Responsible Ethanol Sourcing

Braskem

Introduction

The management of Braskem's Ethanol Suppliers is supported by two pillars: Compliance and Excellence. The former comprises the Braskem Supplier Code of Conduct, which establishes the operational standards expected from suppliers in their management of human resources, the environment, local communities, quality and efficiency. Meanwhile, the latter comprises the Continuous Improvement Program, which focuses on topics of relevance to the ethanol chain.

Audit structure for Ethanol Suppliers

Compliance Pillar:

Braskem Supplier Code of Conduct

The Braskem Supplier Code of Conduct, which is described on the following pages, was carefully drafted for the specifics of the ethanol chain. Each mill is responsible for guaranteeing that such conduct is always enforced and followed in their supply chain.

The values and practices described alongside the stylized illustration of sugarcane reflect the complementary standards that Braskem expects from its Ethanol Suppliers.

Business integrity

Braskem expects its Ethanol Suppliers to conduct their activities with honesty, dignity, strict legal compliance and respect for human rights, the environment and society's ethical standards.

Legal compliance

Complying with all applicable laws and regulations in each country or region where they operate, including, but not limited to, those related to the sale of products and services, hazardous materials, air emissions, solid waste and wastewater, transportation, storage, handling and the release of these materials into the environment.

Registration for sugarcane transportation and sale; Water resource management plan; Permits for discharging wastewater and quality monitoring reports; Plan for reducing air emissions and monitoring reports; Environmental licenses and permits for the production and disposal of hazardous solid waste; Solid Waste Management Plan.

Honesty and integrity

Upholding the spirit of the law and regulations, complying with the highest standards of honesty and integrity, and preventing even the appearance of misconduct. This responsibility also involves adopting adequate measures when becoming aware of irregularities practiced by third parties that could compromise the name or interests of Braskem.

Verification of the existence of policies and/or internal codes of conduct that establish which types of measures the mill adopts when irregularities practiced by third parties are identified.

Nondisclosure and confidentiality

Handling the company's business affairs, without exception, with confidentiality and protecting intellectual property rights. Access to Braskem's information must be limited only to those persons who need to receive the information and use it for a specific supply purpose or for rendering services.

Nondisclosure agreements or clauses may be used as evidence of compliance.

Corruption

Prohibiting any practice of corruption, bribery, extortion or fraud. Ethanol Suppliers may not offer, promise, give or authorize any illegal, improper or dubious payments or benefits to Braskem Team Members, government officials, their equivalents or any individual, whether directly or through third parties, in order to improperly influence any act or decision for the purpose of promoting any interest of Braskem.

Compliance with this indicator may be demonstrated through verification of the mill's internal policies and/or codes of conduct.

International pacts and agreements

Knowing and operating in accordance with international pacts, agreements, treaties and conventions, such as the United Nations Universal Declaration of Human Rights, as well as the documents of the International Labour Organization (ILO).

Compliance with this indicator can be demonstrated by presenting copies of treaties and conventions, checklists containing indicators related to treaties and conventions, or commitments of adherence to or compliance with treaties and conventions.

Land and water use rights
Can be demonstrated by presenting the mill's legal documentation, the land ownership and use rights for the planting of sugarcane and the right to withdraw water, and there should be no legitimate claims by third parties to the ownership or use of the land or to water access.

Legal documentation serves as the objective evidence attesting to compliance with this indicator. Disputes are identified through interviews of stakeholders and consultations of secondary databases by the auditors.

Environment

Maintaining environmental equilibrium and conserving the environment at the industrial units, offices and the entire value chain are practices of vital importance to Braskem's business activities. Braskem actively participates in protecting ecosystems where its industrial units are located and supports various public and private projects related to environmental preservation. These actions are supported by taking great care in the manufacture, handling and transportation of its products, by helping to preserve forest reserves, by preventing the wasteful use of natural resources and by sponsoring preservation campaigns to raise awareness in local communities. As such, the following practices are expected from each Ethanol Supplier:

Environmental legislation
Complying with the environmental laws and regulations applicable to its products and services.

