

## Publications

**Publications between January 1, 2013 and December 31, 2013.**

### **List of all academic staff members:**

**Emeritus Professors:** Estey, R.H.; Buszard, B.

**Professors:** Dutilleul, P.R.; Smith, D.L.; Watson, A.K.

**Associate Professors:** Bede, J.; de Blois, S.; Donnelly, D.J.; Jabaji, S.H. (Assoc. Dean – Research & Graduate Education); Kushalappa, A.C.; Seguin, P. (Chair); Stewart, K.A. (Post-retirement May 31, 2010); Stromvik, M.; Waterway, M.J.

**Assistant Professors:** Charron, J.B.; Gravel, V.; Singh, J.

**Faculty Lecturers:** Begg, C.; Wees, D.

**Adjunct Professors:** Bertrand, A.; Ma, B.L.

## Publications in Refereed Journals

### **BEDE, J.**

Paudel, J, Copley, T, Amirizian, A, Prado, A and **Bede JC**. 2013. Arabidopsis redox status in response to caterpillar herbivory. *Frontiers in Plant Science* 4: 113. Part of a Special Edition on “Induced Plant Responses to Microbes and Insects”.

Afshar, K, Fikru Dube, F, Najafabadi, HS, Bonneil, E, Thibault, P, Salavati, R and **Bede, JC**. 2013. Insights into the insect salivary gland proteome: Diet-associated changes in caterpillar labial salivary proteins. *Journal of Insect Physiology* 59: 351-366.

### **CHARRON, J.B.**

Ouellet, F., and **Charron, J.B.** 2013. Cold acclimation and freezing tolerance in plants. eLS, [doi:10.1002/9780470015902.a0020093.pub2]

Colton-Gagnon, K., Ali-Benali, M.A., Mayer, B.F., Dionne, R., Bertrand, A., Do Carmo, S., and **Charron, J.B.** 2013. Comparative analysis of the cold acclimation and freezing tolerance capacities of seven diploid *Brachypodium distachyon* accessions. *Annals of Botany*; doi: 10.1093/aob/mct283. Epub 2013 Dec 8.

### **DE BLOIS, S.**

Chambers D, Périé C, Casajus N, & **de Blois S**. 2013. Challenges in modelling the abundance of 105 tree species in eastern North America using climate, edaphic, and topographic variables. *Forest Ecology and Management*. 291: 20–29.

Byun C, **de Blois S**, & Brisson J. 2013. Plant functional group identity and diversity determine biotic resistance to invasion by an exotic grass. *Journal of Ecology*: 101 (1): 128–139.

## **DONNELLY, D.J.**

Seguin, P., Mustafa, A., **Donnelly, D.J.** and B. Gelinas. 2013. Chemical composition and ruminal nutrient degradability of fresh and ensiled amaranth forage. *Journal of the Science of Food and Agriculture*. 93: 3730

## **DUTILLEUL, P.**

Aryee, A. N. A., **Dutilleul, P.**, Paszti, M., and Simpson, B. K. 2013. Application of response surface methodology (RSM) to optimize the transformation of animal fats to alkyl esters. *Fuel Processing Technology* 109:103-110.

Bonnell, T. R., **Dutilleul, P.**, Chapman, C. A., Reyna-Hurtado, R., Sengupta, R., and Sarabia, U. 2013. Analysing small-scale aggregation in animal visits in space and time: the ST-BBD method. *Animal Behaviour* 85:483-492.

Bourgault, M., Madramootoo, C. A., Webber, H. A., **Dutilleul, P.**, Stulina, G., Horst, M. G., and Smith, D. L. 2013. Legume production and irrigation strategies in the Aral Sea basin: Yield, yield components, water relations, and crop development of common bean (*Phaseolus vulgaris* L.) and mungbean (*Vigna radiata* (L.) Wilczek). *Journal of Agronomy and Crop Science* 199:241-252.

Crowder, D. W., Dykstra, E. A., Brauner, J. M., Duffy, A., Reed, C., Martin, E., Peterson, W., Carrière, Y., **Dutilleul, P.**, and Owen, J. P. 2013. West Nile virus prevalence across landscapes is mediated by local effects of agriculture on vector and host communities. *PLOS ONE* 8:e55006 (doi:10.1371/journal.pone.0055006).

Manceur, A. M. (\*) and **Dutilleul, P.** 2013a. Unbiased modified likelihood ratio tests for simple and double separability of a variance-covariance structure. *Statistics and Probability Letters* 83:631-636.

