

FOOD FOR THOUGHT: DEMYSTIFYING THE FOOD LANDSCAPE

Ep. 4: What is the great milk debate?

[00:00:00] **Redi Tlhabi:** It's safe to say that dairy is deeply entrenched in South African culture. Some of us grew up eating cereal, porridge or yoghurt every morning, some love nothing more than a cheesy takeaway pizza, and what could be more South African than a milk tart? Many South Africans also grew up drinking the African favourite: *amas*.

[00:00:24] In my own family, even when we are in London, we visit the South African shop at Victoria Station to buy *lwisa pap* and my kids eat it with kefir, spelt k-e-f-i-r – the closest thing to *inkomazi* we can find to satisfy their cravings. But the dairy industry has a cost – especially for the environment.

[00:00:46] These days, more and more South Africans are following the global shift towards plant-based milks. Some believe it's better for their health; some believe it's better for the planet. Of course, the nature of the dairy industry is that animals are farmed. If you are against animal farming, then this discussion is immaterial for you.

[00:01:05] But if your considerations revolve around your health, societal issues and the health of the planet, then there is a lot to consider and we'll do so together. 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 dive into "the great milk debate".

[00:01:27] What are the pros and cons of pro-dairy or plant-based lifestyle choices? You'll hear why many people mistake dairy allergies for lactose intolerance and you'll learn about the milk hormone rBST and the risks for both cows and humans. You'll also discover the harsh realities of almond milk – hearing why almond farming is killing billions of bees in California, a state where 80% of the world's almonds are grown, according to *The Guardian*.

[00:01:57] I'll also be sharing stories of hope – the story of two entrepreneurial South Africans who are making their mark on the local alternative dairy scene, and the story of a group of 70 commercial dairy farmers, with a desire to transfer knowledge and help upskill previously disadvantaged individuals to gain exposure and experience in modern-day dairy farming. Just a quick note that the content shared on this podcast is for discussion and information purposes only, and should not be

taken as advice. The views and opinions discussed here are those of the podcast host and guests and do not represent those of Woolworths. So let's get going!

[00:02:23] My investigation into the world of dairy starts out simply enough. If you've ever bought a container of milk from Woolworths, you've probably also read somewhere on that container that the milk is "rBST hormone-free". At first, you don't think too much about it. But of course, in my case, my curiosity always gets the better of me and I want to know more!

[00:02:44] So, rBST is a type of artificial growth hormone given to some dairy cows to increase their milk production. In my research, I found many groups who are passionately against its use - some believe the hormone is harmful to cows, and some believe it's harmful to the people who consume it via their milk.

[00:03:08] Now, countries like Canada, Australia, Japan and European Union members have banned its use, though interestingly the EU countries still allow dairy imports from places that do use the hormone. There's also a camp that says that the milk produced by cows treated with the hormone is identical and that there is no way to detect rBST in the milk itself.

[00:03:33] Some of the big players like the American FDA and the World Health Organization allow for its use. While I still didn't have a clear opinion either way, I was beginning to understand the significance of the fact that all Woolworths milk and yoghurt is 100% rBST hormone free. After all - if there might be a health risk, why take a chance?

[00:03:56] David Cuff, protein and dairy category manager at Woolworths, told me more. Okay David, so let's talk about this. Why does rBST get such a bad rap?

[00:04:08] **David Cuff:** Um, if you look at it from a consumer point with customers wanting to really be healthy and make sure that they're eating well, uh, there's a lot of studies for and against with regards to the risk of hormones.

[00:04:17] So I think if you look at it based on our journey and, and, and that we're going on as a business with the world of wellbeing, it's really important that we follow customer trend, but also animal welfare trend. So really at Woolies, we're looking to ensure that we follow that, uh, by looking at removing rBST hormone from, uh, all of our Ayrshire milk as well as yoghurts.

[00:04:38] **Redi Tlhabi:** So, David, I had not heard of the hormone rBST before. I just go into Woolies and I pick my milk, I have my cereal, I make my coffee, and I don't pause to ask questions. What should I know about rBST hormone? What is it?

[00:04:53] **David Cuff:** rBST is a hormone that is administered to the cows to really sort of improve milk production. Um, so it does lead to increased yield, but can have some consequences to the animal welfare with regards to that.

[00:05:06] **Redi Tlhabi:** And, and why is, um, hundred percent rBST free such a milestone?

[00:05:14] **David Cuff:** We've gotta look at the wellbeing of our, uh, literally our cows. It, it really, it's better genetics that we look at, better nutrition.