This is demonstrated by verifying licenses and permits, their expiration dates and the activities carried out by the mill under the licenses and permits granted (operating permits, licenses for storing and transporting fuels or other hazardous products); Verification of pending lawsuits, fines or notices of violation; Water resource management plan (required for the Environmental Impact Assessment – EIA); Permit to discharge wastewater; Wastewater quality monitoring reports; Plan for reducing air emissions (required for the EIA); Air emissions monitoring reports; Environmental license or permit for generating hazardous solid waste; Solid Waste Management Plan (required for the EIA and by the National Solid Waste Law); Permits for disposing of solid waste; Solid waste destination reports; Solid waste inventory indicating the destinations.

Zoning
Does not cultivate sugarcane in the Amazon, Pantanal or Alto Paraguai River Basin biomes and complies with the Sugarcane Agroecological Zoning developed by the Ministry of Agriculture, Livestock and Supply.

Protected areas
Does not plant sugarcane on protected areas (as defined by the Brazilian Forestry Code and the National Conservation Units System)

Rural Environmental Registry (CAR)
Complies with the deadlines for registering all areas owned by or under the management of the mill in the CAR and, if necessary, the Environmental Normalization Program (PRA).

Pesticides
Only uses pesticides that are approved by the Ministry of Agriculture, Livestock and Supply (MAPA).

Pesticide storage
Agricultural pesticides and other products with contamination potential, such as empty packaging, are stored securely and given a proper destination, in accordance with governing law and regulations.

Sugarcane burning
Does not burn sugarcane fields, sugarcane bagasse or any other sugarcane subproduct during harvest operations.
Forms fire brigades and adopts preventive measures to suppress fires.

Environmental impact
Contributes to environmentally sustainable development and constantly seeks to reduce the environmental impact of its inputs, operations, products and services.

Environmental management

Environmental management is planned, executed, measured and reviewed to ensure continuous improvement.

Policies and procedures
Is familiar with all of the procedures and policies adopted by Braskem with regard to the environment and complies with them where applicable.

Identifying environmental risks and communicating incidents
Identifies hazards, assesses risks and, for any case involving the environmental indicators of Braskem's Responsible Ethanol Sourcing Program, informs Braskem before taking corrective and preventive actions. Also immediately communicates any environmental accidents and/or incidents (e.g., chemical spills, emissions that fail to comply with standards, burning of planted and native-vegetation areas, and fires) to enable an investigation of the causes and the identification of corrective and preventive measures. When applicable, local government authorities also should be communicated.

Workers and communities

Braskem respects and promotes human rights in its activities throughout the production chain. In this way, it strives to forge business relationships with Ethanol Suppliers that respect human rights and share our labor principles and values, namely:

Supplier relations
Braskem expects cordiality, trust, respect, dignity and honesty in the relationships between its Team Members and the employees of its suppliers, regardless of their hierarchical position or function.

Harassment
Treats all workers with respect and dignity. No worker should be subjected to physical punishment, abuse or harassment of any kind, including, but not limited, to those involving women.

Discrimination
Does not practice any acts of discrimination due to race, ethnicity, gender, nationality, religion, disability, marital status, sexual orientation, union membership or partisan affiliation during the processes of hiring, compensation, training, promotion, termination or retirement.

Gender equality

Fosters gender equality in its activities and in its sugarcane supplier base.

Use of forced and/or child labor, sexual exploitation of children and adolescents, and human trafficking

Braskem Suppliers must not tolerate, permit or condone the employment of forced and/or child labor, the sexual exploitation of children and adolescents or human trafficking in any process related to their activities. Braskem will not enter into any commercial relationship with suppliers that adopt irregular and/or illegal practices involving child labor, conditions analogous to slave or forced labor, the sexual exploitation of children and adolescents or human trafficking.

The evaluation may go beyond the limits of the mill to verify the practices adopted by its independent ethanol suppliers.I.

Employment agreement

All workers at the mill and in the field, including third-party service providers, must have formal labor agreements and/or be formally registered in their labor booklets, regardless of the employment regime.

