



Plant Sciences

Conference Contributions 2024

Conference Papers

Adams, L., Martin, G.D., Downs, C. & Steenhuisen, S. 2024. Community perceptions of a fleshy-fruited invasive alien plant in the grassland biome of South Africa. Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Adams, L., Martin, G.D., Downs, C. & Steenhuisen, S. 2024. Fleshy-fruited invasive alien shrubs population change over time along roadsides of South African grasslands. Paper delivered at the National Symposium on Biological Invasions, Sol Plaatje University, Kimberley, South Africa. 9-12 September 2024.

Adams, L., Martin, G.D., Downs, C. & Steenhuisen, S. 2024. Fleshy-fruited invasive alien shrubs population change over time along roadsides of South African grasslands. Paper delivered at the 16th NRF-SAEON Graduate Student Network, Indibano Conference, Gqeberha, South Africa. 16-20 September 2024.

Adams, L., Martin, G.D., Downs, C. & Steenhuisen, S. 2024. Fleshy-fruited invasive alien shrubs population change over time along roadsides of South African grasslands. Paper delivered at the 59th Annual Congress of the Grassland Society of Southern Africa, Gariiep Forever Resort, Gariiep Dam, South Africa. 22-26 July

Adams, L., Martin, G.D., Downs, C. & Steenhuisen, S. 2024. The role of mammals in seed dispersal of fleshy-fruited invasive alien plants in the Grassland Biome of South Africa. Paper delivered at the 8th Frugivores and Seed Dispersal Symposium, Ilhéus, Brazil. 4-8 August 2024.

Adams, L., Martin, G.D., Downs, C. & Steenhuisen, S. 2024. The role of mammals in seed dispersal of fleshy-fruited invasive alien plants in the montane Grassland Biome of South Africa. Paper delivered at the Southern African Wildlife Management Association Conference, Windhoek, Namibia. 6-11 October 2024.

Amegbor, I.K., Nelimor, C., Adu, G.B., Jamal-Deen, A., Agbesi, ., Ayim, R.K., Kusi, F., Amadu, M.K., Atosona, B., Aboyadana, P. & Labuschagne, M.T. 2024. Insights on yield performance, farmer and consumer preferences for fall army worm tolerant maize hybrids in Ghana. Paper delivered 15th Southern African Plant Breeding Symposium (SAPBA). Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Bender, C.M., Hlongwa, S.I., Meyer, W.B., Pretorius, Z.A. & Boshoff, W.H.P. 2024. Macro- and microscopic phenotyping of *romyces appendiculatus* on beans. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.



Boshoff, W.H.P., Meyer, W.B., Maphobole, L., Coetzer, A., Bender, C.M., Terefe, T.G., Pretorius, Z.A. & Visser, B. 2024. Mitigating the threat of rust pathogens of food and forage crops in South Africa. Paper delivered at the 15th Southern African Plant Breeding Symposium (SAPBA), Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Boshoff, W.H.P., Visser, B., Bender, C.M. & Pretorius, Z.A. 2024. The response of *Allium* species and varieties to *Puccinia porri* in South Africa. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Boshoff, W.H.P., Visser, B. & Pretorius, Z.A. 2024. *Thinopyrum distichum* as a possible ancillary host for cereal rusts in South Africa. Paper delivered at the 53rd congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Buthelezi, T., Steenhuisen, S., Payne, S.L. & Thompson, D. 2024. Pollination ecology of South African endemic *Euphorbia clavarioides* (Euphorbiaceae). Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Canavan, K., Canavan, S., Clark V.C., Gwate, O., Mapuara, S., Richardson, D.M., Steenhuisen, S. Sutton, G.F. & Martin, G.D. 2024. Elevation patterns of non-native invasions in South African mountains. Paper delivered at the Policy and Practice Workshop: Woody range-expanding species in southern African mountains: Trends, predictions and Mitigations at the 59th Annual Congress of the Grassland Society of Southern Africa, Gariep Forever Resort, Gariep Dam, South Africa. 22-26 July 2024.

