

# INDUSTRY NEWS

LATIN AMERICA CONTINUED

## CHILE

**Arauco** selected Kvaerner Pulping to upgrade its evaporation plant at Constitución. The delivery includes a new TUBEL® concentrator and engineering and design of a new effect 6.

## BRAZIL

### NEWS FROM CELSO FOELKEL IPEF: 30 YEARS OF FORESTRY RESEARCH AND DEVELOPMENT

IPEF—The Institute of Forestry Research and Studies—was opened in April 1968 at the University of São Paulo, College of Agriculture Luiz de Queiroz (ESALQ/USP), in Piracicaba, São Paulo. It was a pioneering and winning achievement involving the forest industry and the university. Today, IPEF is one of the most important research institutions in forestry worldwide. The success of this model is the close integration of the university and industry, with an orientation for results.

The history of the institute began in the mid-1960s, when the Brazilian federal government decided to promote the growth of the forest-based industry, providing tax incentives to those interested in planting forests. This program, although controversial today, was responsible for bringing a great dynamism to the forest sector in Brazil. At that time, knowledge about fast-growing plantations was also minimal. The most sophisticated techniques were yet to be developed, thanks to the association between important partners: industry and the forestry department of the University of São Paulo.

Professors Helladio do Amaral Mello and Ronaldo Algodual Guedes Pereira took the lead in bringing the interested parties together. Since more forests were scheduled to be planted, the question was how to do it in a more productive and environmentally friendly way. The answers had to be discovered through good science via research and academic studies. The initial emphasis was dedicated to the introduction of forest species, silviculture, seed production, and forest tree breeding. A network of experimental research projects was implemented to discover the most appropriate way to prepare the soil, to fertilize, to plant, to irrigate, to improve the forest yield, to find the most adequate species, and to understand the relationship between genotypes and the environment.

Some exotic species (eucalypts and pines), which were being planted with success in the country, were reintroduced and re-evaluated. Some native species (*Araucaria*, *bracatinga*, etc.) were also closely studied in terms of their behavior, requirements, and end products. The first objectives were very clear: the production of high-quality industrial wood in very productive forest stands. The objectives and the obtained results were strong enough to keep the partners together for these 30 years. Moreover, new partners were gradually added to the original ones.

IPEF started to gain international recognition during the 1980s, when vegetative propagation of eucalypts became the most notable of the research project developments. Several approaches to improve this technique were researched to find the most suitable ways to upgrade the quality of the forests: hybridization, grafting, rooting small pieces of branches (cuttings), cloning, and tissue culture.

Wood quality oriented to industrial uses received the same level of research. The first attempts were directed to wood density and specific gravity. Soon, the cooperation became stronger in pulp and paper technology, wood drying, sawn timber, wood preservation, and wood panels. Sophisticated laboratories were added to the network, both in the university and in the research centers of the mills.

IPEF was always oriented to bringing results to its members via the network. Cooperative research programs were created. The aim is to work together in common projects and to share the results. Certainly, the institute and the industrial companies also support academic and scientific research (student research, master's and Ph.D. theses, etc.). The members of the institute may also obtain high-quality consultants and may contract specific research projects. Over the years, the industry members and the professors from the Forestry Department have discovered that the most profitable projects are those involving cooperation among several partners. For this reason, there are several cooperative programs in topics such as forest protection, forest breeding, forest certification, environmental management, watershed monitoring, environmental education, clonal silviculture, and plantation forest impact monitoring.

The institute has a dynamic and slim structure to achieve results in three areas: knowledge development via research, information, and events. The idea behind the management is that IPEF must have the ability to promote partnerships between the professors (university) and those demanding technical solutions (industry). Besides the university professors, IPEF also has a group of well-qualified consultants. Depending on the tasks, this consultant network may be used to upgrade the quality of outputs. Outputs include events, courses, workshops, seminars, books, technical reports, technical visits, etc.

The infrastructure provided by the university includes the following main laboratories: wood anatomy, wood chemistry, forest genetics, tree physiology, hydrology and ecology, seed evaluations, quantitative methods, mechanical processing of wood, wood processing, fuel wood, pulp and paper, wood drying, wood preservation, and wood panels. A total of 25 professors and 8 consultants are in charge of the technical developments. Throughout its history, IPEF has received strong support from some of the leading Brazilian research and development government agencies (FINEP, CNP, FAPESP, CAPES, etc.).

