

January 2012

OBPG Bulletin



Ontario Biomass Producers Group

2nd Annual General Meeting of the Ontario Biomass Producers Group

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Ontario Biomass Producers Group

Annual General Meeting

Wednesday, February 8, 2012

Schedule:

1:00 pm-2:30 pm

Ontario Biomass Producer's Group AGM & Guest Speaker
Dr. Gord Surgeoner, President, Ontario Agri-Food Technologies.
[45-min. AGM / 45-min. Speaker]

2:30pm-3:30pm

Agriculture and Agri-Food Canada – Biomass Inventory Mapping
and Analysis Tool (BIMAT) [60mins.] Mark Stumborg, P.Eng.,
Head, Applied Science Agriculture and Agri-Food Canada

3:30pm-4:30pm

Biomass Panel: Mark Stumborg, Dr. Gord Surgeoner and two
OBPG members

Location: Canadian International Farm Show
Toronto International Centre
Aviation 'A' Ballroom – Hall 5

Members and Non-Members are welcome to attend!

Memberships will be available!

About our Guest Speaker

Dr. Gord Surgeoner
President
Ontario Agri-Food Technologies

Dedicated leader is perhaps the best way to describe Gord Surgeoner. During his 30-year career, he has worked tirelessly to promote initiatives and champion causes that he believes are important to the well-being of the agri-food industry.

After completing his Bachelor of Science in Agriculture in 1971 at the University of Guelph, Dr. Surgeoner went on to obtain a Master's degree in Economic Entomology in 1973, also from Guelph and a Ph.D. in Forest Entomology in 1976 from Michigan State University. Gord became an esteemed professor at the University of Guelph in Environmental Biology and Plant Agriculture, where he remained on faculty until his retirement in 2004.

Since his secondment from the University of Guelph in 1999, Gord has been the President of Ontario Agri-Food Technologies, a non-profit organization consisting of members from farm associations, universities, industry and governments. The organization focuses on ensuring that Ontario producers have access to the latest technologies to compete globally and to develop new market opportunities, many of which are beyond food.

In September, 2005 Dr. Surgeoner was invested with the Order of Ontario. This distinguished award recognizes Dr. Surgeoner's significant contribution to Ontario's agri-food sector.

In addition, Gord has also received the 2011 Life Sciences Ontario Community Service Award, the 2007 University of Guelph Alumnus of Honour Award, the 1989 Distinguished Teaching Award from the Ontario Agricultural College Alumni Association, the 1994 T.R. Hilliard Award for Notable Contribution to Agricultural Extension in the Province of Ontario, an endowed Chair of the University of Guelph bearing his name, the 2002 Award for Contribution to Advancing the Benefits of Biotech for Canadians, and is a recipient of the Queen's Golden Jubilee Award.

Gord is a strong advocate for Canadian agriculture, the Canadian regulatory system and the opportunities Canada has in a global marketplace.



About our Guest Speaker

Mark Stumborg, P.Eng

Mark Stumborg, P.Eng was born and raised on a mixed farm in North Central Saskatchewan. Mark attended the University of Saskatchewan, receiving a B.Sc.E. (Agric.) with distinction in 1980, and an M.Sc.E. in 1986.



From 1980 to the present, Mark has been employed by Agriculture and Agri-Food Canada - Research Branch, working in the areas of industrial uses for agricultural materials, renewable energy and biofuels, and equipment design for research needs within the agriculture sector. The focus of Mark's work involves the development of sustainability criteria and modelling of crop residues available for harvest, the harvest systems required for economic collection of biomass, and the integration of the collection system with bioenergy and bioproduct conversion systems.