Canavan, K., Canavan, S., Clark, V.C., Gwate, O., Mapuara, A., Richardson, D.M., Steenhuisen, S., Sutton, G.F. & Martin, G.D. 2024. Elevation patterns of non-native invasions in South African mountains. Paper delivered at the 59th Annual Congress of the Grassland Society of Southern Africa, Gariep Forever Resort, Gariep Dam, South Africa. 22-26 July 2024.

Canavan, K. & Martin, G.D. 2024. Managing wilding Pines in the Cape Floristic Region, South Africa: progress and prospects. Paper delivered at the National Symposium on Biological Invasions, Sol Plaatje University, Kimberley, South Africa. 9-12 September 2024.

Coetzee, E., Achilonu, C.C., Rothmann, L.A. & Marais, G.J. 2024. Airborne *Cladosporium* species associated with pecan orchards in South Africa. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Coetzee, M.P.A., Matodzi, L., Minnaar-Ontong, A., Steyn, C., ilmaz, N. & Visagie, C.M. 2024. *Fusarium* species causing Sudden Death Syndrome like symptom on soybean in South Africa. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.



Coetzer, A., Maré, A. & Boshoff, W.H.P. 2024. First report of *Puccinia striiformis* f. sp. *tritici* race 142E30A+ on wheat in South Africa. Paper delivered at the South African Academy for Science and Art, University of the Free State, Bloemfontein, South Africa. 30-31 October 2024.

Coetzer, A., Terefe, T.G., Maré, A., Mebalo, J., Gqola, B., Meyer, W.B., Pretorius, Z.A. & Boshoff, W.H.P. 2024. Virulence of a new race of *Puccinia striiformis* f. sp. *tritici* detected on wheat in South Africa. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Du Plooy, J., Boshoff, W.H.P. & Visser, B. 2024. Identification of putative virulence effector genes from *Puccinia graminis* f. sp. *tritici*. Paper delivered at the Annual post-graduate symposium of the Department of Botany and Plant Biotechnology at University of Johannesburg, South Africa. 21 October 2024.

Du Toit, I., Boshoff, W.H.P., Rothmann, L.A. & Visser, B. 2024. Monitoring of wheat rust in South-Africa with MARPLEdiagnostics. Paper delivered at the South African Academy for Science and Art, University of the Free State, Bloemfontein, South Africa. 30-31 October 2024.

Du Toit, I., Rothmann, L.A., Boshoff, W.H.P. & Visser, B. 2024. Triazole fungicide sensitivity among South African *Puccinia graminis* f. sp. *tritici* isolates. Paper delivered at the 53rd congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Figueroa, M., Henningsen, E.C., Lewis, D., Hewitt, T., Outram, M., Arndell, T., Blundell, C., Chen, J., Mago, R., Nguyen, T.D., Hartwig, E., Spanner, R., Nazareno, E., Hickey, L., Huang, Y.-F., Visser, B., Pretorius, Z.A., Boshoff, W.H.P., Stone, E., Nienser, N., Moscou, M., Saunders, D., Silva, P., German, S., Campos, P., Steffenson, B., Kianian, S.F., Vanhercke, T., Sperschneider, J. & Dodds, P.N. 2024. Securing crops against rust pathogens: Robigus in the modern times. Paper delivered at the 32nd Fungal Genetics Conference, Pacific Grove, California, USA. 12-17 March 2024.

Fosa, H., Swart, W. J., Nyoni, M. & Muzhinji, N. 2024. Biopriming of Glycine max (Soybean) seeds using *Aureobasidium pullulans* CBS584.75. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Grobler, H., Jackson, M. & Joubert, L. 2024. Pollinator rewards in *Nemesia* (Scrophulariaceae). Paper delivered at the 58th Microscopy Society of South Africa (MSSA) Conference, Bloemfontein, South Africa. 2-5 December 2024.

Gwanya, H., Mohase, L. & Mafa, M. 2024. Bioprospecting lycoside hydrolase influencing RWASA2 and RWASA5 virulence during wheat-aphid interaction. Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.



Gwate, O., Payne, S., Steenhuisen, S.L, Martin, G.D., & Clark, V.R. 2024. Exploring mechanisms underlying the success of range expanding plants in Maloti-Drakensberg Mountains. Paper delivered at the Policy and Practice Workshop: Woody rangeexpanding species in southern African mountains: Trends, predictions and Mitigations at the 59th Annual Congress of the Grassland Society of Southern Africa, Gariep Forever Resort, Gariep Dam, South Africa. 22-26 July 2024.

