

FOOD FOR THOUGHT: DEMYSTIFY- ING THE FOOD LANDSCAPE. Ep. 2: What will we eat in 50 years?

[00:00:00] **Redi Tlhabi:** So I'm a mother of two little girls and like any parent, I do worry about what the future holds for my children. We have to think about the kind of world we are leaving behind for our children. And so sustainability and our interaction with the planet becomes a very crucial part of parenting and my children [00:00:23] and I talk about these matters even as small as they are, they understand their responsibility towards their planet. So as I continue to watch these amazing, amazing little girls grow up, I often wonder what their future will look like. And sometimes when I'm preparing a meal for the family or baking with my girls, I wonder what food they will be eating in 50 years time.

[00:00:47] Will there be any fish left in the ocean? Will my girls be vegan or surviving on high tech supplements or pills? Will it be possible to feed our planets growing population with our resources under [00:01:00] threat as they are? And will we all be eating bugs or cacti and a lot of seaweed?

[00:01:15] I'm Redi Tlhabi and this is "Food for Thought", the podcast designed to demystify the food landscape, brought to you by Woolworths. In this episode, we'll explore what the future holds. You'll hear from a trends forecaster about what we will be eating and drinking in the decades to come, from lab grown meat to seaweed, algae, and 3D food printing. And I'll share the story of a Zulu chef making waves internationally, and an urban agriculture specialist with a farm on the roof of the Morningside Shopping Centre!

[00:01:41] Just like the last episode, I'll be sharing what I've discovered as I've embraced my curiosity and asked the question, what will we eat in 50 years time? And I'll be opening your eyes to the

exciting foods that will be around and the ways we'll be enjoying them. With the global population [00:02:00] set to hit 10 billion people by the year 2050, the scary fact is that it'll take 56% more food than is currently produced in the world to feed everyone.

[00:02:12] But today you'll hear how I went from feeling overwhelmed and helpless to becoming empowered, so that I can shape the future for myself but also for my children and their future children. As I began delving into the future of food, I spoke to trends analyst Hannerie Visser. Hannerie is the owner of Studio H – a culinary-minded design, strategy and trend report team – and she shared some fascinating predictions with me that sound like something straight from a sci-fi movie! Hannerie, thank you so very much for talking to us. I've always associated 3D with movies and technology and broadcasting and all of that. What's it got to do with food? What is 3D food printing?

[00:02:59] **Hannerie Visser:** So in [00:03:00] the same way that you see 3D printing now in the design world where people are printing bridges and houses, And using it as solutions, we also see 3D printers in food. What you can do with 3D food printers is you can actually determine the exact amount of nutrients per person. So for example, if you are intolerant to something or if you're allergic or, you know, if you need to take in certain foods because you know, for health reasons, I kind of see how, and we are actually doing this for, for an event in, in Joburg this month, where each person attending will receive a different meal.[00:03:42] So you can really adjust and personalize meals per person.

[00:03:46] **Redi Tlhabi:** I am completely gobsmacked and, and, and, and it, it sounds like it takes us away from the mass produced, uh, type of situation where you are more empowered as an [00:04:00] individual to design and consume the kind of food, uh, that meet your, your, your tastes, uh, that meets your health requirements, your tolerance or intolerance, and so on.

[00:04:14] **Hannerie Visser:** Exactly. So, so imagine you can now buy cartridges for your printer that's tailor made for you, and you can kind of mix and match it or imagine you walk into Woolworths

in, in 10 years and your ready-to-go meals are packaged in the form of a 3D printer cartridge.

[00:04:31] **Redi Tlhabi:** Wow. Wow. All right and then just talk to me then about Sonic seasoning.

[00:04:38] **Hannerie Visser:** So Oxford university actually has an entire division dedicated to this. So they've done a lot of research already, and then they talk about the perception of sound on the taste of food. So if you, for example, listen. So, so already. We can use sound to alter the taste of our food. So if you listen [00:05:00] to, let's say a high pitched sounds, um, let's say classical music with a lot of flutes, then your, your food will taste sweeter.

