



Steph: Hi Lucas, and welcome to the show.

Lucas: Hi Steph. Thank you so much for having me on the show. I'm looking forward to talk all things bugs today.

Steph: Yeah, absolutely. So let's start with a little bit about you. I want to hear your story, so you can dive as far back into the past as you want to. But set the scene for us as to what led you on the journey to where you are today.

Lucas: Sure, so at Grilo there are four co-founders who established the company about three and a half years ago. When we first started, my sister-in-law, Martina, she was getting ready to run her very first half marathon. And she was running 10, 15, 20 kilometers a day. Back then we were on a vegetarian diet. And Martina was feeling very tired every day and with low energy levels. She then decided to do her homework and go on a bit of research on what would be a good protein alternative that would help raising her energy levels back up. She then came across crickets in the US, where she saw that the industry was starting to take off. She then ordered a cricket powder for a few different cricket farms in America, also Canada and a couple in Asia, to try and see how she would feel and react to eating insects.

She then noticed after two weeks her energy levels were raising, and she was starting to feel much better. When she told us about that, all the co-founders back then we were living together. So this is going back another year, where myself and Camila, which happens to be Martina's sister, and Martina's partner. We then decided to start a business using crickets here in Australia.

Steph: Yeah, that's so good. And so you guys have obviously done your research and had a look at what the best sort of way is to get the protein sources. I want to hear more about what you learned around some of the current protein sources available on the market, and why you were disappointed with them.

Lucas: Sure. We tried a lot of different proteins available in the market, from whey protein, which for me and our business partners, it was a very hard to digest protein. I'm a bit of a dairy intolerant, so it didn't work very well for me to use the whey protein. We also

used a pea protein and brown rice protein, which for me it works. We actually use brown rice protein and also sprouted pea protein in one of our products in the high protein. Chocolate, hemp which for me it's a great alternative too and works really well, was illegal back then in Australia for eating purpose. So we didn't want to go towards hemp when starting a business. And when Martina realised the numbers that the edible insect industry was showing in America, we thought this would be not just a good option to introduce in our plant-based diets back then, but also to start a business. Not many other companies were working with this in Australia.

Steph: Yeah, absolutely. It's been interesting to watch the hemp space as a side note. But yeah, so you've obviously pretty much brought the edible bugs to Australia. I just think, I'd love to actually hear as a side note before we dive into the health benefits, how you have found, I guess pitching this to people? Because I'm sure you get a lot of pushback.

Lucas: Yes. Yeah, for sure. That's actually very good to talk about that. Right at the beginning it was extremely challenging. Every time we would do an in store demo in our stockists, or just do an event where we wanted to share our passion and our recipes, or even cooking at home for friends there was always a cultural barrier towards eating insects. A lot of people thought we were crazy at the beginning, and a lot of people would just walk past and not even consider trying eating insects. After two years doing a lot of work towards creating awareness and working with other people in the industry to promote eatable bugs as an alternative protein, we started to notice a shift on people's perception, where they started to accept crickets in their diets, mostly because of the health benefits, but also because it shows to be a sustainable alternative as well.

Steph: Yeah, I love that sustainable conversation. I want to go there in a minute. But yeah, I think bugs is important to talk about. Because human vegans are the only true vegans on the planet because everybody else eat bugs, they just might just not know about it up until now. It's really quite broad. As you said, 80% of the world is already eating them. It's just that I guess in the Western culture, or at least in Australia, it's something that we weren't aware of until recent years.

Lucas: Exactly. And that's something very funny that I always talk to, especially kids, when we do our bug talks. We have a series of workshops that we've been running with schools all around Queensland lately. And we had about 16 over the last four months where I had the opportunity to go and talk to the kids. And usually I ask them if they ever had crickets. Everyone's first reaction is saying, "No, I never had any bugs. I never tried." And a lot of them get a bit scared of trying them, and I always try to show them that if you ate peanut butter, or chocolate, or even had coffee, chances are that you have been ingesting bugs for quite a while now and you're just not aware of it yet.