Manceur, A. M. (\*) and **Dutilleul, P.** 2013b. Maximum likelihood estimation for the tensor normal distribution: Algorithm, minimum sample size, and empirical bias and dispersion. *Journal of Computational and Applied Mathematics* 239:37-49.

Sivakoff, F. S., Rosenheim, J. A., **Dutilleul, P.**, and Carrière, Y. 2013. Influence of the surrounding landscape on crop colonization by a polyphagous insect pest. *Entomologia Experimentalis et Applicata* doi: 10.1111/eea.12101.

## **GRAVEL, V.**

**Gravel V**, Dorais M, Ménard C. 2013. Organic potted plants amended with biochar: its effect on growth and *Pythium* colonization. *Canadian Journal of Plant Science*, 2013, 93(6): 1217-1227.

## **MA, B.L.**

Zhou, Q.P., D.K. Biswas, and **B.L. Ma**. 2013. Comparisons among cultivars of wheat, naked and hulled oats: dry matter, N and P accumulation and partitioning as affected by N supply and crop lodging. *J. Plant Nutr. Soil Sci.* 176: 929–941.

Liang, A., N.B. McLaughlin, **B.L. Ma**, E. G. Gregorich, M.J. Morrison, S.D. Burt, and B.S. Patterson. 2013. Changes in moldboard plough draught and tractor fuel consumption on continuous corn after 18 years

of organic and inorganic N amendments. *Energy – The Intern’l J.* 52: 89-95.  
<http://dx.doi.org/10.1016/j.energy.2012.10.064>

Chan, Y.K., W.A. McCormick, and **B.L. Ma**. 2013. Fertilizer effects on soil archaeal abundance at two Ontario experimental farms during three consecutive cropping seasons. *Appl. Soil Ecol.* 68: 26-35.

Biswas, D.K., X. Hong, Y. Li, **B.L. Ma**, and G. Jiang. 2013. Modification of photosynthesis and growth responses to elevated carbon dioxide by ozone in cultivars of winter wheat with differential sensitivity to ozone. *J. Exp. Bot.* 64: 1485-1496.

**Ma, B.L.**, K.D. Subedi, A.G. Xue, and H.D. Voldeng. 2013. Crop management effects on Fusarium head blight, Fusarium-damaged kernels and deoxynivalenol concentration of spring wheat. *J. Plant Nutr.* 36: 717-730.

#### **JABAJI, S.**

Chamoun R, Aliferis KA, **Jabaji S**. 2013. Characterization and transcriptional regulation of *Stachybotrys elegans* mitogen activated MAP kinase gene *smkA*, following mycoparasitism and starvation conditions. *Current Genetics* 59:43–54 (DOI: 10.1007/s00294-012-0386-2).

Aliferis KA, Cubeta MA, **Jabaji S**. 2013. Chemotaxonomy of fungi in the *Rhizoctonia solani* species complex performing GC/MS metabolite profiling. *Metabolomics*, 9(1):159-169

Gagne-Bourque F, Aliferis KA, Seguin P, Samson R, **Jabaji S**. 2012. Isolation and characterization of indigenous endophytic bacteria associated with leaves of switchgrass (*Panicum virgatum* L.) cultivars. *Journal of Applied Microbiology* 114: 836-853. doi:10.1111/jam.12088.

Ngwa F, Madramootoo C, **Jabaji S**. 2013. Development and application of a multiplex qPCR technique to detect multiple microcystin-producing cyanobacterial genera in a Canadian freshwater lake. *Journal of Applied Phycology*. DOI 10.1007/s10811-013-0199-9

#### **KUSHALAPPA, A.C.**

**Kushalappa AC** and Gunnaiah R. 2013. Metabolo-proteomics to discover plant biotic stress resistance genes. INVITED REVIEW: *Trends in Plant Science.* 18: 522-531.  
<http://dx.doi.org/10.1016/j.tplants.2013.05.002>.

#### **SEGUIN, P.**

Crépeau M, Khelifi M, Vanasse A, **Seguin P**, Tremblay GF. 2013. Compressive forces and harvest time effects on sugars and juice extracted from sweet pearl millet and sweet sorghum. *Transactions of the ASABE.* 56(5):1665-1671.

**Seguin P**, Mustafa AF, Donnelly DJ, Gélinas B. 2013. Chemical composition and ruminal nutrient degradability of fresh and ensiled amaranth forage. *Journal of the Science of Food and Agriculture.* 93(15):3730-3736.

