if I choose not to give up a good steak!

[00:02:06] **Clip:** The food sector is responsible for about a quarter of all greenhouse gas emissions, which is a very sizeable chunk. Changing to a plant-based diet would reduce greenhouse gas emissions by about three-quarters.

[00:02:24] [So] The thing about any kind of animal product is that you need to feed the animal, right? You need fertilisers, you need water use, you need land use and all of that produces greenhouse gas emissions."

[00:02:32] **Redi Tlhabi:** That's how Professor Marco Springmann summed up our dilemma in an interview for Britain's Channel 4 News. Professor Springmann was one of the authors of an Oxford University study on the health and climate change benefits of dietary change.

[00:02:47] It seems like a no-brainer that the environment would benefit if we all stopped eating meat. And in some ways, it is a no-brainer. But, there are many other considerations to take into account when looking at the question of whether a vegan diet can help save the planet. One of the most surprising discoveries I made was that occasionally a vegan diet can actually have an environmental impact considerably higher than many meat-eaters! How's that possible, you ask?

[00:03:15] In one Italian study, featured in a BBC article, the diets of two vegans were found to be doing more harm to the environment than those of many meat-lovers. When researchers explored the reason, they found that the pair exclusively ate fruit – presumably flown in from all over the world at various times of the year.

[00:03:38] Once the data from all 153 vegans, vegetarians, and omnivores in the study was taken into account, however, it showed that eating meat was on average worse for the environment. According to Joseph Poore, who studies the environmental impacts of food at the University of Oxford, "Nothing really compares to beef, lamb, pork, and dairy

[00:04:02] these products are in a league of their own in the level of damage they typically do to the environment, on almost every environmental issue we track. But it's essential to be mindful about everything we consume: air-transported fruit and veg can create more greenhouse gas emissions per kilogram than poultry meat," he says.

[00:04:23] It turns out that avocados – apart from a famously hefty price tag (particularly out of season!) – also carry a hefty carbon footprint, thanks to a large amount of waste and water required for growing, plus special storage conditions and packaging. Tree nuts like cashew nuts, almonds and walnuts are all popular vegan staples and great sources of plant protein.

[00:04:49] But they're some of the most water-intensive large-scale crops grown on the planet. And when it comes to growing mushrooms, while they produce just a fraction of the emissions of beef, the growing rooms and compost needed to farm mushrooms can reach temperatures of up to 62 degrees Celsius with high carbon emissions associated with this practice.

[00:05:13] The more I learned, the more I realised that even a vegan needs to be conscious of the food choices they make. I spoke to chef and author Mokgadi Itsweng, who expanded on this idea. Protégé of the late, great Dorah Sitole, Mokgadi has nearly 20 years of experience in the local culinary industry. A chef, food writer and author of Veggielicious,

[00:05:37] this entrepreneur and activist was recently a guest on Masterchef South Africa and one of the headline chefs at the recent Plant Powered Show, in Cape Town. Mokgadi, it's lovely to have you here with us. You know, initially I thought just being vegan was enough. So you're saying that even vegans have a litany of responsibilities to fulfil. What's that about?

[00:06:00] **Chef Mokgadi Itsweng:** It's about conscious eating. Um, it's about being conscious of everything that you do, because if you're not conscious, you can't change your habits. Some of us don't take dairy. Um, and for me it's for my health, but it's also for the planet because I know how dairy is farmed, but I won't take almond milk either, because I know how the almonds are farmed.

[00:06:24] So for me, it's about being conscious. It's about being conscious about everything that you eat and how it impacts, um, on the climate and how it impacts on us humans in terms of our health, but more importantly on how it impacts on the planet.

[00:06:38] **Redi Tlhabi:** From a psychology point of view, when you made the everyday decisions that I'm no longer going to eat this, I will eat that, was it overwhelming?

[00:06:48] Was it difficult? If somebody's listening to us today and say, I want to be a part of this journey, but there are a lot of words, there's a lot of information. You're turning my life around. What do you say?

