

SOY

GOOD AGRICULTURAL PRACTICES AND
SOCIO-ENVIRONMENTAL CERTIFICATION IN BRAZIL

Towards Sustainability



Photo: Leandro Baumgarten

2nd Edition



Photo: AIBA

INITIAL CONSIDERATIONS

This publication was developed to emphasize the social, environmental and economic aspects regarding the adoption of good agricultural practices in the soybean production chain. It is also intended to present many socio-environmental agreements and certifications applicable to the commodity and its derivatives. It presents basic information about the representativeness of soybeans in the world market, with greater emphasis on the Brazilian market.

The major focus of the publication is to stimulate reflection on the ways and benefits of implementing socio-environmental standards in various stages of production and operations in this sector, which result in effective social and environmental responsibility required by prominent markets. Also described are some important financial mechanisms based on sustainability criteria and essential conditions needed to grant funding to sector enterprises. This publication seeks, above all, to clarify the generalities of sustainability related to agricultural commodities, especially soybeans and their byproducts to producers, companies and others involved in this chain.

It is important to remember that in no way is this publication intended to have exhausted all options on the initiatives of good agricultural practices, financial arrangements, agreements or existing socio-environmental certification, as this would be an almost impossible task due to the volume of information that exists on these issues.

However, through some examples of best practice programs and a description of many agreements and applicable certification standards, this publication hopes to contribute to the dissemination of the most important aspects of the transition between traditional farming systems and new methods involving continuous improvement criteria in the soybean production chain.

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THE SOYBEAN MARKET

Soybean: an agricultural commodity

Goods that are produced and marketed on a large scale are known as commodities. There are different types of commodities, each of which congregates products of a similar origin: agricultural, mineral, environmental and financial commodities, for example. Another characteristic that could define a commodity is that such product is commercialized in its natural state and will be further transformed by subsequent industrial transformation processes. These products are traded in the Commodities and Future Exchanges and their values are defined by the conditions and fluctuating of the global market. Soybeans, therefore, fall under the category of agricultural commodity, along with cotton, wheat, coffee, tobacco, and others.

Soy is an excellent source of protein, making it a very important foodstuff for both human and animal consumption. Its oil component is used by the food industry and is present in many products such as margarine, mayonnaise, vegetable fats, and others intended for human consumption. Its bran, in turn, is used as feed for dairy and beef cattle breeds.⁽¹⁾ Soybeans are also used as raw material for many products such as sunscreens, creams with localized antioxidant effects (cosmetics), biofuels, industrial lubricants, printing inks and polymers.

Brazilian soybean and its market profile

Brazil is a major world producer of soybeans, with an area of approximately 23 million hectares devoted to soy production in a worldwide total of 96 million hectares. The country, therefore, has a 24% share of the global area in which soy is planted, and thousands are involved in the production of this raw material so important to the social and economic development of all parties involved in its production chain.⁽²⁾ In this context, soybeans are considered the principal crop in the country, both in volume and in income generation.⁽¹⁾ The fact that Brazil is the second-largest global exporter of grain, oil and soybean bran demonstrates the extent of its market.⁽³⁾

Due to increasing prosperity and population growth, consumption of soy has grown substantially because its amino acid composition and high protein content makes it a good source of protein. The largest producers and exporters of soybeans in the world are the United

States, Brazil and Argentina, and the U.S. alone produced 91 million tons in the 2009/2010 harvest season, representing 35% of the global production. Together, Brazil and Argentina accounted for 46% of the global production, showing greater potential for expansion in recent years.⁽⁴⁾

The largest importers of soybeans in the world are China, whose import volume has risen dramatically, followed by the European Union (EU), Japan and Mexico. China became Brazil's largest trading partner in 2009 when it surpassed the United States, which had held that position since the 1930's. Although this situation is likely to be temporary since it is a reflection of the economic crisis faced by the United States in 2008, it is an indication of the importance of the Chinese market for Brazilian commodity exporters. In quantitative terms, Brazil exported nearly 30 million metric tons of soybeans worldwide in 2009, of which just over 15 million were exported to China alone. Even with the most pessimistic projections, the trend points to an increase in Brazilian exports to that country.⁽⁵⁾

In the Brazilian market, soybeans stand as the most explored crop. Its high-level competitiveness is due to the availability of large areas, cheap labor, significant technology, large scale production and availability of capital.⁽⁶⁾

All regions of Brazil produce soybeans, but the states of Mato Grosso and Paraná are responsible for 27% and 20% of national production, respectively. The state of Mato Grosso alone contributes to 8% of all soybean produced globally. Regarding the total cultivated areas in the country, Mato Grosso is first, followed by Paraná and Rio Grande do Sul. However, due to limitations on the expansion of new areas in the South, the Midwest, North and Northeast regions currently have more responsibility to provide areas for the expansion of soybean cultivation in Brazil.⁽⁶⁾

Of the total exports to China, the states of Mato Grosso (34.5%), Rio Grande do Sul (23.9%), Paraná (15.8%) and Goiás (9%) top the list as the largest exporters according to 2009 data.⁽⁵⁾

If on one hand the country stands as a leading exporter of soybeans, on the other, its semi-processed products such as oil and bran do not have the same competitive edge because of tax policies that favor the export of low added value grain. This means that there are few investments in processing plants that would respond to processed products' increased value, gains in international market share and economic development of a more diversified supply chain.⁽⁶⁾ Regardless, in Brazil and

around the world, soybean demand has increased significantly, promoting the growth of the domestic supply chain and increasing its global market presence. Thus, it is clear that operations related to soy are extremely im-

portant for the Brazilian economy, clearly highlighted by the country's role as a producer and exporter of this agricultural commodity.

Market growth and socio-environmental aspects

The rapidly expanding market has promoted development of more soybean fields and other agricultural products, which enhances the impact of and demand for environmental resources such as goods and services that make up natural capital (water, soil, biodiversity, rainfall patterns, among others). Natural capital is the entire environmental-resource base that allows for the survival of life in its entirety and, of course, for the socioeconomic development of human beings. Furthermore, among the elements threatened by development is the dignity of human life, especially that of the workers in these production systems.

