Monday, July 11, 2011

8:00-10:00 Keynote Speakers (Rooms: Ballroom East & Ballroom West)
Daryl Domitruk  “Renewable energy from agriculture: re-profiling agriculture as a solution provider in Manitoba”
David Levin  “Bioengineering for Biofuels and Bioproducts at the University of Manitoba”

10:00-10:30 Refreshment Break

10:30-12:00 Technical Session 1 – Poster Session (Rooms: Ballroom East & Ballroom West)
CSBE11-100 Tower and pendulum impact testers in simulating surgical blows.  S. Hildebrand, J. Morrison
CSBE11-101 Hierarchical task analysis of driving a tractor air seeder system (TAS): determining TAS simulator requirements.  B. Bashiri, D.D. Mann, D. Karimi
CSBE11-103 Monitoring of rear-mounted equipment.  A. Rakhra, D.D. Mann
CSBE11-104 Driving simulation for tractor-air seeder system.  B. Bashiri, D. Karimi, D.D. Mann
CSBE11-105 Simulation of soil mechanics using an aerway soil tine.  J. Mak, Y. Chen, N. McLauglin
CSBE11-106 Design elements of the University of Manitoba Quarter Scale Tractor
CSBE11-107 Texture profile analysis (TPA) of Omani halwa while replacing ghee with vegetable oils.  A. Manickavasagan
CSBE11-108 Ultrasound assisted extraction of lipids from microalgae.  M.B. Latheef, M. Ngadi
CSBE11-109 Water requirements of date palm trees in Saudi Arabia.  A. Alamoud
CSBE11-110 Effect of water table management on potato yield.  S. Satchithanantham, M. Cordeiro, R. Sri Ranjan, S. Sager, B. Shewfelt
CSBE11-111 The effect of storm type and season on the efficiency of vegetative filter strips at watershed scale.  S.I. Ahmed, R. Rudra, S. Manzoor
CSBE11-112 Soil compaction and micro-topography effects on corn under tile-drainage.  M. Cordeiro, S. Satchithanantham, R. Sri Ranjan, S. Sager, B. Shewfelt
CSBE11-113 Evaluation of flow features in a river reach with TUFLOW model.  B. Amirataee, B. Mohammadnezhad
CSBE11-114 Artificial neural network (ANN) to classify Omani date varieties.  A. Manickavasagan
CSBE11-115 Conformation analysis of egg white under thermal gelation and determination of protein secondary structures using Raman spectroscopy.  W. Wang, J. Paliwal
Microwave assisted extraction of phenolic antioxidants from grape seeds (Vitis vinifera). K. Krishnaswamy, K. Thangavel, V. Orsat, Y. Gariepy

Determination of flow properties of sliced pineapple and by-product. C. Nwaizu

Development and validation of a mathematical model to predict temperature during heat treatment in flour mills. F. Jian, P. Fields, D.S. Jayas, N. White, M. Loganathan

Near-infrared hyperspectral imaging of bulk samples of wheat from different growing locations and crop years for quality assessment using principal components regression and partial least squares regression modeling. M. Sivakumar, D.S. Jayas, J. Paliwal, N. White

Feasibility of storing canola in large harvest bags under prairie conditions. V. Chelladurai, F. Jian, D.S. Jayas, N. White

Synchrotron source infrared imaging study to map compositional changes in fungal damaged canola seeds. C.B. Singh, D.S. Jayas, F. Borondics, N. White

Sprouting detection on wheat kernels using FT-NIR spectroscopy and hyperspectral imaging systems. J. Xing, S. Symons, M. Shahin, D. Hatcher

12:00-2:00 Lunch & AGM (Rooms: Ballroom East & Ballroom West)

2:00-3:00 Technical Session 2

Session 2a Biogas Production in Ontario (Room: Ballroom West)
2:00 - 2:20 Innovative aspects of biogas systems. J. DeBruyn (CSBE11-200)
2:20 - 2:40 Influence of regulations on technology design. J. DeBruyn (CSBE11-201)
2:40 - 3:00 Provincial initiatives to support development. J. DeBruyn (CSBE11-202)