[00:06:59] **Chef Mokgadi Itsweng:** For me, it's a journey. You know? It's a journey to be conscious. You don't just wake up and say, I'm conscious.

[00:07:04] And it's a journey between you and your body because you must remember, I grew up eating a lot of meat. My mom, when she was pregnant with me, ate a lot of meat. I know that for a fact. She's a Zulu lady. So she would tell you, "Wena, she's an Ntuli and Ntulis eat meat." Amazimzim. It's, it's in their blood.

[00:07:23] So she, I know for a fact she ate meat. When you decide to go plant based or eat less meat on your plate, you must remember your body's not coming along with you. It's not gonna say, 'Yes, let's do this.' You're gonna have the craving. Um, the craving for meat is there all the time, which is why there's a, there's a big, um, fake meat or meats that are vegetarian and vegan, but that taste like meat to curb that or to, to take care of that, that, that craving that comes.

[00:07:53] **Redi Tlhabi:** Mm, I like your reasonable, empathetic approach because you are acknowledging, uh, human [00:08:00] impulses and also saying that there's a way to respond to them, and we must cut ourselves some slack. All right, so I want to get into the terms. Veganism? Talk to me about that. What is veganism?

[00:08:11] **Chef Mokgadi Itsweng:** So veganism is, um, you know, it's, it's a kind of diet where you leave out anything that has to do with meat.

[00:08:19] So any meat product, any meat. So you, for instance, most vegans won't eat honey because it comes from bees. Uh, most vegans won't wear leather because it, you know, it's farmed from animals. So it's, you cut out all animal proteins, so no cheese, no eggs, no milk, um, no anything that comes from an animal is completely cut out of, um, of that equation.

[00:08:42] **Redi Tlhabi:** Plant-based eating or plant-forward eating. Can you talk to us about that?

[00:08:51] **Chef Mokgadi Itsweng:** So, plant-based eating is the kind of eating where plants play a major role on the plate. So, for instance, you know, when [00:09:00] you look on your plate, if 80% of your plate is plants, and by plants I mean vegetables, fruit, grains, nuts, seeds, um, anything that's a plant. [00:09:11] And then you can have like a little bit of meat there if you want. That is the plant-based plate.

[00:09:17] **Redi Tlhabi:** If I was to be eating more vegetables, I wanted to know not only whether that would be helping the planet, but what it would be doing for my health. It was Cindy Chin, a dietician from Woolworths, who told me the following: "We should all be eating more plants, regardless of whether you are vegan or a meat lover."

[00:09:35] According to Cindy, "Dieticians would recommend eating or following a diet that is predominantly made up of plant foods – not only fruit and vegetables but also whole grains, beans, legumes, healthy fats, nuts and seeds. And then meat, eggs or dairy to complement that. If you only rely on plant foods, you have to be very particular in making sure that you meet all the other dietary needs that you get from animal products, because they contain concentrated sources of certain nutrients."

[00:10:06] I discovered that a major consideration for vegans is whether or not they are getting enough iron in their diet – specifically bio-available iron that your body can actually absorb. Plant foods do contain iron, but Cindy explained to me that these are so-called "non-heme". This iron is less absorbable

and inhibited by plant chemicals that protect the plant cell structure which means that your body has to work harder to break these down and access what it needs.

[00:10:37] Meat, on the other hand, contains heme iron – a bio-available form of iron which is highly absorbable. Cindy shared a handy tip with me, explaining that plant foods with high vitamin C content help your body break down the structures necessary to absorb iron better. Also, you won't be anaemic just because you're vegan, as your body does adapt to become far more efficient at absorbing iron.

[00:11:05] There's no denying though that South Africa is a meat-loving nation, with 90% of South Africans eating meat more than twice a week, reported in a Knorr survey. But as more people start to investigate and follow a plant-based diet, I wanted to understand more about this growing trend. Flexitarian is a term I'm hearing more and more often and I chatted to the head of consumer insights and trends at Woolworths, Cath Bothner, to tell me more.

