

**The AgVocate**  
**Soil is not a Dirty Word - Sam Coggins**  
**S01E03 Transcript**

**Voice Over:** Welcome to The AgVocate. The podcast that advocates for agriculture. I'm your host Simon Pampena.

With this series of podcasts we'll be telling stories from the people of this ever-growing community, be it industry leaders or those just starting out, because each and every one of them shares a passion for Ag and are doing their part in feeding a hungry planet.

**Voice Over:** Sam Coggins is young man who loves soil. He studies it and he champions its protection. So much so that if you ask him why he's so interested in dirt, he'll get offended!

**Sam:** Oh, it's outrageous!

**Voice Over:** Sam's not being oversensitive - there's a good reason why his laid back Australian persona gets ruffled at the mere mention of the word 'dirt'. Soil is far too important to be given such a derogatory label.

**Sam:** It digests all the nutrients for the plants that nourish us, it filters the water that goes into our water supply, and yet people call it dirt. If there's going to be one takeaway from this podcast it's that never ever call soil dirt.

**Voice Over:** Sam's passion is fantastic, and his love for soil comes from a deep desire for Feeding a Hungry Planet. He is a true AgVocate who thinks globally and acts locally.

Sam grew up Canberra, Australia - the nation's capital. Even though his parents were farmers, it wasn't until his final year of high school that he thought about a career in agriculture for himself.

**Sam:** I never really took agriculture seriously as a potential career path until a bloke came to our school and gave us a spiel about the importance of feeding 9 billion people with less resources and... how 20,000 people die of hunger every single day and that really revved me up and um enabled me to see that agriculture is really a mechanism to contribute to things that are more meaningful.

**Voice Over:** Sam's personal revelation is something we all wish for in our own lives... to be part of something bigger than ourselves...but sometimes that means going against what others think, and in this instance, society's misconception of what a career in agriculture can be.

**Sam:** There's this sort of stigma that seems to surround careers in agriculture like I sign up to my agriculture science degree and then my mates are saying "what are you going to go do - learn how to build scarecrows and stuff?" - it's just - it's funny - but at the same time it's terrible, like, it's all these misconceptions that surround agriculture and deter young people from it.

**Voice Over:** Sam was able to rise above this negative perception with empathy and intelligence, understanding *how* this attitude could arise amongst even his closest friends...

**Sam:** My mates didn't come from a farming background and so they sort of had that misunderstanding of agriculture - which is not their fault. like, people sort of complain about this divide between urban and city, and agriculture and non agriculture but it's not, it's almost like demonising these people for not understanding agriculture but it's not their fault like, the world is set up where you're so separated from where your food comes from it's really hard to be able to understand agriculture if you're not from that farming background.

**Voice Over:** Once at university, Sam embraced everything agriculture had to offer, excited by how many different things there were to do... but there was one area that was to capture his heart.

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**Sam:** I was doing my agriculture science degree and then in second year a mandatory course for us to enroll in was soil science and my first response was 'is this some kind of joke, like, science about soil?' but then after the first couple of lectures I was just hooked because, um, [of] how interesting it is like every soil is so different from - if you go one metre to your right the soil will be completely different to the soil under your feet and not just different across landscapes but down landscapes like the soil at ten centimetres down is so different from the soil at fifty centimetres and there's so much going on in there like, in one teaspoon of soil there's over a million species of bacteria like, that just blows my mind, every time I think about all this life in this strange brown substance.

**Voice Over:** Sam's love for soil was at first intellectual, igniting his imagination and curiosity. He knew it was important as well as fascinating - but he was soon to have his interest firmly grounded in reality. During his third year of university study Sam spent a semester in Sri Lanka where he was confronted with the harsh consequences of soil mismanagement...

**Sam:** I studied where the main river of Sri Lanka flowed past this university... and then the wet season came... and the river just turned to this dark, dark brown after the first couple of monsoons. As a lover of soil it really broke your heart because you knew that soil came from upstream from these fertile fields where farmers were using soil unsustainably for potato and tea production and it just meant that this soil was running out to this river... and instead of nourishing our crops it was polluting our ecosystem. It just made me realise how soil is this really finite resource and it's so crucial for our food security and for our environment.

**Voice Over:** Soil is a precious resource that underpins global food security. The soil running down the river in the monsoons of Sri Lanka took thousands of years to form and only hours to disappear forever.

Soil is the skin of the earth and much like our own skin, becomes vulnerable when naked or scratched. The removal of ground-cover along with other unsustainable farming practices leaves soil open to erosion and degradation.

Over the past 150 years, half of global topsoil has been lost and of what remains, 1 third is already degraded - often with pollutants originating from human and industrial activities like mining and untreated urban waste.

95% of our food comes from soil, and as of 2018, 815 million people are food insecure and 2 billion people are nutritionally insecure... and while these problems are varied and complex, any successful solution must have at its core sustainable soil management.

