



Plant Sciences

Conference Contributions 2019

Achilonu, C., Gryzenhout, M. & Marais, G.J. 2019. *Alternaria* spp. associated with anthracnose and leafspot on pecans in South Africa. Paper delivered at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan. 20-24 January.

Adams, L.D., Martin, G., Clark, V.R. & S. Steenhuisen. 2019. *Following the fate of seeds to investigate the spread of invasive Pyracantha angustifolia (Firethorn) in the eastern Free State, South Africa.* Paper presented at the Annual Conference of the The National Symposium on Biological Invasions, Tulbagh. 15-17 May.

Adams, L.D., Martin, G., Clark, V.R. & S. Steenhuisen. 2019. *Reproductive ecology of the invasive firethorn species, Pyracantha angustifolia (Rosaceae), in the eastern Free State Province.* Poster presented at the 45th Annual Conference of the South African Association of Botanists. Johannesburg. 8-11 January.

Adams, Z., Thekiso, M.M.O. & Komoreng, L.V. 2019. *An ethnobotanical survey of traditional medicinal plants used against elephantiasis in the OR Tambo District, Eastern Cape.* Poster presented at the 45th Annual Conference of the South African Association of Botanists. Johannesburg. 8-11 January.

Bender, C.M., Boshoff, W.H.P. & Pretorius, Z.A. 2019. *The impact of new races of Puccinia graminis f. sp. tritici on South African wheat cultivars.* Paper delivered at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan. 20-24 January.

Boshoff, W.H.P., Visser, B., Terefe, T. & Pretorius, Z.A. 2019. *Pathogenic variability in and oat cultivar response to Puccinia graminis f. sp. avenae in South Africa.* Paper delivered at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan. 20-24 January.

Cawood, M.E. & Saba, L. 2019. *Bioactivity of Artemisia afra essential oil and extracts and their ability to reduce disease symptoms in wheat caused by the Russian wheat aphid.* Paper delivered at the 12th International Congress of Plant Biotechnology and Agriculture, Caya Guillermo, Cuba. 27-31 May.

Cawood, M.E. & Saba, L. 2019. *The impact of Agave attenuata extracts on biotic resistance responses of wheat and their ability to act as repellents/insecticides against the Russian wheat aphid.* Paper delivered at the 4th International Conference on Plant Science & Physiology, Sydney, Australia. 25-26 March.



Chemonges, M., Herselman, L., Boshoff, W.H.P. & Pretorius, Z.A. 2019. *Genetic analysis reveals monogenic resistance to Puccinia graminis f. sp. tritici in South African winter wheat varieties.* Poster presented at the 1st International Wheat Congress, Saskatoon, Canada. 21-26 July.

Coertzen, J., Gryzenhout, M., Slippers, B. & Marais, G.J. 2019. *Botryosphaeriaceae fungal pathogens associated with pecans, with special reference to Neofusicoccum parvum.* Poster delivered at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan. 20-24 January.

Cozien, R., van der Niet, T., Johnson, S.D. & S. Steenhuisen. 2019. *Secrets of the Drakensberg's "Hidden flowers" revealed: Discovery of a novel pollination system for continental Africa.* Paper delivered at the 45th Annual Conference of the South African Association of Botanists, Johannesburg. 8-11 January.

Hlongwane, M.V. & Komoreng, L.V. 2019. *Phytochemical analysis and antimicrobial activity of eight medicinal plants used in the treatment of tuberculosis in the eastern Free State, South Africa.* Paper delivered at the 45th Annual Conference of the South African Association of Botanists, Johannesburg. 8-11 January.

Jordaan, E., Van Der Waals, J.E. & McLaren, N.W. 2019. *Effect of irrigation on charcoal rot severity, yield loss and colonization of soybean and sunflower.* Poster presented at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan. 20-24 January.

Kozana, A., Visser, B., Roberts, R., Botha, W., Prinsloo, G. & Terefe, T. 2019. *First detection of Polymyxa graminis, a parasite of cereal roots and vector of cereal viruses, in South Africa.* Poster presented at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan, South Africa. 20-24 January.

Labuschagne, M.T., Töth, B. & van Biljon, A. 2019. *Proteomic analysis of wheat seed in response to low nitrogen and phosphorous stress.* Paper delivered at the 1st International Wheat Congress. Saskatoon, Canada. 21-26 July.