[00:11:35] **Catherine Bothner:** The great protein flip was actually an expression that was coined in response to the amount or ratio of meat to veg that we are now consuming. So if we think back to the past and I, I'm sure we can all remember those 'healthy food plates' from school diagrams. But, um, meat used to take up a significant portion of our plates.

[00:11:58] And, and for many people it was mostly meat, a little tiny bit of veg which was mostly boiled and not very exciting and a lot of starch. And I think where the shift has happened now, the flip has happened, is that there's less meat and that is complemented with, um, different plant-based proteins, a lot more veg.

[00:12:16] Um, so it's just the ratio that, that people are, are now shifting with regards to plants and meat eating. So flexitarian, um, is, is kind of self-explanatory is that you're flexing between meat and plant. Um, and you, you are happy to eat either way, um, with a bit more consciousness, I suppose, around the role that plants play in your diet.

[00:12:42] And I think the reason for this is that everyone, um, whether you are still eating meat or, or not, recognises that from both a climate and a health perspective, there is huge benefit in eating more plants, um, or adding more plants into our diets. And even those not wanting to fully convert, um, to, to veganism or vegetarianism are being more conscious around how much, how often, and what types of meat they choose to eat.

[00:13:08] Analogue products are, um, plant-based products that are designed and created to mimic meat. Um, so you would have it processed and flavoured in a way to taste as succulent and juicy as a hamburger or a sausage would, but they're made completely out of plant-based proteins. These products are a large reason that like all maturing industries, um, people start asking questions.

[00:13:34] So it starts off with an assumption that plant based would be better with you. And then as the market matures, people start digging a little bit deeper and, and getting under the bonnet of these things and, um, they are, you know, highly processed products. So I think it's good that people are reading ingredient statements and, and really scrutinising them.

[00:13:53] And certainly from a trends point of view, we are seeing this real shift towards less processed and simpler or cleaner ingredient statements within the plant-based offering, and not just within analogues, but actually across the board of plant-based products. For me, it all comes down to the quality and integrity of a product.

[00:14:12] So, what you put in is what you're gonna get out. And I really encourage listeners to be engaged consumers and really think about the choices that we make and what impact that has in shaping industry and the future of our planet. Um, so if you choose meat, choose the best quality, best farmed meat that you can. If you're choosing plant based, investigate the integrity of the protein.

[00:14:36] Is it a complete protein? Are you giving your body the full nutrients that it needs? Um, is the alternative fat the best fat you could eat? And what is that product actually made of?

[00:14:46] **Redi Tlhabi:** As someone who enjoys eating meat, the rise of flexitarianism is something I can embrace. Knowing that I can still do my part by eating less meat, and by choosing meat that is reared with more healthy, sustainable practices. Even by embracing Green Mondays, for example, I can start to lower my impact on the climate. Leozette Roode, vegan cookbook author and meat reduction specialist for HSI Africa fully supports this idea.

[[00:15:13][1] Clip:[2] “With more South Africans increasing their plant-based food consumption, eating green is helping to cut down our personal carbon footprints. When you reduce the consumption of meat, eggs and dairy, there are noticeable health benefits alongside positive environmental impacts. For instance, it takes about 20 times more water per calorie to produce beef compared to cereals or starchy roots, six times more to produce chicken, over four times more to produce pork or eggs and over three times more to produce milk. Every green meal can make a difference, whether you commit to Green Monday or replace one meal a day with a plant-based plate”.

[00:15:53] **Redi Tlhabi:** And then there is the absolutely fascinating world of lab-grown meat. Around the world, the technology now exists to grow meat not in a field, or on a farm, but from cells in a laboratory! Tasneem Karodia is the co-founder and COO at Mzansi Meat, South Africa’s very own lab-grown meat producer. Let’s talk about cultivated protein then. What is it and how does it make protein or meat, for that matter, more sustainable?