These problems, which are a consequence of market expansion, have been criticized, especially those related to deforestation and environmental impacts such as greenhouse gas emissions, water and soil contamination and loss of biodiversity. In turn, Brazil has shown a strong concern towards ensuring that the expansion of agricultural commodities, especially that of soybeans, is conducted in a responsible manner and in accordance with national laws. This concern is also due to the fact that the European consumer market has increasingly demanded that the entire production chain be aligned with the precepts of environmental and social sustainability, attested by certifications, agreements or specific programs.⁽⁴⁾

These and other trends show that the future of soybean production in Brazil and throughout the world will follow standardized guidelines on economic, social and environmental aspects, under the umbrella of more responsible agricultural practices. The mobilization of suppliers, producers, buyers, exporters, processors and other actors of the soybean production chain will be a must for there to be an alignment of social and environmental sustainability and business continuity, whether this happens through certain practices covered by commitments or agreements, or through certification standards and initiatives in full development. In order to properly manage the vertiginous growth of the world soybean market, it is necessary to rethink the agricultural production system with a much more sustainable approach than the current one, considering the triple bottom line. Certification standards, as well as agreements and best practices programs adopted by individual companies and suppliers, or by a set of entities, will be the driving force of this journey towards excellence in sustainable agricultural production.



Photo: Prefeitura de Lucas do Rio Verde

FINANCIAL MECHANISMS

Banks, financial agencies and other investors also have an important role in soybean production. The large-scale mechanized cultivation requires investments in land, machinery, fertilizers and pesticides, and these investments are offered to producers and companies that commercialize soybeans. Banks such as the Banco do Brasil, Rabobank, Fortis Bank, ABN AMRO, ING Bank, International Finance Corporation (IFC), Santander, and those focused on development, offer special financing to the agricultural sector, and specifically to soybean producers. However, these institutions have social and environmental requirements and criteria that must be met before financing programs are offered to the business sector.⁽⁷⁾

As the entire soy production chain is responsible for its socio-environmental impact, its investors, such as banks that often enable part or all of the processes and resources in this chain, must also bear responsibility for this impact. After all, it is through funding that the majority of business is done and, therefore, where the impacts occur.

Following this trend of thought, nothing is more coherent than the establishment of specific requirements focusing on social and environmental conditions throughout the supply chain that would benefit from the investments. Experts confirm that without funding, farmers lose the main incentive to produce in recently devastated areas, with clear impact mitigation on the environment.

Conditional financing for sustainability: some examples

Banco do Brasil

Banco do Brasil (Bank of Brazil), the main funder of agribusiness in the country, also joined the Soy Moratorium, a pact intended to prevent the production and marketing of grain grown in deforested areas in the Amazon biome. The moratorium, which seeks a balance between environmental preservation and economic development, was proposed by non-governmental environmental organizations in 2006 and approved by government and industry. The bank has established funding criteria that considers properties' conformity to environmental regulations, and has opened lines of credit for the recovery

of Legal Reserve and Permanent Preservation Areas, denying funding for soybean production in deforested areas. The institution began to consider provisions required by the Soy Moratorium for the analysis and granting of credit.⁽⁸⁾

The monitoring done by the Soybean Working Group - composed of many players in the Moratorium - considers deforestation as any open area above 25 hectares, verified by flyovers and satellite imagery provided by the National Institute for Space Research (INPE). This procedure allows detection of newly deforested areas on soy producers' properties and signals whether any grain was planted in those areas since July 2006. If so, the property can no longer provide its commodities to buyers participating in the agreement.⁽⁹⁾

Rabobank

Rabobank is another example of a financing institution in the agricultural sector that is socio-environmentally responsible. It has developed social and environmental policy that ensures contributions to the strengthening of agribusiness and the agro-food chain in Brazil. The bank aims to improve competitiveness and minimize the risk of non-tariff trade barriers related to environmental and social issues.

Rabobank encourages the adoption of good agricultural practices and environmental management, including biodiversity and soil conservation, water and air quality, the development of social and environmental policies for suppliers of raw materials, the use of procedures to ensure animal welfare, and mitigation of greenhouse gas emissions.

Rabobank has developed an analysis of its customers, with whom the bank hopes to encourage the adoption of good agricultural practices and identify the existence of exclusion criteria. According to publications produced by the institution on the subject, agribusiness and the agro-food chain have the potential to generate employment, combining conservation of natural resources and growth of the country.

Among the various criteria for the exclusion of trade relations with Rabobank, the institution considers any violation of their socio-environmental standards - such as animal welfare, genetically modified organisms, human rights, and the arms industry - as a breach of the measures envisaged by the Declaration of the Interna-

tional Labor Organization, overlapping areas of crops with conservation areas, areas with irregular land tenure, lack of main applicable licenses, etc.

In addition, Rabobank established eligibility criteria regarding labor and environmental laws in Brazil, providing support for its customers to comply with these laws. If deficiencies in compliance with specific legal issues are found, customers must commit to continuous improvement and progress will be checked annually through visits to properties. Clients considered as high environmental risk should commit to improving their processes through action plans developed by the institution's social and environmental area, which also monitors the implementation of these plans. The bank may terminate the relationship with customers who do not present evidence of improvement.

With respect to the supply chain, Rabobank recommends that companies implement a supply policy, taking into account socio-environmental criteria in order to finance suppliers. Moreover, the bank encourages such companies to systematically increase the volume of sustainable-produced raw materials and prefers they have an internationally recognized socio-environmental certification.⁽¹⁰⁾

The institution also prescribes policies for some sectors, such as soybean, sugar cane, cotton, coffee, cocoa, palm oil, forestry, biofuels, aquaculture, fishing, mining, oil and gas. The Soybean Sector Policy aims to contribute to a sustainable supply chain through evaluation and customer engagement. This policy applies to all commercial bank services such as loans, project financing, advisory services and market financing available for the soybean industry.