Session 2b Sustainable Agricultural Practices (Room: Ballroom East)
2:00-2:20 Drying baled hay with combined solar and biomass heat sources. R. Morissette, P. Savoie (CSBE11-203)
2:40-3:00 Precision agriculture in the classroom. D. Petkau (CSBE11-205)

Session 2c Greenhouse Development (Room: Prairie Salon)
2:00 - 2:20 Biomass energy for supplemental heating in a solar energy greenhouse. Q. Zhang, R. Boris (CSBE11-206)
2:20 - 2:40 Preliminary results of solar energy greenhouse research at the University of Manitoba’s Alternative Village. M. Yusim, K. Dick (CSBE11-207)
2:40 - 3:00 Dehumidification in a tomato greenhouse. J. Han, H. Guo, Z. Gao (CSBE11-208)

Session 2d Renewable Fuels - Biodiesel (Room: River Salon)
2:00 - 2:20 Optimization of lipid synthesis for next generation biodiesel. R. Sestric, D. Levin, R. Sparling (CSBE11-209)
2:20 - 2:40 Characterization of canola and flaxseed oil for biodiesel feedstock. A. Rana, S. Panigrahi, K.N. Harker (CSBE11-210)
2:40 - 3:00 Determination of the physico-chemical properties of extracted biodiesel from palm kernel oil. A. F. Alonge, E. Ituen, A. Enyong (CSBE11-211)

3:30-5:10 Technical Session 3
<table>
<thead>
<tr>
<th>Session 3a</th>
<th>Livestock Buildings / Odour (Room: Ballroom West)</th>
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<tbody>
<tr>
<td>3:30-3:50</td>
<td>Evaluation of engineering and management control measures for improving air quality in swine production. Y. Jin, B. Predicala (CSBE11-300)</td>
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<tr>
<td>4:10-4:30</td>
<td>Greenhouse gas emissions from three housing systems for laying hens. S. Fournel, F. Pelletier, S. Godbout, R. Lagacé, J-P Larouche, S. Lemay (CSBE11-302)</td>
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<tr>
<td>4:30-4:50</td>
<td>Controlling gas emissions from swine facilities using zinc oxide nanoparticles. A. Alvarado, B. Predicala (CSBE11-303)</td>
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<tr>
<th>Session 3b</th>
<th>Renewable Fuels - Biomass (Room: Ballroom East)</th>
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<tr>
<td>3:30-3:50</td>
<td>Catalytic fast pyrolysis of biomass for the third generation biofuels. L. Wei (CSBE11-305)</td>
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<td>4:10-4:30</td>
<td>The potential of forage sorghum as a direct combustion biofuel. T. Rennie, A. Tubeileh (CSBE11-307)</td>
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<td>4:30-4:50</td>
<td>Direct microbial conversion. V. Agbor, W. Blunt, C. Durtialh, N. Cicek, R. Sparling, A. Berlin, D. Levin (CSBE11-308)</td>
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<th>Session 3c</th>
<th>Renewable Energy Issues (Room: Prairie Salon)</th>
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<td>3:30-3:50</td>
<td>Development of a comparative renewable energy decision support tool. D. Roth, S. Shaw, B. Van Heyst, D. Lubitz (CSBE11-310)</td>
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<td>4:30-4:50</td>
<td>Assessment of biomass conversion pathways based on energy and water requirement. S. Singh, A. Kumar, B. Ali (CSBE11-312)</td>
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<th>Session 3d</th>
<th>Bioprocessing (Room: River Salon)</th>
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<td>3:30-3:50</td>
<td>Protein content and antioxidant activity of distiller’s spent grains (DSG) dried under different conditions. M. Flores-Alvarez, M.E. Sosa-Morales, S. Cenkowski, J. Paliwal (CSBE11-313)</td>
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<td>3:50-4:10</td>
<td>Current and potential applications of distiller’s spent grains. P. Johnson, J. Paliwal, S. Cenkowski (CSBE11-314)</td>
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<td>4:10-4:30</td>
<td>Drying and physico-chemical characteristics of wheat distiller’s grain with solubles prepared from varying WDG:CDS blends. M.R. Mosqueda, L. Tabil (CSBE11-315)</td>
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<tr>
<td>4:30-4:50</td>
<td>Angle of repose of superheated steam dried distillers spent grain. P. Johnson, S. Cenkowsk, J. Paliwal (CSBE11-316)</td>
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</table>
Physico-chemical characteristics of wheat distiller’s dried grains with solubles sourced from a Saskatchewan ethanol plant. M.R. Mosqueda, L. Tabil (CSBE11-317)