**Voice Over:** Which is why Sam was so shocked by the river choked with soil sediment in Sri Lanka - a defining moment - which led to a focus on working with small holder farmers. These are farmers who have to generate an income for their families and their future - from farmland that is only 2 hectares or less in size.

**Sam:** I was focused on food security and I've always thought that food security was about working in Australia and producing more food for people but then my mentality got flipped when I learned that most hungry people are farmers, most poor people are farmers, and farmers produce most of our food. So food security isn't necessarily about producing more food in Australia, it's more about enabling poor farmers to produce more income for themselves.

**Voice Over:** Sam now works with the Australian Centre for International Agricultural Research, seeking to enact sustainable farming practices across the Asia-Pacific region.

**Sam:** My full-time job in Australian's aid program working in agricultural research, specifically in the soil section because I love soils, and so we go to a lot of different countries particularly in Asia

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Pacific. The farmers and the governments in those countries tell our organisation what the problems are and then our organisation finds agricultural scientists in Australia and help them work with the local scientists there to create solutions for those farmers.

**Voice Over:** His work is having a big impact on small islands in the Pacific under threat of climate change.

**Sam:** One of the projects that we've been working on is Kiribati [pronounced 'Kiri-baas'] which is this tiny country of 30-odd islands made of coral in the middle of the Pacific Ocean - it's an amazing place - and the highest point above sea level in a lot of these islands is about 3 meters... and so all of their water comes from the groundwater which is in a narrow band between the sea level and the top of the coral and so that means they can't use any inorganic fertilisers and pesticides because of the risk of polluting their really precious ground water systems... and so in view of that the farmers trying to grow more vegetables need to give their vegetables nutrients somehow and so they're working with Australian soil scientists to design compost recipes to target the nutrient deficiencies in the soil using local ingredients like traditional endemic trees and manures that are available like pig manure and chook manure to try and create compost to help them grow their veggie productivity for their communities.

**Voice Over:** Sam and the organisation he works for are making real change by transferring knowledge - learned the hard way - by Australian farmers.

**Sam:** One thing that's been really successful in Australia is principles of land care where you're caring for the environment and caring for your farm at the same time, to get them to work together rather than working against each other. Transitioning those principles to other countries has been really successful particularly in the Philippines where they had these really impoverished communities working on very steep landscapes that are very prone to soil erosion and diversifying the crops that you grow there - not just growing potatoes there all the time - where the soil's constantly exposed to the elements, making contour banks along the ridge line and having agroforestry systems where you're growing trees, and banana trees, along the side of the slope enables the water to slow down when it's running down the slope and conserve the soil and so there's a lot of things that you can do that's a win for the farmer and a win for the soil at the same time.

**Voice Over:** For Sam the problem is clear.

**Sam:** In a simple way like soil is just like other non-renewable resources it's like oil, it's like water, it's things that we have a finite amount of and things that we can't get more of. We lose thousands of football fields of soil every day and it's soil that we can't get back. That's really disastrous for the sustainability of our food supply and to be able to nourish ourselves. It might be World Soil Day today but we are in the middle of the International Decade of Soils so really every day should be World Soil Day.

**Voice Over:** Sam's insights and hard-work make him an incredibly affective AgVocate for soil security. And he was made aware of this potential while he was still a university exchange student in Sri Lanka. Just one story from a fellow traveler was enough to reveal the true value of his upbringing and set him on the path that he still travels today.

**Sam:** In Sri Lanka I met this German bloke called Lutz. He was saying how he was doing these travels in China, going up this mountain, and he got in this chairlift to the top of the mountain and these blokes that got the chairlift with him, took it in turns to stand on top of the mountain and pump their fists in the air and scream for the camera... and I thought this was quite a funny story because these blokes were pretending to the world and pretending to themselves that they'd conquered this mountain when really they'd just gotten on a chairlift that somebody else had built for them... but then thinking about this story made me realise that my life has been a massive

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chairlift... I was born in a developed country, English was my first language, a loving family brought me up with excellent nutrition, I had an excellent education, endless opportunities to go to university, and then here I am in Sri Lanka where my roommate busts a gut every single night studying for an English exam so he can have a chance to get a scholarship to study in an overseas University and it just made me realise how unfair the world is and made me commit to a career helping build chairlifts for other people.

**Voice Over:** Thanks for listening to The AgVocate. This podcast is brought to you by the team behind Bayer's Youth Ag Summit. Follow us on Facebook, Twitter and Instagram. Google 'Youth Ag Summit' and visit the website. Subscribe to our newsletter and be part of the AgVocate community.

Applications for the next Youth Ag Summit, to be held Brazil next year, are open from now until January 10th 2019... so if - like Sam you are passionate about making it happen and creating real solutions, now is your chance to apply.

Special thanks to Sam Coggins for making time to talk us.

We'll be back next month with a new guest but before then please share this podcast far and wide and let us know what you think of this episode. We're also interested in suggestions for any future episodes... perhaps we could even tell your story. Get in touch with us and let us know.