



## Plant Sciences

### Conference contributions 2012

**Ashafa, A.O.T. & Tshabalala, N.T.** 2012. Ethnobotanical survey of plants used in the management of diabetes in the Eastern Free State. Joint International Conference on Science and Technology for Development in Africa. Cape Peninsula University of Technology, Cape Town, South Africa, 26-28th June 2012 (poster presentation).

**Booyse, M., Labsuchagne, M.T. & Pakendorf, K.W.** 2012. Statistical models for investigating GxE interaction in wheat yield trials. 9<sup>th</sup> Southern African Plant Breeding Symposium, Protea Hotel Kruger Gate, Skukuza, 12-14 March 2012 (oral presentation).

**Castelyn, H.D., Visser B. & Pretorius, Z.A.** 2012. Volatile emissions of *Puccinia triticina* infected wheat and its effect on uninfected wheat seedlings. 38<sup>th</sup> Annual Conference of the South African Association of Botanists, Pretoria, 15-18 January 2012 (oral presentation).

**Cawood, M.E., van der Westhuizen, A.J. & Pretorius, J.** 2012. The effects of plant extracts in biotic resistance responses of wheat and the identification of an active compound. Natural Products and Biocontrol Congress, Perpignan, France, 19 September 2012 (oral presentation).



**Champouret, N., Moscou, M., Bouyiokukas, C., Steuernagel, B., HernandezPinzon, I., Green, P., Kaufman, J., Olivera, P.D., Pretorius, Z., Millet, E., Steffenson, B.J., Ward, E.R. & Wulff, B.B.H.** 2012. A pipeline for cloning resistance genes effective against African *Puccinia graminis tritici* races from the diploid wheat relative *Aegilops sharonensis*. 4<sup>th</sup> BGRI Technical Workshop, Beijing, China, 2-4 September 2012 (invited talk by last author and reviewed paper in proceedings).

**Combrink, N., Bijzet, Z., Booyse, M. & Labuschagne, M.T.** 2012. Genetic variation in fruit size and shape in citrus tangor Kiyomi families. 9<sup>th</sup> Southern African Plant Breeding Symposium, Protea Hotel Kruger Gate, Skukuza, 12-14 March (oral presentation).

**du Plessis, A., van der Linde, M., van Biljon, A., Minnaar-Ontong, A., Wentzel, B., Pretorius, Z.A. & Herselman, L.** 2012. Molecular and biochemical characterisation of rust and Fusarium head blight resistant wheat lines. 9<sup>th</sup> Southern African Plant Breeding Symposium, Skukuza, 12-14 March 2012 (oral presentation).

**du Plessis, A., van der Linde, M., van Biljon, A., Minnaar-Ontong, A., Wentzel, B., Pretorius, Z. & Herselman, L.** 2012. Molecular and biochemical characterisation of rust resistant wheat lines. 4<sup>th</sup> BGRI Technical Workshop, Beijing, China, 2-4 September 2012 (poster presentation).

**du Preez, P.J., Brown, L. & Seipethlo, L.** 2012. The peatlands of the highlands of Lesotho - a unique aquatic system under threat. 38<sup>th</sup> Annual Conference of the South African Botanists, Pretoria, 15-18 January 2012 (oral presentation).



**Fernandez-Jalvo, Y. & Scott, L.** 2012. Natural Parks: Their value in understanding the past, present and future. 3<sup>rd</sup> Annual Diamond Route Research Conference, De Beers Campus, Johannesburg, 30-31 October 2012 (oral presentation).

**Flett, B.C., Janse van Rensburg, B., Small, I.M., Rose, L.J., Ncube, E., Schoeman, A., McLaren, N.W. & Viljoen, A.** 2012. An overview of research on fumonisin producing fungi of maize in South Africa. Combined Crops, Soils, Horticulture and Weeds Congress, Potchefstroom, 16-19 January 2012 (oral presentation).

**Flett, B.C., McLaren, N.W., Mavhunga, M., Boutigny, A-L. & Viljoen, A.** 2012. *Fusarium graminearum* mycotoxins associated with grain mould of maize in South Africa. The Maize Trust Mycotoxin Research Symposium (oral presentation). **Flett,**

**B.C., Viljoen, A. & McLaren, N.W.** 2012. Approaches to the management of mycotoxins in maize. The Maize Trust Mycotoxin Research Symposium (oral presentation).

