

Phrasia Mapfumo, Ph.D.

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Executive Summary

- Plant scientist specializing in crop productivity, experimental design, data collection, data curation, sustainable agriculture, and integrated disease management.
 - Published two first-author and one co-author articles in peer-reviewed scientific journals.
 - Laboratory skills like DNA extraction, PCR, microscopy, pathogen isolation and culturing
 - Data analysis skills, with proficiency in SPSS, XLSTAT, GenStat, R, and Python (beginner) software
 - Proficient leader and mentor, having guided eight undergraduate students, six student researchers, and trained 50 farmers through a master farmer program.
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Education

- Ph.D. in Plant Sciences, University of Pretoria 2024
 - M.Sc. in Agriculture, University of South Africa 2020
 - BTech in Agricultural Management (*Cum Laude*), University of South Africa 2016
 - Diploma in Agriculture (*First Class*), Esigodini Agricultural College 2005
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Work Experience

Postdoctoral Fellow

University of Pretoria 2024 – to date

Sustainable Crop Production and Agro Climatology: Tutor

University of Pretoria 2022/23

Agricultural Scientist /Consultant

Private Applications Office 2017/19

Agricultural Science Teacher

Kuedza Primary Sch and Nyamuroro Primary Sch 2014/15

Mathematics, Natural Science Teacher & Finance Manager

Ekuthuleni Primary School, RSA 2008/13

Agriculture Research & Extension Officer

AGRITEX, Zimbabwe 2005/08

Mentorship Experience

- **University of Pretoria:**
 - Mentored Stiaan Odendaal on Hons research project 2022
 - Mentored Olanrewaju Soogun under the CPHB mentorship program 2023
 - **University of South Africa:**
 - Mentored students in Strategic Planning, Strategy Implementation, Financial Management, and Research Methodology 2015/19
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Grants & Scholarships

- University of Pretoria Postdoctoral Fellowship 2024/26
 - International Sunflower Committee Student Conference Grant 2022
 - Oil and Protein Seeds Development Trust Postgraduate Fellowship (Ph.D.) 2020/22
 - University of South Africa Postgraduate Bursary (M.Sc.) 2019
 - Presidential Grant (Dip in Agriculture) 2004/05
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Publications

Peer-Reviewed Journals

1. Mapfumo, Phrasia, Clarietta Chagwiza, and Michael Antwi. "Impact of rainfall variability on maize yield in the KwaZulu-Natal, North-West and Free State provinces of South Africa (1987–2017)." *Journal of Agribusiness and Rural Development* 58, no. 4 (2020): 359-367.
2. Chagwiza, Clarietta, Phrasia Mapfumo, and Michael Antwi. "Impact of climate change on maize yield." *J. Agribus. Rural. Dev* 58 (2020): 359-367.
3. Mapfumo, Phrasia, Sikelela Buthelezi, Emma Archer, Dirk ZH Swanevelder, P. Markus Wilken, and Nicky Creux. "In-field climatic factors driving Sclerotinia head rot progression across different sunflower planting dates." *Plant Pathology* 73, no. 5 (2024): 1112-1126.
4. Mapfumo P, Archer E, Swanevelder DZH, Wilken PM, Creux N, Read D. Genomic characterization of Bidens mottle virus and its impact on sunflower growth (*accepted for publication in Plant Pathology journal*).

Publications in Preparation

1. Mapfumo P, Wilken PM, Archer E, Swanevelder DZH, Creux N. Impact of late planting on sunflower development and yield.
 2. Mapfumo P, Wilken PM, Archer E, Swanevelder DZH, Creux N. Effects of extreme weather events on sunflower floral traits and yield.
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Workshops & Short Courses

- 1st Annual Modelling and Epidemiology Summer School, University of Pretoria, 2023
 - SANSOR Soft Skills Course 2023
 - Edx Scientific Writing 2021
 - Amity University Jaipur (Online Workshop) on weather monitoring techniques, 2020
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Outreach Activities

- Grain Research Program representative at NAMPO Harvest Day 2023
 - Participation in Tree Protection Co-operatives and Eucalyptus & Pine Pathogen Interactions programs 2021/23
 - Field trips to conduct disease surveys in:
 - Mpumalanga, Gauteng, and North West 2021
 - KwaZulu-Natal 2020
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Management & Administrative Roles

- CFBE (Journal Club Coordinator), UP, SA 2020/24
 - Plant Science in the News Coordinator, UP, SA 2020/24
 - Field Trip Coordinator, UP, SA 2021/24
 - School Financial Manager, Ekuthuleni Primary School, SA 2008/13
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Scientific Conference Contributions

- Mapfumo P, Buthelezi ST, Wilken M, Swanevelder ZH, Archer E, Creux NM. **Planting date and environments effect on Sclerotinia head rot progression.** 33rd SASPP Congress, 2022 August 1-3. Pretoria, South Africa. Presentation: **Poster Presentation**
- Mapfumo P, Buthelezi ST, Wilken M, Swanevelder ZH, Archer E, Creux NM (2022) **Effect of planting date on Sunflower growth, development, yield, and Sclerotinia head rot progression.** 20th International Sunflower Conference, 2022 June 20-23. Novi sad, Serbia. Presentation: **Oral and Poster Presentation**

- Mapfumo P, Buthelezi ST, Wilken M, Swanevelder ZH, Archer E, Creux NM. **Planting date and environments effect on Sclerotinia head rot progress**. 33rd SANSOR Congress, 2022 June 8-9, Cape Town, South Africa. Presentation: **Oral and Poster Presentation**
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Peer Review Contributions

- Open Science Journal: Reviewed 1 article 2022
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Professional Affiliations

- SACNASP (Cert. Nat Scientist: 117012) 2017 – Present
 - SASAE (Cert. Agriculture Extension Technologist: 2372) 2016 – Present
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Awards

- Runner-up for Best Poster Presentation at the International Sunflower Conference 2022
 - Best Student in Soil Conservation, Esigodini Agricultural College 2005
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International open driving licence

- Code 10 Department of Traffic and Licensing, South Africa 2017
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References

1. **Dr. Nicky Creux** – Forestry, Agriculture and Biotechnology Institute (FABI), University of Pretoria
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Affiliation: PhD and Postdoc supervisor at the University of Pretoria
2. **Dr. David Nsibo** – Department of Plant and Soil Sciences, University of Pretoria
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3. **Dr. Dawit Kidanemariam** – University of Queensland, Australia
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Affiliation: Colleague at the University of Pretoria