Steph: Yeah, exactly. Or not to mention your organic lettuce and the other vegetables that you're grabbing, and maybe not washing as well, which I think we're definitely moving towards now. We understand the importance of eating dirt, and avoiding that sort of hygiene hypothesis that we've done to death in the West and has caused a lot of damage as a result.

Lucas: For sure. That's right.

Steph: Yeah, so we've been talking about protein. I want to hear more about the nutritional benefits of crickets.

Lucas: Sure. Yeah. Well, usually when we talk about the nutritional benefits of eating insects, a lot of people always think of protein. And that's true, it's a very high in protein super food. It can be up to 69% protein on crickets with some other insects being able even to go up to 85% protein, which is the case of the silkworm. Which is not used yet in a lot of places, but it's definitely an option out there. But for us at Grilo, crickets are much more than just a complete protein with all essential amino acids. It has also a lot of vitamin B12, which personally I think it's one of the highlights on the product, where you can find 155% of your recommended daily intake on B12 in just a tablespoon of cricket powder. So it's a very good option for people with a B12 deficiency, that don't want to be eating meat on a regular basis, or they'd rather avoid having B12 shots.

There is also omega threes and sixes on crickets, high content of iron, and you can also find other nutrients like potassium, calcium, fiber. It's quite a broad super food. And we like it to say that it's a very nutrient dense ingredient too because you don't need to have much in order to get a lot of those ingredients, a lot of those nutrients.

Steph: Yeah, so the portion size is obviously quite reasonable as you said, with one tablespoon. I love that because I do a lot of blood testing with my clients, and B12, low levels of B12 is very common. And of course it's much harder to get from plant-based foods, so I'm normally recommending beef and lamb and a lot of people don't want to eat more of that, or it might be expensive, there's other barriers. And so yeah, I love this idea for avoiding supplements but also not having to eat more beef and lamb than you would personally prefer.

Lucas: Yes, for sure. And it does a lot more of that's been coming out lately as well. I'm not a specialist in nutrition, but we all at the Grilo headquarters do our research and try to look for more studies that have been done on insects because it's such a new ingredients like you said, in the Western cultures that we all have so much to learn about it. But there has been a few studies done, mostly in America and Canada, where they tested crickets, orange and olive oil. And they were very impressed to see that crickets show to have a higher antioxidant profile than olive oil and orange.

And not only that, but we also seen a very interesting research done by the University of Wisconsin, with also the University of Colorado. Where they partnered up and they have been trialling crickets as a food on a number of patients, and they noticed that there was even an increase on probiotic bacteria in those people that were ingesting crickets on a regular basis, mostly due to their high chitin content on their composition. So there are studies coming out saying that crickets can be also good for your gut health, which for us it's a great thing to show people as well, especially when there's so much talk in Australia about how important our gut health it is for our wellbeing.

Steph: Yeah, I think that's really fascinating. I love that there's more research coming out because you're right, everyone's talking about the microbiome. But honestly, I think we've lost our way a little bit because we've been obsessed with kombucha, which is a yeast. And we've been not eating enough fiber, and there's carnivore diets which are

taking things to the extreme. So I love that we're looking at crickets as a way to rebalance our microbiome, which comes back to that whole eat dirt concept, or at least get out in nature and look at ways beyond food that we can really improve the health of our gut. So that's fascinating.

Then I wanted to mention as well around the calcium, because I also like this conversation. Because again, in the West, especially in Australia, we've been told about milk for calcium. And basically if we don't drink milk, we'll get osteoporosis. And I really hate that myth. I can't stand how uneducated we've become around other sources of calcium. And I actually honestly hadn't considered crickets, they're not on my radar. They will be now. But normally we're recommending foods like tahini, sesame seeds, bones in fish, almonds, celery, oranges, et cetera for calcium. But it's so good that we can eat crickets as well, to make sure that we are getting enough dietary calcium without having to drink cow's milk.