Areas of Expertise:

- agricultural design engineering
- bio-processing/biofuels/renewable energy
- biomass harvest systems

Current Projects:

Crop Residue Harvest Systems

Affiliations:

- Canadian Society of Agricultural and Bioresource Engineering
- Society of Automotive Engineers
- Association of Professional Engineers and Geoscientists of SK

Research Publications:

2011: Ebadian, M., Sowlati, T., Sokhansanj, S., Stumborg, M., and Townley-Smith, L. (2011). "**A new simulation model for multi-agricultural biomass logistics system in bioenergy production.**", *Biosystems Engineering*, 110(3), pp. 280-290. doi: 10.1016/j.biosystemseng.2011.08.008

2010: Stephen, J.D., Sokhansanj, S., Bi, X., Sowlati, T., Kloeck, T., Townley-Smith, L., and Stumborg, M. (2010). "Analysis of biomass feedstock availability and variability for the Peace River region of Alberta, Canada.", *Biosystems Engineering*, 105(1), pp. 103-111. doi: 10.1016/j.biosystemseng.2009.09.019

2010: Stephen, J.D., Sokhansanj, S., Bi, X., Sowlati, T., Kloeck, T., Townley-Smith, L., and Stumborg, M. (2010). "The impact of agricultural residue yield range on the delivered cost to a biorefinery in the Peace River region of Alberta, Canada.", *Biosystems Engineering*, 105(3), pp. 298-305. doi: 10.1016/j.biosystemseng.2009.11.008

Steppuhn, H., McDonald, T., Dunn, R.F., and Stumborg, M. (2010). "Biodiesel fuel quality of canola feedstock grown on saline land.", *Biological Engineering (ASABE)*, 2(3), pp. 165-179.

2011 In Review From A Biomass Perspective

By: Urs Eggimann,
OBPG Vice President

The past year gave us numerous indications that biomass will play a far more significant role than we have seen in the past. Especially in our province we have witnessed some major encouraging events and milestones. What is most remarkable is the fact that progress is being made on all fronts; biomass related research, production, as well as processing.

A lot of really exciting discoveries have been made and perfected in biomass research in our province. Especially one process from the researchers of the University of Guelph stands out. This innovative group came up with a formula where recycled plastic gets reprocessed and mixed with biomass, resulting in environmentally friendly consumer products, like stackable bins, containers and even car parts.

For biomass producers this plastic story is really huge. It is very hard to imagine where this discovery can lead. Considering that not too long ago, purpose grown agricultural biomass was almost exclusively associated with energy, this could be a real game changer in our industry. With the new reality of low natural gas prices in North America, seeing an alternative to biomass based energy production is a very welcome fact for biomass producers.

The Bioeconomy Research Highlights Day and Expo, organized by the University of Guelph, presented a very encouraging year-end picture for our biomass industry in Ontario. On an international scale, Canada does not rank highly on the bioresearch front. Fortunately, our province bucks this trend and has emerged as a leader in several areas, especially in the automotive sector.

Purpose grown agricultural products have often been mentioned in the context of ethanol production. Insufficient research has been performed to-date, to make this a mainstream market. The current ethanol production processes, mostly corn input based in North America, only yield modest energy gains. Purpose grown biomass, like switchgrass, is promising, but has not come to the forefront, yet. A research team at the Purdue University might have changed this situation. The Purdue biomass researchers discovered a pretreatment process where the yield of ethanol from switchgrass can be increased drastically. Instead of producing 150-250 gallons of ethanol from an acre of switchgrass, the research team has come up with a target of 800-1000 gallons per acre. As a comparison corn currently yields about 500-600 gallons per acre. Considering that the input costs for switchgrass are much lower, this new discovery could open an attractive market opportunity for biomass producers.

Even though we have made significant progress in Ontario, in European countries like Denmark, Germany, Austria and others, we can find very advanced biomass based combustion units that are not available on our continent, yet. A significant new type of furnace category is now able to burn biomass without having to go through a biomass pelleting or briquetting process. Instead of using pellets or briquettes, these units can process entire bails of straw or switchgrass, which reduces the cost of the heating material considerably.