[00:16:26] **Tasneem Karodia:** So the easiest way to understand cultivated meat is really to think about it as the same process that you'd find inside an animal's body, outside of the animal. So we are replicating the same processes, just using a bit of technology.

So the process starts with an animal and we take a small sample, really the size of a peppercorn, um, bring it back to the lab and process it and give it nutrients, put it at 37 degrees, put it in something called a bi-reactor, which looks like a steel vat that you would find in a brewery and you get cultivated meat out of that process.

I think one thing to note where people get a bit confused is that it isn't plant based, it is real meat because it comes from cells from an animal, but our

process takes one month versus 18 months to rear a cow for slaughter. So you immediately kind of reduce the time it takes to make meat, so you have less emissions and less land usage and water usage and everything that's, that is required to rear animals, less space requirements, which I'm quite excited about.

[00:17:36] **Redi Tlhabi:** So you mentioned a whole lot of things there the logistics of just, uh, growing meat, the space that is needed, the water that is needed. [00:19:25] Then the time it takes, uh, to, to process and produce that, that meat. But here's a question then. The cost. How expensive is it to grow lab meat?

[00:17:54] **Tasneem Karodia:** So it's probably first important to just give an indication of where the industry is and then we can talk a little bit about costs. This industry is still quite young. It started in 2013, a little bit before that, but in 2013, a significant milestone in the industry was hit.

[00:18:12] We had our first cultivated product, which was made in the Netherlands, um, by a few researchers based out of the university in, in the Netherlands. And the first burger costs 250,000 US dollars. Now we've come a long way from there. One of the main reasons it's so expensive is because we're taking technologies that exist in the medical field and pharmaceutical industry, and we are really

[00:18:43] reapplying it for the food industry, and that's the real important distinction here. We've come a long way and we're in the process of being able to bring our costs down quite significantly, and by the time we get to market, we will still be a bit more expensive, but not prohibitively expensive. So we expect that by the time we hit shelves we will be a much cheaper price, and we expect to be able to get price parity within three to five years.

[00:19:14] **Redi Tlhabi:** Mm-hmm and by price parity you're saying what? Uh, comparatively speaking, compared to what? A kilogram of beef, uh, a kilogram of chicken, uh, and so on. What, what would that look like?

[00:19:25] **Tasneem Karodia:** We're currently focused on beef, and so when we go to market, we'll go out with initial products like burgers and sausages and ground mince, and we will be comparable to the prices that you would see in in store for those.

[00:19:43] Redi Tlhabi: Mm-hmm and then, uh, what would it take though for, uh, cultivated protein to become accessible at scale and thus make it more affordable?

[00:19:54] Tasneem Karodia: Say with time the technology will progress even further. We'll be able to take the pharmaceutical grade equipment we use and make it food grade.

[00:20:02] So make it priced accordingly, and we will be able to achieve scale as we grow. That immediately cuts price down quite significantly. And thirdly, I think with consumer appetite, I think there [00:22:00] is a greater, you know, appreciation for what's needed to get this technology to price, price parity. And so I think a lot more stakeholders will get involved.

[00:20:28] There's a lot of technology that exists in different industries and there's a lot of people with talent to accelerate the technology, but they haven't yet moved over into this space. And I think with more consumer appetite and people wanting this, more people move into the space to accelerate those timelines and getting those prices down.

[00:20:45] Redi Tlhabi: Mm. And I imagine you have your work cut out for you in terms of then educating the public and, you know, transitions are very difficult to persuade the public that the way we are doing things and the way we've been doing things is not sustainable. Here's a better alternative that requires, uh, a level of empathy, but also some education and mobilisation as well. [00:22:51] Are you up to the task?

[00:21:11] Tasneem Karodia: We're definitely up to the task. I don't think we would've been the first ones to do it here if we weren't. We're not targeting vegetarians, so our target market is people that wanna make a change but find it too difficult to make the change. I think people that are vegan and vegetarian have already moved past the hurdle that they need to. [00:23:14] We are targeting people that are meat eaters that wanna be more conscious.