Lucas: Oh, for sure. I think, yeah, like growing up, I even sometimes still get them feedback on my mum. I haven't had milk since 2010 now. Mostly because it actually is not a help, but it triggers my allergies, my hay fever, I have a bit of an asthma condition. So for me, avoiding dairy is quite important. And I always had my mom saying to me like, "How come you don't drink milk? You need calcium. You're not going to have a strong bones and teeth, and your nerve function." And I always try to say that that's an old myth, and there are lots of ways of getting calcium apart from dairy. Like you said, from sesame seeds, crickets and many other foods as well.

Steph: Yeah. Beautiful. I love that. So let's change gears slightly. I really want to hear about the sustainability of crickets because you would know the vegan movement's huge at the moment, and I think it's really important that we do have a sustainability focus, but I just don't believe that veganism is good for the environment. I'd love to hear about the sort of production side of crickets and yeah, how that really helps the environment

Lucas: For sure. Yeah, I think like crickets... So basically from what I checked and read it on the United Nations feed is that we have to increase our global food production by 70% to feed the population, the growing population in 2050. Which is estimated to grow up to 9 billion people. Now, the way we're producing our food today, it's proven that it's not a supporting our environment and it's destroying in a lot of places our nature, and especially if we consider that 80% of our water goes into agriculture and a lot of times you're not even produce food for ourselves, but to feed all the animals.

So I actually trialled myself veganism for 10 months, and for me, it was not the best option. I know that it can work for a lot of people. But I seen a lot of movement lately into what is called entovegan diet. Which are people on a plant-based diet, or on a vegan diet, that will consider eating crickets for sustainable reasons and to get those nutrients that we spoke about before.

Steph: Get out.

Lucas: Yeah.

Steph: Are you allowed to do that as a vegan? Are you really allowed to eat crickets and still call yourself a vegan? I think that's cheating.

Lucas: So they say entovegan. So entomophagy is the act of eating bugs. And the whole eatable insect movement is now calling for an entovegan diet, where we would consider insects, but you still don't eat any other animals. It's quite funny how they word ever diet these days. And I personally think that every body is different, and a diet may work for someone but may not work for someone else.

Steph: Oh yeah, of course. Of course. It's very much about bio individuality. Entovegan, I actually haven't heard of that word so I'm going to check that out. That is mind blowing. And I love that you talk about the water production because obviously that's one of the criticisms of say beef production that it requires, 20 odd thousand litres for one kilogram of beef. And I haven't looked at the stats recently, but it's quite a significant use. And then we know obviously that the production of cricket is a very, very small amount.

Lucas: For sure. Yeah. So crickets, we usually use about a litre of water to produce the same one kilo of protein, when beef, according to our research, would require 22,000 litres of water. And it's not just the water, but also the feed, the space, the energy. Bugs would require far less energy and space. In which a lot of cases they could grow on a vertical farm as well. Also the life cycle on crickets will be far shorter than a cow for example. Where in a cricket farm where we're sourcing our crickets from, usually they will have a life cycle of five to six weeks, which also proves to be much more efficient way of producing our food.

Steph: Mmm. I do love that. So interesting. I love how much research you guys have done. It's so incredible. And of course, yeah, looking after the planet at the same time. So I'm sure everybody is dying to know, what does it taste like?

Lucas: Yes, that's a good question. We've been very fortunate that lately more and more people have been try. And like I mentioned at the beginning people would even walk past us and avoid eye contact in the tastings and promotions that we were doing. But now, people, they either seen on TV, they've seen chefs like Gordon Ramsey, and guys from Noma restaurant, which is a very well known restaurant. I seen a chef from Tasmania, Vincent Trim. Alexa Tyler, a lot of people all around the world using more and more insects and promoting the industry too.

And people get curious about what it tastes like. And we get all sorts of feedback. We had people saying that it tastes like popcorn, people saying that it tastes like almonds. Also had people saying that it even tastes like mushrooms. So it depends a lot on people's perception. But we always like to say to people that it's not a scary thing, it's just like eating a piece of meat, or chicken, or broccoli. If you're cooking, you usually add something to it to make it taste nice, and you'll be able to have a very good result.