Working conditions

Offers dignified working conditions to all employees with regard to work hours, health and safety, always respecting the labor laws of the region where they operate.

Work shift

The work shift must be monitored and not exceed the standards established by law. Overtime must be paid or offset respecting the minimum increase of 25% in relation to normal payment or shift hours.

Wages and benefits
Compensates employees and provides all legally established benefits.

For this indicator, an assessment must be made of the mill's compliance with collective bargaining agreements and with the applicable legislation for wages and benefits.

Political activities and free association
Braskem is a non-partisan organization that respects the individual rights of Team Members and third-party workers with regard to their political and union engagement. As such, Braskem expects its suppliers to recognize workers' rights to free association and to participate in collective bargaining agreements.

Health and safety

To Braskem, safety is a critical value that must guide all attitudes, conduct and decisions in day-to-day activities. People are the main link capable of keeping Braskem on the path of business excellence. Therefore, caring for their safety and well-being will always be paramount. As such, Braskem Suppliers must:

Health and safety legislation
Comply with local laws and regulations whenever mandatory and with the commitments of Braskem's Sustainability Policy, and be familiar and comply with the requirements related to workplace safety and the health of its employees and of everyone directly involved in the activities contracted.

Regulatory Rule (NR 31)
Demonstrate compliance with occupational health and safety laws applicable to agricultural activities (NR31), including, but not limited to, matters related to accommodation, transportation, living areas, provision at no charge and use of personal protective equipment (PPE), etc.

Workplace
Provide their employees with a workplace with adequate physical and psychological conditions for the performance of their activities.

Risks of accidents
Adopt a posture of intolerance to uncontrolled risks and to the occurrence of accidents of any kind, especially occupational.

Internal Accident Prevention Commission (CIPA)
Form a functioning Internal Accident Prevention Commission (CIPA), identify risks and adopt measures to eliminate, reduce or mitigate risks.

Braskem's practices and guidelines
Know and implement Braskem's health and safety guidelines, as described below:

Risk scenarios
Communicate and remedy any risk scenario as soon as it is identified.

Work Permit
Release the Work Permit at the work site, when applicable, and implement all necessary precautions.

Safe conditions
Conduct any activity only in safe conditions and refuse to conduct any activity if there are any indications of unsafe conditions.

First aid
Provide first aid kits that can be accessed by employees and an emergency response plan.

Personal Protective Equipment (PPE)
Perform all activities while using the proper Personal Protective Equipment (PPE) and tools.

Qualifications
Allow only duly qualified and able persons to carry out critical activities.

Investigation and communication of accidents
Register, report and support the investigation of 100% of accidents or incidents considered to hold high severity potential.

Pesticides
Permit the handling of agricultural pesticides only by workers with proper training, who are submitted regularly to specific health tests to identify contamination by chemical products.

Energy sources
Guarantee the isolation and blocking of hazardous energy sources.

Safety systems
Disable safety instrumentation systems and alarms only with a formal authorization.

Water and food
Provide drinking water in sufficient amount to all workers. If meals are provided, they must be adequate in terms of amount, quality, hygiene conditions and temperature.

Sugarcane supplier management

Ethanol Suppliers should have a supplier management program through which they formalize their relations with their sugarcane supplier base and promote actions to ensure adequate social and environmental practices and to promote their development. They also should conduct monitoring actions for their critical social and environmental issues.

Support for sugarcane suppliers

Promote sustainability in the field through actions targeting small independent sugarcane producers.

Selection of business partners

Strive to select business partners that operate in compliance with local labor laws and with ethical standards consistent with the principles espoused herein.

Contractual requirements

Establish a contractual requirement for their sugarcane suppliers regarding the need to hire only workers who are formally registered in their employment booklets or have a formal employment agreement.

Formal employment monitoring

Monitor direct and indirect sugarcane suppliers with regard to the formal registration in the employment booklet of its employees and third-party service providers and adopt disciplinary measures when deviations are identified in its supplier base.

Work shift monitoring

Monitor compliance with the law regarding the work shifts of its third-party service providers and sugarcane suppliers.