[00:05:22] Better animal welfare and farming practices, which really lead to sort of improved cow health, which then produces a lot better quality of milk. Um, and that's really where we want to head to - good, transparent, uh, traceable, uh, production of good quality milk by removing hormones ends hence when we started in 1996 and where we are today,

[00:05:44] something that we are really passionate and proud about is a real differentiator within the local market.

[00:05:52] **Redi Tlhabi:** So after hearing about the potential dangers of rBST, I started to wonder what else I didn't know about milk. Was dairy good for my body or would it be better to start buying plant-based milks? With local research suggesting that a staggering 80% of Black South Africans are intolerant to lactose, according to ProVeg International – a food awareness NGO,

[00:06:16] I wanted to understand more about this too. I chatted to registered dietician Reabetjoe Mokoko fondly known as cooking dietician, Rea. Welcome, Rea. It's very nice to have you with us. So let, let's talk about this. Every second person I know is lactose intolerant and, uh, you know, I wonder is this a new trend?

[00:06:37] What's happening? I never heard our parents speak about this. Can you please speak to the subject of milk allergies versus lactose intolerance?

[00:06:48] **Reabetjoe Mokoko:** Hi. Thank you so much, Redi. That's very, what you are saying is true that nowadays we are seeing more and more people with a lactose intolerance. I don't know, maybe it's because we are becoming more and more aware of it, but the main difference between a lactose intolerance and a milk allergy is that

[00:07:00] with a milk allergy, it involves an immunological response. Immunological in the sense that it displays the clinical signs of an allergy, whereby there's anaphylaxis, there's swelling of the lips, swelling of the eyes, vomiting, wheeziness, all those clinical symptoms, unlike with an intolerance.

[00:07:18] An intolerance stems from the, the fact that your body does not manufacture enough lactase, which is an enzyme that's required to digest the lactose in the milk. So what happens when you consume milk or dairy products is that that lactose then goes in undigested. The normal process is that lactase will break down the carbohydrate into galactose and glucose, and it's better digested.

[00:07:43] But with a lactose intolerance, it goes in as it is and it causes clinical symptoms such as your bloating, your stomach cramps, and just feeling uncomfortable in the stomach.

[00:07:53] **Redi Tlhabi:** Okay, and does it matter the amount of milk you're having if you are lactose intolerant? For example, I wouldn't sit and have a whole glass of milk, but I certainly want some milk in my, in my coffee.

[00:08:05] So somebody who's allergic, how might they react to that small amount in their coffee? And then again, the same question for somebody who's lactose intolerant.

[00:08:14] **Reabetjoe Mokoko:** When it comes to quantities, even the smallest quantities might be more severe for somebody with a milk allergy, as we said that it involves an immunological response. Milk intolerance, I think with smaller quantities or with a different form of a dairy, I know some people handle fermented dairy products better than with your fresh milk products.

[00:08:33] **Redi Tlhabi:** Okay, so let's talk about milk then. Uh, or dairy products. I grew up being told that if we drink milk, we're gonna be strong and fit and healthy, healthy bones, healthy teeth, you name it. And I think I've repeated that same thing to my children. I dunno if it's true or not. Is dairy good for us?

[00:08:55] **Reabetjoe Mokoko:** Um, Redi, I still repeat that to my kids, um, because it's very true. If there's one thing, it's that our parents, our grandparents knew better and it is true that milk is, it's, it's a nutrient-dense, we call it a nutrient-dense, almost can be classified along with the superfoods because it contains so much.

[00:09:13] Number one, this is an affordable source of protein and it's important from childhood up until. Milk not only contains protein, but it has other vitamins like your calcium, your phosphorus, your vitamin D, your potassium, your zinc, et cetera. So milk is good for us.

[00:09:29] **Redi Tlhabi:** Any kind of milk? I mean, nowadays we're seeing 2%, you're seeing full cream and you're seeing skim milk, semi skim. I don't know what the choices are just endless. Is any kind of milk good for us?

[00:09:44] **Reabetjoe Mokoko:** Um, so with the different types of milk, like for example, low fat and fat-free or full cream, uh, the main thing is that the only thing that they alter is the fat percentage in the milk, but anything other than that, the milk nutrition is kept the same.

[00:09:58] So it all goes according to your preference. Are you on a weight-loss journey? Uh, but with kids, we always emphasise that kids require full-cream milk.