[00:05:10] If you listen to sounds or a soundscape with lower pitched notes, then your food will taste more bitter. So in the same way that you can alter taste, I see that we can actually influence, you know, we can make people feel fuller. We can make people eat less consume, less, consume more responsibly by using sound.

[00:05:34] So maybe you walk into a shop in future and you actually buy a soundtrack or you get a soundtrack with your food

[00:05:41] **Redi Tlhabi:** and then something else then that I'm learning for the first time about space food. So where does food fit into space? What's that about?

[00:05:51] **Hannerie Visser:** So there's a lot of labs that work on space food.[00:05:55] And obviously there's a lot of attention on space travel at the moment. And [00:06:00] therefore there's a lot of focus on just looking at space food, but not only for, for people traveling to space. There's also a lot we can take from that technology because what they do is, they preserve food differently. So they use a lot of different like freeze methods and a lot of methods that that can help us here preserve our food for longer and also take up less space. So for example, you know, if something's in season, people will harvest those ingredients. Same with something like meat that's gonna become incredibly precious. You know, how can we preserve the food to last longer? Because we know that about a third of all food produced globally goes to

waste.[00:06:51] So, so there's definitely gonna be an element of using that technology to preserve food that would've gone to waste.

[00:06:58] **Redi Tlhabi:** I found it so fascinating that amidst all the innovation, Hannerie also pointed out that we will enter an era of so-called "UNnovation". We live in a world where there is immense pressure to be innovative, and where there is a saturation of over-collaboration. But we will stop, take stock and draw inspiration solely from heritage and tradition; the food that we grew up eating. As Hannerie put it, we will find comfort in Granny Cooking – the simplest, most authentic form of home cooking.

[00:07:39] Mmabatho Molefe is the head chef and owner of Emazulwini Restaurant in Cape Town and is proving just how amazing it can be when heritage and tradition meet innovation. Hannerie had already mentioned to me that we should start to expect traditional African flavours popping up everywhere in food and drinks. Mmabatho's menus promote nose-to-tail dining – a sustainable way of eating that is becoming hugely popular worldwide. Her restaurant proves that if you treat it right, offal can be just as delicious as any other cut of meat.

[00:08:05] **Mmabatho Molefe:** The culture that I grew up in, the role that culture plays in sustainability is just through embracing the, the whole animal itself. What we are trying to do at Emazulwini, in terms of like reintroducing our culture within the food scene in South Africa is to sort of show that these custom meats that were seen as undesirable have a place within the food scene.

[00:08:31] And of course it, our culture helps in terms of like introducing how we prepare it. The reason why sometimes people don't like offal is just that they've had bad experiences with offal that hasn't been treated well. So, we start from like taking it out of its packet, cleaning it properly, treating it well, and then, um, turning it into the beautiful product that it is.

[00:08:58] And I think because [00:09:00] usually around like the blood and the gore, it always has this sort of like mineral taste. So

it's just like finding a balance on when to accentuate the taste of the mineral or where to sort of like hide that mineral taste.

[00:09:16] **Redi Tlhabi:** I was beginning to realise that it's not all about 3D-printed food, but also about going backwards to go forwards. I wanted to understand what that could look like for the people who produce our food – the people who farm our fruit and vegetables. I turned to Kobus Pienaar, Woolworths' technical manager of food security and an expert on their Farming for the Future practices.

[00:09:41] Well Kobus, thank you so very much for joining us. Let's elaborate a little bit more then about Woolworth's concept of, uh, farming for the future, uh, concepts around regenerative farming and growing more with less. What is Woolworth's approach and strategy towards this?

[00:09:59] **Kobus Pienaar:** We look at swell [00:10:00] health, we look at irrigation management.

[00:10:03] We look at the biodiversity management and remember biodiversity is not only the animals and the plants above ground. It's also the biodiversity below ground. Very important. We also look at the carbon footprint of the farms. We look at help team in terms of the legal compliance of agriculture environment and health.

[00:10:24] Help them because we've got fantastic legislation interpreting it. This might be a problem so we help the farmers to, to put that in place. And then we look at how do you manage crop health? So all those things we measure in terms of science and, uh, best practice, that's been proven with research across the world and we build it into the farm in terms of the context of that farm and that pharmacist, uh, management style.