Tuesday, July 12, 2011

8:00-5:00 Day-Long Tours

Wednesday, July 13, 2011

8:00-10:00 Panel Discussion (Rooms: Ballroom West & Ballroom East)
Eric Bibeau “Achieving 50% Renewables by 2030 in Manitoba”
Jeremy Langner “Five Bioenergy Demonstration Projects”
Tom Molinski “The Drivers and Barriers for Emerging Energy Technologies”

10:00-10:30 Refreshment Break

10:30-11:50 Technical Session 4

Session 4a Green Buildings (Room: Ballroom West)
10:30-10:50 Development of a renewable energy demonstration building to support on-line training. R. Baron, M. Mathison, S. McInroy (CSBE11-400)
10:50-11:10 Load, thermal and moisture behaviour of Manitoba hemp for use in hempcrete wall systems in a northern prairie climate. J. Pinkos, K. Dick (CSBE11-401)
11:10-11:30 Preliminary results of thermal, energy and moisture monitoring of six wall systems. K. Dick (CSBE11-402)
11:30-11:50 Results of a research programme to investigate the load-deformation performance of metal truss plate laminated posts. K. Dick, K. Fedirchuk, J. Pinkos, D. Orchard (CSBE11-403)

Session 4b Renewable Fuels – Livestock Waste (Room: Ballroom East)
10:30-10:50 Design and commissioning of a pilot-scale solid state anaerobic digester for the Canadian prairies. J. Agnew, P. Lung, B. Lung (CSBE11-404)
10:50-11:10 Anaerobic fermentation of swine manure to increase P removal by struvite precipitation. J. Ackerman, N. Cicek, J. Oleszkiewicz (CSBE11-405)
11:10-11:30 Design of a pilot-scale anaerobic digester for liquid swine manure. N. Cicek (CSBE11-406)

Session 4c Livestock Buildings / Odour (Room: Prairie Salon)
10:30-10:50 Evaluation of water use and water conservation strategies available in swine industry. Y. Jin, E. Navia-Richards, B. Predicala (CSBE11-407)
11:10-11:30 Comparison of greenhouse gas emissions from three laying hens production systems based on life cycle assessment. F. Pelletier, S. Fournel, S. Godbout, M. Belzile, S. Lemay, J.R. Feddes (CSBE11-409)
11:30-11:50 Assessing acceptable odour levels. A. La, J. Allston, Z. Gao, Q. Zhang, H. Guo (CSBE11-410)

Session 4d Renewable Fuels - Biomass (Room: River Salon)
10:30-10:50  Harvest of willow plantations under intensive management with a biobaler. P. Savoie, P.L. Hébert, F-S Robert, M. Labrecque (CSBE11-411)
10:50-11:10  Biomass experience at Case New Holland. J. Henry (CSBE11-412)
11:10-11:30  Evaluation of energetic potential of vegetable biomasses. F. Farias, K. Tannous (CSBE11-413)
11:30-11:50  Energy production from direct combustion of agricultural biomass on farm. S. Godbout, F. Pelletier, J. Palacios, S. Lemay, D. Bussieres, P. Brassard (CSBE11-414)
12:00-1:30  Lunch
1:30-3:30  Technical Session 5