Hlahla, J.M., Mafa, M.S., Van der Merwe, R. & Moloi, M.J. 2024. Synergistic effects of drought and heat stress on the photosynthetic efficiency and osmolytes accumulation in edamame. Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Hlahla, J.M., Mafa, M.S., Van der Merwe, R. & Moloi, M.J. 2024. The enzymatic and non-enzymatic antioxidant systems and cell wall modification enhanced edamame tolerance during combined drought and heat stress. Paper delivered at the annual post-graduate symposium of the Department of Botany and Plant Biotechnology at University of Johannesburg, South Africa. 21 October 2024.

Hlahla, J.M., Mafa, M.S., Van der Merwe, R. & Moloi M.J. 2024. The enzymatic and non-enzymatic antioxidant systems and cell wall modification enhanced edamame tolerance during combined drought and heat stress. Paper delivered at the 11th International Plant Protection Symposium at University of Debrecen, Hungary (online session). 15 October 2024.

Hlakotsa, N.M.M.S. & Ngara, R. 2024. Identification of droughtresponsive small RNAs in sorghum roots. Paper delivered at the Annual post-graduate symposium of the Department of Botany and Plant Biotechnology at University of Johannesburg, South Africa. 21 October 2024.

Hlakotsa, N.M.M.S. & Ngara, R. 2024. Physiological and small RNA responses of sorghum seedlings under mild drought stress. Paper delivered at the Qwaqwa Campus Research Conference. Science, Social Innovation and the Future of Local Societies: Keeping Pace in a Changing Knowledge and Political Landscape, Clarens, South Africa. 9-10 October 2024.

Labuschagne, M.T. 2024. Crop biofortification for iron content in African food security crops: current status, progress and prospects. Keynote address delivered at the 21st International Symposium on Iron Nutrition and Interactions in Plants (ISINIP), Düsseldorf, Germany. 8-11 July 2024.

Labuschagne, M.T., Reveglia, P., Cobos, M.J. & Rubiales, D. 2024. Metabolomics as a tool in plant breeding: Pisum sativum as a case study. Paper delivered 15th Southern African Plant Breeding Symposium (SAPBA), Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Lichakane, M., Labuschagne, M., Van Der Merwe, R. & Zhou, M. 2024. The effect of photoperiod treatments on time to genotype flowering and implications for sugarcane breeding in South Africa. Paper delivered 15th Southern African Plant Breeding Symposium (SAPBA), Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.



Lichakane, M., Zhou, M., Labuschagne, M.T. & Van der Merwe, R. 2024. The effect of photoperiod treatments on time to genotype flowering and implications for sugarcane breeding in South Africa. Paper delivered 15th Southern African Plant Breeding Symposium (SAPBA), Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Mafa, M.S. & Mohotloane, M.M. 2024. Elucidating holocellulolytic enzymes of commercial secretome sourced from *Aspergillus Niger* and its saccharification of alkaline-pretreated mango seed husk. Paper delivered at the 20th International Conference on Polysaccharides-Glycoscience, Novotného lávka 5, Prague, Czech Republic. 13-15 November 2024.

Malekana, L., Clark, V.R., Steenhuisen, S. Martin, G.D. & Alexander, J. 2024. Impact of invasive Rosaceae on plant diversity along elevation gradients in the Maloti-Drakensberg. Paper delivered at the Policy and Practice Workshop: Woody range-expanding species in southern African mountains: Trends, predictions and Mitigations at the 59th Annual Congress of the Grassland Society of Southern Africa, Gariep Forever Resort, Gariep Dam, South Africa. 22-26 July 2024.

Marais, G.J. 2024. Types of fungal diseases in pecans. Paper delivered at the Annual General Meeting of the South African Pecan Nut Producer's Association NPC, Douglas, South Africa. 1 November 2024.

