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Biopalma opens first palm oil production plant in Pará

Biopalma da Amazônia S.A., a Vale company in partnership with the MSP Group, today opens its first palm oil extraction plant, located in the municipality of Moju, 150 km from Belém, in the Brazilian state of Pará. The plant is the first of two units to be built to extract oil from the fruit. An industrial plant will also be built to transform the oil into biodiesel starting 2015. Total investment is US\$ 500 million.

The project aims to meet Vale's demand for B20 (a blend of 20% biodiesel and 80% regular diesel) to power its fleet of locomotives, machines and equipment in Brazil. Today, Brazilian legislation requires the use of a blend with a minimum of 5% biodiesel (B5). It is estimated that using B20 will reduce the company's emissions of greenhouse gases by about 20 million metric tons of CO₂ over 25 years. It is also estimated that two million metric tons of CO₂ may be sequestered by planting palm oil trees.

The plant has an extraction capacity of 120 metric tons/hour of fresh fruit bunches, which represents about 25 metric tons/hour of oil. The unit has two distinctive factors: it is the first oil extraction plant designed with an unprecedented degree of automation in its processes; and it has the largest clean power generator ever installed in this kind of plant in Brazil. Furthermore, almost all residues generated throughout the production chain will be reused in the plant to generate renewable power and to fertilize oil palm plantations.

The plant's clean electricity generating capacity is 11 MW, of which 3.5 MW will be used in the plant and the surplus may be made available to the state power utility. Another environmental gain is the reuse of empty bunches and ashes from the boiler, which will return to the agricultural area to be used as an organic fertilizer.

The Biopalma plant's elevated level of automation will afford a high degree of safety to workers in the plant, as well as gains from the optimization of industrial processes. An example of this automation can be seen in the process of sterilizing and cooking the fruit. In conventional plants, this stage is carried out by workers who need to accompany the whole process while subjected to high ambient temperatures. As a result of automation, the workers will monitor the process and measure the quality of the final product at a distance, from inside the control room.

The use of technology has stimulated the qualification of specialized employees to work in the new jobs. Biopalma invested in establishing a vocational training center in Moju, where it trained its new employees who will operate the extraction plant. These operators, who are from the region itself, took electrical and mechanical engineering courses focused on industrial maintenance.

Environmental restoration

Biopalma already has about 50,000 hectares planted with oil palms. By 2013, 80,000 hectares will be planted and a further 90,000 hectare allocated to legally mandated reserves and permanent preservation areas. It is noteworthy that the plantations have been established in areas previously used as pasture and abandoned areas. Therefore, it is a project involving 100% recovery of degraded areas.

Biopalma has five agricultural centers in the Acará Valley and Lower Tocantins region in northeastern Pará, and will produce 600,000 metric tons of biodiesel in 2019, when the crop reaches maturity.

Socioeconomic development

As well as focusing on environmental rehabilitation and preservation, the biodiesel project will promote development in the region by generating employment and income. In February 2010, the company launched the Family Farming Program, which aims to involve 2,000 families in planting oil palms by 2013.

This program is already benefiting 124 farming families and another 500 are in the process of being registered. The farmers are financed by credit lines from Pronaf-Eco Dendê, a federal program administered by the Banco da Amazônia, for the purchase of saplings, crop maintenance and subsistence needs in the first three years of planting until harvesting begins.

Farmers who are interested make available 10 hectares of their family farm for planting oil palms, and Biopalma provides them with free technical assistance and a raw material purchase guarantee for the next 30 years of production. At the same time, to strengthen family farming among producers enrolled in the program, Biopalma monitors and provides technical support for the development of agricultural production by the families, since they also produce other products on the same property, such as fruits and poultry.

Pará

Pará is the largest producer of palm oil in Brazil, accounting for 95% of national production. This oil can be used in various sectors such as cosmetics, pharmaceuticals, lubricants and food. To make biofuel, it has been proven that oil palm has the highest productivity (tons per hectare) among oilseeds. Soybean, the main raw material used to make biodiesel in Brazil, has a yield just one-tenth that of palm, and it also requires more intensive land use.

More information



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