Steph: Yeah, I think it's the name. You've probably seen this a million times. Like it can be quite off putting, but when you look on your website and you see a beetroot dream cake, a

delicious cake with Grilo cricket powder as well as almond meal, and eggs, and avocado chocolate ganache. It's dessert, yeah? So I think it's just about broadening our perspective on how it can be used because it's not just sitting there eating crunchy dried up bugs.

Lucas: For sure. I totally agree. And our biggest focus has been since day one on how we can promote the industry on a much more friendly way. A lot of people, especially in Australia, when they had their first contact with edible insects was either in Cambodia, or Thailand, or Vietnam, where they see people barbecuing insects on the street. And it's kind of, not dirty, but it's kind of on the street, there's not many regulations, there's not a nice packaging which will bring more credibility to that product. So from day one we have been trying to bring a bit of fun as well on how to incorporate the crickets, the powder and also now the whole crickets into every daily recipe.

Lucas: We're very fortunate that in our team, myself and Pedro, we both have been chefs for over 14 years now, and we have been always very open-minded into experimenting new things. Especially when we came across crickets, and a lot of other insects, it became a very fun way of cooking too.

Steph: Yeah, the recipes just look incredible. And that's obviously because you've got the blend. You've got the high-protein blend, or you've got the beautiful Super Greens blend, but you do also have the whole roasted crickets. So are they quite crunchy? I have not tried them myself, obviously.

Lucas: Yeah, so the whole roasted crickets, it's the latest addition into our range. We started with the plain roasted crickets, which has no added flavor, to see how the market would respond, and also to show people that they can add any flavors into those roasted crickets. And surprisingly enough, it's been quite a fun product to work with. We had a lot of people curious to try them because if you're going to any retail store or supermarkets, you'll see a lot of cricket energy bars, you'll see a lot of Super Greens options, you'll see a lot of high-protein options, but you don't see a whole bug on the shelf. And I think this is actually driving a bit of curiosity from people. And we have been getting a lot of requests on doing a flavored range of crickets, which we're working on at the moment and hoping to bring into the market early next year.

Steph: So cool. I love it. So you've got a nice product range at the moment. I've mentioned some of the powders and obviously we just spoke about the whole roasted bugs, but you do have bars as well?

Lucas: Yes, so we do a range of three cricket energy bars. A highlight in our energy bars, which I love to tell customers and retailers, is that it's the only energy bottle in the market that I'm aware of off having natural vitamin B12 on it. For example, our choc-mint energy bar, it has 38% of the recommended daily intake on vitamin B12, and that's purely coming from crickets, nothing else. They also, not just the bars but all our range, they are 100% organic ingredients. So we always like to make sure that our ingredients are organic, to bring a bit more credibility for people, especially when talking insects, which usually for people who don't know much about it, they would associate insects with a pest, and they always think of pesticides. And we just want to bring that security to

people so they know that either the crickets, or the field that they got served, doesn't have any contact with pesticides and ingredients that would harm the final customer.

Steph: Yeah, so, so important. And I just love how passionate you guys are about education because that's really what it's about in this space where there's been so much confusion. And as long as we can keep an open mind, we can certainly learn new things. And yeah, I think it's beautiful to see what you're doing and how passionate you all are to produce such a quality product. I'd love to know, what have you noticed in the space in terms of popularity and other companies getting on board?

Lucas: Yeah, so there's been quite a lot of interesting things happening lately. We had the very first Edible Insect Symposium of Australia, in Brisbane.

Steph: Oh, get out.

Lucas: Yes, so it's a thing now. There's an industry and there are four or five cricket farmers in Australia who are working very hard to produce crickets and other insects like mealworms for human consumption. But there's also another whole side of the industry which is producing all the insects for livestock feed, in order to reuse waste, food waste, to feed the cows then, opposed to growing food to feed those cows. This event, the symposium, was supported by the CSIRO, which is very good support to have in the industry. We also see the interest not just from new customers and new stores, but also new companies coming on board of this industry. And not working exactly like competitors, but they more working together to grow the industry and make sure they cause a positive impact in the market, and positioning Australia in a way that we can become insects exports to the whole world.

