



Plant Sciences

Conference contributions 2010

Agenbag, G.M., Boyd, L.A., Pretorius, Z.A. & Prins, R. 2010. Fine mapping of durable resistance to stripe rust in the South African wheat cultivar, Kariega, using an expressed sequence tag (EST) marker strategy. Plant and Animal Genome Conference XVIII, San Diego, USA (9-13 January) (poster presentation).

Agenbag, G.M., Pretorius, Z.A., Boyd, L.A., Bender, C.M. & Prins, R. 2010. Identification of quantitative trait loci (QTL) associated with durable resistance to stripe rust derived from the wheat cultivar Cappelle Desprez. SAPBA conference, Spier, Stellenbosch (15-17 March).

Agenbag, G.M., Pretorius, Z.A., Boyd, L.A., Bender, C.M. & Prins, R. 2010. High resolution mapping of stripe rust resistance QTL in the wheat cultivar Kariega. Biennial Congress of the SA Genetics Society, University of the Free State, Bloemfontein.

Ajith, A., Labuschagne M.T. & Malan, A.F. 2010. The influence of nitrogen fertilizer application on malting quality of irrigation barley. 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (poster presentation).

Ajith, A., Labuschagne, M.T. & Malan, A.F. 2010. The use of leaf nitrogen to determine kernel nitrogen of a doubled haploid population of malting barley under irrigation. 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (poster presentation).



Crouch, J.A., Sakthikumar, S., Cuomo, C. & Pretorius, Z. 2010. A panel of SNP-based real-time PCR probes for the rapid and accurate detection of Ug99. 8th International Wheat Conference, St. Petersburg, Russia (1-4 June) (poster presentation).

De Villiers, C., Kriel, W. & Pretorius, Z.A. 2010. Greenhouse screening of CIMMYT wheat germplasm for FHB response. SAPBA conference, Spier, Stellenbosch (15-17 March).

Elago, O., Labuschagne, M.T. & van Biljon, A. 2010. The influence of low nitrogen on starch and minerals in quality protein maize. CST-SA – ICC International Grains Symposium: Quality and safety of Grain Crops and Foods. University of Pretoria, 3-5 February 2010. (poster presentation, winner of 3rd prize in student section).

Elago, O., Labuschagne, M.T. & van Biljon, A. 2010. The influence of low nitrogen conditions on quality and nutritional values in quality protein maize. AACC International Annual Meeting, October 24-27. Savannah, Georgia, USA (poster presentation).

Flett, B.C. & McLaren, N.W. 2010. Analysis of non-linear G X E interactions in disease evaluation. Scientific Workshop, Free State Branch of the SASPP, Stonehenge, Parys, 28 January 2010.

Herselman, L. 2010. Application of molecular markers for pathogen characterisation. Scientific Workshop of the Free State Branch of the SASPP, Stonehenge, Parys, 28 January 2010 (oral presentation).



Herselman, L., Sydenham, S.L., Senoko, K.J., Prins, R. & Pretorius, Z.A. 2010. Combining wheat rust and Fusarium head blight resistance genes and QTL using marker-assisted selection. 8th International Wheat Conference, St. Petersburg, Russia, 1-4 June 2010 (poster presentation).

Jackson, B.C., Spies, J.J., Herselman, L. & Maleka, M.F. 2010. Differential gene expression in the floral tepals of *Clivia miniata* using cDNA-AFLP. 21st Biennial Congress of the South African Genetics Society will be hosted by the University of the Free State in Bloemfontein from 9 - 11 April 2010 (poster presentation).

Janse van Rensburg, B., Flett, B.C., Mc Laren, N.W. & Mc Donald, A.H. 2010. **Distribution and quantification of *Fusarium verticillioides* in South African maize and its effect on grain quality and toxicity.** Combined Congress of SASSS, SASCP, SAWSS and SASHS, Bloemfontein.

Janse van Rensburg, B., Flett, B.C., Viljoen, A. & Mc Laren N.W. 2010. Genotype x environment interactions associated with fumonisin contamination of commercial maize. 8th Southern African Plant Breeding Symposium, Spier Wine Estate, Stellenbosch, March 15th-17th, 2010.

Janse van Rensburg, B., Flett, B.C., Viljoen, A. & Mc Laren N.W. 2010. Incidence of fumonisin and fumonisin producing *Fusarium* spp. in commercial maize. Scientific Workshop, Free State Branch of the SASPP, Stonehenge, Parys, 28 January 2010.

Janse van Rensburg, B., Flett, B.C. Viljoen, A. & Mc Laren N.W. 2010. Modelling the incidence of *Fusarium verticillioides* and *Aspergillus* spp. and their mycotoxins in maize in South Africa taking all related factors into consideration. Scientific Workshop, Free State Branch of the SASPP, Stonehenge, Parys, 28 January 2010.



Labuschagne, M.T. & Akinbo, O. 2010. Increasing cassava root protein content by introgressing high protein genes from a wild relative (*Manihot esculenta* spp *flabellifolia*). 15th World Congress of Food Science and Technology. Cape Town 22-26 August 2010 (oral presentation).

Labuschagne, M.T. & van Biljon, A. 2010. The genetic relationship between glutenin and gliadin protein subunits in a double haploid population of wheat. 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (oral presentation).

Labuschagne, M.T. & van Biljon, A. 2010. The relationship between RP and SEHPLC peaks and some quality characteristics in a double haploid wheat population varying in LMW Glutenin subunits. AACC International Annual Meeting, October 24-27. Savannah, Georgia, USA (oral presentation).

Labuschagne, M.T., van Biljon, A. & Elago, O. 2010. Polymeric and monomeric proteins in South African wheat: how they are influenced by environmental conditions. CST-SA – ICC International Grains Symposium: Quality and safety of Grain Crops and Foods. University of Pretoria, 3-5 February 2010. (invited speaker - oral presentation).