Soybean producers who do not properly manage sustainability problems may pose serious ecological and social risks and therefore generate significant business risks. Problems usually associated with the production of soy include: deforestation and converting natural habitats into agricultural land, impacting biodiversity; disturbing preserved or protected areas, large amounts of greenhouse gases caused by fire or clearing of new areas; conflicts over ownership and use of land; poor treatment and rights violations of indigenous people and local communities; poor labor conditions; soil erosion, deforestation and low-level processing of arable land; irresponsible use of drinking water (especially in areas where there is scarcity of this resource), and surface and groundwater pollution.⁽¹¹⁾

International Finance Corporate - IFC

IFC, member of the World Bank Group, is a financial institution whose mission is to promote sustainable, private sector investment in developing countries, helping to reduce poverty and improve people's lives. The entity is an investor and global advisor committed to promoting sustainable projects in member and developing countries. As a basic premise, these projects must be financially and economically sound, and environmentally and socially sustainable.

The IFC offers a variety of financial products to private sector projects in developing countries that are eligible to receive funding.

Projects financed by IFC must:⁽¹²⁾

- **Be implemented in a developing country that is an IFC member;**
- **Belong to the private sector;**
- **Be technically sound;**
- **Have good prospects for profitability;**
- **Benefit the local economy, and**
- **Be environmentally and socially healthy, as per the IFC's environmental standards and the standards of the country in which they operate.**

Environmental standards to be met by parties interested in IFC financing include several issues related to meeting the requirements of socio-environmental responsibility. The standards are available in documents^a published by the IFC and aim to help stakeholders understand all social and environmental aspects relating to their projects, as well as learn how to comply with their criteria. These documents deal with biodiversity conservation; conflict resolution in affected communities; the environment; health and safety; child labor; social aspects of the private sector; non-discrimination and equal opportunities; working conditions; assessment and management of the impact on human rights; stakeholder engagement in projects developed in emerging markets; among other topics. The publications also outline a number of documents that list environmentally responsible and socially fair initiatives that support good agricultural practices which, in turn, are the very conditions for obtaining financing from the IFC.

^a IFC: www.ifc.org.

The Biodiversity and Agricultural Commodities Program (BACP), for example, is an initiative of the IFC, the Global Environment Facility (GEF), and the governments of Japan, the Netherlands, Norway, Luxembourg, Italy and New Zealand. The program supports projects aimed at reducing threats to biodiversity arising from habitat destruction due to expansion of agriculture.⁽¹³⁾

Photo: AIBA



The BACP seeks to use market forces to promote best practices in all links of the supply chain, focusing on four agricultural commodities: soybeans, palm oil, sugar cane and cocoa.

Regarding soybean, it aims to promote the production, demand, and commercialization of sustainable soy. The report from the Brazilian Biodiversity Fund (Funbio) 2009 states, *"This support is given through four strategic lines of funding, which seek to: promote an enabling environment for mainstreaming biodiversity; develop, test and disseminate best practices for production; promote the demand for products that have a positive impact on biodiversity; and develop financial services that support the implementation of the actions listed in the other three components."*⁽¹⁴⁾

As the focal point of the program in Brazil, Funbio has participated in both the development of strategies for transforming the market for commodities which are handled by the program - soy, sugar cane, cocoa and palm oil – as well as in the selection of projects.⁽¹⁴⁾

GOOD AGRICULTURAL PRACTICES

Increasingly aware of the importance of sustainability and its three pillars – social, environmental, and economic – as well as product quality, consumers are now demanding more responsible practices throughout the production chain. In the case of field production, these requirements gave rise to so-called Good Agricultural Practices (GAPs), which can be defined as "doing things in the best way and proving that is the case".

GAPs are a set of principles, standards, and technical recommendations applied to the production, processing, and transportation of feedstock, raw materials, and products aimed at taking care of human health, protecting the environment and improving conditions for workers and their families. The direct and indirect beneficiaries of GAPs are farmers and their families who add greater value to their products; consumers who will have higher-quality and socio-environmentally responsible products, and society in general that will enjoy a protected environment and more equitable social relations.⁽¹⁵⁾

GAPs seeks the following objectives:⁽¹⁵⁾

- People's safety and social conditions, because they improve the living conditions and welfare of workers and their families;
- Food safety for the production of healthy, uncontaminated and higher quality food that improves nutrition and feeding;
- Environmental responsibility, as resources such as water, soil, air and natural services are less negatively impacted;
- Product safety, through systematic management that allows greater traceability of the stages of production and commercialization, as well as greater access to a more demanding market;
- Animal welfare, with better treatment of animals and a more appropriate diet.

GAPs are established procedures for primary production aiming, above all, to control the risks and hazards present in each operational step, taking into account sustainability criteria for environmental preservation and the socioeconomic development of all who are involved in agricultural production. The following are some programs of great prominence on the Brazilian agricultural stage.

Brazilian Soybean Economic, Social and Environmental Management Program (Soja Plus)

Soja Plus is organized by the Brazilian Association of Vegetable Oil Industries (ABIOVE), the National Association of Grain Exporters (ANEC), the Mato Grosso Association of Producers of Corn and Soybeans (APROSOJA), and the Institute for Responsible Agribusiness (ARES).

It is a program that promotes and implements actions in partnership with farmers, state and local governments, civil society, industry, commerce, research institutions, teaching and extension, with the following goals:⁽¹⁶⁾

- To develop a nationwide soybean farming management program that is participatory and transparent in order to meet market demands for sustainable products;
 - To achieve continuous and gradual improvement of rural properties' environmental, social, and economic aspects;
 - To conduct voluntary verification of criteria and indicators.

Diagnosis of challenges and opportunities is the program's working dynamic so as to promote support and encouragement, the monitoring of performance indicators, and recognition of progress made. This dynamic is present in many program activities, which can be summarized as:

- Increasing awareness and enlightening producers on economic, social and environmental topics;
- Producing and distributing technical equipment to implement better agricultural practices;
- Providing tools for managing farms;
- Training educators;
- Organizing training and field days;

- Organizing the exchange of experiences between producers and establishing benchmarks for comparison;
- Checking the effectiveness of production units' implementation;
- Assessing content retention;
- Recognizing and disclosing the progress achieved through a statistical annual report, meeting with participants, providing qualification seals and certification for production units;
- Prospecting financial incentives for producers who seek a differentiated market so they can gain high-level management skills.⁽¹⁶⁾

Soja Plus works in five areas that serve as basic principles for the program: Quality of life at work; Best practices for production and services; Financial and economic feasibility; Product Quality; and Social Responsibility.