Lachapelle M, Bourgeois G, DeEll J, Stewart KA, **Seguin P**. 2013. Modeling the effect of preharvest weather conditions on the incidence of soft scald in 'Honeycrisp' apples. *Postharvest Biology and Technology*. 85:57-66.

Gagné-Bourque F, Aliferis K, **Seguin P**, Samson R, Jabaji S. 2013. Isolation and characterization of indigenous endophytic bacteria associated with leaves of switchgrass (*Panicum virgatum* L.) cultivars. *Journal of Applied Microbiology*. 114(3):836-853.

Piva A, Bertrand A, Bélanger G, Castonguay Y, **Seguin P**. 2013. Growth and physiological response of timothy to elevated CO<sub>2</sub> and temperature under contrasted nitrogen fertilization. *Crop Science*. 53(2):704-715.

Kim EH, **Seguin P**, JH Lee, Chung IM. 2013. Comparison of tocopherol contents in adzuki bean (*Vigna angularis*) genotypes. *International Journal of Agriculture and Biology*. 15(1):179-180.

### **SINGH, J.**

Singh, M., Singh, S., Randhawa, H., **Singh, J.** (2013) Polymorphic homoeolog of key gene of RdDM pathway, ARGONAUTE4\_9 class is associated with Pre-harvest Sprouting in wheat (*Triticum aestivum* L.). *PLoS ONE* 8(10): e77009. doi:10.1371/journal.pone.0077009.

Lamb-Palmer, N.D., Singh, M., Dalton, J. P., **Singh, J.** (2013) Prokaryotic Expression and Purification of Soluble Maize Ac Transposase. *Molecular Biotechnology* 54:685–691.

Kaur, R., Singh, K., **Singh, J.** (2013) A root specific wall-associated kinase gene, HvWAK1, regulates root growth, and is highly divergent in barley and other cereals. *Functional & Integrative Genomics* 13: 167-177.

Coulman, B., Dalai, A., Heaton, E., Lee, P. C., Lefsrud, M., Levin, D., Lemaux, P. G., Neale, D., Shoemaker, S. P., **Singh, J.**, Smith, D. L., Whalen, J. K. (2013) Developments in crops and management systems to improve lignocellulosic feedstock production. *Biofuels, Bioproducts & Biorefining*, 7 (5): 582-601.

Solis, M., V., Patel, A., Orsat, V., **Singh, J.**, Lefsrud, M. (2013) Identification of fatty acids in different varieties of peas by RP-LC/ESI-MS/MS: Towards the development of an oilseed pea. *Food Chemistry*. 139: 986–993.

### **SMITH, D.L.**

Coulman B, Dalai A, Heaton E, Lee CP, Lefsrud M, Levin D, Lemaux PG, Neale D, Shoemaker SP, Singh J, **Smith DL**, Whalen JK 2013. Developments in crops and management systems to improve lignocellulosic feedstock production. *BioFuels, Bioproducts and Biorefining* 7:582–601.

Ngosong C, Halpern MT, Whalen JK and **Smith DL** 2013. Purslane (*Portulaca oleracea* L.) has potential for desalinating greenhouse recirculation water. *Can. J. Plant Sci.* 93:961–964.

Miransari M, Riahi H, Eftekhari F, Minaie D, **Smith DL** 2013. Improving soybean (*Glycine max* L.) N<sub>2</sub>-fixation under stress. *Journal of Plant Growth Regulation*. *Journal of Plant Growth Regulation* 32:909-921.

Bourgault M, Madramootoo CA, Webber HA, Stulina G, Horst MG, **Smith DL** 2013. Legume production and irrigation strategies in the Aral Sea Basin: Yield, yield components, water relations, and crop development of common bean (*Phaseolus vulgaris* L.) and mungbean (*Vigna radiata* (L.) Wilczek). *Journal of Agronomy and Crop Science* 199:242-252.

Khan W., Palanisamy R., Critchley A.T., **Smith D.L.**, Papadopoulos, Y., Prithiviraj, B. 2013. *Ascophyllum nodosum* (Brown seaweed) extract and its organic fractions stimulate root nodulation and growth of alfalfa (*Medicago sativa*). *Communications in Soil Science and Plant Analysis* 44:900-908.

### **STRÖMVIK, M.V.**

Liseron-Monfils, C., Ashlock, D., McNicholas, P., Fauteux, F., **Strömvik, M.**, and Raizada, R. (2013) "Promzea: A pipeline for discovery of regulatory motifs in maize (*Zea mays* L.) and its application to the anthocyanin biosynthetic pathway" *BMC Plant Biology* 13: 42