Laurie, S.M., Booyse, M., Van Jaarsveld, P.J., Faber, M. & Labuschagne, M.T. 2010. Characterization of new cream-fleshed sweetpotato varieties based on agronomic traits, taste acceptability and nutrient content. 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (oral presentation).



Laurie, S.M., van Jaarsveld, P., Faber, M. & Labuschagne, M.T. 2010. Selected micronutrient content of orange- fleshed sweetpotao from South Africa. 15th World Congress of Food Science and Technology. Cape Town 22-26 August 2010 (poster presentation).

Lindeque, R.C., Tolmay, V.L. & Labuschagne, M.T. 2010. Identification and utilization of new resistance donors with host plant resistance to Russian Wheat Aphid; biotype SA2. 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (poster presentation).

Lindeque, R.C., Tolmay, V.L. & Labuschagne, M.T. 2010. New resistance donors to biotype RWASA2 exist in CIMMYT (Mexico), Iran and South African germplasm collections. 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (oral presentation).

McLaren, N.W. 2010. Optimal use of disease progress curve data. Scientific Workshop, Free State Branch of the SASPP, Stonehenge, Parys, 28 January 2010.

Miles, C.W., Labuschagne, M.T. & Otto, W.M. 2010. The mixogram as a selection tool for desirable rheological characteristics and loaf volumes in South African wheat cultivars, 2010. 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (poster presentation).

Muedi, H.T.H., Fourie, D. & McLaren, N.W. 2010. Reaction of common bean cultivars and lines to bacterial brown spot in South Africa. 8th Southern African Plant Breeding Symposium, Spier Wine Estate, Stellenbosch, March 15th-17th (poster presentation).



Oelofse, R.M., Labuschagne, M.T. & van Deventer, C.S. 2010. Sodium Dodecyl Sulfate Sedimentation - Discrimination ability in a dryland wheat breeding programme in South Africa. 8th International Wheat Conference, June 1-4, 2010. St.

Petersburg, Russia (poster presentation).

Olivera, P.D., Pretorius, Z.A. & Jin, Y. 2010. Resistance to race TTKSK of *P. graminis* f. sp. *tritici* in Triticale (X Triticosecale). BGRI Technical Workshop, St.

Petersburg, Russia (30-31 May) (poster presentation).

Park, R., Fetch, T., Hodson, D., Jin, Y., Nazari, K., Prashar, M. & Pretorius, Z. 2010. International surveillance of wheat rust pathogens - progress and challenges.

BGRI Technical Workshop, St. Petersburg, Russia (30-31 May).

Phalafala, T., Labuschagne, M.T. & van Biljon, A. 2010. The mineral and protein value of South African quality protein maize (QPM). CST-SA – ICC International Grains Symposium: Quality and safety of Grain Crops and Foods. University of Pretoria, 3-5 February 2010. (poster presentation).

Rouse, M.N., Steffenson, B.J., Pretorius, Z.A., Carson, M. & Jin, Y. 2010. Races of *Puccinia graminis* f. sp. *tritici* identified from the 2009 Njoro stem rust nursery. BGRI Technical Workshop, St. Petersburg, Russia (30-31 May) (poster presentation).

Shegro, A.G., Labuschagne, M.T., Shargie, N.G. & van Biljon, A. 2010. Protein and mineral content of sorghum [*Sorghum bicolor* (L.) Moench] accessions from Ethiopia and South Africa. CST-SA – ICC International Grains Symposium: Quality and safety of Grain Crops and Foods. University of Pretoria, 3-5 February 2010. (poster presentation).



Sydenham, S.L., Herselman, L. & Kriel, W.M. 2010. Marker-assisted backcross breeding for Fusarium head blight resistance in South African wheat. 8th South African Plant Breeding Symposium, Stellenbosch, South Africa, 15-17 March 2010. (oral presentation)

Sydenham, S.L., Herselman, L. & Kriel, W.M. 2010. Marker-assisted backcross breeding for Fusarium head blight resistance in South African wheat. 8th International Wheat Conference, St. Petersburg, Russia, 1-4 June 2010. (poster presentation) **van**

Biljon, A., Gissa, D. & Labuschagne, M.T. 2010. Protein quality of quality protein maize grown under low and optimal nitrogen conditions. CST-SA – ICC International Grains Symposium: Quality and safety of Grain Crops and Foods. University of Pretoria, 3-5 February 2010. (oral presentation).

van Biljon A., Phakela K. & Laurie S. Total starch, amylose and mineral content of South African sweet potato breeding lines. 8th Triennial Conference of the African Potato Association, Cape Town, 5-9 December 2010 (poster presentation).

van der Merwe, R., Herselman, L., Hugo, A. & Labuschagne, M.T. 2010. Development of molecular markers linked to the high-oleic acid trait in sunflower (*Helianthus annuus* L). 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (oral presentation).

Van Eeden, E. & Labuschagne, M.T. 2010. Characterization of falling number and sprouting tolerance in South African Hybrid bread wheat. 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (poster presentation).



Visser, B., Herselman, L., Park, R.F., Karaoglu, H., Bender, C.M. & Pretorius, Z.A. 2010. Characterization of two new wheat stem rust races within the Ug99 lineage in South Africa. 2nd BGRI Technical Workshop, St. Petersburg, Russia, 30-31 May 2010. (oral presentation)

Wentzel, B.S., Labuschagne, M.T. & Otto, W.M. 2010. Relationship between sizeexclusion HPLC and flour quality in selected South African hard red winter wheat (*Triticum aestivum* L.) cultivars. 8th Southern African Plant Breeders Conference. Spier, Stellenbosch, 15-17 March 2010 (poster presentation).