Session 5a  Processing of Agricultural Fibres (Room: Ballroom West)
1:50-2:10  Optimization of acid hydrolysis parameters for the nao-sizing of flax fibres. B.A. Siaotong, L. Tabil, S. Panigrahi (CSBE11-501)
2:30-2:50  Stochastic modeling of hemp fibre-core interface. Y. Chen (CSBE11-503)
2:50-3:10  Drying characteristics of microwave, microwave-convection, and microwave-vacuum treated flax fibre. A. Tripathy, S. Panigrahi, V. Meda (CSBE11-504)

Session 5b  Renewable Fuels – Ethanol (Room: Ballroom East)
1:30-1:50  Optimizing the debranning of wheat for incorporation in animal feed production. E. George, B. Rentsen, L. Tabil, V. Meda (CSBE11-506)
1:50-2:10  Juice extraction from sweet sorghum and sweet pearl millet for bioethanol production. M. Crépeau, M. Khelifi, A. Vanasse, P. Seguin, G. Tremblay (CSBE11-507)
2:10-2:30  Selection of nutrients to optimizecellulosic ethanol production under high solid loadings. R. Islam, E. Hossain, R. Sparling, N. Cicek, D. Levin (CSBE11-508)
2:30-2:50  In silico analysis of Clostridium termitidis genome for biofuel synthesis pathways. S. Lal, D. Levin (CSBE11-509)
2:50-3:10  Starch analysis and fermentation characteristics of high starch, low protein varieties of winter wheat for bioethanol production. A. Menon, N. Cicek, M. Izydorczyk, A. Brule-Babel, D. Levin (CSBE11-510)
3:10-3:30  

Session 5c  Biomass Processing (Room: Prairie Salon)
1:30-1:50  Physico-chemical characteristics of densified untreated and microwave-chemical pretreated canola straw grind. M. Kashaninejad, L. Tabil (CSBE11-511)
1:50-2:10  Drying characteristics of forage sorghum. T. Rennie, D. Mercer, A. Tubeileh (CSBE11-512)
2:10-2:30  A comprehensive analysis of the factors affecting densification of barley, canola, oat and wheat straw grinds. P. Adapa, L. Tabil, G. Schoenau (CSBE11-513)
2:30-2:50  Effect of pretreatment and densification on hydrolysis of lignocellulosic barley straw. S. Raamanathan, L. Tabil (CSBE11-514)
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<td>Study of hydrodynamic behavior of waste wood in a gas-fluidized bed.  A. G. De Mitri, K. Tannous (CSBE11-516)</td>
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**Session 5d**  
**Bioproducts & Renewable Fuels (Room: River Salon)**

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<td>1:30-1:50</td>
<td>Characterization of PHA synthase genes of Pseudomonas LS46 and construction of recombinant Pseudomonas strains for PHA production.  P. Sharma, J. Fu, D. Levin (CSBE11-517)</td>
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<td>1:50-2:10</td>
<td>Use of flaxseed oil for biopolymer development.  A. Rana, S. Panigrahi, L. Kushwaha, P. Chang (CSBE11-518)</td>
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<tr>
<td>2:10-2:30</td>
<td>A biochemical study of bioproduction of an alditol in a batch system.  M. Soleimani, L. Tabil, S. Panigrahi (CSBE11-519)</td>
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<td>2:30-2:50</td>
<td>Mining the Clostridium termitidis genome for cellulosomal components.  R. Munir, S. Lal, D. Levin (CSBE11-520)</td>
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<td>2:50-3:10</td>
<td>Medium chain length Polyhydroxyalkanoates from Pseudomonas LS46.  J. Fu, P. Sharma, D. Levin (CSBE11-521)</td>
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**Conference Finished!**