

PHINDA SANELE MAGAGULA

University of Pretoria (UP), Department of Plant and Soil Sciences,
Email: , Phone: +27697103699

Education

- Ph.D. Department of Plant and Soil Sciences, UP. In Plant Sciences/Plant Pathology.
2021 – Present.
- MSc. Department of Plant and Soil Sciences, UP. In Plant Sciences.
2020.
- BSc. Honours. Department of Plant and Soil Sciences, UP. In Agricultural
Crop Sciences. 2017.
- BSc. Department of Agronomy, University of Swaziland. In Agronomy. 2012.

Awards

- Government of Swaziland to support my undergraduate studies – 2008.
- Mastercard Foundation Scholarship Program to support my Honours and master's Programs – 2017.
- The Hans Merensky Chair in Avocado Research to support my PhD Program – 2021.

Group membership

- Hans Merensky avocado research programme (<https://www.fabinet.up.ac.za/index.php/research-groups/avocado-research-programme>)
Forestry and Agricultural Biotechnology Institute ()

Member of the Southern African Society for Plant Pathology (<https://saspp.co.za/>)

Languages

Fluent English and Siswati- written and spoken.

Research

Interests: Microbiome research, Botany, Horticultural and Agronomic crops production, Ecology, Microbiology, Plant pathology, Plant physiology and Soil Science, Fungicides, and biological products.

Publications

Magagula P.S., N. Taylor, V. Swart, N. van den Berg. 2021. Efficacy of Potential Control Agents Against *Rosellinia necatrix* and Their Physiological Impact on Avocado. *Plant Disease* 105: 3385-3396 (<https://apsjournals.apsnet.org/doi/full/10.1094/PDIS-08-20-1751-RE>).

Manuscripts In progress

Magagula P.S., R. Backer, V. Swart, N. van den Berg. **The potential impact of soil and rhizosphere microbiome on avocado tree health** (*Frontiers in plant Science*).

Magagula P.S., A. Fourie, V. Swart, N. van den Berg. **Investigating the rhizosphere community composition of white root rot infected and healthy avocado trees** (*Frontiers in Microbiology*).

Magagula P.S., V. Swart, N. van den Berg. Evaluation of the effectiveness of Fluazinam and Extrasol against avocado white root rot occurring under commercial orchards (Plant disease journal).

Talks:

Magagula P.S. 2023. The potential control strategy of white root rot in avocado orchards. Plant Cell and Combined Congress 2023. Pretoria, South Africa. (<https://combinedcongress.org.za/>).

Posters:

Magagula P.S. 2019. Physiological effects of the white root rot pathogen, *Rosellinia necatrix* on avocado: opportunity for early disease detection. Plant Cell and Environment: 40th anniversary. **Poster presentation.** Glasgow, Scotland.
(<https://onlinelibrary.wiley.com/page/journal/13653040/homepage/symposium>)

Teaching and Mentoring Experience

Teaching Experience

Tutor: Undergraduate Botany. UP. 2018-2020.

Teacher: Mathematics and Science. Oslo High School, Swaziland. 2013-2014.

Mentoring Experience

Chrizzane Smith, Honours project. “The search for beneficial microorganisms against white root rot and Phytophthora root rot in healthy avocado trees. UP.2021.

Khanyisile Botshelo, Honours project. “Working of biological controls against white root rot”. UP.2021.

Work Experience

Field Supervisor at Illovo (Ubombo sugar): Production of sugarcane, lead a team of about 200 people with 4 team leaders (1.5 ha section).

Skills experience at Illovo: farm section operations, health, and safety officer, writing reports, field work, irrigation management, data capturing and analysis, budgets, strategic planning, report writing, leadership, organizational and staff management skills, extension work with farmers.

Skills

DNA extractions and sequencing, Pacbio sequencing, Metabarcoding, RNA extractions, field design experimentation, greenhouse design experimentation, computer skills, application of fungicides and biological controls (efficacy of the products, phytotoxicity and maximum residue limit trials), communication, collaboration (Institutions and Industries), orchard and crop management, rootstocks, worked with avocado, maize and sugarcane on large scale production, Disease management (phytophthora root rot and white root rot), soil and root sampling skills, pathogenicity experiments and plant diseases clinic work (diagnostic of diseases from samples sent by farmers), strategic planning, project management, staff management, computer literacy, organizational, field trips, local and international travelling experience.

Additional Skills

R-statistics, SAS statistics, ContigExpress, CLCBio, Genesious, Conda environment, LI-6400XT and LI6800 Portable Photosynthesis System experience, LAI-2200C Plant Canopy Analyzer, Drone application and usage (remote sensing), Irrigation systems management, Driver's license code 8.

References

- Professor Noleani van den Berg**, Department of Biochemistry, Genetics and Microbiology, Plant Science Complex, University of Pretoria, 0083. Phone: +27827754983. E-mail: Velushka.Swart@fab.up.ac.za
- Dr Velushka Swart**, Department of Biochemistry, Genetics and Microbiology, Plant Science Complex, University of Pretoria, 0083. Phone: +27833988469. E-mail: Velushka.Swart@fab.up.ac.za
- Dr Mammoloro Molly Malefo**, Department of Biochemistry, Genetics and Microbiology, Plant Science Complex, University of Pretoria, 0083. Phone: +27815137345. E-mail: molly.malefo@up.ac.za
- Mr Mbuso Mndzebele**, Ubombo Sugar Limited (ILLOVO), Big Bend.L311. Phone: +26876181833. E-mail: mmndzebele@illovo.co.za
- Dr Mzwandile Mabuza**, Department of Agronomy, Luyengo Campus, University of Swaziland, P.O Luyengo. Phone: +27789289335. E-mail: mzmabuza@uniswa.sz