CELSO FOELKEL



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PERSONAL INFORMATION

Brazilian; born on April 05^{th} , 1948; married; two daughters; living in Rio Grande do Sul, South of Brazil.

EXPERTISE PROFILE

Fifty years of experience in the forest industry as manager, director, university professor, researcher, lecturer and international consultant.

Areas of expertise:

- > Eucalyptus (plantations, wood quality, fiber characteristics, pulping, papermaking, industrial utilization)
- > Sustainable forestry, fiber supply
- > Pulp and paper (industry, production, marketing, market pulps, end uses)

- ➤ Mill optimization : operational efficiencies and economic results
- ➤ Environment and quality (management; ISO 9000 and 14000; sustainable development, cleaner production, waste minimization, pollution control and prevention, environmental auditing for pulp and paper mills)
- > Business planning, competitiveness and strategy
- > Technology and innovation management
- > Information and knowledge management
- > Teaching and researching

EDUCATION

Agronomist, Major: Forestry, 1970 University of Sao Paulo, Brazil

Master of Science, Major: Pulp and Paper, 1974

State University of New York

College of Environmental Science and Forestry, Syracuse, NY, USA

Syracuse University, Syracuse, USA

➤ PhD "Honoris Causa": Forestry, 1997

Federal University of Santa Maria, RS, Brazil

INTERESTS AND SKILLS

Reading, Teaching, Learning, Speaking, Human Relations, Personal Development, Information Sources, Network Building, Technological Development, Business Excellence, Competitiveness, Environment-related activities, Photography, Nature, Eco-tourism

PROFESSIONAL EXPERIENCE

<u>December 1973 / March 1976</u>

Assistant Professor / Forestry Department University of São Paulo, Piracicaba, Brazil

April 1976 / July 1979

Manager of Quality and Research Celulose Nipo Brasileira S/A - CENIBRA Belo Oriente, MG, Brazil

August 1979 / May 1998

Riocell S/A

Manager of Quality, Research & Environment

Director of Technology & Environment

Guaíba, RS, Brazil

July 1998 ⇒

International Consultant Owner of Celsius Degree-Business with Knowledge Management Porto Alegre, RS, Brazil

Customers:

ABTCP, Abt Associates (USA), Alto Parana (Argentina), Aracruz, Arauco (Chile), Araupel, Bacell, Bracelpa, Celulosa Argentina (Argentina), CNTL -Brazilian National Center for Cleaner Production and Clean Technologies, Cambara, Cenex, Cenibra, Cenpapel (Colombia), Copesul, Corma(Chile), Don Cabral Business School, Eco Aguas, Eucatex, FANAPEL (Uruguay), FAO (Italy), IBA, IFC – International Finance Corporation, Imerys, International Paper do Brasil, Intertech (USA), Klabin, Massuh (Argentina), MD Papeis, Melbar, Morgan Price (USA), Netherlands Business Support Office, Nitro Quimica, Nobrecel, OACA (Peru), PCI Consulting, PUC/RS, Riocell, RISI, SBS (Brazilian Society of Forestry), Santher, São Roberto, Stora Enso/Derflin Agropecuaria, Suzano, Tappi (USA), Tres Portos, UCS (University of Caxias do Sul), UNIDO, Veracel, VCP

• Regular consulting work with:

<u>ABTCP</u> - Brazilian Technical Association of Pulp and Paper <u>CNTL</u> - Brazilian National Center for Cleaner Production and Clean Technologies

December 1998 / December 2000

Federal University of Santa Maria, Brazil Visiting Professor, Forestry Department Forest Products / Pulp and Paper Santa Maria, RS, Brazil

OTHER TEACHING ACTIVITIES

▶ 1977 – 1979

Federal University of Vicosa, MG, Brazil Pulp and Paper Graduate Course (MS) Visiting Professor

> 1979-1981

University of Sao Paulo , Piracicaba and Sao Paulo , Brazil Pulp and Paper Graduate Course (MS) Visiting Professor

> 1990-1998

Federal University of Santa Maria, Santa Maria, RS, Brazil Pulp and Paper Graduate Course (MS) Visiting Professor

- Adviser / co-adviser of 22 graduate students (MS level)
- Member of about 35 examination committees for Master and PhD Thesis defenses

ASSOCIATIONS & INSTITUTES: BOARD OF DIRECTORS & COMMITTEES

ABTCP, ABECEL, ANFPC, ANPEI, BRACELPA, CENEX, CEPEF, CNI, Embrapa Florestas, FAPERGS, FIERGS, IPEF, SIF, SINPASUL, TAPPI

✓ Presently Director for International Relations & Businesses of ABTCP – The Brazilian Technical Association of Pulp and Paper

