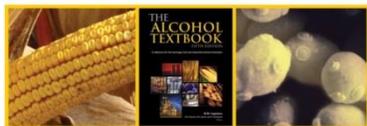


## The Alcohol School 2013



### The Alcohol School 2013 Montreal Recap

The Ethanol Technology Institute has just completed its 2013 Alcohol School held in Montreal, Quebec from Sept 15-20. Approximately 70 delegates from both fuel ethanol and beverage distilling companies from 10 different countries attended the week long course.

A continued emphasis was placed on attracting beverage alcohol delegates with an increase in more specific beverage related topics and the introduction of new speakers. We believe that this was, again a truly spectacular session, in part due to the quality of material and the speakers that we were able to attract to the school.

### Course Agenda

The delegates listened to an Industry overview from both Fuel Ethanol and Distilled Beverage perspectives, from what is happening currently and the future challenges facing both industries. Other presentations ranged from the impact of fuel ethanol on beverage alcohol production, substrate selection and composition from both starch and sugar based substrates, grain receiving, storage and milling (both wet and dry), and subsequent mash preparation. Lectures on fermentation basics and nutrition and the processing of sugar based feedstocks for fermentation were also featured.



Novel methods of dry grind processing, traditional enzymes and enzymes needed as processing aids, high gravity fermentation technology, anaerobic digestion, cellulose technology and biomass usage were interwoven with discussions on analytical methods techniques and the need for proper cleaning and sanitation to preserve ethanol yields.

Emphasis on yeast production, propagation, and nutritional requirements were discussed as well as processing basics such as distillation, molecular sieves, and dry house technologies. The topics of new developments and technologies were

discussed and new and novel yeasts for ethanol production were given to introduce delegates to new technology coming to the industry. The relevant topics of water reuse and energy balance in operating facilities were discussed with practical applications for all in attendance. The finale consisted of the topics of 2<sup>nd</sup> generation feedstocks, enzymes, and operating capabilities and implementation. A pertinent discussion on a nutritionist's view of DDGS and how we can improve the quality and consistency to open up more markets to this valuable co-product were reviewed. This session ended with the role of biorefineries in the alcohol industry and looking at the challenges facing the alcohol industry and some of the technical opportunities for the future.

For the breakout sessions in the Beverage stream, the topics dealt with specific information on raw materials (starch and sugar based) used in various beverage processing facilities, mashing and fermentation of potable spirits, and key elements of distillation for beverage alcohol. Other lectures consisted of specific flavour distillation techniques and key analytical methods in beverage alcohol production. Informative discussions on Whiskey Yeasting Methods and Continuous improvement tools in a distillery were discussed. And finally a talk about rum production in various parts of the world was given.

One of the highlights of the North American program was the special beverage tasting event in Les Voutes, a series of three caves underneath the hotel. These caves were an integral part of the fortifications of Old Montreal and provided a fantastic setting in which various spirits like tequila, whisk(e)y, rum, vodka, gin, pisco, wine and beer were tasted.



This event gives everyone an opportunity to experience various types of spirits and understand some of the knowledge learned throughout the course. It also gave the delegates a chance to interact and ask questions of the presenters in a more relaxed social setting.

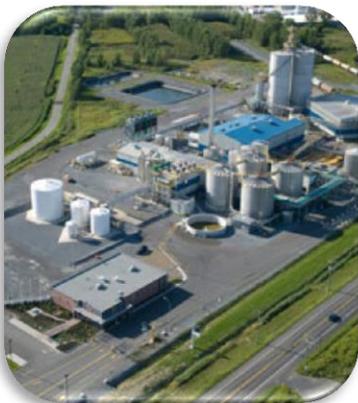


## Practical Applications

In addition to the lectures, tours of various facilities were interwoven into the program to provide the delegates a focus on facts discussed in lectures. In the North American School, tours of Lallemand's (BRI) laboratory facilities took place in order for the delegates to better understand microscopy (general and fluorescence), basic microbiology, culture collection, molecular biology, yeast and bacterial fermentations, and pilot scale alcohol fermentation. Discussions on probiotic bacteria and how Lallemand's Animal Nutrition division cross links to alcohol production through Distillers Dried Grains and their nutritive value which is important to feed nutritionists were also presented.



Delegates also visited Lallemand Inc.'s (Prefontaine) yeast plant to learn how yeasts are produced, processed and distributed in its various forms to industries around the world.



Visits to an ethanol production facility (Éthanol GreenField - Varennes, Québec) provided delegates with an opportunity to view a first class fuel alcohol facility and to see in practice some of the techniques and knowledge learned from the lectures.

**GREENFIELD**  
ETHANOL

A visit to Diageo Global Supply (Salaberry-de-Valleyfield, Québec) provided another perspective in alcohol production from the distilled beverage point of view. Demonstrations such as distillation and a sensory tasting panel were given to get a feel for not only the science, but also the art of making alcohol for the distilled beverage industry.



### **Next Course**

We are happy to announce the following dates: the 2014 Alcohol School(s) will be held April 7-11 in Toulouse, France and September 14-19 in Montreal. We hope to see you there! Look for more information on our website at [www.lallemandbds.com](http://www.lallemandbds.com).