[00:10:55] **Redi Tlhabi:** One of the best things we can do to eat more sustainably is to eat seasonal, locally produced foods. Out-of-season foods are harvested early in their production cycle to be shipped worldwide. This compromises on the flavour and nutritional value, so it's good news that we're seeing a move to sea-

sonal, local produce once more. Of course, these choices also play a big role in our overall carbon footprint.

[00:11:22] You might think that going vegan is the obvious solution for eating sustainably. But ditching meat in favour of greenhouse-grown vegetables flown thousands of miles to reach your local supermarket might actually increase your carbon footprint. So, if I do want to eat locally to reduce my food miles, how can I do that while living in a city, far from any farms? According to Zandile Kumalo of Neighbour Roots, the answer may be as simple as a small, outdoor community, rooftop or backyard garden.

[00:11:59] **Zandile Kumalo:** My name [00:12:00] is Zandile Kumalo. I am the CEO and co-founder of NeighborRoots, which is based on the rooftop of Morningside Shopping Centre in Sandton. Our enterprise is a fresh food company farming with the future in mind using technologies like hydroponics. How we describe urban farming, we describe it as growing plants within the cities towns, mainly for perfect-able purposes.

[00:12:28] So in our case, as NeighborRoots, we make use of unutilized spaces to try and turn them into farming spaces. When it comes to our country, especially in agriculture, the issues that we face, it's very high carbon emissions because of the food that we keep on transporting to these distribution centers or to these destinations.

[00:12:52] So with us, how our model work is that we grow all our vegetables on these shopping center rooftops [00:13:00] and the veggies then are supplied directly into the dining restaurants and retail groceries into the shopping center. Then that helps us to reduce on the carbon emissions. So we would be having like zero carbon emissions that we are having, cuz we deliver them like in crates, you know?

[00:13:17] And then the problem we are solving is then when we bring food closer to the market, the markets that we're supplying can be able to get their vegetables always fresh and, and then we are able to use these unused spaces within the urban spaces, which also allows us to reduce then on food waste.

[00:13:36] **Redi Tlhabi:** I was so interested to learn about the kinds of foods we'll be growing more of in 50 years' time. And I was happy to hear that African crops will be trending! Brands are looking to our continent for its so-called superfoods – from moringa and tamarind, to lesser-known grains like sorghum, teff and millet. Hannerie had some more fascinating insights for me about the food we'll be dishing up in the years and decades to come.

[00:14:27] Hannerie, everything that we spoke about here is about innovation, yes. But it also has, it's giving us a window into what the future will look like. So let's talk a little bit then about reimagined food futures and what we will eat. I'm interested to know in your mind, with all this data, with all these trends at our disposal. Do you have an idea of what we'll be eating more of in the next 50 years, in the next 30 years, what's becoming popular and essential and what is not?

[00:14:35] **Hannerie Visser:** So Redi, what I'm seeing is there's, I think there's great news for South Africa and also for, for our continent Africa in that ingredients, like sorghum.

[00:14:47] That that's indigenous ingredient to South Africa is incredibly drought resistant. So, so what we're seeing globally, there's massive water issues and countries like the UK and everywhere, that's never [00:15:00] had this issues all of a sudden are struggling with, you know, they're droughts. So, Something like sorghum, I think we are gonna see everywhere.

[00:15:09] People are really gonna start using it commercially, um, because it's so good for the planet. It doesn't use a lot of water and it's also incredibly healthy and good for you. Um, and similarly so with ingredients like that corn, you see, um, more in Africa. So I think there's gonna be an explosion of African indigenous grains globally.

[00:15:30] And then, um, something like lab grown meat. You know, that there's in, there's only a few, a handful of labs that that's, um, cultivating meat at the moment. There's two in Africa and one of those labs are actually in Cape Town, Mzanzi Meat Co. Our studio's actually working with them a little bit at the mo-

ment. Um, and it's, they, they're not far off from, from starting to produce food with lab grown [00:16:00] meat products. And I think it's gonna be as quick as a year or two, where you can actually walk into a restaurant and you can start buying it commercially. So we've always thought that that was so far off and so far away, but it's becoming a reality and what's really exciting is that one of those labs are here in Cape Town.

