



Credits: CENIBRA archive

Cenibra improves quality through smart monitoring of operations

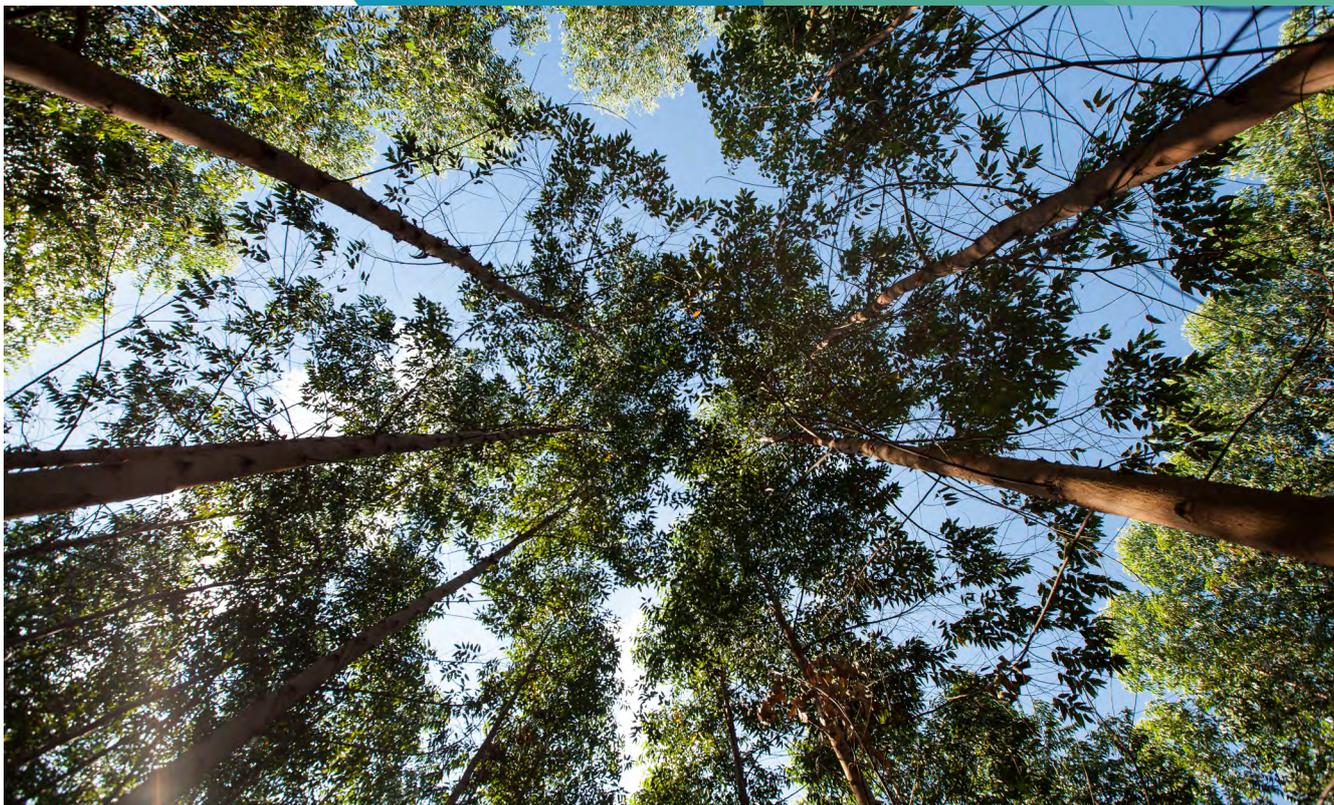
CENIBRA is a forest-based company that started in 1973 and today has a presence in 54 Brazilian cities. Located in eastern Minas Gerais, it is the result of the entrepreneurial spirit of Companhia Vale do Rio Doce and Japan Brazil Paper and Pulp Resources Development (JBP), which is wagering that Japanese technology could generate major results on Brazilian soil.

Despite its presence in many cities in Brazil, CENIBRA has approximately 97% of its production directed to the foreign market, mainly Asia, Europe and North America. To serve its customers, it uses distribution centres, commercial offices and representation divided into three continents. For domestic operation, the company has an industrial unit in the city of Belo Oriente (MG), with two production lines of bleached eucalyptus hardwood pulp and an installed capacity of 1,200,000 tons/year. In addition to three regional forest management areas in the state of Minas Gerais and a specialised port terminal in Barra do Riacho, Espírito Santo.

CENIBRA seeks to improve the locations where it operates, through socio-environmental projects, with the objective of contributing to the development of the region. With more than 7,000 of its own and outsourced employees, partnerships with local organisations and initiatives that provide income generation and integration, contributing to the development of the region.

Cenibra mission

To transform planted trees, generating and distributing wealth in a sustainable manner.



Hexagon

Hexagon's Agriculture's division has over 15 years of experience in the forestry sector, developing solutions and products that provide planning, management, monitoring and automation of field operations: from soil preparation to the application of crop treatments, through planning and operationalisation of planting and harvesting, and support operations. Generating greater efficiency and profitability in each cycle.