IPEF also has two forest stations (Anhembi, 700 hectares, and Itatinga, 220 hectares) for forest experimentation and project installation, training, biodiversity sav

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ings, and species collections. These stations also serve to grow upgraded trees for seed collection and commercial production for sales to the market. A significant amount of 2.5 metric tons of seed is sold each year by the institute. This program was partly responsible for the introduction of genetic quality in the country's forestry, mainly with eucalypts and pines.

IPEF invests heavily in information; the journal *Scientia Forestalis* is known worldwide. Other publications, such as books, technical reports, courses handouts, and seminar proceedings, are also regularly issued. The institute has a Technical Information Center with 6500 books, 600 magazine titles, 1000 brochures, 150 videos, and 500 maps, totaling 35,000 bibliographic references. The information center can be accessed via the Internet at <http://jatoba.esalq.usp.br/ipef>. The enthusiasm and guidance in the information area is due to the work of Marialice Metzker Poggiani.

IPEF's strategic plans and decisions are made by its board of directors, with several members. The board's president is an industry representative (Manoel de Freitas/Champion Brazil), and the scientific director is the chairman of the Forestry Department (Dr. Jose Otavio Brito).

The following companies are sustaining members of the institute: Aracruz Bahia Sul, CAF Santa Barbara, Cenibra, Champion, Suzano, Duratex, Eucatex, Inpacel, Klabin, Lwarcel, Pisa, Rigesa, Riocell, Ripasa, and Votorantin. According to the new strategic plan, IPEF is considering opening memberships on a global basis, as long as the proposed international companies fulfill the requirements for acceptance.

The coordination of the administrative and research work is the responsibility of Edward Fagundes Branco (fax +55 19-4308666 or e-mail [ipef@jatoba.esalq.usp.br](mailto:ipef@jatoba.esalq.usp.br)), who may be contacted for additional information.

I had the honor being vice president of IPEF and a professor (twice) at ESALQ/USP in addition to working closely with the institute as executive in charge of two industry members (Cenibra and Riocell). I therefore feel comfortable in describing IPEF as one of the most successful examples of a two-way partnership between the industry and a university.

—Foelkel is a consultant at  
*Celsius Degree, Porto Alegre, Brazil.*

## ASIA PACIFIC

### INDONESIA

#### MILLS AND CONVERTERS

Asia Pulp & Paper Co. (APP), Tjiwi Kimia mill, Mojokerto, is operating its new Beloit fine paper machine No. 11 at speeds averaging 3700 ft/min, with plans to increase to 4265 ft/min in the coming months.

### IRAN

Gharb Paper Industries selected Andritz to construct Iran's first APMP plant at Gharb's facility in the Bakhtaran Province. The plant will produce 50,000 metric tons/year of pulp for writing and printing grades.

### INDIA

#### NEWS FROM RAMESH C. GUPTA

##### NEW PRODUCTS ANNOUNCED

Sinar Mas Pulp & Paper (India) Ltd. will soon launch a series of new import substitute paper products. The first product will be a high-brightness art paper.

Sinar Mas is planning to produce about 800 metric tons/month of high-brightness art paper and may price it near Rs 46,000 (US\$ 1082) per metric ton compared to the cost of imports at Rs 52,000 (US\$ 1224) per metric ton, according to Suresh Kilam, managing director of Sinar Mas India.

Last year, India imported 35,000 metric tons of high-brightness coated papers to meet the domestic demand.

While Europe had accounted for more than 60% of India's imports, the rest came from Japan and Korea. India will now enjoy a dual advantage as it will be able to export this quality paper to Sri Lanka, Bangladesh, and west Asia, said Rajiv Mallik, marketing director.

The Pune plant of Sinar Mas, which went into operation in July 1997, is now running at 95% of its installed capacity of 115,000 metric tons/month for wood-free coated paper. In the initial phase, it was running at a paltry 50% capacity utilization.

The Singapore-based Asia Pulp & Paper Co. (APP), the parent company of Sinar Mas, is supplying all the pulp needed by the Indian unit from its Indonesian facilities. Low-cost wood fiber is available in Indonesia in abundance. A few months ago, the cost was US\$100-110/metric ton; the cost has now decreased to US\$ 50/metric ton after the rupiah's devaluation, said Kilam.

APP has now emerged as the largest vertically integrated paper and pulp producer in Asia, excluding Japan, with a capacity of 6.1 million metric tons of paper and paperboard. APP is also the largest shopping bag producer in the world, with a market share of 30% in the US\$ 1 billion global market.

Kilam denied all allegations of undercutting in the Indian market. "We sell wood-free coated paper 20% higher than the international price but less than the landed cost of the imported paper. Our price is US\$ 950/metric