[00:16:20] **Redi Tlhabi:** There are a lot of cultures in Africa that are already eating bugs, you know, eating worms and so on. Is, is that the future as well? Should we, should we get used to that? They seem very simple to, to, to prepare very accessible, less complicated than meat. In the context of this conversation that we, we are talking about, about how much it costs, uh, from a sustainability point of view to produce and eat meat, would bugs be a healthier protein alternatives must be rethink, uh, our relationship with bugs?

[00:16:55] **Hannerie Visser:** Absolutely. And I think, like you've said, there's in, especially in the, in the global south, you know, [00:17:00] Africa, South America, people are, have been eating bugs for ages, you know? Um, and it's also, once you get over the, you know, once you kind of don't crawl, it's, it's actually delicious. So again, I think people must just try stuff.

[00:17:16] So what you, what you are seeing a lot. Someone like Ikea have a lab in Denmark where they're playing around with future food and what they're doing is, and they've created fast food using spirulina and they've also used bugs and they also, you see them, they've mixed the spirulina as well as the bugs with other veggies.

[00:17:38] But absolutely because bugs don't take up a lot of space. So you can, and they're incredibly protein dense. So. It's much better for the planet. You don't need a lot of space.

[00:17:50] **Redi Tlhabi:** While thinking about the food we grow, and will grow in future, I was reminded about an absolutely critical aspect of crop production... Pollination. The flowers of a plant are usually pollinated by flying insects like honeybees, bumblebees,

flies, beetles, butterflies and wasps. I did some digging and found out that these pollinator species affect 35% of global agricultural land, supporting the production of no less than 87 of the world's leading food crops.

[00:18:25] But I was shocked and concerned to learn that extinction rates for pollinators have jumped to between 100 and 1 000 times the normal rates, according to the Food and Agricultural Organisation of the United Nations. In fact, a frightening 40% of invertebrate pollinators, especially bees and butterflies, are facing extinction worldwide.

[00:18:49] We rely on bees to pollinate everything from almonds to strawberries to the alfalfa used to feed dairy cows. So if the bees disappear, humanity is in big trouble. Luckily there are individuals doing something to save the bees, one farm at a time. I felt so grateful to hear **bee farmer Portia's** story, and know that there are people working to make a difference.

[00:19:16] **Portia Morudi:** I think it was Einstein that said, "without bees, mankind would have about four years of life left." So that spoke to the importance of these creatures and the food that they help us enjoy. So if you think of your flowering crops, most of them are pollinated by bees. So if you're thinking fruits, strawberries, apples, all of those types of flowering plants would be pollinated by, by bees.

[00:19:45] I think, um, what we are finding more so now, bringing it back to Africa. Um, the loss of the natural spaces is a major concern and a part of our work is to say, how do [00:20:00] we rehabilitate forests? So part of what we do is to go out into your deep remotest of villages and give them alternatives. So as opposed to going into a village and saying, um, you must stop chopping down forest.

[00:20:14] For charcoal because that's quite common. Um, we say here's an alternative. We train you in sustainable beekeeping and then that honey that you produce, we buy it back from you as a way of earning an income. So communities are deriving a greater value from protecting nature, as opposed to just exploiting it.

[00:20:35] So for me, it's to say, what are the simple things that we can do? So I've, I've spoken about communities deriving a greater value from protecting nature as opposed to exploiting it. And what we found is that when you find solutions to social ills within these communities, automatically that transforms into people doing better to nature.

[00:20:59] [00:21:00] Um, I'll give you an example. So one of the communities that we work in is in Gazini at the north of KZN and on the bottom of Mozambique and this community struggled a lot with elephants. So migrating elephants, um, they would actually go into the village ,damage, their crops, damage their huts. Um, and then we learned from

[00:21:21] Dr. Lucy king in Kenya that elephants are scared of bees. So instead of just going in and saying, here's a bee project or take care of nature, we said, here's a solution to this problem that you have of human elephant conflict by building, starting to build fences. So around these communities, we started putting up Bee line fences.