**Gil-Romera, G., Neumann, F.H., Scott, L. & Fernández-Jalvo.** 2012. In the pooh or out? Pollentaphonomy in coprolites. SASQUA Conference, Gobabeb, Namibia, 13-16 September (poster presentation).

**Herselman, L., Sydenham, S.L., van der Linde, M.J.P. & Pretorius, Z.A.** 2012. Marker-assisted introgression of different rust resistance genes into a single South African wheat line. 13<sup>th</sup> International Cereal Rust and Powdery Mildew Conference, Beijing Friendship Hotel, Beijing, China, 28-31 August 2012 (oral presentation).



**Hodson, D.P., Gronbech-Hansen, J., Lassen, P., Alemayehu, Y., Arista, J., Sonder, K., Kosina, P., Moncada, P., Nazari, K., Park, R.F., Pretorius, Z.A., Szabo, L.J., Fetch, T. & Y.Jin.** 2012. Tracking the wheat rust pathogens. 4<sup>th</sup> BGRI Technical Workshop, Beijing, China, 2-4 September 2012 (invited talk by first author and reviewed paper in proceedings).

**Janse van Rensburg, B., McLaren, N.W., Viljoen, A. & Flett, B.C.** 2012. Development of an epidemiological model of fumonisin producing *Fusarium* species on commercial maize in South Africa. Combined Crops, Soils, Horticulture and Weeds Congress, Potchefstroom, 16-19 January 2012 (oral presentation).

**Janse van Rensburg, B., McLaren, N.W., Viljoen, A. & Flett, B.C.** 2012. Development of an epidemiological model of fumonisin producing *Fusarium* species on commercial maize in South Africa. Mycotoxin mini-symposium of the Maize Trust, 1 March 2012, Pretoria (oral presentation).

**Janse van Rensburg, B., McLaren, N.W., Viljoen, A. & Flett, B.C.** 2012. Development of an epidemiological model of fumonisin producing *Fusarium* species on commercial maize in South Africa. The Maize Trust Mycotoxin Research Symposium (oral presentation).

**Janse van Rensburg, R., Kemp, G., Pretorius, J.C. & Visser, B.** 2012. Proteomic analysis of wheat treated with a novel plant activator. 38<sup>th</sup> Annual Conference of the South African Association of Botanists, Pretoria, 15-18 January 2012 (oral presentation).



**Johansson, E., Alexandersson, E., Labuschagne, M., Jacobson, D., Vivier, M., Nguni, D., Mujaju, C., Andersson, S., Hailu, F., Mkhatywa, N., Jönsson, E., Geiger, A., Weighill, D., van Biljon, A., PrietoLinde, M. & PerssonHovmalm, H.** 2012 Plant breeding and genetic resources – Collaborations between SLU, South Africa and Southern Africa. The SLU Africa Food Security Research Symposium, Outcomes of a Swedish Government Initiative, Kampala, Uganda, 4 - 6 December 2012 (oral presentation).

**Kapinga, F.A., Herselman, L., Labuschagne, M.T., Ferguson, M.E. & Kanju, E.** 2012. Development of breeding resources for new sources of resistance to cassava brown streak disease. GCP21-II: Second Scientific Conference of the Global Cassava Partnership for the 21<sup>st</sup> Century, Kampala, Uganda, 18-22 June 2012 (poster presentation).

**Kulembeka, H.P., Rabbi, I.Y., Herselman, L., Labuschagne, M., Mkamilo, G., Kanju, E., Masumba, E, Fregene, M. & Ferguson, M.** 2012. Genetic linkage mapping of CBSD resistance in cassava (*Manihot esculenta* Crantz) landraces from Tanzania. GCP21-II: Second Scientific Conference of the Global Cassava Partnership for the 21<sup>st</sup> Century, Kampala, Uganda, 18-22 June 2012 (poster presentation).

**Labuschagne, M.T. & van Biljon, A.** 2012. Low molecular weight glutenin subunits and gliadins in 150 double haploid wheat lines derived from a cross between Kariega and Avocet. International Gluten Workshop, Beijing, China, 13-15 August 2012 (oral presentation).



**Labuschagne, M.T., Mkhatywa, N., Wentzel, B., van Biljon, A. & Johansson, E.** 2012. Tocopherols and tocotrienols and their relationship to protein subunits and quality characteristics in some South African wheat cultivars. The 14<sup>th</sup> ICC Cereal and Bread Congress, Beijing, China, 6-9 August 2012 (oral presentation).

