



Workers at
Aracruz's nursery:
plant clones adapted
to the Brazilian South

Rio Grande do Sul: the new pulp frontier

The state is in the crosshairs of major entrepreneurs in the sector who foresee injecting more than US\$ 5 billion in investments in the region over the next few years. With this, by 2015, the state of Rio Grande do Sul will account for more than 3 million tons of pulp produced annually in Brazil

By Marina Faleiros

In Brazil, Aracruz, VCP (Votorantim Celulose e Papel) and Stora Enso will build industrial plants in the state of Rio Grande do Sul, capable of producing more than 3 million tons of pulp per year and definitively rank the Gaucho state as one of the key players in the sector responsible for this commodity in Brazil.

The idea to explore Rio Grande do Sul started out with the basic prerequisite for the pulp and paper sector that depends on a forest base: the availability of land! In the region, eucalyptus is still a minority. "Together, all these new projects will occupy roughly 0.8% of the state's land" comments Otávio Pontes, vice-president of Stora Enso for Latin America.

With a relatively low dispute for farms and the right climate for growing eucalyptus, Rio Grande do Sul has attracted the attention of pulp producers, explains economist Maria Benetti, from the Foundation of Economics and Statistics of Rio Grande do Sul, a state government entity. She says that the regions where pulp projects are located are still empty areas. "In general, they are used for cattle raising, many of which are explored with little productivity, but have forestry exploration potential in an adequate manner", she says.

At present, the pulp and paper sector in the state is still timid. According to Benetti, Rio Grande do Sul possesses only 7% of planted forest area in the country. "With regards to pulp production, it contributes only 4.3% of the country's industrial pro-

duction, and regarding paper production, the state's participation is even less expressive, accounting for only 2.4%.

Among companies that produce paper in the state, there's Trombini, which has been in the region for over 30 years. "It is an area with a good consumption market, with shoe, food and wine companies. Since we produce paperboard, client proximity is a key factor in order to be logically competitive. Today, 40% of Trombini's revenues come from the south region", says Gilmar Maffei, the company's regional manager.

According to him, the market in the region has been growing between 3%-5% per year, which stimulated investments. Trombini's paper machine, which is installed in the city of Canela, for example, underwent two major refurbishments, the last one

having been last year, aimed at improving its technology in terms of starch, so as to provide greater product resistance. In the middle of a region that totally caters to tourism, such as the Serra Gaúcha mountains, Maffei believes that the sector pleases the state's population, even more so with the investments expected to be made.

As such, pulp investors promise to heat up the regional economy. With the new plant, Aracruz estimates that it is possible to purchase around US\$ 300 million in services from the area surrounding the plant. "We value local labor and the annual revenues to be received by the state could add up to US\$ 780 million, in addition to circulate annually US\$ 110 million in additional wealth in the regions of influence", says Otemar Alencastro, Aracruz project director in Guaíba (RS).

If all projected investments in pulp production are made, the state's situation will change completely. "We will go from a very secondary player to one of the most important in this market. The area listed for planting eucalyptus forests amounts to 360 thousand hectares, twice the current amount of 180 thousand hectares", says Benetti. In terms of logs, production will jump from 2.6 million cubic meters to 13.7 million, that is, an increase of more than five-fold. The new volume of wood, says Benetti, would allow for the production of roughly 3.8 million tons of pulp, a volume 8.5 times greater than the 446 thousand tons registered in 2005. "In the case of state pulp exports, this figure could go from 353 thousand tons to something around 3 million tons."

INFRASTRUCTURE

In searching throughout the state of Rio Grande do Sul (RS) for properties with eucalyptus plantations and nurseries, one thing is clear about regional logistics: roads need more asphalt. If considering that each mill with an approximate production of 1 million tons/year of pulp places 100 trucks daily on the roads, the highway infrastructure problem could become even greater in the future. As such, regional investment automatically remits to a capital injection in logistics infrastructure, among others.

Aracruz is well located along the Guaíba River banks, so that transport is done by coastal navigation to the mu-



The farmer Mario Farias and his eucalyptus: building the future

nicipality of São José do Norte, where the company purchased land to build its own export terminal. Today, the mill already operates its own export terminal from the plant along the Guaíba River, which caters to Aracruz Guaíba.

However, with the new plant, Aracruz intends to increase its warehouses and create a top to cover its entire loading area, similar to a model its technicians saw in Finland. In other words, they are going to create a warehouse over the company's dock, measuring roughly 90 meters long so that the vessels can enter and be loaded with pulp even in bad weather conditions.

Additionally, Aracruz's new plant project foresees various regional infrastructure improvements in partnership with the local government. Examples include the asphalting of highway RS 703, the asphalting of the road that connects Guaíba with Barra do Ribeiro, where the company's nursery is located, and the construction of access roads, road expansions, roundabouts and intersections.

