ISSCT CO-PRODUCTS WORKSHOP

PIRACICABA, SãO PAULO, BRAZIL
14 - 18 July 2003

ETHANOL PRODUCTION AND USE

- INTRODUCTION
- **PROGRAMME**
- REPORT
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PROGRAMME AND THEMES

Thirty papers were presented during two days of auditorium sessions These were followed by two days of visits to four sugar mills.

After the oral presentations of about 15 minutes each, five minutes were devoted to questions. Each session consisting of **5** presentations on average was followed by overall discussion on the theme concerned.

The Workshop Programme is presented below:

Monday July 14
Workshop Registration (Antonio's Palace) Welcome reception (Antonio's Palace)
Tuesday July 15
Session 1: Opening
Session 2: Ethanol Programs in Brazil and other Countries • Ethanol: renewable fuels evolution in Brazil *Luiz Carlos de Carvalho* • Bioethanol as an oxygenator for automotive gasoline: still a possibility in Colombia *C. O. Briceño* • Introduction of a new alcohol and yeast complex in Iran *E. Rezaee and M. A. Parsafar* • Potential for fuel ethanol in the Guyana sugar industry *H. Davis and L. Stuart* • Discussion
Session 3: Automotive use of ethanol • Vehicular application of ethanol fuel *H. Joseph Jr.* • Environmental aspects of fuel ethanol use in Brazil *A. Szwarc* • Specification and Quality of Fuel Ethanol *J. F. Silva Jr.* • Fleet test of Ethanol/Diesel blends in cane transportation trucks *Armando J. Dal Bem and Gilberto H. Azevedo Koike* • Discussion
Session 4: Alternative raw materials for ethanol production • DHR – Revolutionary process for producing alcohol from sugar cane bagasse *J. L. Olivério and A. G. Hilst* • Estimates of ethanol production from sugar cane feedstocks *B.P. Lavarack and R. Broadfoot* • Discussion

Session 5: Energy balance in ethanol production

- Energy reduction in distillation
  F. Seemann
- Integration of ethanol production with a sugar factory producing maximum cogeneration
  P. Avram
- Life cycle analysis of energy use in sugar/ethanol production
  I.C. Macedo and M. R. Leal
- Discussion

Session 6: Ethanol production technologies

- PDE process for beer-enrichment-based lowering of the steam consumption in an azeotropic dehydration of ethanol
  Sergio Barreira
- Ethanol dehydration by zeolite membrane
  K. Yamada
- Survival in a raw sugar mill through cogeneration and ethanol production
  D. Heck
- Discussion

Wednesday July 16

Session 6: continuation

- Antibiotics use reduction in continuous alcoholic fermentation
  I. Spina
- Evolution of ethanol production process in Brazil
  J. Finguerut
- Productive diversification of Guabira Sugar Factory
  A. Vera
- Discussion

Session 7: By-products of the ethanol production

- Alternatives for use of yeast and its products
  K. H. Leimer
- Sugar plant based co-products and cogeneration at the Andhra Sugars
  N. Mullapudi
- Use of vinasse in fertirrigation
  J. L. Donzelli
- Discussion

Session 8: Other Co-products from sugar cane

- A review of sugar cane potential for the production of chemical products
  C.E. Rossell
- Biodegradable plastic (PHB) from cane sugar – CTC production process
  Paulo Eduardo Montellato and C.E. Rossell
- Biocomposting of sugar mills effluents
  Z. Mehmood
- Discussion

Session 9: Integration of Co-production with the sugar factory and energy cogeneration

- Sharing of revenues from cogenerated bagasse energy in Mauritius
  K. Deepchand
- Factors influencing surplus eletric production in bagasse cogeneration plants
  A.F. Lau et alli
- Energy balance in the combined production of sugar and ethanol
  C. Procknor
- Integration of DHR process with a typical sugar and ethanol factory
  D. Lahr Filho et alli
- Discussion

Session 10: Closing and discussion on future workshop
Thursday July 17
Visit to CTC
Departure to São Luiz AA Mill (Pirassununga)
Presentation about São Luiz AA Mill
Mill visit
Departure to Ribeirão Preto
Friday July 18
Departure to Santa Adélia Mill
Mill visit
Departure to Pedra Mill
Mill visit
End of Workshop