Martin, G.D., Canavan, K., Chikowore, G. & Hill, M. 2024. Biological Control for *Pinus pinaster* seeds in the Cape Floristic Region. Paper delivered at the Forestry Science Symposium, Hilton, KwaZulu Natal, South Africa. 26-27 November 2024.

Martin, G.D. & Clark, V.R. 2024. Legal aspects around listing of and management of indigenous bush encroaching species in southern Africa. Paper delivered at the Policy and Practice Workshop: Woody range-expanding species in southern African mountains: Trends, predictions and Mitigations at the 59th Annual Congress of the Grassland Society of Southern Africa, Gariep Forever Resort, Gariep Dam, South Africa. 22-26 July 2024.

Martin, G.D., Mashamba, T., Steenhuisen, S. & Payne, S. 2024. Beauty and the Beast: A story of *Salix* species in South Africa's grassland biome. Paper delivered at the National Symposium on Biological Invasions, Sol Plaatje University, Kimberley, South Africa. 9-12 September 2024.

Martin, G.D., Philip, I. & Chikowore, G. 2024. Resolving conflict situations when using biological control against economically useful invasive tree species. Paper delivered at the 3rd International Congress of Biological Control (ICBC3), San José, Costa Rica. 24-27 June 2024.

Martin, G.D., Steenhuisen, S.L., Moloi, K.T., Adams, L.D., Payne, S., Gwate, O., Masole, P., Malekana, L., Downs, C. & Clark V.R. 2024. Invasive temperate Rosaceae in southern African mountains and highlands. Paper delivered at the Policy and Practice Workshop: Woody range-expanding species in southern African mountains: Trends, predictions and Mitigations at the 59th Annual Congress of the Grassland Society of Southern Africa, Gariep Forever Resort, Gariep Dam, South Africa. 22-26 July 2024.



Masisi, T.V., Jackson, M., Rose, L.J., Sabela, K.S. & Rothmann, L.A. 2024. National grain sorghum disease surveillance: Detecting fungi threatening production and livelihoods. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Masisi, T.V., Sabela, K.S. & Rothmann, L.A. 2024. Sorghum disease surveillance to understand South African producer perceptions and inform disease management and industry needs. Paper delivered at the 13th International Epidemiology Workshop, Foz do Iguaçu, Brazil. 9-12 April 2024.

Matjeke, B.M., Gerrano, A.S., Labuschagne, M., Minnaar-Ontong, A., Truter, M. & Mbuma, N.W. 2024. Combining ability and heritability of cowpea (*Vigna unguiculata* L. Walp) for yield and yield components. Paper delivered at the Combined Congress, George, South Africa. 22-25 January 2024.

Mbele, T., Steenhuisen, S. & Canavan, K. 2024. Invasive status of pampas grass in South Africa. Paper delivered at the Centre for Biological Control Research Day, Rhodes University, Makhandla, South Africa. 28 November 2024.

Mbele, T., Steenhuisen, S. & Canavan, K. 2024. Invasive status of pampas grass in South Africa. Paper delivered at the National Symposium on Biological Invasions, Sol Plaatje University, Kimberley, South Africa, 9-12 September 2024. (Best Student Presentation Award for Miss Mbele).

Mbele, T., Steenhuisen, S. & Canavan, K. 2024. Seed germination of naturalized and floristically traded *Cortaderia* species in South Africa. Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Mekonnen, T.W., Matongera, N., Van Biljon, A. & Labuschagne, M.T. 2024. Breeding of high iron and zinc and grain yield under abiotic stress conditions, supporting enhanced maize biofortification. Paper delivered at the Applied Genetics Conference, Washington DC, USA. 6-10 March 2024.

Minnaar, J.J., Steenhuisen, S. & Cron, G.V. 2024. Pollinators drive floral diversification and speciation in *Galtonia* (Hyacinthaceae): a Drakensberg near-endemic genus. Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Mohotloane, M.M., Alexander, O., Adoons, V.N., Pletschke, B.I. & Mafa, M.S. 2024. Peroxidase application reduces microcrystalline cellulose recalcitrance towards cellulase hydrolysis in model cellulose substrates and rooibos biomass. Paper delivered at the 20th International Conference on Polysaccharides-Glycoscience, Novotného lávka 5, Prague, Czech Republic. 13-15 November 2024.