Steph: Wow, that's so incredible. I mean good on you guys for bringing it to Australia and you must be so happy to see the evolution of just that awareness growing and yeah, really spreading that message that yeah, you are passionate about.

Lucas: Oh, so happy. It's so rewarding to see this happening. And at the beginning, like I said, people would run away from us. Now we have our range of products in over 55 stores between Byron Bay and Sunshine Coast. We've got a distributor onboard for Sydney and Victoria, starting sales from this month. South Australia is coming on board before the end of the year. And we've seen major players jumping on the market like IGA, which was the very first supermarket chain to support edible insects, stocking a Grilo products in about 12 stores now. And not longer, after IGA jumping on board, we've seen Woolworths creating the Macro brand, using locally sourced cricket powder too, from another company who has been on the market for a while.

So crickets are becoming a mainstream thing in Australia just like it happened in Canada, in England, in America. It was just a matter of time for this food to catch on. And I think it's a very promising times ahead for all the companies in Australia.

Steph: So wonderful. Good on you. I just love seeing people so passionate about what they do. And yeah, really inspired to bring better health with sustainable and future conscious

food as you say. So I just wanted to give you the space to add anything else that you'd like to share, Lucas. And of course direct us to where we can learn more.

Lucas: Sure. Well, One thing I always like to say to everyone that is still a bit on top of the fence, not sure if they should try crickets or not. If you think of a lot of other industries in the market, like kombucha. A few years ago kombucha was very unusual, and these days it's all over the place. There are 10, 15 different brands in a lot of the health food stores that I go to. And and also if you look at medicinal mushrooms, which are coming up strong and showing a lot of benefits to our health, and not to forget also about sushi, which was, when it first came out, was extremely unusual to eat the seaweed, and only became popular when a chef in California did the sushi inside out and called it the California roll.

After that change, sushi became a worldwide thing. And everywhere you go in Australia you you can sort sushi these days. So I think a very similar shift will happen into the edible insect industry, and we're working a harder to make sure that you'll be able to find crickets. Same way as you can go into a supermarket and find out a piece of chicken, or lamb, or beef as well.

Steph: Yeah, exactly. We've just got to keep an open mind. We once thought that the world was flat also, and we can't rely on what we've always known or what we've always eaten. So, yeah, I'm sure there are some fence-sitters like you say. But you guys have made it such an easy way to add this into your already real food diet because you don't have to sit there and eat roasted crickets if you don't want to. There's the powders and the bars, which is a beautiful way to get started. And of course open-minded enough to try the roasted crickets. I look forward to grabbing mine.

Lucas: Nice. Yeah. I think today, everyone wants to live longer and make sure they support the environment in a way. I see a big change and a much more conscious all around the world where people want to... Life expectancy is growing, so why not live a better life and for longer? And if we can impact the environment on a positive way, and also if that means eating unusual food, why not? There's so many things that we learn along the way, like the myth if you don't drink milk you don't get a calcium. We evolved in so many ways that I think that eating an insect, it's a very small change on our eating habits, if you consider the benefits that you get, not just in your health and the environment also.

Steph: Yeah, so good. So good. So it's Grilo, so G-R-I-L-O protein.com.au. And you're on the usual social media channels?

Lucas: For sure, so on Facebook, Instagram @Griloprotein. There's a lot of information all through our website on how to use crickets, why we choose crickets, a lot of recipes. In our blog we actively talking about every single aspect of our business, the challenges, how we incorporate into our daily lifestyle as well, eating bugs. So there's a lot of content out there for people that are curious about it and want to learn a bit more about what we do.



Steph: Yeah, for sure. So head to the show notes team and learn so much more from Lucas and the team at Grilo Protein. My friend, it was so good to have you on the show. I look forward to catching up again soon.

Lucas: Sounds great, Steph. Thanks again for having us. We'll be sending you some cricket goodies this afternoon, they'll be getting shipped.

Steph: So nice of you.

Lucas: Yeah. I'll be very curious to hear your feedback and from your team, and see what you guys think. And yeah, looking forward to it.

Steph: Oh, let me make the beetroot dream cake. That looks so good.

Lucas: Sounds great.