Contractual requirement
Establish as a contractual requirement for the acquisition of sugarcane from direct suppliers the obligation to comply with all laws and regulations related to accommodation, transportation, living areas, provision at no charge and use of personal protective equipment (EPI), etc.

Monitoring of Regulatory Rule 31
Monitor direct suppliers with regard to compliance with all laws and regulations related to accommodation, transportation, living areas, provision at no charge and use of personal protective equipment (PPE), etc.

Chemical products – Sugarcane burning
Does not purchase sugarcane from suppliers who practice burning during harvest operations.

Communication, monitoring and violations

Communication
Ethanol Suppliers are responsible for communicating this Code and disseminating the values of its provisions to their leaders, employees and suppliers to ensure that the ethical principles established herein are effectively practiced throughout the company and its value chain.

Monitoring and evaluation
Braskem monitors the development and performance of its Ethanol Suppliers. Monitoring aims to support improvements in management and to strengthen the partnership relationship between Braskem and its suppliers. Therefore, it is important for suppliers to the support the managers of their contract by providing information and facilitating site visits on pre-agreed dates and times.

Compliance with the Responsible Ethanol Sourcing guidelines
Ethanol Suppliers are expected to comply with the guidelines established in this Code.

All provisions of the Compliance Pillar are mandatory, while the Continuous Improvement Indicators are used to evaluate the performance of Braskem's Ethanol Suppliers over time (with the expectation of verifying continuous improvement in their performance).

Responsible Ethanol Sourcing

Excellence Pillar:

Continuous Improvement Program

Braskem established the following indicators to support its Ethanol Suppliers in the pursuit of continuous improvement. Compliance with these indicators demonstrates the level of evolution in practices in the field and mill. Therefore, they do not represent required conduct, but rather indicate the parameters desired for strengthening the chain.

Environment

To support advances in the management of natural resources, Braskem has established the following good practices:

Natural areas

Adopts proactive management of natural areas and High Conservation Value Areas, with a view to improving their quality.

Conservation of natural areas

1 The mill has a planted area expansion policy under which it commits not to plant sugarcane on or to buy sugarcane from areas that were converted as of July 22, 2008.

2 Half of the sugarcane crushed comes from land converted over 20 years ago.

3 All of the sugarcane crushed comes from land converted over 20 years ago.

High conservation value

1. In addition to complying with legal requirements, the mill identifies, using maps and/or satellite images, any High Conservation Value Areas (including environmental, social and cultural attributes) on its own areas and/or on areas under its management.

2. Evidence is provided in the form of maps, satellite images and other equivalent forms demonstrating that there were no conversions of High Conservation Value Areas (HCVA) into sugarcane fields after January 1, 2008, even though there were no legal restrictions on conversions.

3. The mill conducts actions to raise awareness among its suppliers on the importance of knowing and protecting biodiversity, with evidence attesting to the implementation of actions on its areas to protect biodiversity.

Biodiversity

1. Studies are conducted to survey the biodiversity existing on the areas owned or under the management of the mill, as well as on surrounding areas.

2. Biodiversity is monitored on planted areas and whenever the need for intervention is identified, the appropriate measures are taken, such as: combating illegal hunting and fishing, restoring degraded areas, fencing permanent preservation areas, etc.

3. The mill conducts actions to raise awareness among its suppliers on the importance of knowing and protecting biodiversity, with evidence attesting to the implementation of actions on its areas to protect biodiversity.

Prohibited pesticides

1. The mill does not use any pesticides prohibited by the: Stockholm Convention (Annex A); Rotterdam Convention (Annex 3); Montreal Protocol (Annexes A, B, C and E), even if approved by the Ministry of Agriculture, Livestock and Supply (MAPA) for sugarcane cultivation.

2. Biodiversity is monitored on planted areas and whenever the need for intervention is identified, the appropriate measures are taken, such as: combating illegal hunting and fishing, restoring degraded areas, fencing permanent preservation areas, etc.

3. The mill conducts actions to raise awareness among its suppliers on the importance of knowing and protecting biodiversity, with evidence attesting to the implementation of actions on its areas to protect biodiversity.

