WATER PERSONALITY

Prof Sue Walker – A career in agrometeorology

Although the renowned South African agrometeorologist, Prof Sue Walker, officially retired at the end of June 2021 after a more than 40-year career, she claims not to know the meaning of the word 'retire'! Far from slowing down, she is still going at full pace to share her knowledge and experience with researchers, students and farmers, not only on projects she is still running but also wherever she travels.

Highlights from Prof Walker's extraordinary career include obtaining her PhD from the University of California, Davis in the USA in 1988 for a thesis titled 'Spatial pattern of leaf growth of sorghum as affected by water stress and implications for canopy development'. She has published 103 peer-reviewed scientific articles and 27 chapters in books and was the supervisor or co-supervisor of 20 doctoral graduates.

Prof Walker's interest in climate and the environment started at a young age when she observed her father measuring the rainfall after every event in a copper rain-gauge. She learned about gardening and wildlife from her mother. In high school, her Geography teachers further stimulated her interest. Even as a child growing up in Gillitts, KwaZulu-Natal, she sought answers to weather-related questions such as why was it misty when she left home and walked to the bus but when she arrived at school in the next valley the sun was shining? Those things fascinated her.

During her long career Prof Walker travelled to more than 70 countries and became a bridge across different cultures – greatly enjoying such interactions. She has guided scientists and students from many countries on how to relate weather and climate to agricultural production. Her PhD graduates comprise 6 from South Africa, 12 from other African countries and 2 from Asia (including 3 female graduates). She has also served on international committees, representing South Africa at the World Meteorological Organisation and the International Commission for Irrigation and Drainage.

With villagers in Mujika, in north-western Zambia.

Perhaps one of the most important things that guided Prof Walker in her research and that she taught her students is "If you don't ask the right question, you won't get the right answer". She says that this works in most situations and helps you to think logically about a problem. Another pearl of wisdom is that "Failure is the backdoor to success". In other words, you must use your experience of perceived failure to push yourself to the next level and build your perseverance and determination to succeed.

For Prof Walker it is important to make science useful to farmers and extension practitioners – to find out what is important to them, what they are currently doing and what their dreams are. She shares her expertise on the interactions between crops, livestock and the environment and helps them to identify the stresses and limiting factors in their farming systems. She uses her vast knowledge together with information from databases and maps to develop possible scenarios and look at alternative crops that show potential in that area. She then uses this information to develop Agromet Advisories or Climate Services tailored for those specific groups of farmers.

Prof Walker's experiences in various countries as a devoted Christian made her realise that it was God who sent her to those communities, not only to bring practical agrometeorological advice but also to encourage and inspire the women there. For example, after a long day visiting the farmer field trials at Mujika, Monze in Zambia, her two students informed her that the ladies from the village wanted to talk to her. She went and sat on the ground to listen to them. Their God-given wisdom was "***If I only have seed – then it is better to eat it. But if I have compost or fertilizer – then I should plant the seed so it can multiply and feed my family for the whole year***". Just like Jesus taught in the parable of the talents – we should use them and they will multiply.

Another more recent opportunity was working alongside two anthropologists from the Universitas Indonesia with Science Field Shops in the Indrumyu Regency. She often walked with farmers in their rice fields, where she especially enjoyed seeing each one with their own rain gauge. She interacted with them in the rainfall observer clubs, helping them to understand about the El Niño-Southern Oscillation (ENSO) and the effect of dry spells on their own cropping patterns and farm management decisions. She taught them how to determine the clay content of their own soils by playing with the mud. She gave them the opportunity to share their own 'new knowledge' with others during the 'train the trainers' workshops. Eventually she realised that the farmers no longer needed her continued input as an agrometeorologist as they had learnt about these things themselves.

Back home in South Africa, on her return to Hoxane Irrigation Scheme in Tulamashe, Mpumalanga after about 25 years, Prof Walker met the extension officers who reminded her of their past interactions. They would walk in the fields and do farm and home visits to farmers on Tuesdays, then meet the extension officers on Wednesdays and hold the monthly Farmers' Days on Thursdays. All benefited from the inputs from researchers and interaction with other farmers, thereby obtaining updated information and knowledge. This was where she first learnt in practice, through using participatory methods, that the farmer is the most important person!

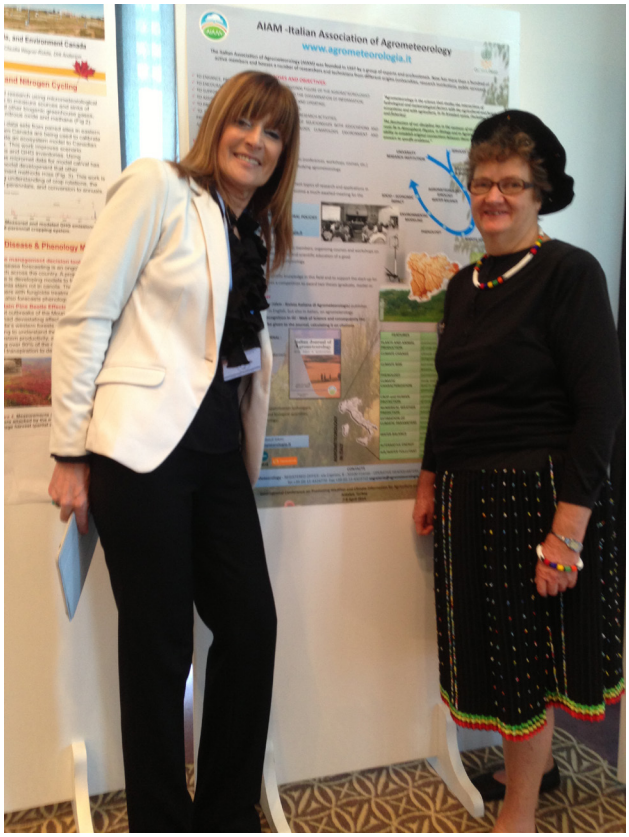
Until other new opportunities come up, Prof Sue will continue working on a part-time retiree contract at the Agricultural Research Council in Pretoria. Her current projects include one funded by the Water Research Commission on the Water-Energy-Food Nexus in the Inkomati-Usuthu Catchment in Mpumalanga,

which highlights the co-development of a decision-making model to capture the tradeoffs and synergies between the three sectors with stakeholder engagements. Another ongoing project is Climate-Smart Agricultural Training for Extension Practitioners in three provinces (funded by GIZ) where she is leading and guiding the development of manuals, week-long training courses and a toolbox about the possible adaptation and mitigation interventions to optimise agricultural practices under a changing climate.

Clearly Prof Sue Walker has no intention of hanging up her rain gauge and relaxing just yet!

Thanks to the Agricultural Research Council for this contribution

At a community meeting on crop modelling at Monze and Sinazongwe, Zambia.



Meeting WMO Commission for Agricultural Meteorology Vice President, Dr Federica Rossi, in Turkey.

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