[00:10:06] **Redi Tlhabi:** So, we are very busy raising families. We are working. Nobody has time to go to the grocery store every day. Where I grew up in, in Soweto, for example, we were sent to buy milk at the general dealer, at the store around the corner every single afternoon. You knew you went to buy milk. Nobody has time for that. So we buy long-life milk. Should, is that what we should be doing? Uh, can we do that? Does that have any impact at, at all? Should I buy long life or fresh milk?

[00:10:35] **Reabetjoe Mokoko:** The, the fresh milk is the one that you find there in the fridge, sitting with a shelf life with, with a shelf life for about seven days.

[00:10:41] Unlike long-life milk that can stay in the cupboard and doesn't even require to be in the fridge, it can stay in the cupboard for months on end. So also, again, the nutritional value, nutritional component is essentially the same. It's just that one spoils quicker than the other one. So I always say that it goes by the demand of the household.

[00:11:02] In my house, milk flies through. We can use up to six to eight litres of milk in a week. So for us, fresh milk also works. But if there are those people who milk, they use it maybe for like a cup of coffee or a bowl of cereal. They can use one litre for like a whole week. So it goes according to you the, the demands of the family or the household or person.

[00:11:24] But if you prefer fresh, then go for fresh. If you prefer long life, then go for long life. You are not losing out any, any nutritional component or any nutrition if you're going for one over the other.

[00:11:35] **Redi Tlhabi:** Oh, that's such a relief. That's so good to know. And then just in terms of, um, where to buy, how to buy, talk to us about buying local. Is this important?

[00:11:45] **Reabetjoe Mokoko:** Um, the emphasis is always on supporting, uh, local. So it's better to buy local products number one, you are boosting the economy. And also, another thing when it comes to things such as dairy, remember that dairy is sensitive, so you'd prefer dairy that is produced locally because then it reduces the

chances of contamination during delivering and transportation. So that will just be the biggest emphasis.

[00:12:07] **Redi Thabi:** When I spoke to Woolworths dietician Cindy Chin, she confirmed what Reabetjoe had shared with me. According to Cindy, "The protein in milk is highly bio-available and of high quality, meaning that you can access and utilise those essential amino acids readily,

[00:12:24] but also it is a full complement. The only way plant mylk can match dairy nutritionally (with the exception of soya milk) is when you combine different plant proteins to get the full complement of essential amino acids, but then it's not as bio-available as milk – the way your body can absorb or use it.

[00:12:44] If you combine for instance pea, oats and almond mylk you might get a better protein complement." So, if nutrition is top of your list of considerations, dairy is a good choice. However, a lot of plant-based mylks are fortified with added calcium, vitamin D, some of the B vitamins and zinc. Cindy recommends soy as a good choice as long as it is in a whole form, and not overly processed for instance as a soy isolate or in powder form.

[00:13:17] Unfortunately, soy has a negative reputation for the massive tracts of rainforest being destroyed in Brazil. I wanted to know more about whether soy is any more sustainable in the South African context, and I looked up Schutz Marais, the protein and dairy sustainability manager at Woolworths, to ask him about this.

[00:13:37] **Schutz Marais:** Regenerative agriculture is, is a, a different way of farming and it's, it's not necessarily a certain practice or a certain way of farming. It's a holistic view or look at how farming and nature can coincide by leaving the area in a better, call it more positive, state than what you've started with. So with

[00:14:00] regenerative agriculture, you're looking at the soil and you're saying, well, how can I improve the soil quality, whether it be through, uh, carbon, or whether it be through nitrogen or increasing the nutrient richness and the diversity of that soil.

[00:14:15] Thereby um, in effect creating a better environment for your crop or for your product to survive and thrive in. It also makes the area obviously healthier, purely from a soil point of view, and in that sense where soy farming in, in, in a lot of agricultural practices is used as a rotational crop. For instance, they would be farming maize, and on a three-year cycle they would, they would switch over to soy farming.

[00:14:44] Because of the regenerative nature of a soy plant to put nitrogen back into the soil, so it takes the nitrogen that you've put down and whether it's available in the soil, available in the atmosphere, available in the environment, it puts it

[00:15:00] back into the soil. So in, in effect, when you then put a crop that is very, um, call it susceptible or thrives on nitrogen in the soil like maize, You plant it the next year and suddenly your, your cash crop or your production yield is much higher without you adding nutrients to your product or to your soil.

[00:15:19] So in that context, it's definitely a regenerative practice because it, it does put back more than it takes out and it, it leaves the environment in a better state than it was, you know, prior to you, um, introducing it.