**Labuschagne, M.T., Wegary, D. & Vivek, D.** 2012. Breeding for protein quality maize under adverse production conditions. 9<sup>th</sup> Southern African Plant Breeding Symposium, Protea Hotel Kruger Gate, Skukuza, 12-14 March 2012 (oral presentation).

**Matela, T.E. & Sieben, E.J.J.** 2012. Wetland vegetation of coastal KwaZulu-Natal. National Wetlands Indaba 2012, Bela-Bela. 23-26 October 2012 (poster presentation).

**Mavhunga, M., Koch, S., Flett, B.C. & McLaren, N.W.** 2012. *Fusarium graminearum* (sensu lato) mycotoxins associated with grain mold of maize and sorghum in South Africa. International MPU Workshop. Plant Protection for the Quality and safety of the Mediterranean Diet. Bari, Italy, 24-26 October 2012 (oral presentation).

**Mazibuko, D.R. & Sieben, E.J.J.** 2012. Wetland vegetation of the KwaZulu-Natal midlands. National Wetlands Indaba 2012, Bela-Bela. 23-26 October 2012 (poster presentation).

**McLaren, N.W. & Coetzee, L.** 2012. Epidemiology and prediction modelling of diseases caused by *Sclerotinia* spp. Soil Borne Diseases Interest Group, Stellenbosch, September 2012 (oral presentation).

**McLaren, N.W. & van Rooyen, D.** 2012. Biotic interactions – Trichoderma colonization of sorghum roots and the severity of root rot. Soil Borne Diseases Interest Group, Stellenbosch, September 2012 (oral presentation).



**Meier, H.A., Bousman, C.B., Brink, J., Bateman, M.D., Trower, G., Grun, R., Codron, D., Rossouw, L., Bronk R.C. & Scott. L.** 2012. The middle and late Pleistocene alluvial terraces with middle and later stone age occupations in the Modder River valley, South Africa. Geological Society of America Annual meeting, Charlotte, USA, 4-7 November 2012 (oral presentation).

**Miles, C.W., van Biljon, A., Otto, W.M. & Labuschagne, M.T.** 2012. Grain and milling characteristics and their relationship with selected mixogram parameters in South African hard red bread wheat cultivars. 9<sup>th</sup> Southern African Plant Breeding Symposium, Skukuza, 12-14 March 2012 (poster presentation).

**Mohase, L. & Taiwe, B.M.** 2012. Elicitors in Russian wheat aphid saliva induce defence responses in wheat. Geo-Future, Inkaba yeAfrica and Beyond, 9<sup>th</sup> Annual Workshop. Potsdam, Germany 26-30 November 2012 (oral presentation).

**Moloi, J.M. & van der Westhuizen, A.J.** 2012. Manipulation of nitric oxide levels in wheat affects resistance to the Russian wheat aphid. Natural product and biocontrol congress, Perpignan, France, 19-21 September 2012 (oral presentation).

**Mtshali, H. & Sieben, E.J.J.** 2012. Data analysis of the National Wetlands Vegetation Database. National Wetlands Indaba 2012, Bela-Bela. 23-26 October 2012 (oral presentation).

**Muedi, H.H., Fourie, D. & Mc Laren N.W.** 2012. Inheritance of resistance to bacterial brown spot in selected common bean accessions. South African Plant Breeders Association Congress, March 2012 (poster presentation).



**Mussane, C.R., van Biljon, A. & Herselman, L.** 2012. Morphological and genetic characterisation of mango varieties in Mozambique. African Crop Science Conference Proceedings 10:383-387.

**Neumann, F.H, Botha, G.A. & Scott, L.** 2012. 18,000 years of grassland evolution in the summer rainfall region of South Africa – evidence from Mahwaqa Mountain, KwaZulu-Natal. SASQUA Conference, Gobabeb, Namibia, 13-16 September 2012 (poster presentation).

**Neumann, F.H., Botha, G.A. & Scott, L.** 2012: Late Pleistocene and Holocene evolution of the southern African grassland biome. 22. Annual meeting of working group “Vegetation history“ of the Reinhold-Tüxen-Society 2012, Bonn, Germany, 28 September - 1 October 2012 (oral presentation).