ASSOCIATIONS: MEMBERSHIP

ASQ, ASQC, ACOTEPAC, APPITA, ATCP Chile, ATIPCA, ABCQ, ABES, ANAVE, CPPA, FPRS, IMAM, IUFRO, NGS, PAPTAC, PI/Finland, PIMA, SBS, SBPC, TECNICELPA, ZELLCHEMING, WEF, WWF

ACHIEVEMENTS & AWARDS

- Seven awards for distinguishing student in the academic studies
- Eighteen awards for best article / technical paper presented at the ABTCP (Brazilian Technical Association of Pulp and Paper) Congresses
- "Roberto Simonsen Institute" Technological Award, 1978
- CNPq Brazilian National Award for Technological Research, 1986
- ANPEI Technological Award, 1996
- ANAVE Distinguishing Member, 1997
- CMCN / UFV Environmental Conservation Award, 1997
- TAPPI Fellow Technical Association of the Pulp and Paper Industry / USA
- Honorary member of ABTCP/Brazil, TAPPI/USA

CONFERENCES, CONGRESSES, SYMPOSIUMS & EXHIBITS

- ➤ 600 events, many of them as speaker, in the following countries: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, France, Germany, Mexico, Norway, Portugal, Spain, Sweden, United Kingdom, Uruguay, USA, etc.
- > 80 participation in technical exhibits

COURSES

• 80 attended courses (worldwide basis)

Relevants:

- Competitiveness management, CENEX, Brazil
- Business planing, CENEX and USP, Brazil
- Cleaner production, CNTL SENAI, Brazil
- Eucalyptus pulping and papermaking, IPT, Brazil
- Finances and costs, UFRGS / Riocell, Brazil
- Laboratory management, IBP, Brazil
- Management (Behavior and Advanced levels), CENEX, Brazil
- Process economics and financial analysis, TAPPI / PIMA, USA
- Pulp bleaching, Pulp and Paper, USA
- Pulp refining, ABTCP, Brazil
- Quality management, IPT, Brazil
- Research experimental design, IPT, Brazil
- R&D Management, PACTO / USP, Brazil
- R&D Management, IMD / Lausagne, Switzerland
- Water Pollution Engineering, TAPPI, USA
- Wastewater and Residues: Treatment and Control, CETESB, Brazil

PUBLICATIONS

- 400 technical articles and columns published in journals, proceedings, and books in a worldwide basis
- Columnist or former columnist to O Papel magazine, Tappi Journal and Tecnicelpa
- More than 300 articles and speeches in the web site www.celso-foelkel.com.br
- Author of the Eucalyptus Online Book & Newsletter (www.eucalyptus.com.br) and PinusLetter (www.celso-foelkel.com.br)

PATENTS

- 3 patents registered in Brazil (bark utilization and pulp bleaching)
- 1 patent registered in USA (pulp bleaching)

RELEVANT WORK WITH CLEANER PRODUCTION & ENVIRONMENT

 Consultant on cleaner production and clean technologies, with continuous contract with CNTL – Brazilian National Center for Cleaner Production and Clean Technologies

- Implementation of Cleaner Production in Klabin Celulose Riocell, Cambara, Tres Portos, Nobrecel, Melbar.
- Researcher to UNIDO, writing the report "Assessing the Uptake of EST (Environmentally Sound Technologies) by the Pulp & Paper Industry in the South of Brazil"
- Researcher to NBSO/Netherlands Business Supporting Office at Rio Grande do Sul, writing the report "Market orientation for Clean Technologies in the Brazilian pulp & paper and printing industrial segments: two case-studies"
- Learder auditor in the International Environmental Audit for the Celulosa Arauco Valdivia mill, in Chile (first report available at the following web address: http://www.e-seia.cl/externos/fiscalizacion/archivos/digital_idExp25_idFis4499.pdf)
- International expert providing technical guidance about plantations and environmentally sound technologies for pulp production to IFC International Finance Corporation, in mediation of the questionings between Argentina and Uruguay in 2006
- Professor of the international course "Cleaner Production in the Pulp and Paper Industry", presented in Chile, Colombia, Peru, Brazil (several mills and associations)
- Professor of the course "Cleaner production to the chemical industry"
- Professor of the course "ISO 14001 and Environmental Auditing" at the Universidade de Caxias do Sul, Brazil
- Relevant experience in environmental impact assessment in plantation forestry, and pulp and paper mills and technologies