Aracruz Celulose also promises to resuscitate the Jacuí river waterway system, through which it will transport logs of wood to its plant. As the Rio Grande do Sul state governor said in an interview to O Papel magazine (see this issue's Interview section), investments in the sector point to a transformation that the state only imagined during the Farroupilha revolution. "Without a doubt, Rio Grande do Sul will kick start the long awaited waterway navigation with economic, social and cultural benefits", bets

the governor.

Aracruz's investment in the waterway is expected to total around US\$ 225 million, which also includes a barge system. In the long term, these expenses will be justified, says Alencastro. "Roughly 60% of the cost of any commodity, like pulp, is logistics. So, every sort of optimization in transport is very important." Aracruz's river-based transport system shall account for up to 50% of all the wood that goes to the plant, totaling 2.5 million tons of wood annually.

With regards to Stora Enso, whose investment focuses on the east side of the state and is more distant from the port, the Swedish-Finnish multinational plans to also use railway transportation. The region does have lines but need new investments and adaptations for transporting pulp. Therefore, a partnership with ALL, which manages the local railway, is in the company's plans.

According to Sinésio Cerqueira Neto, Superintendent-Director of the Rio Grande port – through which the state's entire production passes through -, companies in the sector are already of major importance for the port. Growth expectations are such that the building of a specific terminal for shipping forestry products is already being contemplated, with 600 thousand square meters of area and a capacity to anchor up to three ships simultaneously.

"The project has already been approved by the Port Authority Board, and we are now preparing a financial-economic feasibility study to see if it will work out, in order to, then, hold a public bid process and obtain

the environmental licenses necessary”, says Cerqueira Neto. He also pointed out the importance of Aracruz’s initiative with the immediate investment project for building a seaport in the city of São José do Norte, which is located on the opposite bank of the Rio Grande Port. “It is one of the poorest municipalities in the state and possesses very good infrastructure that has never been explored.” With the estimated pulp production, Cerqueira Neto believes that the shipping volume through the terminal should go from the current 350 thousand tons/year to 700 tons annually already in 2008.

VCP: PROJECT FOR OTHER GENERATIONS

Due to the strong impact in the local economy, among other factors, when VCP decided to invest in the construction of a new pulp plant, it focused on other matters besides the business itself. The company’s forestry director, José Maria de Arruda Mendes Filho, was given the responsibility to analyze how the community could be in-

volved in something that would not be there for a short period of time, but rather; for at least 100 years.

“It’s a project for the future, for the baby that is born today will be consuming later on the paper from these trees now being planted. And in this type of project one may not forget about the environment, business sustainability, as well as the generation of income and business competitiveness on a global level”, says Mendes Filho. Therefore, upon arriving in Rio Grande do Sul, VCP did not limit itself to only buying up farms and planting what it needed in terms of eucalyptus for production.

The forestry director explains that the company wanted the population, including small producers settled in the region, to be a part of the business. Starting out from Pelotas, the biggest town in the southernmost extreme of Brazil, the VCP team headed out on the both asphalted and dirt roads after small villages hidden throughout the state, where small rural settlers and European immigrant descendants live. The objective was

to show everyone that they could participate in Losango, which is how VCP is calling the project in the region.

With the Forestry Savings project, VCP was able to attract 4 thousand producers interested in planting eucalyptus to produce pulp. According to Mendes Filho, with this they were able to build a common future for the company and the small forestry producers. The Losango project has not yet defined where the plant will be built, but the structure that is being set up in the state impresses for its size, beginning with the pulp plant’s nursery.

Next to the nursery, following a dirt road, is the NES (Environmental Education Nucleus) which functions as a school for teaching children in the region and includes pulp production and environmental awareness classes. From there you can already see the huge warehouses where 30 million baby plants are produced annually. In practice, it is 27 hectares of land, where small eucalyptus trees grow in greenhouses with heating, retractable



Building Leadership Excellence

Conferência PaperCon’08

Apresentada pelas associações de papel e celulose dos Estados Unidos, PIMA e TAPPI, Divisões de Artes Gráficas e Revestimento, de Controle de Processos, de Qualidade de Processos e Produtos e de Engenharia

Sustentabilidade: Lucros e desempenho

Destaques da conferência

- Painel do CEO
- Mesa-redonda dos superintendentes
 - Painel “A opinião do cliente”
- Mesa-redonda dos fabricantes de papel
- Inovações na tecnologia de revestimento
- Almoço e sessões de aprendizagem sobre revestimentos
- Aperfeiçoamentos na eficiência da máquina de papel
 - Avanços na confiabilidade e parcerias
 - Inovações e práticas em controle de processos
- Exposição e feira de negócios de novas tecnologias

**Sheraton Hotel
(formerly Adams Mark)**
4 a 7 de maio de 2008
Dallas, Texas, EUA



roofing and electronic fertilizing.