**Nyambeni, T. & Sieben, E.J.J.** 2012. Wetland vegetation of Limpopo province: Ecology and biogeography. National Wetlands Indaba 2012, Bela-Bela. 23-26 October 2012 (oral presentation).

**Pretorius, Z.A. & Prins, R.** 2012. Are South African wheat cultivars protected against Ug99 stem rust? SAPBA Symposium, Protea Hotel Kruger Gate, March 2012 (oral presentation).

**Pretorius, Z.A., Prins, R., Malaker, P.K., Thapa, D., Park, R.F. & Cisar, G.L.** 2012. Assessment of stem rust resistance in wheat lines from Bangladesh and Nepal. 4<sup>th</sup> BGRI Technical Workshop, Beijing, China, 2-4 September 2012 (poster presentation).





**Prins, R., Boyd, L.A., Dreisigacker, S. & Pretorius, Z.A.** 2012. An analysis of stem rust resistance in the JIC African wheat collection. SAPBA Symposium, Protea Hotel Kruger Gate, March 2012 (oral presentation).

**Schneider, S-R., van der Merwe, N.C. & Visser, B.** 2012. Comparison of different allelic discrimination methods for a TaqMan® probe-based assay. South African Genetics & Bioinformatics Society Conference, Stellenbosch, 10-12 September 2012 (oral presentation).

**Scholtz, J.J. & Visser, B.** 2012. Expression analysis of two genes during three different wheat-*Puccinia* interactions using qPCR. 38<sup>th</sup> Annual Conference of the South African Association of Botanists, Pretoria, 15-18 January 2012 (poster presentation).

**Scicio, L., Neumann, F.H., Roberts, D., Tsikos, H., Scott, L. & Bamford, M.** 2012. Fluctuating Miocene climates and ecosystems at the tip of Africa: a multiproxy approach. 16th Biennial Conference of the Palaeontological Society of Southern Africa, University of Cape Town, 5-8 September 2012. *Palaeontologia Africana* 47: 7.

**Scott, L., Gil-Romera, G., Brook, G.A. & Marais, E.** 2012. A Holocene desert margin pollen record from dung deposits at Nauwkluft, Namibia. SASQUA Conference, Gobabeb, Namibia, 13-16 September 2012 (oral presentation). **Sieben, E.J.J., Dullo,**

**B.W., Ellery, W.N. & Grootjans, A.P.** 2012. Resilience in estuarine ecosystems: influence of sea water inundation on the shoreline vegetation of Lake St. Lucia. National Wetlands Indaba 2012, Bela-Bela, 23-26 October 2012 (oral presentation).



**Smit, Z.M., Smit, G.N., du Preez, P.J. & Pienaar, F.C.** 2012. The classification, description and mapping of the vegetation in the Doornkloof nature reserve, northern Cape. 4<sup>th</sup> Kimberley Biodiversity Research Symposium, Kimberley, 4 September 2012 (oral presentation).

**Swart, V.R., Saaiman, J. & Marais, G.J.** 2012. The role of *Atelocera raptoria* (Hemiptera: Pentatomidae) in the succession of fungal populations within pecan nut (*Carya illinoensis*) orchards in South Africa. XXIV International Congress of Entomology. Daegu, Korea, 19-25 August 2012 (oral presentation).

**Terefe, T., Pretorius, Z.A. & Visser, B.** 2012. Recently identified races of *Puccinia triticina* on bread wheat in South Africa. 4<sup>th</sup> BGRI Technical Workshop, Beijing, China, 2-4 September 2012 (poster presentation).

**van Biljon, A., Osthoff, G., Phalafala, L.T. & Labuschagne, M.T.** 2012. Nutritional value of South African open pollinated and hybrid quality protein maize under different storage conditions. Plant Breeding for Drought Tolerance Research Symposium, Colorado State University, Fort Collins, Colorado, USA, 21-22 June 2012 (poster presentation).

**van Biljon, A., Osthoff, G., Phalafala, L.T. & Labuschagne, M.T.** 2012. Total protein, tryptophan, starch and amylose content of South African open pollinated and hybrid quality protein maize under different storage conditions. 9<sup>th</sup> Southern African Plant Breeding Symposium, Skukuza, 12-14 March 2012 (poster presentation).