Occupational health: the adoption of procedures to ensure access to clean water, adequate food and sanitary conditions for workers; the Medical Control of Occupational Health Plan; the Environmental Risks Prevention Program ; first aid procedures; accident and emergency medical care; and guidance for use of Personal Protective Equipment.

Labor relations: control plan to ensure legal requirements and compliance with working hours; guidance procedures directed at the activities of employees operating machinery or handling chemicals, environmental hazards, health and safety.

Agricultural practices and impact management on natural resources: mapping natural resources (water, Permanent Preservation Areas and Legal Reserves); monitoring impacts on land and water; monitoring of fuel-based greenhouse gas emissions; identification and mapping operations' socio-environmental risks; adoption of procedures for the mitigation of negative impacts; plan for reduction, reuse and waste recycling; conservation techniques and other procedures.

Financial and economic viability of projects: financial planning of projects; implementation of cost controls; adoption of risk management mechanisms; and legal compliance.

Product quality: plan for assessing hazards and critical control points; monitoring the use of potential contaminants; procedures for production; logistics and transport infrastructure; storage and processing.

Social Responsibility: procedures for interaction with society to solve conflicts of interest in surrounding areas and a participation plan for individual and collective social projects.

To participate in the Soja Plus program, farmers must register on the program's website^a where they can access technical materials on good agricultural practices and utilize management tools for use on their farms. Producers and their employees can attend trainings and field days, and exchange experiences with other property owners and employees. Unions and farmer associations, the public sector, private companies, non-governmental organizations, universities and financial institutions are also very important partners, offering several benefits and contributing to the development of the program.⁽¹⁷⁾

Greener Soybean Project (Soja Mais Verde)

The Soja Mais Verde Project^b is an initiative of Mato Grosso state, the Mato Grosso Soybean Producers Association (APROSOJA) and the international non-governmental organization The Nature Conservancy (TNC), in partnership with municipal governments and other entities. It aims to ensure sustainable soybean production in Mato Grosso through the environmental mapping and regulation of rural properties.⁽¹⁸⁾ At the same time, it attempts to recover degraded areas and eliminate the cultivation of soybeans in Permanent Preservation Areas, which include natural springs and wells, plateaus, and river banks, among others.

The project proposes to map farms in thirteen cities in the region of Alto Teles Pires – (Mato Grosso), the largest soybean producing area in central Brazil, accounting for about 10% of the national production.⁽¹⁹⁾

^a Soja Plus: www.sojaplus.com.br.

^b Soja Mais Verde:

www.aprosoja.com.br/novosite/com_projeto.php?id=14&comissoes=Sustentabilidade%20Socioambiental.

The city of Sorriso is an excellent example of the benefits of the Soja Mais Verde Project. As of March 2011, technicians had managed to map 60% of the municipal area and the property registration process continued. Meetings were held in communities and information was disseminated in the press in order to obtain 100% participation of producers in the region. After registration, protected areas will be identified using GPS to enable the delineation of areas to be recovered. This recovery may be accomplished by isolating the area, and allowing its own seed bank (already in the soil) to take root for the natural recovery of the original vegetation to take place. However, experts say, where there has been intense use of herbicides, the seed bank may have been depleted, precluding an effective recovery of native vegetation. In such cases, native seedlings from the isolated region should be planted where there was agricultural activity. Experts say that following the third or fourth year after seedlings are planted, new forest is able to develop by itself. But even then, technical support is needed to ensure that reintroduced native vegetation takes root. According to farmers that have benefited from such activities, it is possible to identify a positive cost-benefit ratio regarding the recovery of Permanent Preservation Areas, despite some of the difficulties in the process.

The second phase of the program will seek to recover and manage the so-called Legal Reserves - compulsorily protected parcels of properties, which vary from region to region.⁽²⁰⁾

Producers on properties that have not yet registered for the program should consult with their own municipal governments to obtain information on the proper regulation. This helps the mapping of environmental liabilities derived from soybean cultivation and the planning of actions for the recovery of Permanent Preservation Areas and Legal Reserves.

Cargill 3S – Sustainably Sourced & Supplied

The SSS program (or 3S) from Cargill^a is an initiative that aims to provide solutions for the three main aspects of soybean production: deforestation, workers' rights, and greenhouse gas emissions. It is essentially a simple and pragmatic response to actual current demands and is focused on the sustainability of their products. Since 2011, Cargill has positioned itself as a supplier of soybeans established under the 3S program criteria.⁽²¹⁾

In order to help prevent the degradation of areas, Cargill is committed to providing products that are not from.⁽²¹⁾

- Areas with high biodiversity value, considered primary forests;
- Areas legally designated for protection; and
- Land with high carbon stock.

By choosing to participate in the 3S program, Cargill's soybean suppliers commit to these terms by signing a declaration on the products they provide, allowing Cargill access to the farms, either directly or through independent auditors, in order to verify the compliance declared by the producer.

To respect and protect the welfare of the worker, Cargill states that the planting, growing and processing of their products should not adversely affect the rights of workers. As a major global buyer and processor of soybeans with operations in Brazil, the company recognizes the need to respect and protect sensitive environments, providing support for sustainable soy production. The organization has been working with farmers, industry partners, NGOs and communities to develop cutting-edge solutions that promote sustainable agricultural practices and incentives for sustainable economic development.⁽²²⁾

Focusing on continuous improvement through the 3S program encourages producers to evolve systematically in areas such as employment contracts, health and safety, housing, pay, non-discriminatory policies, verification of seed origin, and pesticide use. Producers receive annual 3S program certification based on assessment of their practices.

Furthermore, supplier properties must comply with all laws relating to working conditions and employee rights, especially those related to child labor and the conditions that characterize forced or compulsory labor. Farms must meet basic health and safety requirements, ensuring that workers are properly trained and have access to appropriate safety equipment.

Regarding the management of greenhouse gas emissions (GHG), Cargill confirms that it is aligned with the Renewable Energy Directive of the European Union (EU - RED), in each step of its supply chain. Additionally, the company guarantees that its carbon footprint is below all agreed benchmarks and that it invests heavily in supply chain and process efficiency in order to significantly reduce GHG emissions.⁽²¹⁾

Cargill's supply chain, shaped by the 3S Program, is audited by an independent body under the criteria established by internationally recognized ISO 19011 auditing standard or any other standard acceptable under the rules of the EU - RED.