[00:21:36] Redi Tlhabi: Once again though, there is complexity around the subject. Currently, lab-grown meat is very expensive, meaning it's not very

accessible. And while efforts are being made to change this, the process of growing meat in a lab still necessitates the use of animals.

[00:21:53] Of course, the obvious – and more affordable – solution for those who love the taste of meat but prefer not to eat it for ethical reasons, is meat substitutes. ProVeg International is a food awareness organisation with the mission to reduce the global consumption of animals by 50% by 2040.

[00:24:01] The impact of eating meat on the environment and even the concept of eating less meat was not really spoken about 10 or 15 years ago. “Meat-free Mondays” or “Green Mondays” were not yet invented and nobody had really heard of a flexitarian. Donovan Will from ProVeg told me more. So talk to me about the incentive then behind bringing ProVeg to South Africa.

[00:22:38] **Donovan Will:** There was a big gap in South Africa. You know, the benefits of eating more plant based are there, the health benefits, environmental benefits, the animal benefits. There wasn't an organisation that was really working in a professional way to spread that information and to work with key stakeholders like the government, like the food industry, like the media, and also educating the public.

[00:22:59] And that's what ProVeg does. We are an international food awareness organisation and we are trying to, to work with key stakeholders to get this information out there so that consumers can make a choice and that the companies who are making these foods and who are producing, um, the, the end product or are selling it can know what they're [00:25:00] offering to consumers.

[00:23:19] **Redi Tlhabi:** Mm-hmm and, and what are some of the trends that you are seeing in the product development space? What is happening?

[00:23:25] **Donovan Will:** So, I stopped eating meats, um, eight years ago and one of the big things that we've definitely seen is this shift towards a flexitarian market and with that becomes, you know, it becomes very important that producers are making a product that tastes just as good.

You know, for someone who is really, um, adamant about eating a vegan or vegetarian diet for ethical reasons or religious reasons or health reasons, they might be willing to sacrifice on taste. But for the average flexitarian who is just doing it a couple of days a week, or, you know, they're not quite a hundred percent sold.

[00:23:57] Taste is still the number one factor when people are choosing what they eat. So we're seeing a lot of products coming out that really mimic the taste and texture, um, to a point that, that an average consumer can't tell the difference. And then also convenience and variety. You know, the Woolworths fish style goujons are a perfect example.

[00:24:14] You know, it's the kind of thing we just wouldn't have seen 10 years ago where we only had burgers and sausages. So I think that variety is a, is also a very big part of, of what we're seeing now.

[00:24:23] **Redi Tlhabi:** Mm and isn't part of, uh, the, the trick, for lack of a better word, for people to make the leap to tasting the food?

[00:24:31] So it's a lot about what's in our mind and what we are willing to, to, to, to give up without really making it complicated isn't it?

[00:24:39] **Donovan Will:** Ja, I think that's the biggest thing. And for me as well, I was that like a very stereotypical South African guy. Grew up eating tons of meat. You know, I'd go to KFC and order a bucket of chicken or if I went to, uh, an all-you-can-eat breakfast buffet, I'd just be eating bacon and maybe a little bit of eggs, no veggies.

[00:24:56] And you know, discovering that there are foods that are more sustainable, that can be healthier and that are much better for, for animal rights. I mean, we can end factory farming if people ate less meat. If we can have these things and they can taste just as good, then you open a whole new journey from the culinary side.

[00:25:14] **Redi Tlhabi:** Yeah, and we get creative as well. But look, everything is with some sort of controversy. There's a school of thought that says if you're going to jettison a meat-based diet, then don't substitute the meat for

something that tastes like meat. Have your veggies have whatever it is that you want to, to have, but don't substitute the taste.

[00:25:34] I understand that the matter is so serious that there's even a, a current legal debate around meat analogues. Tell me about that.