We have at our disposal all of the technologies developed by the Hexagon group, allowing us to bring the forestry sector cutting-edge innovations in the areas of geopositioning, mapping, automation, embedded electronics, artificial intelligence and systems integration.

Challenge

For Henrique Neyffer de Souza, Forest Analyst, using resources and equipment in an intelligent manner and being able to develop internal processes in the best possible way is essential to remain competitive against competitors. Thus, CENIBRA searched for a partner that would be able to deliver a technological solution, making it possible to optimise its operations. Thus, it would be necessary to extend and highlight the need for greater control of processes, to understand the potentialities of the technology.

Hexagon was chosen to join CENIBRA in this major challenge because it is a reference in the forestry sector, besides already having a relationship and partnership for the development of other products with the forestry company and having presented a solution compatible with the demand

A Successful Partnership

For the operation of the HxGN AgrOn platform at CENIBRA it was necessary to count on the involvement and commitment of both parties, and the greatest time of dedication was during the implementation process, because there was a necessary period for stabilisation and mastery of the technology that would be used in the field. When the stage of operationalising the entire project began, it required the monitoring of CENIBRA's development areas, for better integration and adaptation of the operation with the changes in the process. After this initial phase, the forestry company focuses on the use and management of information, either as an addition to the management and decision-making of managers, or even for payment processes and reduction of inputs and resources.

Currently, in addition to providing products for soil preparation control and monitoring, Hexagon is directly involved in the execution of input application activities with tire tractors and excavators, mulch, herbicide and formicidal bait, and provides management support tools in an accurate and optimised manner. CENIBRA opted for the products integrated to the displays that enable control in the application of inputs and monitoring of operations, in addition to SWS, a system with resources and tools for managing information obtained in the field for analysis and assertive decision.



Credits: CENIBRA archive



Hexagon's major differential is its experience in the forest environment and the development of solutions for this segment."

Henrique Neyffer de Souza,
Forest Analyst - CENIBRA



Credits: CENIBRA archive

Results

Today, CENIBRA utilises products from Hexagon’s Machine Control solution on 32 displays that are integrated with 50 implements in field operations. The growth of the partnership between the two companies is visible when comparing the size of the area worked and the amount of inputs used in recent years. The total area worked at CENIBRA since 2012, monitored with Hexagon products, is equal to 14,216 hectares. The activities that had the largest area monitored and controlled in the application of inputs include fertilisation (49%) and subsoiling (37%).

	Worked Area (ha)	Total Input (Kg)
2017	1.586	590.732
2018	9.998	3.541.242
Growth	+530,4%	+499,5%
Total 2012 - 2019	14.216	5.226.306

The HxGN AgrOn platform makes it possible to store georeferenced data at each second of the operation, generating a rich and extensive database, which allows the compilation of indicators for all activities. The major advantage of using a precision system in forestry operations is the possibility of controlling the flow of the input according to the oscillation of the tractor’s speed in the application of the input. This contributes to greater homogeneity in the application of input, as well as generating important data for planning and decision-making by manager.

The major highlight for the results obtained with Hexagon’s solutions is the reduction of anomalies related to dose deviation in the application of solid fertilisers, as well as the differentiated evaluation of common processes that were not detected, highlighted or treated, such as application failures. As such, CENIBRA guarantees that the fertiliser is applied in the appropriate quantity and position according to technical recommendations.

The partnership still has room to grow a lot in the coming months. Henrique points out that in addition to meeting the initial parameters established, Hexagon has presented prospects for advancement in the negotiations of improvements needed for the intensive and complete use of technology, inclusion of resources and potential additional tools. Now the two companies are in the process of studying to improve the technologies and expand into other excavators of the soil preparation activity.



“ The Hexagon solution adds value and improves the quality of CENIBRA’s mechanised activities, through control and monitoring of the applied input and vehicle tracking, as well as generating greater practicality and assertiveness in the activities of preparation and execution of the operation by the operators. ”

Ronaldo Soares,
Forest General Manager - Hexagon

This expansion is an example of how it is possible to create customised solutions for the needs of each customer, generating excellent results. With Hexagon’s technology, the CENIBRA operator can visualise the line segments forming the subsoil, allowing the process to continue without failure. It is also possible to monitor and control the amount of input applied, and also generate georeferenced information and maps of the areas executed, greatly improving the quality of the operation.

After the deployment and the entire learning phase, the challenge for this successful partnership is to continue to ensure that all the information generated by the system is used intelligently, generating a positive impact on the optimisation of processes in each forest cycle.



Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications. Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Agriculture division develops and delivers information technology solutions that unleash the full potential of agricultural assets, driving big gains in efficiency, productivity and sustainability. Our solutions convert data into intelligent, actionable information that enables smart planning, efficient field execution, precise machine controls and automated workflows that optimise operations.

Our aim is to accelerate innovation within the agriculture sector with solutions that challenge the status quo — what is — and point our customers towards what should be, the digital transformation of agriculture.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.9 bn EUR.

agriculture@hexagon.com

+55 48 4009 2704 | +34 911 123 033