Moloi, M.J. & Hafeez, A. 2024. Effects of increasing temperature on the photosynthesis efficiency, biochemical and yield responses of edamame cultivars. Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Muzhinji, N. & Ntuli, V. 2024. Soil microbial Profile as a bioindicator of soil health, biodiversity, functionality, and disease risk. Paper delivered at the 32nd Soilborne Plant Diseases Interest Group of South Africa (SBPDG-SA), ARC-PHP Vredenburg, Stellenbosch, South Africa. 22-24 October 2024.

Nekundi, J. & Mafa, M.S. 2024. Osmotic stress induced with sorbitol: a tool for selecting drought tolerant wheat cultivars at seed germination and seedling stages. Paper delivered at the Annual post-graduate symposium of the Department of Botany and Plant Biotechnology at University of Johannesburg, South Africa. 21 October 2024.

Ntswane, M., Labuschagne, M., Shandu S.F., Rantso, P. & Mbama, N.W., 2024. Phenotypic diversity among cowpea mutants and accessions for grain yield and yield components. Paper delivered at the Combined Congress, George, South Africa. 22-25 January 2024.

Payne, S., Alison, J., Høye, T. & Steenhuisen, S. 2024 Pollination interactions and wildlife camera by-catch across elevations in the northern Maloti-Drakensberg. Paper delivered at the Policy and Practice Workshop: Woody range-expanding species in southern African mountains: Trends, predictions and Mitigations at the 59th Annual Congress of the Grassland Society of Southern Africa, Gariiep Forever Resort, Gariiep Dam, South Africa. 22-26 July 2024.

Ramovha, D., Bender, C.M., Boshoff, W.H.P. & Visser, B. 2024. A study of *Puccinia coronata* isolates from oat and *Phalaris aquatica* in South Africa. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Rothmann, L.A. 2024. Syllabus redesign: A quest to conquer a 'wee beastie' in plant health education. Paper delivered at the American Phytopathological Society Plant Health Conference, Memphis, Tennessee, USA. 27-30 July 2024.

Shamuyarira, K.W., Labuschagne, M., Shimelis H., Botha, E. & Fourie, P. 2024. Pre-breeding and breeding capacity of sorghum within South Africa. Paper delivered at the European Association for Research on Plant Breeding (EUCARPIA) Conference, Leipzig, Germany. 18-23 August 2024.

Shamuyarira, K.W., Labuschagne, M., Shimelis, H., Botha, E. & Fourie, P. 2024. Pre-breeding and breeding capacity of sorghum within South Africa. Paper delivered at the South African Plant Breeders Association (SAPBA) Conference, Bloemfontein, South Africa. 11-13 March 2024.

Sithole, J.V., Dayaram, A. & Van Aardt, A.C. 2024. Influence of Aspect on the Drakensberg Amathole-Afromontane Fynbos (Gd6) vegetation composition, Golden Gate Highlands National Park. Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.



Sithole, Z., Moloi, K.T., Steenhuisen, S. & Martin, G.D. 2024. Role of mammals in the seed dispersal of the invasive plant species, *Rosa rubiginosa*, in the Free State rangelands. Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Sondela, L.C., Gokul, A. & Moloi, M.J. 2024. Influence of *Pseudomonas* spp endophytes on the physiological and biochemical responses of drought-stressed edamame (*Glycine max* (L.)). Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Spanner, R.E., Henningsen, E.C., Li, F., Matny, O., Hodson, D., Virzi, N., Nguyen, K.-P., Moscou, M., Pretorius, Z.A., Boshoff, W.H.P., Sperschneider, J., Dodds, P., Steffenson, B. & Figueroa, M. 2024. Understanding the role of somatic hybridisation in global wheat stem rust epidemics through the development of haplotype-phased reference genome assemblies. Paper delivered at the Fungal Genetics Conference, Pacific Grove, California, USA. 12-17 March 2024.

Steenhuisen, S.L., Martin, G.D., Moloi, K.T., Adams, L.D., Payne, S., Gwate, O., Masole, P., Malekana, L., Downs, C. & Clark V.R. 2024. When roses go rogue: Expanding ranges of invasive Rosaceae in South Africa. Paper delivered at the 20th International Botanical Congress (IBC), Madrid, Spain. 21-27 July 2024.

