

**FOR EXTERNAL RELEASE  
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## **The Alcohol School 2009 Montreal Recap**

The Ethanol Technology Institute has just completed its 2009 Alcohol School in Montreal, Quebec, Canada held September 14-18. Delegates from 8 different countries from both fuel ethanol and beverage distilling companies attended the week long course making this a truly exceptional event.

### **History**

The Alcohol School started out as a relatively small forum, growing moderately as the industry grew from 1980 to 2003. It provided valuable information in a format that continues to this day. In 2004, Lallemand Ethanol Technology (LET), a business unit of Lallemand, Inc., one of the world's foremost yeast supply companies, took over the management of the school under its educational arm, the Ethanol Technology Institute. The updated 29<sup>th</sup> annual 2009 Alcohol School continued as an important educational resource for fuel ethanol and distilled beverage producers, providing valuable scientific insight into the processing of alcohol.

### **Course Objectives**

The School is designed to educate delegates in both fuel ethanol and beverage alcohol. This year, increased emphasis was made on beverage alcohol production and as a result two separate breakout sessions were dedicated to each area. The North American Alcohol School covers unit operations extending from milling to ethanol and coproducts. The program is designed for lab, plant, and management personnel and is organized around lectures, laboratory demonstrations and plant visits. This important resource has become more valuable with the downturn in the economy. Now is the perfect time to invest in re-education for plant personnel. A minimal investment will pay back many times over in plant troubleshooting and problem solving; the need for continual education is a must!

### **Course Agenda**

The delegates listened to an industry overview from both Fuel Ethanol and Distilled Beverage perspectives, how the growth of both industries has occurred and what the future holds. Other presentations covered substrate selection and composition, new corn varieties, grain receiving, storage and milling (both wet and dry), and subsequent mash preparation. Lectures on fermentation (batch and continuous), and the processing of sugar beets, cane juice and molasses for fermentation were featured. Other subjects included use of traditional enzymes and enzymes used as processing aids, data variability between operating facilities, high gravity fermentation technology,

cellulose technology and biomass usage, discussions on pollution abatement and the need for proper cleaning and sanitation to preserve ethanol yields. Emphasis on yeast production, propagation, and nutritional requirements were stressed as well as unit operations including distillation, molecular sieves, and dry house technologies. The challenges of analytical methods used in process monitoring and a pertinent discussion on a nutritionist's view of DDGS and how industry can improve the quality and consistency to increase markets of this valuable co-product were reviewed. A relevant and timely topic of water and energy balance in operating facilities was discussed with practical applications for all in attendance. The finale consisted of looking at the challenges facing the alcohol industry and some of the technical opportunities for the future.

For the breakout sessions on the beverage side, the topics dealt with specific information on raw materials used in various beverage processing facilities, mashing and fermentation of grains used in potable spirits, distillation for beverage alcohol, and a special section on maturation and blending of potable spirits. Other lectures consisted of selected quality control procedures, general yeasting practices in beverage alcohol facilities and a case study involving one of the fastest growing sectors in potable spirits production - cachaça, a Brazilian spirit typically used in caprihinas. In addition, informative talks on the selection of specialty yeasts for various spirits and the differences in whisky production from various regions were given leading to a panel discussion centered on various hot topics within the beverage industry featuring panellists from both the production and services sides of this industry.

One of the highlights of the North American program was the special beverage tasting event in the 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, whiskey, rum, vodka, gin, pisco, wine and beer were tasted. Award winning, locally produced, blueberry and potato vodkas were also 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.

The event this year was extra special as members from the Lallemand Board of Directors were able to attend and mingle with the delegates to get a first hand opportunity to see what makes the Alcohol School so special!

### **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 is important to nutritionist 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.



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 panel were given to get a feel for not only the science, but also the art of making alcohol for the distilled beverage industry.



## Future Education

Interest in both of Lallemand's Alcohol Schools (Europe and North America) and Operators Schools has been high over the past few years. In response, the Ethanol Technology Institute, run by Dr. Mike Ingledew, has constantly improved not only the quality but the relevance of the topics. Every year new topics are reviewed to ensure that current technologies and operating procedures are considered for inclusion into the agenda. Constant improvement is required to achieve our goal of providing the best educational experience possible. It is the belief of the Ethanol Technology Institute through the response of former delegates, that the Alcohol School with its padfolio of colored prints of each talk, combined with the fifth edition of *The Alcohol Textbook* (provided as part of tuition to each attendee) provides the right mix of educational materials to the industry. *The Alcohol Textbook* (now in its 5<sup>th</sup> Edition) is the only textbook in the field of alcohol production that covers fuel alcohol production in detail along with discussions of beverage alcohol production technologies. Chapters

are written by industry-leading experts in their field, as well as by Lallemand Ethanol Technology's own senior staff.

One of the unique differentiating features of The Alcohol School is the use of these experts and Lallemand Ethanol Technology senior staff. The partnership is invaluable in order to present a high quality program year after year to the industry. Many speakers have 15-25 years of experience in industry education. Lallemand Ethanol Technology and The Ethanol Technology Institute, with Professor Emeritus Mike Ingledew as the Scientific Director, are proud to have been a part of this tradition for the past 6 years and look forward to many years to come.

We are currently finalizing the dates for next year's Alcohol Schools and will provide this information as soon as it becomes available. We hope to see you there! Look for more information on our website at [www.ethanoltech.com](http://www.ethanoltech.com).