^a Cargill: www.cargill.com.br/pt/responsabilida-corporativa.

The company's vision, focused on responsible soy production in Brazil, includes:⁽²²⁾

- Responsible Soy Production in the Amazon;
- Support for Producers and Promotion of Sustainable Practices;
- Development of and Sustainable Soybean Production; and
- Respect and Engagement with the Local Community in Santarém (State of Pará).

"Responsible Soy Production in the Amazon" refers to the company's adherence to the Soy Moratorium, joining others involved in the soybean industry in Brazil, with the commitment to not buy soybeans from areas that have been deforested since July 2006 areas in the Amazon biome.

The last edition of the Moratorium, which is valid until 2013, includes a new program that provides information and guidance to farmers so as to ensure their properties' legal compliance and registration in the Rural Environmental Registry (Cadastro Ambiental Rural – known as CAR). This issue will be discussed further in this publication. More than 13,000 booklets and training sessions have been used to help farmers and local stakeholders understand the objectives of the Soy Moratorium, legal compliance with the Brazilian Forest Code, and GAPs.⁽²²⁾

"Support to Producers and Promoting Sustainability" is carried out in partnership with TNC, and Cargill provides direct support to actions aiming at legal compliance with the Brazilian Forest Code in areas in the Santarém region, in Pará state. Since 2004, the Partnership for Sustainable Soy, as it has become known, has helped farmers implement environmental management best practices, providing training in reforestation and restoration techniques.

Since 2006 there has been no deforestation in the region of Santarém, reflecting this partnership's obvious success. In the coming years, the activities will include pilot environmental impact monitoring systems that go beyond deforestation, and also consider the use of pesticides and water quality. The initiative will also be expanded to reach more than 20 additional municipalities in Mato Grosso, covering over 15 million hectares of land, including approximately 2.5 million hectares of soybean fields.

Regarding the "Development and Promotion of Sustainable Soy", Cargill has also been supporting a number of

industry initiatives, in addition to its internal efforts to encourage the sustainable production of soybeans. The company is also a member of the RTRS program for responsible soy certification and contributes to the Soja Plus Program, an initiative already discussed in this publication.

Since the establishment of a soybean terminal in Santarém, respect and engagement with the local community has become a reality. In partnership with TNC, Cargill has been providing direct assistance to producers in the region and helping them comply with the Forest Code. This partnership enables the evaluation of all local producers to ensure they meet the legal conservation requirements. Support for small local producers who grow other crops is also being offered. The company is building relationships with the community at large, supporting local initiatives such as the reconstruction of the public library and restoration of murals in the city. The soybean terminal in Santarém can be visited by the community, and people can find answers to their questions.⁽²²⁾

Unilever Sustainable Agriculture Code - SAC

Unilever^a, one of the largest consumer goods companies in the world, has pressing challenges in the areas of recycling, efficient use of water, and social inclusion. It has developed the Sustainable Agriculture Code (SAC) for its suppliers, establishing specific criteria that focus on issues such as continuous improvement, agrochemicals and fuels, soil, water, biodiversity, energy, waste, human and social capital, animal welfare, value chain, the local economy, and training.

Through its program of sustainable agriculture, Unilever seeks the protection and enhancement of nature and biodiversity, improvement and maintenance of soil fertility, improved income and better living conditions for farmers and other workers, efficient use of nitrogen fertilizers and those that do not harm the environment, improvement, protection and availability of quality water, and reduction of greenhouse gas emissions.⁽²³⁾

With this code, the company expects its suppliers and farmers to adopt sustainable practices on their properties. All suppliers of agricultural raw products must be committed to being part of what the company describes as "the journey of sustainability", demonstrating compliance with minimum standards of performance and con-

^a Unilever: www.unilever.com.br/sustainability.

tinuous improvement of its processes. The code covers all practices that suppliers should strive to achieve, established as essential requirements, compulsory best practices, and others strongly-recommended actions.⁽²³⁾

The Soybean Free Program (Programa Soja Livre - Embrapa)

Brazil has assumed a leadership position in the generation of production technology of soybeans for the tropics. It is part of a select group of producers to meet the conditions of consumer markets that require conventional soybeans. The Soybean Free Program^a was created to fulfill the needs of producers in the state of Mato Grosso, which target a wider range of conventional soybean cultivars.

The initiative consists of increasing the supply of conventional soybean varieties with high technology, productivity, quality, and agronomic characteristics adapted to the needs of soybean producers, allowing a variety of choices for the soybean planting. As a technically and economically feasible option, conventional cultivation meets the needs of today's special markets, strengthening opportunities for differentiation and adding value to production and export.

Soybean Free Program intends to expand the supply of soybean seeds and their access to conventional producers, develop and strengthen partnerships for Embrapa's (Brazilian Enterprise for Agricultural Research) technology transfer of conventional soybean cultivars, and, finally, expand the supply of conventional soybeans to the processing industry.

The program's actions ensure the maintenance of the sector's competitiveness and access to various technological options for the soy farmers. Also, it regulates the market in a sustainable way, increasing the technical and economic independence of the producer.

The program is conducted through partnerships among many players in the soy industry that operate in different areas, from the generation of new soybean varieties to development of production systems, marketing, processing, manufacturing, and even exportation.⁽²⁴⁾

Bunge - Sustainable Agriculture

Bunge, in Brazil since 1905, produces and processes soybeans and wheat, among other products. To help keep the focus on sustainability initiatives, it created and maintains the "Platform for Sustainability" so that sustainability principles are put into practice on a daily basis in line with its entire value chain. Through this platform, the company seeks to disseminate best practices and a culture of sustainability among its partners, developing actions focused on four strategic pillars: sustainable agriculture, climate change, healthy diets and waste reduction. The company also endorses the Soja Plus Program and participates in the Round Table on Responsible Soy (RTRS).

With regard to sustainable agriculture, the company aims to raise awareness and provide capacity development so that farmers can produce in ways that reduce environmental impact while maximizing the use of natural resources. According to the Bunge 2011 Sustainability Report, around 35,000 producers are connected to the company, which proposes to minimize the negative impact of rural activities and encourage responsible production on four fronts: awareness and sensitization, training, recognition and sanctions. These steps outline a set of actions to be followed carefully, aiming to promote sustainability in the field and throughout the supply chain.