Terefe, T.G., Boshoff, W.H.P., Park, R.F., Pretorius, Z.A. & Visser, . 2024. Virulence diversity of *Puccinia graminis* f. sp. *tritici* on wheat and triticale in South Africa. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Terefe, T.G., Pretorius, Z.A. & Boshoff, W.H.P. 2024. Virulence diversity of *Puccinia triticina* in South Africa and the response of wheat cultivars and breeding lines to new races. Paper delivered at the 20th International Plant Protection Congress, Athens, Greece. 1-5 July 2024.

Terefe, T.G., Visser, B., Pretorius, Z.A. & Boshoff, W.H.P. 2024. Variation in *Puccinia graminis* f. sp. *tritici* and *P. triticina* on wheat in South Africa and reaction of commercial cultivars and breeding lines to recently identified races. Paper delivered at the ARC-DALRRD Conference, ARC-VIMP, Roodeplaat, Pretoria, South-Africa. 12-14 February 2024.

Tsotetsi, M.E., Boshoff, W.H.P. & Visser, B. 2024. Sequence analysis of the *AvrSr35* and *AvrSr50* avirulence genes in South African *Puccinia graminis* f. sp. *tritici* isolates. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Van Aardt, A.C., De Jager, J.C.L. & Van Tol, J.J. 2024. Effect of annual burning on diversity and vegetation composition of Golden Gate Highlands National Park. Paper delivered at the 59th Annual Congress of the Grassland Society of Southern Africa, Gariep Forever Resort, Gariep Dam, South Africa. 22-26 July 2024.



Van Aardt, A.C., Scott, L., Grundling, P.-L., Grundling, A. & Woodborne, S. 2024. Late-Holocene paleoenvironmental reconstruction of the Savanna-Grassland ecotone, Gauteng, South Africa. Paper delivered at the XXIV SASQUA Conference, Cango Valley, South Africa. 19-24 May 2024.

Van der Merwe, R., Coetzee, E. & Moloi, M.J. 2024. Combining ability of drought tolerance-related traits in vegetable-type soybean. Paper delivered 15th Southern African Plant Breeding Symposium (SAPBA). Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Visser, B., Terefe, T.G., Bender, C.M., Pretorius, Z.A. & Boshoff, W.H.P. 2024. Wheat rust surveillance in South Africa: past, present and future. Paper delivered at the Annual postgraduate symposium of the Department of Botany and Plant Biotechnology at University of Johannesburg, South Africa. 21 October 2024.

Weaver, K., Hill, M.P., Martin, G.D., English, K., Ngxande-Koza, S., Ivey, P., Paterson, I. & Coetzee J. 2024. Promoting biological control leads to improved implementation and long-term sustainability. Paper delivered at the 3rd International Congress of Biological Control (ICBC3) in San José, Costa Rica. 24-27 June 2024.

Zondo, S.N.N., Mohase, L., Tolmay, V., & Mafa, M.S. 2024. Functional characterisation of β -1,3-glucanase regulating callose accumulation upon wheat infestation by *Diuraphis noxia*. Paper delivered at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Conference Posters

Adams L, Martin G.D. Downs C, & Steenhuisen S. 2024. The role of mammals in seed dispersal of fleshy-fruited invasive alien plants in the Grassland Biome of South Africa. Poster presented at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Delport, B., Marais, G.J., Castillo-Hernandez, J., McCarlie, S. & Bragg, R. 2024. Metagenomic evaluation of the bacterial diversity in overall decline pecan trees. Poster presented at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Edwards, G., Swart, V. & Marais, G.J. 2024. Ecological aspects of soil-dwelling arthropods in pecan orchards. Poster presented at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Engida, C., Van Biljon, A., Herselman, L., Nida, H. & Labuschagne, M.T. 2024. Ethiopian sorghum landraces as a possible genetic diversity resource for breeding. Poster presented at the 15th Southern African Plant Breeding Symposium, Bloemfontein, South Africa. 11-13 March 2024.