[00:15:33] **Redi Tlhabi:** Even with regenerative farming practices, dairy has the biggest environmental footprint by far. Cow's milk has a global warming potential – measured as a kilogram of carbon dioxide equivalent per litre – of between 1.14 in Australia and 2.50 in Africa. Almond and coconut mylks are, on average, at 0.42 and soy mylk at 0.75. Dairy also generally requires *nine* times more land than any plant-based alternative!

[00:16:07] Water use is around 628 litres for every litre of dairy, compared to 371 litres for almonds, 270 for rice, 48 for oat and just 28 for soy mylk. But some plant mylks come with other downsides. Take almond mylk for example, a hugely popular alternative to dairy since the 2010s. According to *The Guardian*, almonds are an \$11 billion industry in California, producing roughly 80% of the world's supply.

[00:16:43] But the increasing demands of this industry are placing incredible pressure on the beehives used to pollinate orchards, resulting in billions of honeybee deaths. According to *The Guardian*, when colony collapse disorder was first identified in 2006, with a record number of honeybees mysteriously disappearing or dying outside their hives, it was linked to a loss of habitat and climate change. But the primary culprit was pesticides.

[00:17:14] Almonds in California are doused with greater absolute quantities of pesticides than any other crop. One of the most widely applied pesticides is glyphosate, also called Roundup, which is standard among large-scale almond growers and has been shown to be lethal to bees and to cause cancer in humans.

[00:17:35] Another cancer link? I was shocked. The article explained further: "So far this year three US courts have found in favour of glyphosate users who developed forms of lymphoma; thousands more cases are pending". I'm not sure if I'd want to regularly consume something that possibly puts the growers' health at risk.

[00:17:56] Oat mylk fares better than almond mylk in terms of sustainability. Compared to cow's milk, oat mylk uses 80% less land, produces less than one-third of the greenhouse gas emissions and uses just 4% of the water required. Coconut mylk, from a sustainability point of view, is somewhere between oat and almond, making it better as an ingredient in your dairy-free lifestyle rather than a replacement for cow's milk. That's why Sinenhlanhla Ndlela uses it in her dairy-free ice cream brand - Yococo.

[00:18:30] **Sine Ndlela:** I started Yococo in 2016 when I was going through a bit of, um, quarter-life crisis and I needed a dairy-free ice cream myself. So ice cream has always been such an important part of my life because I was raised by my grandmother. My mom was still in school when I was around, and one of the things that she brought back, Um, for me was ice cream and my baby brain decided that that's, uh, a language for love.

[00:19:05] So I've always just had ice cream every time I needed some sort of comfort and I missed my mom or as I grew older, I was going through life. So I started Yococo just to bring love to people, to serve love. The local dairy-free market is a growing one. There are currently over 70 plant-based mylks, and I think about 18 for specifically created for coffee.

[00:19:39] So that shows you that a lot of people are consuming plant-based mylks and there are yoghurts, there are cheeses. Lots of people are exploring a dairy-free lifestyle. How I see the future of dairy-free products in South Africa is, it's a very promising market. Things are very different from when I started in 2016.

[00:20:02] Also, there are more entrepreneurs who are popping up in this space and people actually have allergies, food allergies, that need to be addressed via these products. So, and more and more people are taking care of, of their health in that way. So I think it's, it's a very promising future.

[00:20:24] **Redi Tlhabi:** Having explored some of the health and environmental implications of the great milk debate, I turned my attention to another important consideration: the societal impact.

[00:20:35] How many job losses would there be, for example, if the whole country suddenly stopped consuming dairy? Researching the dairy industry in South Africa was a sobering exercise. Dairy farming is the country's third-largest agricultural product in terms of production volume but the fifth-largest in terms of value.

[00:20:55] South African dairy farmers are being squeezed by an intensely competitive, deregulated marketplace, rising input costs, plus the worsening impacts of weather extremes due to climate change. Zola Gebede of the SA Milk

Producers Organisation shared a bit more on the latter. Ta Zola, a pleasure to have you on our podcast. Now, let's just get into the, let's get into the granular details of the environmental impact, uh, of, of, of, of dairy farming and, uh, just what the industry, uh, is doing the conversations and, uh, the adaptations that you are introducing in the industry, uh, to reducing carbon footprint and also to adapt to climate change.