As part of its awareness and sensitization step the company produces lectures, publications, programs and partnerships to disseminate technical knowledge for agricultural conservation, as well as legislation, to encourage employment best practices. A partnership was established with Embrapa for the development of Crop-Livestock-Forest Integration (iLFP – Integração Lavoura-Pecuária-Floresta) technology programs to disseminate knowledge, and launch booklets that raise the discussion on sustainability among all players involved, from producers to consumers.

The iLFP is a technique that combines trees and crops (grains, oilseeds and fiber) with pastures, diversifying production through integrated management of natural resources. The result translates into economic and environmental benefits, both for producers and for society as a whole, which is less impacted by the use of this technique. The technology reduces environmental impact, especially in regions with limited biodiversity, such as large monoculture areas. At the same time, it contributes to the generation of employment and income, improving the quality of the fields and reducing degradation, and bringing back the productiveness of the soil.

^a Soja Livre: www.sojalivre.com.br.

Respecting the characteristics of each region, iLPF can be applied in all Brazilian biomes.

In order to promote better adherence to the law, the capacity-building step contributes to environmental conservation and enhances the quality of production, and produces programs, events and publications in order to stimulate and inform on how best to use inputs and non-renewable resources, emphasizing concepts, benefits and practices of sustainable agriculture that can be easily adopted. Field Days are organized to drive the adoption of new practices, give continuity to the process and attract new members, as well as to allow farmers to meet, discuss and disseminate new technologies, strengthening partnerships, and presenting results (step titled "recognition") obtained from the correct use of inputs.⁽²⁵⁾

To prevent abuse related to environmental and labor legislation, the company also imposes strict criteria in its contracts with suppliers, part of the action known as "sanctions."

Finally, Bunge, with support from the Ministry of the Environment (MMA), also provides a booklet^a on Environmental Responsibility in Agricultural Production, focusing on the Cerrado Biome, in order to assist producers in legalizing their farming and forestry activities through the adoption of farming best practices.

Initiative "From Field to Market" - Institute for Sustainable Agribusiness (ARES) and Embrapa

The program From Field to Market^b is an initiative that seeks the creation of indicators for assessing the sustainability of production processes and guiding decision making for continuous improvement. The so-called "Field Indicators to the Market" aim at supporting public and private policies for the sector, as well as direct investments.

In this context, the consolidation of sustainability systemic indicators seeks to provide a tool to enable a bet-

^a Responsabilidade Ambiental na Produção Agrícola – Bunge: www.bunge.com.br/downloads/sustentabilidade/cartilha_RA.pdf

^b Do Campo ao Mercado:

http://www.institutoares.org.br/ares_projetos.html

ter understanding of factors limiting the efficiency of processes, allowing staff of different supply chains to act in a coordinated way and build a new paradigm for sustainability.

In 2010 alone, Bunge's control system blocked 64 farmers for use labor akin to slave labor, five suppliers for breach of the Soy Moratorium in the 2010 harvest season, and another 72 in early 2011, in addition to the 1,873 farmers identified by IBAMA (Brazilian Institute of Environment and Natural Resources) for environmental irregularities. According to the company, it currently has no operations identified as having significant risk related to child or forced labor.⁽²⁶⁾

The structuring and consolidation of indicators for the fiber, food, and bioenergy production chain is expected to get results such as: continuous improvement of economic, social, environmental and technological production processes; improvement of supply chain governance; interaction with society on a consistent basis, providing pertinent information; effectively-managed investments; and guidance for the formulation of policies aimed at the public and private sectors.⁽²⁷⁾

Responsible Application Program (Programa de Aplicação Responsável - PAR)

Developed in partnership with Paulista State University (UNESP/Botucatu), APROSOJA, professionals from Dow AgroSciences, and other entities, PAR seeks to provide information and techniques that can improve the quality of agricultural products management. It focuses on the producers and operators of spraying equipment.

Having these professionals in mind, PAR disseminates techniques that prevent the misuse of agricultural products, and teaches techniques for the pulverization process. It further includes guidance on the use of personal protective equipment (PPE) and the correct and safe use of pesticides. According to experts, these security measures are focused on preserving the environment and the health and safety of workers.⁽²⁸⁾

Each program activity involves lectures on the use of PPE and packaging disposal, quality application, weather conditions, as well as theoretical and practical activities on periodic inspection of sprayers and spray drift reduction.⁽²⁹⁾

Programs of Good Agricultural Practices - (Programas de Boas Práticas Agrícolas - Emater)

The Technical Assistance and Rural Extension Company (Emater), present in several Brazilian states, develops programs in partnership with other agencies that are aimed at disseminating good, basic agricultural practices on:

- Production systems for a sustainable and ecologically safe agriculture;
- Safe, high-quality products;
- Food safety, increasing access to markets and improving income generation, working conditions, and the lives of farmers and their families.

An important example of these programs comes from Emater in the Federal District^a, with support from the Department of Agriculture and other research institutes, such as Embrapa. The "Field Day" event aimed at producers seek to present and discuss issues and challenges such as food safety, access to technology, and respect for the environment. Moreover, questions such as collection and sorting of products, agronomics, maintenance of machinery, equipment and utensils, conservation and environmental aspects are widely discussed during these meetings.⁽³⁰⁾

Manual of Good Agricultural Practices in Social and Environmental Agribusiness – Rabobank

Rabobank provides a manual that lists good social and environmental agribusiness practices presenting criteria to achieve sustainability in a systematic way and showing how make rural properties compliant with current legislation. The manual discusses two main areas specifically: labor and environmental law.

The manual provides information that covers the following topics regarding labor law: hiring labor, working hours, compensation, legal documents necessary for hiring, safety and medicine in the workplace, housing, sanitation, lunchrooms, laundry facilities, transportation of workers, basic infrastructure for rural workers and their families, use of PPE, Medical Control and Occupational Health Program, Program for the Prevention of Environmental Risks, Social Security, taxation, child labor, and workplace discrimination.

^a Emater-DF: www.emater.df.gov.br.