Gqola, B.N., Mebalo, J., Boshoff, W.H.P. & Terefe, T.G. 2024. Virulence diversity of *Puccinia triticina* collected from wheat and triticale in South Africa from 2021 to 2022. Poster presented at the Combined Crops, Soils, Horticulture and Weeds Congress, Wilderness Hotel, George, South Africa. 22-25 January 2024.

Hlatshwayo, K., Maré, A., Minnaar-Ontong, A., Zhang, Q. & Van der Merwe, R. 2024. Family selection for pod-shattering resistance and seed yield of vegetable-type soybean. Poster presented at the 15th Southern African Plant Breeders' Association (SAPBA) Symposium, Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Kruger, W., Achilonu, C.C. & Marais, G.J. 2024. Post-harvest pathogens associated with pecan nuts in South Africa. Poster presented at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Lichakane, M., Zhou, M., Labuschagne, M.T. & Van der Merwe, R. 2024. The effect of photoperiod treatments on time to genotype flowering and implications for sugarcane breeding in South Africa. Poster presented at the 15th Southern African Plant Breeders' Association (SAPBA) Symposium, Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Malekana, L., Clark, V.R., Steenhuisen, S., Martin, G.D. & Alexander, J. 2024. Impact and Management of Range Expanding Rosaceae Species Along Elevational Gradients in the Maloti Drakensberg. Poster presented at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Maphobole, L.A., Visser, B., Meyer, W.B., Pretorius, Z.A. & Boshoff, W.H.P. 2024. Pathogenicity and microsatellite analysis of *Puccinia sorghi* isolates in South Africa. Paper delivered at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Masisi, T.V., Sabela, K.S., Rose, L., Jackson, M., Matebesi, S., Pelsler, A., & Rothmann, L.A. 2024. A first look at farmer perceptions of sorghum production, disease constraints and future outlooks. Poster presented at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Matjeke, B.M., Gerrano, A.S., Labuschagne, M., Minnaar-Ontong, A. & Mbuma, N.W. 2024. Diallel analysis and heritability of cowpea for nutritional characteristics. Poster presented at the 15th Southern African Plant Breeders' Association (SAPBA) Symposium, Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Matjeke, B.M., Gerrano, A.S., Labuschagne, M., Minnaar-Ontong, A., Truter M. & Mbuma, N.W. 2024. Combining ability and heritability of cowpea (*Vigna unguiculata* L. Walp) for yield and yield components. Poster presented at the Combined Congress, George, South Africa. 22-25 January 2024.



Mbuma, N.W., Steyn, P.J., Laurie, S.M., Labuschagne, M.T. & Bairu, M.W. 2024. Phenotypic diversity of the South African bred potato varieties for tuber yield and processing quality. Poster presented at the Combined Congress, George, South Africa. 22-25 January 2024.

Mekonnen, T.W., Gerrano, A.S., Van Biljon, A. & Labuschagne, M.T. 2024. Application of artificial intelligence (AI) in crop breeding, with a focus on teff, grass pea and cowpea. Poster presented at the 15th Southern African Plant Breeding, (SAPBA) Symposium, Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024

Mishasha, T., Zhou, M., Van der Merwe, R. & Labuschagne, M. 2024. Genetic correlations among cane quality traits and implications on sugarcane breeding. Poster presented at the 15th Southern African Plant Breeders' Association (SAPBA) Symposium, Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Moloi, K.T., Martin, G.D., & Steenhuisen, S. 2024. Seed dispersal and germination of *Cotoneaster pannosus* on Afromontane grasslands of eastern Free State, South Africa. Poster presented at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Moloi, N., Masisi, T.V., Achilonu, C.C., Sabela, K.S. & Rothmann, L.A. 2024. Occurrence and identification of fungi associated with sorghum grain from contrasting production systems. Poster presented at the 53rd Congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Motshegwa, G. & Moloi, M.J. 2024. Frequency matters: The impact of multiple selenium foliar applications on the physiobiochemical responses of drought-stressed edamame. Poster presented at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Muzhinji, N. & Ngalipo, N. 2024. Decoding the soil microbiome to enhance Pearl Millet growth and drought resilience under varying soil amendments. Poster presented at the International Society of Microbial Ecology (ISME), Cape Town Convention Centre, Port Elizabeth, South Africa. 18-23 August 2014

Ngara, R. & Steenhuisen, S-L. 2024. Work Integrated Learning. Poster presented at the Annual UFS Learning and teaching Conference: Enhancing the Quality of Blended Learning and Teaching within the UFS Context, University of the Free State, Bloemfontein, South Africa. 16-10 September 2024.