2011 In Review from a Biomass Perspective ... continued

A noteworthy mention is the field research project of the Ontario Soil and Crop Improvement Association. This program has attracted 27 cooperators of all parts of Ontario. These biomass pioneers have planted various types of biomass, like Miscanthus, Switchgrass, Big Bluestem and other tall grasses on over 750 acres. Some of the participants who joined the “fast track” program in 2010 will have their first harvest this year. This successful program is conducted in close cooperation with the University of Guelph and OMAFRA.

For the first time OSCIA and OMAFRA in cooperation with the University of Guelph organized a 6-day biomass tour; an event that included stops at biomass producer farms, biomass research sites, pellet mills, biomass stove manufacturers and processing of biomass based plastic articles.

Another first is OSCIA’s 4-acre Miscanthus and Switchgrass demonstration plot at the Canadian Outdoor Farm Show in Woodstock. This test plot will undoubtedly improve awareness of biomass production in the farming community.

Further progress has been achieved on the Switchgrass research side. REAP-Canada has come up with new cultivars that produce a higher yield. Future research will concentrate on the characteristics of switchgrass, by improving the fiber content, reducing lodging, improve vigor and generate additional yield gains.

Our provincial switchgrass leader, Don Nott, has stepped up his operation to the next level. With his added biomass acreage he is now, according to REAP-Canada, the top Switchgrass producer in Canada. Nott Farms was leading the way with the Switchgrass Fall Mowing – Spring Harvesting concept. In 2011 Nott Farms proved with a successful Spring Wheat / Switchgrass nurse crop concept, that it is possible to produce income during the year of establishment. In the past year Nott Farms made also major breakthroughs on the processing side with the introduction of a plastic recycling program as well as being the major biomass contributor for the production of biomass based plastic products. More exciting projects are in store for this year, including the cooperation with a production facility of fibreboards, with an 85% biomass content.

Another positive indicator is the biomass program content of the 2012 growing the Margins Conference in London, ON. Unlike last year, biomass has now a considerably higher presence than solar. Many of the major players in the biomass industry will be present at this event.

Trying to look into the biomass crystal ball of 2012, we will most likely witness major progress on all fronts. It can be expected that a lot more people, who are currently on the sideline, will become active participants of the biomass supply chain. As an organization of producers we have to be proactive, get organized and prove to the industry that we are reliable suppliers going forward. The Ontario Biomass Producers Group is currently the only province wide organization representing the interest of biomass producers. The membership number of the group is still on a modest level and needs to grow substantially to be able to successfully protect producers’ interests. To help shaping the biomass industry to a significant part of our economy, producers need to demonstrate leadership.

Ontario Biomass Producers Group

Who we are:

Ontario Biomass Producers is a group of Ontario farmers exploring the sustainable production and marketing of biomass. This group is open to all Ontario farm operations, from small to large scale.

We are currently exploring:

We are currently exploring:

- Marketing opportunities
- Production of purpose grown biomass crops
- Harvesting of crop by-products
- Further processing of biomass (ie. pelleting) to suit markets
- Transportation and storage issues
- Generating or co-generating electricity from biomass
- Structure and financing options for a biomass production co-op or corporation
- Densifying of biomass (ie. pelleting, briquetting)
- Biomass based heat energy
- Biomass for the production of plastic products
- Biomass for the production of fibre based building materials
- Animal bedding (dairy, pet market, etc.)

We're on the web!

<http://ontariobiomass.com/>

OBPG Executive

President:	Jamie Fisher	905-336-7499	james.fisher@ontariobiomass.com
1st Vice President:	Urs Eggimann	519-794-0313	urs.eggimann@ontariobiomass.com
Secretary/Treasurer:	Nancy Comber	905-878-4955	info@ontariobiomass.com
Directors:	Mike Faulkner	519-856-0779	m.j.faulkner@everus.ca
	Lieven Gevaert	519-856-4529	gevaert1940@yahoo.com
	Peter Lambrick	905-854-9957	lambrickfarms@primus.ca
	David Lyons	905-838-3550	lyonsdale9@hotmail.com