

Portia Phohlo of Woodlands Dairy on her love of soil science, and improving farm sustainability



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As part of our <u>#YouthMatters</u> series, we chat to Portia Phohlo, sustainability researcher at Woodlands Dairy about her love of soil science, who inspires her and where she sees herself in the next five years.



Portia Phohlo, sustainability researcher at Woodlands Dairy

III Can you tell us what your role entails and what your day-to-day looks like?

This is a difficult question to answer because each day is different. On one day I will be on a farm, meeting with a farmer and discussing strategies with them. The next I could be in the office researching about improving our current measures of sustainability or writing articles.

On any other day, I could be in a meeting with the Trace & Save team, a sustainable agriculture company which facilitates and guides us on research pertaining to sustainability on farms and the implementation of these practices.

Who inspires you?

My mother is my biggest inspiration. She raised me and my 10 siblings basically on her own as she was widowed at a young age. She has taught me to always stand tall even in the face of adversity. Her poise and strength inspired me, and as a result, I have inherited some of those traits from her which are helping me in my professional setting today.

III What other skills or talents do you have?

Well, I cannot call it a talent or skill as I am not that good at it. Maybe a hobby, but I enjoy art, specifically drawing, I am a bit rusty now but in my teenage years I used to draw well. I like making comics, like sketches and cartoon characters.

III Where do you see yourself in five years?

Hopefully, having finished my PhD and seen as one of the leading researchers in my field of expertise in the country. I also want to somehow contribute my knowledge back to rural communities. I want to help improve the rural economy through agriculture.

The government provides funds to start farming projects in rural communities but does not provide sufficient support in training to help the farmers maintain these projects sustainably. I would really like to one day be involved in something like this.

I see each farm and farmer as a research station and scientist. Farmers have a wealth of knowledge and I believe as academics and researchers, we can learn a lot from them which we cannot learn from our textbooks.

What sparked your interest in measuring sustainability on dairy farms and/ or soil science?

As a child I used to go to our family field with my mom and siblings to plant or remove weeds on our maize and soybean field. I was always fascinated by how soil can convert a seed into food. I guess the seed was planted then.

When I started university, I was not sure exactly which field in agriculture I was interested in because agriculture is very broad. I then realised that I enjoyed botany (the study of plants) in my first year, so I knew I wanted to continue with something similar; then, one of my lecturers in my second-year courses, Prof Muchaonyerwa shifted my interest not just from plants but to soils as well.



He taught one of the soil science courses I attended with such passion as if he was living in the soil himself. From there, I changed my degree not just from plant-focused but to soil as well. I realised the importance of this natural resource and was fascinated and wanted to know more about it.

My postgraduate studies and my current work then helped me create the link with the bigger picture of farming and to see how soils are important to sustainable farming.

III Can you tell what you most love about doing this sort of work?

The research aspect and engaging with farmers. A huge part of my work involves doing research about trends and practices in agricultural sustainability globally. We are constantly trying to ensure that we meet global standards in all that we do, and what I find exciting is that in some cases we can see how the work we are doing is progressing beyond what we can see in the rest of the world.

It is also exciting for me when our research leads to further questions – it makes me feel like Sherlock Holmes, following clues to try and figure out the story.

I also enjoy engaging with farmers, getting to witness their passion for the land and learning from them as well. I see each farm and farmer as a research station and scientist. Farmers have a wealth of knowledge and I believe as academics and researchers, we can learn a lot from them which we cannot learn from our textbooks.

In your opinion, why is sustainability indicators such as carbon footprint, soil health, water use efficiencies and nutrient conversion important?

The combination of these measures gives us a holistic picture of the sustainability of a farm. They each provide insight into important aspects of a farm's management and insight into the environmental impact of farming. We cannot manage what we do not measure, therefore these indicators allow us to assist farmers to start managing their farms more sustainably.

Further to this, sustainability has become a very loose term. People use it to mean all sorts of things. The company I work with, Trace & Save, believes that claims of sustainability should be made with integrity. Measuring indicators on a farm each year allows us to see whether farmers are actually successfully implementing sustainable practices, and the effect they are having at improving the sustainability of the farm.



The carbon footprint, for instance, is a good tool to measure the impact of farming practices on climate change and from it, we are able to advise farmers on what they can do to reduce their environmental impact. Soil health measures the soil's status and potential to produce food with minimal inputs.

If farmers can make their soils healthier then they can use less fertiliser while they still grow healthy produce without having to use environmentally degrading fertilisers. Fewer fertiliser inputs also mean less financial input by

the farmer, less pollution our fresh water sources as well as lower emission of greenhouse gases.

How can this be beneficial to farmers in the long run?

Well, one of the pillars of sustainability is maintaining economic efficiency, and the improvement of these indicators will also improve the farms finances and thus the sustainability of the farm. We also work with a lot of farmers that deeply care for the environment and want to improve the environmental health of their farms. Our work can support them in this goal.

III What is your message to South Africa's youth this Youth Month? Set your goals and focus on them, do not let anything interfere with your journey to accomplish them and always remember to stand with poise no matter what. Remembering this has worked for me and still works even today.

ABOUT ROBIN FREDERICKS

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