Monitoring and reduction of pesticide use

1. Monitors and reports the quantity of agricultural pesticides used on the plantations, which should be less than 5 kg of active ingredient/ha/year.

2. Presents evidence of efforts to reduce the use of agricultural pesticides, such as using biological pest control at both the mill and its suppliers.

3. The mill monitors its direct suppliers with regard to the types and quantities of agricultural pesticides used. Evaluations of the performance of mill managers are linked to compliance with this indicator.

Workers and community

Gender equality

The mill promotes gender equality in its activities and sugarcane supplier base.

1. The mill has a formal gender equality policy for its industrial and agricultural activities, including a complaint resolution mechanism.

2. The mill implements a program of positive actions to promote gender equality in its industrial and agricultural activities.

3. The mill regularly implements actions to raises awareness and train its sugarcane suppliers on gender equality in sugarcane production.

Human resources management

1. In addition to the monitoring of employees' hours worked and not worked (justified and unjustified absences), the information is used to analyze and improve people management through the adoption of measures such as accident and illness prevention, awareness campaigns with employees, psychological support, etc.

2. Employees' hours worked and not worked (justified and unjustified absences) are below 5%.

3. The mill carries out actions with its sugarcane suppliers to improve its people management processes.

Change in workforce

1. New production processes or techniques that potentially cause adverse effects on the workforce are adopted only after these effects are measured, stakeholders are consulted and mitigation actions are planned.

2. The mill adopts measures to mitigate the adverse effects caused by the adoption of new production processes or techniques, such as relocating employees to other activities, support for professional relocation, etc.

3. The mill implements and/or supports professional training programs for workers involuntarily terminated due to the adoption of new production processes or techniques in its region of influence.

Health and safety training

1. The mill administers training on workplace health and safety that covers at least 90% of all employees every five years.

2. The number of lost-time accidents is less than 15 per million hours worked for the mill and less than 45 per million hours worked for agricultural activities.

3. The mill raises awareness and provides guidance to its sugarcane suppliers on issues related to workplace health and safety. Evaluations of the performance of mill managers are linked to compliance with this indicator.

Communication and dialogue channels

The mill has channels for effective communication and dialogue with its stakeholders.

1. The mill has formal mechanisms for dialogue and conflict resolution with its stakeholders, which are broadly disseminated, and demonstrates their proper functioning by registering the contacts, agreements and actions taken, etc.

2. Negotiations related to land concessions or any conflicts over land or water use adhere to the principles of free, prior and informed consent. Negotiations closed or ongoing may be corroborated through documental evidence and/or consultations of the parties involved.

3. More than 90% of actions that require the consultation/involvement of stakeholders reach an agreement in accordance with the principles of free, prior and informed consent. Evaluations of the performance of mill managers are linked to compliance with this indicator.

Local communities

The mill organizes initiatives to promote the development of local communities.

Local development

1. The mill identifies the impacts of its operations on local communities and implements preventive or mitigation actions following free, prior and informed consent by the communities affected.

2. The mill identifies opportunities and priorities for development through consultations of local communities.

3. The mill invests in programs in the areas of education, natural resource conservation, social well-being or economic development that target local communities, based on the priorities identified.

Sugarcane supplier management

Supplier base control

1. The mill maintains control of its independent sugarcane supplier base via a registry of direct suppliers and knowledge of relative production aspects, such as: location, planted area, conservation area, land ownership and use rights, chemical products used, registration in the Rural Environmental Registry (CAR), etc.

2. The mill shares with Braskem its registry of direct suppliers and information on: location, planted area, conservation area, land ownership and use rights, chemical products used, registration in the Rural Environmental Registry (CAR), etc.

3. Whenever the mill acquires sugarcane from direct suppliers that in turn acquired it from sub-suppliers, the mill requests information on the origin of the sugarcane, such as: location, planted area, conservation area, land ownership and use rights, chemical products used, registration in the Rural Environmental Registry (CAR), history of burning during harvest, etc.

Support for suppliers

The mill fosters sustainability in the field through actions targeting small independent sugarcane producers.