Li, F., Upadhyaya, N., Schwessinger, B., Sperschneider, J., Matny, O., Raley, C., Miller, M.E., Silverstein, K., Nguyen-Phuc, H., Hirsch, C.D., Visser, B., Pretorius, Z.A., Steffenson, B., Dodds, P.N. & Figueroa, M. 2019. *Contribution of a somatic hybridization event to the emergence of the Ug99 lineage of the wheat stem rust pathogen, Puccinia graminis f. sp. tritici.* Paper delivered at the International Society for Molecular Plant-Microbe Interactions XVIII Conference, Glasgow, Scotland, 14-18 July.



Liu, Y., Minnaar-Ontong, A. & Labuschagne, M.T. 2019. *Wbm: a gene link to bread making quality in South Africa wheat?* Poster presented at the 1st International Wheat Congress. Saskatoon, Canada. 21-26 July.

MacDonald, S., Oosthuizen, G., Marais, G. & Cawood, M.E. 2019. *A comparative study of the chemical composition and bioactivity of extracts from leaves of two Pecan nut cultivars grown in South Africa.* Paper delivered at the 12th International Congress of Plant Biotechnology and Agriculture, Caya Guillermo, Cuba. 27-31 May.

Maré, A., Herselman, L. & Boshoff, W.H.P. 2019. *Development of wheat lines with complex resistance to rusts and Fusarium head blight.* Poster presented at the 1st International Wheat Congress, Saskatoon, Canada. 21-26 July.

Masisi, T.V., Rothmann, L., Bender, C.M., Maree, G.J. & Boshoff, W.H.P. 2019. *Comparative virulence of stripe rust pathotype 6E22A+ and field isolate GWK2015_56.* Paper delivered at the Cereal Science and Technology SA 3rd New Voices Symposium, Pretoria. 11 September.

Masisi, T.V., Rothmann, L., Bender, C.M., Maree, G.J. & Boshoff, W.H.P. 2019. *Resistance response of irrigation wheat cultivars to stripe rust under different temperature regimes.* South African National Seed Organisation Annual Conference, Umlazi, KwaZulu-Natal. 21-24 May.

Mbuma, N.W., Zhou, M.M. & van der Merwe, R. 2019. *Family by environment interactions for sugarcane yield in South Africa.* Paper delivered at the 92nd South African Sugar Technologists' Association Congress, Durban. 20-22 August.

Mdletshe, N.W., Thekiso, M.M.O. & Komoreng, L.V. 2019. *Comparison on pharmacological activity of Rhoicissus tomentosa and Rhoicissus tridentata for the treatment of elephantiasis in South Africa.* Paper delivered at the 45th Annual Conference of the South African Association of Botanists, Johannesburg. 8-11 January.

Meiring, M.C. & McLaren, N.W. 2019. *Screening for tolerance to Sclerotinia sclerotiorum in soybean cultivars.* Paper delivered at the Third Annual New Voices Symposium, Pretoria. 11 September.

Meyer, W.B., Boshoff, W.H.P., Minnaar-Ontong, A. & Visser, B. 2019. *Phenotypic and genotypic variation of Puccinia helianthi in South Africa.* Paper delivered at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan. 20-24 January.

Minnaar, H., Prins, R., Bender, C.M., Maree, G.J. & Boshoff, W.H.P. 2019. *Phenotypic expression of stripe rust resistance using spray and point inoculation.* Poster presented at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan. 20-24 January.



Mishasha, T., Zhou, M.M. & van der Merwe, R. 2019. *Using quantitative genetic parameters to determine sample size for sucrose content in sugarcane breeding.* Paper delivered at the 92nd South African Sugar Technologists' Association Congress, Durban, South Africa. 20-22 August.

Mohase, L., Adendorff, J. & Jankielsohn, A. 2019. *Foliar application of Alexin™ selectively enhances defence responses to Russian wheat aphid, Diuraphis noxia.* Paper delivered at the Joint Conference of the South African Association of Botanists, Southern African Society for Systematic Biology and African Mycological Association. University of Johannesburg, Johannesburg. 8-11 January.