[00:21:41] What that does is that it derails the migratory roots of elephants, moving them away from the communities. What I've found is they is that by so doing, a lot of these people, look after these initiatives, they start taking care of nature better because they're deriving a greater value from it. There's [00:22:00] honey, but they're also protected from [00:22:02] from the elephants.

[00:22:04] **Redi Tlhabi:** The fact is: our current food system is broken. And we have to ask whether we're simply sustaining an unsustainable system. Given that it will take 56% more food than is currently produced in the world to feed the global population in just 30 years' time, we have lots of work to do. Even today, hundreds of millions of people are hungry and agriculture is already responsible for 70% of freshwater use.

[00:22:34] By this stage, I wanted to know what part I could play as a consumer. What could I eat that was both sustainable *and* innovative, keeping up with the trends of the future? I turned to Marisa Munroe from Woolworths to hear about what innovative foods I

should look out for and also what would also be sustainable choices for me. Marisa heads up one of the best product innovation teams in the world and her insights did not disappoint!

[00:23:01] All right. So Marisa, what I want to know is, you know, we are trying to change behaviors here. We want our, uh, listeners our Woolworth's consumers to have choices to, to, to be presented with sustainable and innovative products. So maybe you can talk to me about what constitutes innovative foods, uh, that consumers can look out for. [00:23:26] And, and what would be sustainable choices that your team is working on to present to consumers as they walk through your stores?

[00:23:37] **Marisa Munroe:** I think we, um, We can't really talk about innovation um, if it's not also sustainable, because I think there's nothing that's innovative about something that you bring to market.

[00:23:45] That's not as well sustainable. It, it can't be innovative if it is at the cost of people and planet and communities. So a lot of what we busy with these days are really anchored in a world of wellbeing. Where you know, we look at [00:24:00] the nutritional density of the food as well as how delicious it is as well as the minimal, uh, negative impact it has to have on, on the planet.

[00:24:11] We're certainly developing a lot into a world of a healthier bakery. Um, and by definition of that category, you look at alternative grains. Um, you know, I think there's also something around the, um, current, uh, war in the Ukraine that has led us to realize that we are way too dependent on a few, very commercially farmed crops.

[00:24:37] So it is about diversifying the amount of grains and pulses and seeds and raw material that we include and we definitely see a shift, um, in that context, in the bakery category. In the world of protein and protein is an interesting conversation to have, because it is one of those micronutrients that's almost, um, found [00:25:00] itself in the bull's eye of all conversations that that relates to, um, to sustainability in particular, animal.

[00:25:07] Animal based protein. So what we are seeing is, um, a far greater lean into the development, um, of product into a plant based into the plant based space. Um, and there, looking at ways in which we can encourage customers to include protein into their diets that are less reliant on animal protein as the, as the only source.

[00:25:33] So you find that we are looking for, um, for greater inclusion of, of pulses, legumes, beans, um, and there's such a variety of beans. We, um, according to scientists, we are only using a small handful of legumes, um, considering there are over 20,000 different species.

[00:25:54] **Redi Tlhabi:** I think we are learning as well that plant protein is just as delicious. [00:25:58] I think, uh, you know, [00:26:00] and our tongues get accustomed to what we expose them to. And in the future, we are looking perhaps at a scenario where, uh, future generations will wonder how on earth we ate so much meat in the first place.

[00:26:13] **Marisa Munroe:** Exactly. And I think the, the conversation has also shifted to: what it is on the plate that we can celebrate rather than feeling deprived of what it is that we're starting to leave out.

[00:26:24] And certainly culinary innovation and chefs have started to embrace this, uh, protein flip in how you find that oftentimes the, the, the plant based alternatives are really, really delicious. You know, they're able to bring flavor, that umami flavor that often lacks. They are able to bring techniques to really make, uh, textures very interesting.

[00:26:46] So it is really not a, a conversation anymore of what it is that you give up. Um, it, it really can be so delicious and, and very much increasingly embraced by flexitarians. Not just a diet [00:27:00] for the, the purest vegans, um, and vegetarians to adopt.