[00:25:43] **Donovan Will:** Yeah, so this is something that we've seen around the world. You know the question, can you call a burger a burger if it's not, um, containing meat? So if you go to a fast-food joint and you order a veggie burger, is that gonna confuse consumers?

[00:25:56] Should those words be only used for meat products? And I think there are a few different levels where, where the confusion comes in. I think most people would agree a falafel burger or a mushroom burger is not confusing, it's when specific meat terms start being used, like chicken style or you know, vegan pepperoni.

[00:26:41] And for, from our side, it's, it's all about what is best for the consumer. And what the government is currently saying is that consumers are confused and that these words should only be used for meat products. It's very difficult to actually describe these foods without using these words. You know, we are all happy with, um, with chicken-flavoured 2-minute noodles or, you know, chicken stock, even though most of these products don't have any chicken in them.

[00:26:41] And that's perfectly fine because we need it to describe what it is. So if we have a product that, that looks like a chicken nugget and it tastes like a chicken nugget and the texture's the same as a chicken nugget. Why wouldn't we be allowed to call it a vegan or a plant-based chicken-style nugget?

[00:26:57] No one out there is calling it, no one out, as, as far as we are concerned, we've done a landscape audit in South Africa, no one's pretending that it's chicken. You know, it's very clearly labelled plant-based chicken or vegetarian chicken or meat-free chicken. And so the legal debate is just around where can these words be used?

[00:27:13] And the biggest problem is that there's no regulation at the moment for meat analogues. So ProVeg is pushing, um, along with a lot of other industry

partners for regulations to be made specifically for meat, uh, meat analogues because the government is actually relying on processed meat regulations to try and govern the words that are used for, for meat analogues. [00:29:37] And we, we don't really think that that makes a lot of sense.

[00:27:34] **Redi Tlhabi:** The bottom line when it comes to veganism is that yes, less meat and more responsible choices are definitely better. But veganism may not be the global, one-size-fits-all magic bullet some believe it to be. Globally, there are over 1 billion people involved in livestock value chains. With a move towards veganism,

[00:27:55] many jobs that disappear from livestock farming will eventually appear in other sectors of food production. But this will take time and reskilling. It's also true that some parts of the world are just not able to grow the kind of plants that humans can eat. In some parts of arid east Africa, for example, many plants that grow there are tough and inedible. Animals like goats and sheep can survive in these environments,

[00:28:23] so people rely on meat in their diets. Mary Beth Hall from the US Department of Agriculture has written dozens of papers considering these complexities and believes in a balanced approach.

[00:28:36] **Clip:** "You can't make global statements and say 'this one thing we will do will be the solution everywhere'. You need to take a more balanced approach or more balanced consideration of how the pieces fit together so you can decide what is a good move. We have to look at our whole picture and decide what are the changes we need that society finds acceptable to make our sand, our planet sustainable."

[00:29:06] **Redi Tlhabi:** I couldn't have said it better myself. As someone who doesn't see myself completely giving up meat, but does want to make a difference, I felt so much more confident in what that could look like after all these conversations I'd had.

[00:29:13] By choosing to eat less, but better quality animal protein, I realised there is still a place for animal protein reared responsibly and sustainably. And if

we choose to eat with purpose, we can know where our food comes from, how it was produced and that every food decision has consequences.

[00:29:39] Going forward, I'll be looking to eat a balanced, whole diet, to eat local and seasonal, to eat whole foods and to follow the principles of root-to-shoot, nose-to-tail eating. Plus of course, buying just enough to avoid waste!

[00:30:00] I'm journalist, producer and author, Redi Tlhabi, host of "Food for Thought", a podcast designed to demystify the food landscape brought to you by Woolworths. You will find all podcast episodes at www.woolworths.co.za/podcast or wherever you listen to your podcasts. Thank you for joining us – we look forward to having you along for the next episode of Food for Thought. If you enjoyed this episode, you can dig deeper at www.woolworths.co.za and if you're enjoying this podcast please give this channel a follow. You can also rate and review it wherever you listen to your podcasts.