

Mario Lucio Lopes

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Agronomist graduated by the “Universidade Para o Desenvolvimento do Estado de Santa Catarina” (UDESC), Brazil, in 1990. Master of Science in Nuclear Energy by the “Centro de Energia Nuclear na Agricultura” (CENA), São Paulo, Brazil in 1995 and PhD in Biological Sciences–Applied Microbiology by the “Universidade Estadual Julio de Mesquita Filho” (UNESP), São Paulo, Brazil, in 2000. Began to work in Fermentec at 1997 as microbiologist and after 3 years started as assessor of the president Dr. Henrique V. Amorim. In 2001 implemented the Fermentec On-line System to organize data and information about more than 50 Mills and Distilleries in Brazil. After two years, started as Coordinator of Technology of the Information and implemented the Internal System of Management (SIG) to organize all scientific and analytical results from Fermentec laboratories. Today, Fermentec has a historical data bank of more than 60 industries, with 120 industrial parameters that are measured weekly and evaluated by statistical analyses at end of each crop season. In addition, it was created a data bank with all samples and analysis carried out by Fermentec for distilleries. In 2007 became Scientific Coordinator of Research and Analysis in Fermentec laboratories. Nowadays, 44 research projects have been carried out yearly in Fermentec or in collaboration with Universities and Research Institutes in Brazil and outside. Since 2000, Mario L. Lopes organizes the Fermentec Annual Meetings for more than 300 people. These annual meetings have been held for transfer of technology to industries that produce around 40% of all sugar and alcohol in Brazil.

Main research activities

- Yeast genetic and physiology, nutrition, alcoholic fermentation, microbiology and contamination of sugar and alcohol production.
- Development and adaptation of analytical methods for quality control labs in sugar mills and distilleries, involving chemical and microbiological analyses.
- There are also projects to optimize the fermentation and the use of yeast byproducts.
- Selection of new yeasts strains by the karyotyping and mitochondrial DNA.
- Sugar cane Juice clarification, tests of new products and equipments for sugar and alcohol industries.

Key Publications

AMORIM, H.V. ; BASSO, L.C.; **LOPES, M. L.** . Sugar cane juice and molasses, beet molasses and sweet sorghum: composition and usage. In: W.M. Ingledew; D.R. Kelsall; G.D. Austin; C. Kluhspies. (Org.). The alcohol textbook: a reference for the beverage, fuel, and industrial alcohol industries. 5 ed. Nottingham: Nottingham University Press, 2009, v. 1, p. 39-46.

GODOY, A; AMORIM, HV ; **LOPES, M. L.** ; OLIVEIRA, A. J. . Continuous and batch fermentation processes: advantages and disadvantages of these processes in the Brazilian ethanol production. International Sugar Journal, v. 110, p. 175-181, 2008.

BASSO, LC;AMORIM, HV ; OLIVEIRA, A. J. ; **LOPES, M. L.** . Yeast selection for fuel ethanol production in Brazil. FEMS Yeast Research, v. 8, p. 1155-1163, 2008.

SIMIONI, K. R.; SILVA, L.F.L.F; Barbosa V. ; RÉ, F. E. ; BERNARDINO, C.D.; **LOPES, M. L.** ; AMORIM, H.V. Efeito da variedade e época de colheita no teor de fenóis totais em cana-de-açúcar. STAB. Sociedade dos Técnicos Açucareiros e Alcooleiros do Brasil, v. 24, p. 36-39, 2006.

AMORIM, HV; **LOPES, M. L.**. Ethanol production in a petroleum dependent world: The Brazilian experience. Sugar Journal, Louisiana, v. 67, n. 12, p. 11-14, 2005.