[00:27:02] **Redi Tlhabi:** mm-hmm. And just in terms of cost, because, you know, sometimes, um, the reality of living in a country

with so much inequality in our country, cost of living going up, even in first world countries, is that people want to eat certain things, but they can't afford to eat those things.[00:27:20] Uh, how, how are you seeing, uh, the cost of this type of diet?

[00:27:28] **Marisa Munroe:** Well, I think initially at least, um, there are raw materials that, um, you know, people have different opinions on whether it's right or wrong that gets, uh, imported and there's a natural cost to that. However, um, oftentimes when you search about what foods can we expect to see on dinner plates in the future, insects pop up.

[00:27:49] Now I grew up in Limpopo on a farm and. I shared with colleagues last week, how that palpable, exciting [00:28:00] energy in the air just before the first summer rains where, you know, the flying ants are gonna come out and how excited people are to scoop that up and eat these delicious buttery little creatures. So the idea of eating insects, um, is not really that novel, nor is it so far-fetched. Um, it is already a very valued source of protein by vast populations all over the world. So when it comes to the affordability of protein, I think there's going to, you know, it's, it's going to continue to be a very expensive, um, protein to access in the normal type of ways that we used to.

[00:28:40] Ie in lamb, in beef, in particular. Um, but certainly insects. I, I, I can't see the future without us considering that in some shape or form.

[00:28:52] **Redi Tlhabi:** So it's my absolute pleasure to welcome Zama Ntlantsana, who works alongside Marisa as product development manager at Woolworths, and she's here to share some more fascinating tidbits about specific innovations and the move towards sustainability.

[00:29:07] Let's talk a little bit about the kind of innovations that you are working on. I'm talking here in terms of ingredients, flavors, or food formats that we will see in the future.

[00:29:19] **Zama Ntlantsana:** The ingredients really is going back to the basics. It's really going back to what we used to eat before, like simple, uh, unprocessed products.

[00:29:29] And I always say this, uh, and people laugh at me here at work. It's like: go back to how Africans used to eat. Go back to how we used to plant things, go back to how we used to farm, you know, uh, all the, the forage more. Go outside and get things from the outside, you know? And so that's where we're going back to, we're going back to our roots, to be honest, innovation respects tradition.

[00:29:55] **Redi Tlhabi:** What does the perfect future look like for [00:30:00] Woolworths in terms of sustainability?

[00:30:02] **Zama Ntlantsana:** For me, a perfect sustainable Woolworths would look like this: right now we're at 90%, um, of our products are sourced locally. So I'm looking at a hundred percent sourced products, a hundred percent source raw material to make sure that we, we kept the cup on emission.

[00:30:20] I'm seeing Woolworths having, lab bulbs or already we are doing that. But all our store using solar energy, I'm seeing, uh, less packaging on our shelves. I'm seeing, um, lots of queues because they're getting what we're trying to do for the environment and for them and their families.

[00:30:41] **Redi Tlhabi:** At the end of the day, I realised that how I eat today is one of the biggest factors that will influence what we eat in 50 years' time – and whether there is even enough food to go around. My individual choices and actions make a big impact, so if I begin to eat local, seasonal food only, the demand will immediately drop for exotic unseasonal food, flown in from all over the world. And supermarkets will be forced to start supplying only food that is grown responsibly, food that supports biodiversity and longevity for the planet.

[00:31:16] And so, as I ponder what my children and their children will be eating 50 years from now, I imagine the look on each of their faces the first time they try eating something that's been 3D-

printed. Or I wonder which of them might travel into space and enjoy a meal somewhere beyond our planet. I picture us doing a blind tasting of lab grown meat vs the real thing to see what we think.

[00:31:45] And in the meantime, I'll be stocking up on more whole grains, fruit and vegetables, grown in a responsible way. I'll be strictly watching my water usage and I'll excitedly be trying new foods like seaweed and algae. Of course, I'll also be embracing our wonderful heritage of nose-to-tail, root-to-shoot eating. *Ipapa nezinso*, anybody?

[00:32:13] 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. 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.