Myburgh, P.P., Maré, A. & Boshoff, W.H.P. 2019. *Phenotypic and genotypic characterisation of South African winter wheat cultivars for stem rust resistance.* Paper delivered at the Annual post-graduate symposium of the Department of Botany and Plant Biotechnology at University of Johannesburg. 3-4 November.

Ngara, R., Goche, T. & Chivasa, S. 2019. *Comparative physiological, biochemical and proteomic analysis of two sorghum varieties in response to drought stress.* Poster presented at the Plant Cell and Environment 40th Anniversary Symposium, University of Glasgow, Scotland, UK. 4-6 September.

Ngara, R., Goche, T. & Chivasa, S. 2019. *Sorghum as a model system in plant stress biology: lessons learnt from drought response studies.* Paper delivered at the Connecting Minds Africa Conference, World Agroforestry Centre, Nairobi, Kenya. 25-27 September.

Ngara, R., Ngcala, M.G., Moloi, S.J., Goche, T., Shargie, N.G. & Chivasa, S. 2019. *Comparative molecular analysis of sorghum in response to abiotic stresses.* Paper delivered at the 45th Annual Conference of the South African Association of Botanists, Johannesburg. 8-11 January.

Ngcala, M.G., Chivasa, S. & Ngara, R. 2019. *High temperature stress triggers molecular responses in sorghum cell suspension cultures.* Paper delivered at the 45th Annual Conference of the South African Association of Botanists, Johannesburg. 8-11 January.

Pretorius, Z.A. 2019. *Are cereal rusts still important?* Invited keynote delivered at the 51st Congress of the Southern African Society for Plant Pathology, Club Mykonos, Langebaan. 20-24 January.

Prins, R., De Klerk, C., Boshoff, W.H.P., Abbrouk, M., Bettgenhaeuser, J., Minnaar, H., Pretorius,

Z.A., Doležel, J., Šimková, H., Wessels, E., Horn, M. & Krattinger, S.G. 2019. *Pursuing the partial stripe rust resistance QYr.sgi-4A.1 gene of the wheat cultivar Kariega.* Poster presented at the Plant and Animal Genome Conference XXVII, San Diego, CA, USA. 12-16 January.



Rothmann, L.A., Bester, M.C., Steyn, C. & McLaren, N.W. 2019. *A community of practice: modelled on Sclerotinia stem rot of soybean.* Paper delivered at the 51st Congress of the Southern African Society for Plant Pathology, Club Mykonos, Langebaan. 20-24 January.

Rothmann, L.A., McLaren, N.W., dos Santos Alves, K. & Del Ponte, E.M. 2019. *A quantitative summary of a 10-year survey of white mold prevalence in South Africa.* Paper delivered at the Third Annual New Voices Symposium, Pretoria. 11 September.

Ruiz-Hernández, V., Joubert, L., Rodríguez-Gómez, A., Terry, P.M.J., Weiss, J., Bielza, G.B.J. & Egea-Cortines, M. 2019. *Visual traits override scent cues in Bombus terrestris floral selection.* Poster presented at the New Phytologist Next Generation Scientists Symposium, University College Dublin, Ireland. 22-25 July.

Scott, L., Gil-Romera, G., Neumann, F.H., Sobol, M., Horwitz, L.K., van Aardt, A. & FernandezJalvo, Y. 2019. *Diverse modes of pollen taphonomy and late Quaternary palaeoenvironments in the Kalahari.* Paper delivered at Session: Wonderwerk Cave and Related Research Projects in the Northern Cape Province. Association of Southern African Professional Archaeologists, Kimberley, South Africa. 2-4 July.

Semu, E., Gryzenhout, M. & Marais, G.J. 2019. *Chaetomium species associated with pecans in South Africa.* Poster delivered at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan. 20-24 January.

Siwale, J., Gerrano, A., Labuschagne, M.T., van Biljon, A. & Lebaka, N. 2019. *Variation in Fe, Zn, protein and anti-nutritional contents in Bambara groundnut (V. subterranea) accessions.* Paper delivered at the First African Plant Breeders Conference. University of Ghana, Accra, Ghana. 23-25 October.

Theron, N., Gryzenhout, M., Swart, W.J. & Marais, G.J. 2019. *Cladosporium cladosporioides, causative agent of pecan scab in South Africa.* Poster delivered at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan. 20-24 January.