**van Biljon, A., Osthoff, G., Phalafala, L.T. & Labuschagne, M.T.** 2012. Total protein, tryptophan, starch and amylose content of South African open pollinated and hybrid quality protein maize under different storage conditions. 23<sup>rd</sup> SANSOR Annual Congress, Irene, Pretoria, 9-10 May 2012 (poster presentation). **van der Merwe, R.,**

**Hugo, A., Herselman, L. & Labuschagne, M.** 2012. Physicochemical and oxidative stability characteristics of high- and mid-oleic sunflower seed oil (poster presentation). In: Proceedings of the 18<sup>th</sup> International Sunflower Conference, Mar del Plata and Balcarce, Argentina. 08-VC-12, pp. 955960. 27 February - 1 March 2012.

**van der Merwe, R., Labuschagne, M.T., Herselman, L. and Hugo, A.** 2012. Genetic analysis of seed oil quality and related traits in sunflower exposed to heat stress during seed-filling. 9<sup>th</sup> SAPBA Symposium, Protea Hotel Kruger Gate, Skukuza, 12-14 March 2012 (poster presentation).

**van der Merwe, R., Labuschagne, M.T., Herselman, L. & Hugo, A.** 2012. Genetic analysis of seed oil quality and related traits in sunflower exposed to heat stress during seed-filling. 23<sup>rd</sup> Annual Congress of the South African National Seed Organisation, Pretoria, 9-10 May 2012 (oral presentation).

**van der Westhuizen, A.J., Mohase, L., Moloi, J.M., Taiwe, B.M., Bernard, J. & Moerschbacher, B.** 2012. Elicitors and signals involved in the Russian wheat aphid resistance response of wheat. Tagung der Arbeitskreise Mykologie und Wirt-ParasitBeziehungen, Hohenheim University, Stuttgart, Germany, 22-23 March 2012 (oral presentation).



**Visser, B., Szabo, L., Terefe, T. & Pretorius, Z.A.** 2012. Evaluation of a SNPbased qPCR identification system for the Ug99 race group using field collections of *Puccinia graminis* f. sp. *tritici* in South Africa. 4<sup>th</sup> BGRI Technical Workshop, Beijing, China, 2-4 September 2012 (poster presentation).

**Visser, B., Szabo, L.J., Herselman, L. & Pretorius, Z.A.** 2012. Ug99 variants of *Puccinia graminis* f. sp. *tritici* in South Africa. 38<sup>th</sup> Annual Conference of the South African Association of Botanists, Pretoria, 15-18 January 2012 (oral presentation).

**Visser, B., Viljoen, R., Janse van Vuuren, L., Wolmarans, K., Swart, W.J. & Pretorius, J.C.** 2012. The impact of selected plant activators on wheat and herbicides on the soil microbial population. 9<sup>th</sup> Inkaba yeAfrica GEO-FUTURE Workshop, Potsdam, Germany, 25-30 November 2012 (oral presentation).

**Watson, M., Seaman, M.T., Avenant, M.F., King, J., Armour, R., Barker, C.H., Dollar, E., du Preez, P.J., Hughes, D., Joubert, A., Kemp, M.E., Rossouw, L., Rowntree, K., van der Waal, B., van Tonder, G.J. & Vos, A.T.** 2012. The development of and Environmental Water Requirement (EWR) method for nonperennial rivers. IWA World Congress on Water, Climate and Energy, Dublin, Ireland, 14-17 May 2012 (oral presentation).

**Watson, M., Seaman, M.T., Avenant, M.F., King, J., Armour, R., Barker, C.H., Dollar, E., du Preez, P.J., Hughes, D., Joubert, A., Kemp, M.E., Rossouw, L., Rowntree, K., van der Waal, B., van Tonder, G.J. & Vos, A.T.** 2012. The development of and Environmental Water Requirement (EWR) method for nonperennial rivers. SASAqS Conference, Cape St. Francis, 1-5 July 2012 (oral presentation).

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**Wentzel, B.W., van Biljon, A., Otto, W.M. & Labuschagne, M.T.** 2012. Reversedphase and size-exclusion HPLC for evaluating dough properties of hard red winter wheat flour. 9<sup>th</sup> Southern African Plant Breeding Symposium, Skukuza, 12-14 March 2012 (poster presentation).

**Wessels, E., Pretorius, Z.A., Boyd, L.A. & Prins, R.** 2012. Development of a low resolution genome scan SSR marker set in wheat. SAPBA Symposium, Protea Hotel Kruger Gate, 12-14 March 2012 (oral presentation).