Niekerk, L-A., Gokul, A., Keyster, M. & Klein, A. 2024. An Omics view of the alleviation of iron deficiency in common beans through the application of indole-3carboxyaldehyde. Poster presented at the Next Generation of Emerging Researchers Symposium hosted by the National Research Foundation (NRF), Birchwood Hotel, Johannesburg, South Africa. 23-25 October 2024.



Ntjabane, N.A., Boshoff, W., Visser, B. & Mafa, M.S. 2024. Unravelling functions of the modified cell wall in Thatcher and ThatcherLr9 wheat infected by *Puccinia triticina*. Poster presented at 49th South African Association of Botany (SAAB) Annual Conference, University of Zululand, Richards Bay campus, South Africa. 7-11 January 2024.

Ntswane, M., Labuschagne, M.T., Shandu, S.F., Rantso, P. & Mbuma, N.W. 2024. Variation in seed protein, selected minerals, phytic acid and potential mineral bioavailability of cowpea [*Vigna unguiculata* (L.) Walp] mutants and accessions. Poster presented at the 15th Southern African Plant Breeders' Association (SAPBA) Symposium, Monte Bello Estate, Bloemfontein. 11-13 March 2024.

Nxumalo, P.D., Labuschagne, M., Van Der Merwe, R. & Zhou, M. 2024. Quantifying the contribution of fibre content to indirect breeding for *Eldana saccharina* (Lepidoptera: Pyralidae) stalk borer resistance in sugarcane. Poster presented at the 15th Southern African Plant Breeders' Association (SAPBA) Symposium, Monte Bello Estate, Bloemfontein. 11-13 March 2024.

Payne, S., Steenhuisen, S., Moloi, K., Masole, P., Carvalho, G., Sithole, Z., Chikowore, G., Westwood, T., Rahlao, M., Chatanga, P., Seleteng-Kose, L. & Martin, G.D. 2024. Review of the invasive, yet economically beneficial, *Rosa rubiginosa* L. (Rosaceae) within southern Africa. Poster presented at the 49th Annual Conference of the South African Association of Botanists (SAAB), University of Zululand, Richard's Bay, South Africa. 7-11 January 2024.

Rothmann, L.A., Del Ponte, E.M., Boshoff, W.H.P. & Pretorius, Z.A. 2024. Plant rust research in South Africa: "A picture is worth a thousand words." Poster presented at the American Phytopathological Society - Plant Health Conference, Memphis, Tennessee, USA. 27-30 July 2024.

Sabela, K.S., Masisi, T.V., Van der Walt, P.J. & Rothmann, L.A. 2024. Seeds of knowledge: exploring fungi associated with uChokwane (tepariy bean), a climate-smart landrace. Poster presented at the 53rd congress of the Southern African Society for Plant Pathologists (SASSP), Golden Gate Highlands Hotel, Golden Gate, South Africa. 22-25 January 2024.

Sivhada, R.A., Van Biljon, A. & Labuschagne, M.T. 2024. Going back to the wild for better bread. Poster presented at the 15th Southern African Plant Breeders' Association (SAPBA) Symposium, Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Tenesi, T., Jumbo, M., Jaba, J. & Labuschagne, M.T. 2024. Genetic resistance to fall armyworm in sorghum. Poster presented at the 15th Southern African Plant Breeders' Association (SAPBA) Symposium, Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.

Valombola, J.S., Labuschagne, M.T., Van Biljon, A. & Horn, L. 2024. Radio sensitivity test of gamma-irradiated Bambara groundnut for lethal dose (LD50) and growth reduction (GR50). Poster presented at the 15th Southern African Plant Breeders' Association (SAPBA) Symposium, Monte Bello Estate, Bloemfontein, South Africa. 11-13 March 2024.