Tiwani, T., Pieters, R., Horn, S., Thekiso, O.M.M. & Komoreng, L.V. 2019. *Phytochemical screening, antimicrobial activity and cytotoxicity of Platycarpha glomerata and Tulbaghia alliacea used in the treatment of lymphatic filariasis in the Eastern Cape, South Africa.* Paper delivered at the 6th World Congress on Medicinal and Aromatic Plants, Kaya Artemis Hotel, Famagusta, Northern Cyprus. 13-17 November.

Tóth, B., van Biljon, A., Ammar, K., Sipos, P., Győri, Z., Guzmán, C. & Labuschagne, M.T. 2019. *Variability in mono- and polymeric proteins in a worldwide collection of commercial durum wheat cultivars and correlations with alveograph W and P/L.* Paper delivered at the 1st International Wheat Congress. Saskatoon, Canada. 21-26 July.



Van Aardt, A.C., du Preez, P.J. & Scott, L. 2019. *Major plant communities and physical environment in the catchments of the putative palaeo-Kimberley and palaeo-Modder Rivers, Free State South Africa.* 16th Biodiversity Research Symposium in Kimberley, Kimberley, South Africa, 18 September.

Van Aardt, A.C., Scott, L., Theron, E.J., & Rossouw, L. 2019. *Charred cuticles in Tswaing crater lake deposits: A palaeoenvironmental indicator?* Paper delivered at the XXII Biennial Congress of the South African Society for Quaternary Research, Mossel Bay, South Africa. 28-31 January.

Van Biljon, A., Miles, C.W., Booyse, M. & Labuschagne, M.T. 2019. *Mixsmart parameters as possible indicators of bread making quality in wheat cultivars adapted to the South African dryland summer rainfall areas.* Paper delivered at the 1st International Wheat Congress. Saskatoon, Canada. 21-26 July.

Visser, B., Meyer, M., Park, R.F., Gilligan, C.A., Burgin, L.E., Hort, M.C., Hodson, D.P. & Pretorius, Z.A. 2019. *Out of Africa to Down-Under: a study on the proposed inter-continental movement of wheat stem rust.* Paper delivered at the 51st Congress of the Southern African Society for Plant Pathology, Langebaan, South Africa. 20-24 January.

Voua Otomo, L., Sabiu, S., Thekiso, M.M.O. & Komoreng, L.V. 2019. *Investigation of antimicrobial properties from plants used in the treatment of non-filarial elephantiasis in KwaZulu-Natal, South Africa.* Paper delivered at the 45th Annual Conference of the South African Association of Botanists, Johannesburg. 8-11 January.

Voua Otomo, L., Sabiu, S., Thekiso, M.M.O. & Komoreng, L.V. 2019. *Phytochemical analysis and anti-oxidant properties from plants used in the treatment of non-filarial elephantiasis in KwaZulu-Natal, South Africa.* Paper delivered at the 6th World Congress on Medicinal and Aromatic Plants, Kaya Artemis Hotel, Famagusta, Northern Cyprus. 13-17 November.

Conference Proceedings

Labuschagne, M.T. 2019. Proteomics in wheat gluten research: where are we standing and where are we going? In: *Proceedings of the 13th International Gluten Workshop.* Mexico City, Mexico, 14-17 March. Guzman, C. (ed.). University of Cordoba Press.

Lindeque, R., van Biljon, A. & Labuschagne, M. 2019. Matching opposites: defining the association between grain yield and protein content in South African wheat. In: *Proceedings of the 13th International Gluten Workshop.* Mexico City, Mexico, 14-17 March. Guzman, C. (ed.). University of Cordoba Press.

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Mbuma, N.W., Zhou, M.M. & van der Merwe, R. 2019. Determining the breeding values of parental genotypes of sugarcane for biomass yield. In: *Proceedings of the Australian Society of Sugar Cane Technologists* 41: 74-78.

Tóth, B., Moloji, J., van Biljon, A., Steyn, C. & Labuschagne, M. 2019. The effect of fertilization level on the quantity of high molecular weight glutenin subunits in two South-African spring wheat cultivars. In: *Proceedings of the 13th International Gluten Workshop*. Mexico City, Mexico, 14-17 March. Guzman, C. (ed.). University of Cordoba Press.