In addition to this information, the manual: provides checklists so that producers can conduct a socio-environmental diagnosis of their properties vis a vis labor and environmental aspects; describes the conditions under which the owner may be fined for breach of labor and environmental rules; proposes the systematic definition of corrective measures based on identified priorities; provides guidelines for the development of social and environmental policy for properties, and finally, presents a summary of the applicable laws in each area, identifying the relevant environmental permits needed for the use of water resources and irrigation wells.⁽³¹⁾

To access the above document visit the Rabobank website.^b

Syngenta – Socio-environmental Projects

Syngenta is a global company that offers solutions and products for the entire food production chain, such as pesticides, seeds, and urban pest control. It is guided by the conviction that value creation depends on successful integration between business and environmental performance. Syngenta is included in key financial indexes that measure business contribution to sustainable development.

The company offers a wide range of environmental projects that aim to bring information technology and new opportunities to thousands of farmers around the world, emphasizing respect for the environment and people. Some of the projects developed in Brazil are highlighted below.

Project Grow and Save: it was created with the initiative of APROVALE, an association that brings farmers together from the Vale do Pamplona in the state of Goiás, with the goal of creating standards for the implementation of a comprehensive environmental program that meets the needs of agricultural producers, the market and environmental preservation. The Vale do Pamplona includes the cities of Cristalina and Luziânia and is renowned for the richness of its natural resources, especially water for irrigation.

^b Manual de Boas Práticas Socioambientais no Agronegócio (Rabobank): www.rabobank.com.br/pdfs/manual_boaspraticas.pdf

The Grow and Save project seeks to bring a series of practices so that farmers in the region can gain environmental certifications, adding value to the final product through the integration of environmental sustainability in production. Trainings conducted for farmers cover the correct and safe way to use pesticides, and discuss the modernizing of agrotechnology. In this program, Syngenta works in partnership with the NGO Aliança da Terra, the Regional Council of Engineering and Agronomy (CREA-GO), the companies Goiás Verde Alimentos and SLC Agrícola, Cristalina City Hall, the State University of Goiás, the Rotary Club of Luziânia, SEMARH-LUZ (Department of Environment and Water Resources), and CAT-Luziânia (Association of Friends of the Earth of Luziânia).

Project for the Disposal of Empty Pesticides Packaging:

with the participation of Syngenta, in 2001 the National Institute for Processing Empty Containers (inpEV) was created, and was essential in placing Brazil among the countries that best address the disposal of empty pesticide containers. The inpEV brought clear guidelines for the final and proper disposal of this type of packaging, dividing responsibility among all players involved in agricultural production in Brazil: farmers, distributors, industry, and government. The project established that farmers have one year from the date of purchase to deliver the packaging to the location indicated in the product's invoice. Depending on the region, traveling posts are set up to receive the material, facilitating collaboration with farmers. Such packaging may be recycled, generating products that can be used in construction and helping to increase the life cycle of materials.

PPE Project: it was created to promote the importance of using personal protective equipment, and aiming to

encourage its use, the company established a distribution policy that includes setting annual quotas for the dealers and cooperatives that sell the Syngenta products. About 50,000 kits of PPE are sold annually with no profit for the company.

Lucas do Rio Verde Legal Project: the goal of this project is to make Lucas do Rio Verde, in the state of Mato Grosso, the first Brazilian city to have all its 680 farms environmentally compliant with the

Forest Code. The first step consisted of the mapping of the entire municipality and the results are being delivered to landowners in the form of dossiers on each of the properties. The best options for the setting up of Legal Reserves and Permanent Preservation Areas will be based on this mapping. In this project, Syngenta works in partnership with the Municipal Council, TNC, The State Department of the Environment (SEMA), the Rio Verde Foundation, the State Prosecutor, Sadia, the Sadia Sustainability Institute, and Figril. The company's role in this project is to provide a diagnosis of the practice of proper use of pesticides, in addition to implementing procedures and training to improve safety in agriculture and promote sustainable agricultural production.

Riparian Vegetation Project: initiated in 2004 by the company, the project aims to restore the vegetation that is on

the river banks, streams, lakes, dams and springs, via the planting of native species in the state of Paraná. The revitalization of these areas involves awareness on the part of farmers about the need to maintain riparian vegetation, highlighting its importance in ensuring water quality and preserving the environment. To this end, the company not only hosts "Field Days" that bring together rural workers, but also donates native trees provided by the Agronomic Institute of Paraná (IAPAR). The project is developed in partnership with the State Government of

Syngenta adopts the following principles in places where it operates:

- Maintenance of high ethical standards in all businesses;
- Contribution to sustainable agriculture in the production of healthy food and biodiversity conservation;
- Promotion of safe, healthy, and resource-efficient practices for the production, handling, and disposal of products;
- Implementation of high standards of management for safe, effective, and environmentally conscious use of products;
- Promotion and support of suppliers and customers so they can adopt similar standards of accountability;
- Value and respect for the diverse talents and creative potential of its employees;
- Positive contributions in the communities where it operates;
- Seek and respond to feedback from its shareholders.



Paraná, State Department of the Environment, Emater and the Department of Agriculture and Food Supply.

Pro Safety Program (Pró's): Created in 1990, Project Pró's holds training courses for farmers and distributors with a focus on the safe handling of pesticides. The initiative aims to facilitate the production of healthy food, always focused on safety for the farmer, the consumer and the environment. Activities are performed by Syngenta agronomists, who dedicate a part of these technical meetings held around the country to discuss the "correct and safe use" of pesticides. Within this theme, they cover such matters as the correct use of PPE, product storage, transportation and handling of pesticides, technology implementation, proper disposal of empty containers, and caring for the preservation of the environment.

Safety and Solidarity Project: the result of a partnership between Syngenta, its distributors and manufacturers of PPE, the initiative has two goals: protecting the health of workers who engage in the application of pesticides and allocating funds to charities. It is a project that unites the company's commitment to the welfare of rural workers with collaboration for charities. The partnership allocates sums that are proportional to sales of PPE sets to charities nominated by Syngenta dealers participating in the project.

School in the Field Project: started in 1991 through the partnership between Syngenta and the São Paulo State Department of Education, the project aims to train new generations of farmers on the need to preserve the environment and the use of technology in the production of healthier foods. Within this project, an educational program was developed in rural schools, with the active participation of teachers who use the project's educational content in the curriculum. Young people are encouraged to convey what they learn to their families and the communities in which they live. Thus, the project also plays an important role in the awareness of adults about the concepts of sustainable agriculture, making this an activity that meets present needs without compromising the ability of future generations to meet their own needs.