Like in an industrial assembly line, the employees work with modern and ergonomic equipment – even the tables on which the baby plants are planted are adjusted to the height of workers – and rolling conveyors transport crates of eucalyptus from one side of the nursery to the other, covering distances in excess of 100 meters.

According to VCP's industrial engineering director, Carlos Monteiro, the future plant will have a production capacity of 1.3 million tons of pulp per year. The project will be similar to the one currently being implemented in Três Lagoas (MT). "They will be the biggest single line plants in the world, which cheapens implementation costs." The idea of implementing such big plants came about due to the price hike in steel and nickel, which increased component prices. "The solution to obtain an attractive return in dollar per ton of pulp was to increase scale", explains Monteiro.

In order to do all this, the company intends to hire more than 8 thousand workers during peak periods, when 24 thousand meals and 16 thousand slices of bread will be served daily. Monteiro guarantees that the company complies with all domestic and international environmental requirements. "These plants could be installed anywhere in the world, since they comply with all international regulations. The main market for pulp produced in the south is the Asian market, but we will also sell to Europe and the United States."

According to Monteiro, the expectation is that the decision about where the plant will be located, will be decided by the middle of this year. "By the end of the year, we want to have the environmental licenses ready in order to begin building in August 2009." VCP's total investment in Rio Grande do Sul in terms of plant and forests amounts to around US\$ 2 billion.

STORA ENSO: THE BEGINNING

Stora Enso's project for Rio Grande do Sul is in the phase of still preparing its forestry base. Of the three big plants planned for the region, the Swedish-Finnish multinational's unit will probably be the last to start up operations, around 2015. For the time being, 46 thousand hectares of eucalyptus

have been planted. "The idea is to have 100 thousand hectares planted, which is being done as we obtain the environmental licenses", says Otávio Pontes, vice-president of Stora Enso for Latin America.

A total of 11 municipalities are working to receive plantations, one of which will also be where the plant will be installed, which will produce pulp to be 100% exported. The project is still in its initial planting phase, whereby R\$ 100 million has already been invested in the state, with 40 employees working for the company down south. "It's a very poor region of the state and that suffers with the problem of settling people in the field. Hardly any investment takes place and when the people begin to see the plantations, they begin to get excited."

In order to integrate with the population, says Pontes, the company has held public hearings and is working to obtain all the environmental licenses to continue the project. "It is very important to have this type of process, for it provides the foundation for the company to be sure about the future too." The future plant will have an annual production capacity of 1.3 million tons of pulp, which will be earmarked for Stora Enso's own paper mills throughout the world. "The important thing about pulp production is to be close to the raw material, the fiber, and the paper mills need to be close to the consumer market", he explains. The company is also giving continuity to a similar project in Uruguay, China, Russia and Laos.

One of the factors that attracted the company to the region was the availability of land and topography, as well as a good rain regime. According to Otávio Pontes, the idea that eucalyptus companies are going to invade the state and cause some sort of problem is incorrect, since the vast majority of hectares continue being used for planting rice and raising cattle. "There are 15 million hectares for rice and 45% of the land in the state is used to raise cattle." According to the executive, social issues shall not compromise the company's desire to have a strong presence in the region. "We conducted a major audit, opinion survey, and this encourages us for the state has been very receptive to investments."

ARACRUZ BETS ON A SECOND MILL

Proof of its confidence in the state of Rio Grande do Sul can also be seen in Aracruz Celulose's intention to expand its production facility in Guaíba-RS. The municipality is located just thirty minutes from the state capital, Porto Alegre, and on the river bank that can transport its products to the Rio Grande port.

Close by to the state's economic center and with logistic advantages, the company has harvested good results in the regions, having decided to adopt an even bolder development plan of building a second production line in Rio Grande do Sul. The project foresees expanding Aracruz's production capacity from 450 thousand tons/year to 1.8 million tons of the commodity produced in the region. "At present, we have 110 thousand hectares of eucalyptus. We're going to increase this to 250 thousand, with 90 thousand of preserved area", says project director Otemar Alencastro.

The company is so optimistic that it has started to "tear down" some parts inside the plant, in order to leave the property ready for what is to come in the future, a very close future, since the government has, right now, granted the operating licenses. "Due to the fact that we already have a unit, the construction of the new plant will be integrated to the current one, which will provide us a 20% reduction in pulp production costs", he said.

Additionally, the new Aracruz Celulose mill will focus on becoming self-sufficient in terms of energy and also generate a 15 MW surplus in energy to be sold on the market. "The reduction in water consumption is also significant. We expect to go from 4 cubic meters per second down to 1.8 cubic meters/second, which represents a 55% reduction."

With everything very well planned out – and with a lot of determination –, the Aracruz project managers in Guaíba expect to obtain approval to begin expansion works by the end of this month. "If everything goes as planned, the new mill should start up by the middle of 2010." Alencastro informed that the company's investment in the new plant project shall total around US\$ 2.5 billion.