1. The mill organizes engagement actions with sugarcane suppliers, such as meetings, events, field days, etc., with the main goal of transferring knowledge and technology.

2. The mill maintains a guidance and/or support program designed primarily for small sugarcane producers on production, environmental, social, financial, administrative and other issues.

3. The mill has a formal sugarcane sourcing policy for small producers under which it commits not to exclude small producers from its sugarcane supplier base due to the possibility of not being able to meet responsible sourcing requirements, unless unacceptable production practices established by the mill itself are identified.

Pesticide handling and storage

1. The mill organizes actions to raises awareness or provides guidelines to its sugarcane suppliers on the importance of safely handling and storing pesticides.

2. The mill monitors its direct suppliers with regard to the safe handling and storage of agricultural pesticides through field inspections and provides guidelines on how to remedy nonconformity.

3. The mill requires its direct suppliers to comply with the minimum requirements for the safe handling and storage of pesticides, conducts field inspections to verify compliance and establishes corrective targets whenever nonconformity is identified.

Environmental compliance of suppliers

1. The mill organizes actions to raise awareness or provides guidance to its sugarcane suppliers on the importance of registering their properties in the Rural Environmental Registry (CAR) and the Environmental Normalization Program (PRA).

2. The land ownership and use rights for the planting of sugarcane, as well as for the right to withdraw water, are demonstrated by the presentation of the mill's legal documentation. Customary rights may be corroborated by other means.

3. For cases in which the direct supplier acquires a portion or all of the sugarcane supplied to the mill from indirect suppliers, the former must provide to the mill the legal documentation attesting to the indirect supplier's land ownership or usage rights.

Agreements with suppliers

1. The delivery of sugarcane to the mill by its independent suppliers is made only formally, via contracts executed by the parties.

2. There is evidence that the mill explains the contents of the contract to suppliers prior to its execution, especially on issues related to the method for determining prices.

3. Payments are made as established in the contract, complying with the terms established and with corroborating documents provided to the suppliers.

Quality and efficiency

Training

1. Training on operational, production, environmental, social and managerial aspects is offered to all levels of the workforce.

2. A formal training program exists that was created based on a mapping of needs and that is reassessed regularly to ensure its continuous improvement.

3. The percentage of payroll spent on training is greater than or equal to 1% or the time spent on training direct employees is equal to or greater than two days. Evaluations of the performance of mill managers are linked to compliance with this indicator.

Research, development and efficiency

The research, development and constant pursuit of efficiency gains in production are part of the mill's routine activities.

Research and development

1. The mill invests in research and development to capture efficiency and quality gains in its sugarcane and ethanol production.

2. The mill invests in technical support and rural extension to foster sustainability in its sugarcane supply base through technology transfers.

3. Spending on research and extension corresponds to over 0.5% of the amounts obtained from the sales of the mill's products.

Production efficiency

1. Sugarcane yields (tons of cane/hectare) are in accordance with the Bonsucro table, which is available at www.bonsucro.com.

2 Total raw materials consumed per kilogram of product is less than 30 kg/kg for total ethanol production and total fermentable sugars, expressed as Total Sugars As Invert (TSAI), is greater than 120 kg per metric ton of cane.

3 The mill's processing time in relation to total crushing time is greater than 75% and the industrial efficiency indicator, which is measured by the sum of the TSAI equivalent of products (sugar, ethanol, yeast, molasses) divided by the TSAI of imported cane and molasses, is greater than 75%. Evaluations of the performance of mill managers are linked to compliance with this indicator.

Financial feasibility

The mill and primarily its independent sugarcane supplier base present financial feasibility for the long term.

Financial management

1 Tools and practices are implemented to ensure the mill's financial feasibility in the long term.

2 The value added by the mill operation (sales less costs with goods and raw materials, including energy and third-party services) is greater than US$4 per metric ton of cane.

3 Administrative and financial education actions are carried out by the mill with the small and midsized independent sugarcane producers in its supply base. The value added for producers (sales of sugarcane less input costs) is greater than US$2 per metric ton of cane.

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www.braskem.com