[00:21:39] **Zola Gebeda:** We must understand that we're dealing here with a biological entity called a cow which is very sensitive to, uh, changes in environment. If we want to, um, optimise the productivity of a cow, we need to create a, a conducive environment. We as, um, milk producers have joined hands with the processors and formed an establishment called Milk SA and out of Milk SA, we have a research and development unit

[00:22:10] that looks at various, um, impacts such as global warming, environmental issues, and they conduct research in terms of how the environment impacts on the animal. We've also got a dairy standards agency, which therefore looks at the issues of quality. It looks at issues of, um, legislation. It looks at also, um, issues of making sure that the role players in the industry from a production

[00:22:37] and processing side of things comply with certain standards that are going to ensure that human health is secured, animal welfare is secured, and that we are able to work together as a team. That's why Milk South Africa was established. Then we've also got an important dimension to say we have human beings

[00:22:55] that are responsible for this industry, both at a production as well as a processing side. That's why we've got a, a skills institute that trains workers and they, and farmers and everyone that's, that's, uh, even schools lately that are now being orientated to look after the environment and make sure that we are able to mitigate the impact of the environment in that regard.

[00:23:23] We also have, obviously, transformation so that the new entrants that enter the dairy industry, especially the previously disadvantaged, uh, individuals who want to, um, join the mainstream, uh, dairy industry, are getting proper support and they're um, orientated in terms of environment, they're orientated in terms of animal welfare and also skilled to be able to be better producers as you go forward.

[00:23:49] **Redi Tlhabi:** So there's one environmental win - while dairy farming may use more land and water than plant milks, and create more waste, it is actually removing carbon from our atmosphere - who would have thought? Climate change is not the only challenge facing our dairy farmers. In 1996, South Africa deregulated its agricultural sectors and import control was scrapped. With no protection or support and no tariffs on milk imports,

[00:24:18] our farmers were contending with international competition overnight. Even in their own country, South African dairy farmers now compete with much cheaper dairy products from countries with milk subsidy programs. One of the biggest challenges is that these farmers have no power to regulate pricing. They might receive R5 per litre for milk that is sold at R25 per litre by retail.

[00:24:43] As a result, many small-scale farmers are exiting the market. Between 1985 and 2020, there was a decline in primary producers of around 90%, according to a study conducted by Reena das Nair Centre for Competition, Regulation & Economic Development at the University of Johannesburg. There are currently only about 1200 dairy farms and 1.2 million dairy cows in South Africa, producing around 40 000 jobs.

[00:25:14] Small and medium-sized dairy farmers are being squeezed out of the market by larger, mechanised producers. And this results in job losses, leaving families destitute. Automation may give an 18% improvement to production but causes 12% fewer jobs.

[00:25:37] But amidst the concerns are wonderful stories of hope. Jeanet Rikhotso from Amadlelo Agri shared one such story with me.

[00:25:42] **Jeanet Rikhotso:** I studied agricultural animal production at TUT, and one of the requirements for me to graduate is that I had to have a full year of internship. So what Amadlelo Agri normally do is that they go to different institutions every year to interview students for for their internship.

[00:26:04] So 2008, I was actually chosen to be one of the students to do um, my internship with Amadlelo and then after my year of service, I was, um, given the opportunity to grow, um, within the, the business. What made me want to be a dairy farmer? Basically, I didn't necessarily want to be a dairy farmer at first. I just wanted to farm, but what happened was that I got an opportunity to do my internship on the, on a dairy farm.

[00:26:39] And then when I was there, I started to fall in love with it basically because of the, uh, I don't, I don't know whether to call it adrenaline rush, but yeah, basically the dairy farmers, you are always busy, so I loved that rush of always being busy. Also, you get to learn a lot of things. What is it like to be a female in a male-dominated industry?

[00:27:05] Yoh, I don't want to lie. It is, it is very tough. Um, dairy farming is not just a male-dominated industry. It's a white male-dominated industry so being a black male means you have to prove yourself 10 times harder. When you are a female,

you actually have to prove yourself 20 times harder. So yes, it's, it's very tough, but what you need to do is to put in the hours.

[00:27:31] They always talk about 10,000 hours. You have to put your, your 10,000 hours in and learn as much as you can.

[00:27:37] **Redi Tlhabi:** Jeanet and Sinenhlanhla's stories made a real impact on me. I realised that whether I'm buying dairy or plant-based products, my priority can be to look for local brands and suppliers in order to support the farmers and entrepreneurs of South Africa.

[00:27:53] Once again, I had been made acutely aware that my daily choices make an impact. Whether we opt for cows' milk or plant-based alternatives, we can all do our part. At the end of the day, no one can decide what's most important for you – be it your individual health and that of your family, the health of animals and the planet, or the health of our farming communities.

[00:28:16] If we can align our shopping decisions to support personal health, the well-being of local communities, animals *and* our planet, so much the better. And it all starts with making informed food choices. 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.

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