



Science For A Better Life

Achieving Valore Certification for sustainable agricultural production



food chain partnership



The Brazilian Sugarcane Project



How it all started

Brazil is the world's leading producer of sugar, accounting for half the total global consumption. Sugarcane is grown on a total of 9,750,000 hectares, provides employment, directly and indirectly, for more than one million people, and is produced for domestic sugar consumption, the production of ethanol and bioenergy, and for export. The total export volume is 32 million tons, with exports mainly going to the USA, Asia and the Middle East. The environmental and social demands placed on sugarcane growers in Brazil are one striking feature. Growers are constantly monitored by government agencies to ensure there is no child labor, no slave labor, and no production in environmental preservation areas.

This Food Chain Partnership project emerged from a vision for the future of the Guaíra Usina Açucareira, in which all the legislative requirements were fulfilled and certification obtained to attest compliance with good agricultural practices and sustainable production. In October 2013 Bayer CropScience presented its Valore Certification Program to Guaíra, a Brazilian cane sugar producer. Since food producers certified in this manner can increase their international competitiveness by achieving high standards of quality, worker wellbeing, and environmental preservation, Guaíra readily entered into a Food Chain Partnership with Bayer CropScience in order to achieve such certification.

What we aimed to achieve

The main objective was to achieve Valore Certification, which demonstrates compliance with the relevant legislation and what is required for sustainable agricultural production. To this end, this Food Chain Partnership project aimed to ensure good agricultural practices for sustainable sugarcane production, traceability, and product safety. Another aim was to help Guaíra stand out in the global sugar market as a lighthouse facility in terms of sugar quality and social and environmental responsibility. After all, the major buyers of sugar on the world market value this certificate very highly and have indicated that they will only market certified sugar in the future.



Who is involved

Usina Açucareira Guaíra Ltda.: This producer of cane sugar for sugar, ethanol and bioenergy is located in the Brazilian state of São Paulo.

TÜV Rheinland do Brasil Ltda.: This certification body supported the project by auditing the compliance with the relevant protocol.

Bayer CropScience Brazil: This leading crop science company contributes in the development of new technologies to improve production processes and promote sustainability in agricultural production. Bayer's Valore Certification program, which has been implemented since 2009, focuses on helping farmers meet sustainability criteria, and on fostering sustainable agricultural practices. In the case of sugar the basis for Valore is the Bonsucro Certificate.



The integrated solution

The key feature of the solution jointly developed by Guaíra and Bayer CropScience was a broad training program with approximately ten sessions of between 8 and 40 hours, with all the employees involved in the production processes included. The following topics were covered:

- Safe use of tractors and harvesting equipment
- Application technology and safety training for chemical crop protection products
- First aid and personal hygiene
- Fire fighting
- Internal audit training
- Integrated Pest Management (IPM)

The latter training course included identification of pests, pest pressures, sampling methods, monitoring of pests, and control methods. The major pest in sugarcane is the root leafhopper (*Mahanarva Fimbiolata*), an insect that sucks water as well as plant nutrients and injects toxic substances, causing extensive damage in productivity up to 60 %. Bayer CropScience provided an important product to control leafhoppers in the sugarcane, the Curbix® insecticide. It belongs to a new chemical group for controlling leafhoppers and is ideal for rotation purposes as it has a different mode of action. Another issue of productivity in the sugarcane fields was infestation by weeds, especially of the grass family, which compete with sugarcane for water, nutrients and sunlight. This can lead up to 50 % yield losses. For this sugarcane cultivation Bayer offered two important crop protection products, Provence® and Sencor®, which are herbicides that inhibit the emergence and growth of

weeds for a longer time, providing greater control from fewer applications. Due to the weather conditions in Brazil, sugarcane is constantly subject to the plant flowering process, which leads to desiccation, the loss of up to 30 % of the saccharose contained in the plant, and consequently a loss of quality and productivity. To prevent this problem Bayer offered Ethrel® to the producers, a product that stimulates the release of ethylene within the plant, enhances natural maturing, provides a greater accumulation of sucrose without affecting the development of the plant, and ensures greater industrial efficiency and quality.

In addition, sustainability measures were introduced to ensure compliance with sustainable production, traceability and food safety requirements. Furthermore, regular environmental and social monitoring tests were carried out both in the agricultural and industrial processes, and chemical analyzes of the waste products and the sugar quality were also conducted.



What we achieved

The Guáira Sugar Mill was initially awarded a Valore Bronze Certificate and is now working towards achieving the Valore Gold level – which is, automatically, the Bonsucro Certificate. Their efforts have also been recognized by important awards such as the Best Bio Prize and the 2014 Van Martius Sustainability Prize from the Brazilian-German Chamber of Commerce.

Next steps

The Valore program is a continuous improvement program made up of the levels Bronze, Silver and Gold. After reaching the initial level of certification, the Guáira Sugar Mill continued its journey in striving for the Gold level, the highest level of Valore certification. Achieving this goal will require major structural adjustments, implementation of management systems, and the constant training of the people involved. Bayer is supporting and collaborating with Guáira on this path of continuous improvement within the scope of this ongoing Food Chain Partnership project.



left:
Clayton Barella
Sales Representative at
Bayer Cropsience Brazil

right:
Eduardo Junqueira da Motta Luiz
Director Guáira Usina Açucareira

food chain partnership



Consumers are becoming increasingly conscious of the need for healthy nutrition. Food Chain Partnerships help to supply consumers with high-quality fresh produce, which forms the basis of a healthy diet. But such partnerships can only succeed if they involve every player in the food chain – from the farmer and processor to the exporter or importer and retailer. Bayer CropScience has the global experience and cutting-edge expertise to create a successful partnership at every level.



Bayer CropScience

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