Syngenta has other environmental projects, such as: Incentive Laws, More Beans, Horti and Fauna, which can be accessed on the company's website^{a (32)}.

^a Syngenta: www.syngenta.com.br

André Maggi Group – Sustainability

The André Maggi Group's main activities are in agricultural production and in soybean seeds, origination, processing and marketing of grain, fertilizer, energy, port management, and river transportation.

With the mission of contributing to the development of value-added agribusiness, respecting the environment and improving the lives of communities, the group took on the environmental commitments from the RTRS, the Soy Moratorium, and belongs to the Companies in Sustainability Reference Group^b (GRES).

Understanding that environmental management in agriculture is configured as the most appropriate way to implement sustainable production systems based on compliance, pollution reduction and good agricultural practices, the Group has developed and released a Guide to Sustainable Practices that proposes to extend some of the environmental, social, and safety principles that guide the pursuit of sustainable development to all partners. Thus, it seeks to promote responsible production through guidance for producers, covering topics such as sustainable agriculture, environmental management (good agricultural practices and crop-livestock integration), protection (storage, transport, and application), management of empty containers, deposits (fuel, fertilizers, and biomass), waste management, Permanent Preservation Areas, Legal Reserves, the Legal Amazon area, Plan for Recovery of Degraded Areas, legislation (environmental licensing, Federal Technical Registry, and Environmental Declaratory Act), Legal MT (Mato Grosso), Fires, among others. The Guide can be found on the website of the André Maggi Group^c.

The André Maggi Group also invests in research and development, strengthening relations with scientific communities and helping improve competitiveness in the international market. The Savannization Project, for example, studied the effects of fires in the transition areas between the forest and Cerrado (scrub forest). The project aims to identify and quantify the variables that control the behavior of fire in the Amazon transition forest, and pinpoint how the intensity and frequency of fires may permanently alter the Amazon rainforest. The project is taking place in a 300-hectare area provided by the Group, and was developed by the Environmental Research Institute of Amazonia (IPAM), in partnership with

^b GRES: <http://www.ethos.org.br/DesktopDefault.aspx?TabID=4244&Alias=ethos&Lang=pt-BR>

^c Guia de Práticas Sustentáveis (Grupo André Maggi): www.grupoandremaggi.com.br/wp-content/uploads/2010/12/Guia_praticas_sustentaveis.pdf.

the campus of Unemat in Nova Xavantina - Mato Grosso, ESALQ/ USP, the Emilio Goeldi Museum, the Federal University of Pará, and American schools such as the University of Florida, Yale University and the English school RainFor – Oxford University.

For the André Maggi Group, sustainability practices, environmental issues, labor and social concerns should be the concerns for all who make up the supply chain. The Group established a training program for the soybean supply chain that seeks to promote responsible agricultural production by encouraging farmers to manage their crops through good agricultural practices and sustainability. The company's objective is to interact with these producers, bringing about a gradual improvement in the levels of legal inclusion and in the patterns of environmental performance.⁽³³⁾

The following strategic directives underpin the program:⁽³³⁾

- Vetting the use of degrading work;
- Vetting the use of child labor;
- Commitment to non-interference in indigenous areas;
- Commitment to non-interference in protected areas;
- Commitment to producing in non-embargoed areas only (SEMA-MT e IBAMA);
- Commitment to not produce in areas that have been deforested since July 2006 in the Amazon (Soy Moratorium).

Other environmental actions of great relevance developed by the André Maggi Group can be seen in their annual sustainability reports^a.

Fiagril – Socio-environmental Projects

Operating in the State of Mato Grosso, Fiagril is a provider of pest management products, fertilizers, seeds, and specialized technical assistance in the cultivation of soybeans, corn, cotton, sorghum, beans and rice. It is also a manufacturer of biodiesel originating from animal fat or vegetable oils, such as soybeans, cotton, sunflow-

er, castor, sesame, jatropha, peanut, palm oil, among others.

Starting with the production of biodiesel in 2008, the company began to acquire part of the raw material directly from 400 families from nine municipalities in the region of Lucas do Rio Verde (where the headquarters of the company is located), expanding its range of actions and focusing on respect for the environment and social responsibility. Fiagril is a business partner and sponsor of the Lucas do Rio Verde Legal Program, which aims to regularize the environmental, health and labor liabilities of rural properties.

The company is committed to contributing to sustainable socio-environmental development, whether through modern technologies and management processes in the production cycle, or through initiatives and projects that encourage best practices in rural properties.

Along with the Autonomous Water and Sewage Service (SAAE), the Middle-North Socio-Economic Development Agency (ADSEMN), and Sicredi, all partners imbued with the same purpose, Fiagril developed the project "Keeping an Eye on Oil," which aims to recycle cooking oil to produce biodiesel and, thus, contribute to preserving the environment and fostering environmental education. The initiative is directed at schools, residences, and commercial and industrial establishments in Lucas do Rio Verde, to stimulate a shift in attitude and promote the correct way to store and collect saturated oil waste.

In partnership with Syngenta, Fiagril also developed the Good Environmental Practices Manual, available on its website, that covers illegal pesticides, disposal of packaging, worker safety and environmental management.⁽³⁴⁾ Fiagril is the founder and sponsor of projects such as:

Supportive PPE: project that promotes the acquisition of protective equipment for those who apply pesticides. Part of the funding goes to charitable organizations;

Eradication of Child Labor Program (Programa de Erradicação do Trabalho Infantil - Peti): childcare support agreement that benefits about 80 children and adolescents up to 15 years of age;

^a André Maggi Group Publications: www.grupoandremaggi.com.br/?cat=10.

Sports Sponsorship: sponsors teams that represent municipalities in state and national competitions in the areas where the company operates;

Agro Shed Friend Pilot Project: the goal is to integrate businesses, farmers, and communities, eventually expanding to all municipalities in Fiagril's area of operations.⁽³⁵⁾

ADM – The Doing it Right Program and other commitments

ADM (*Archer Daniels Midland Company*) is a company that processes and distributes oil, wheat, cocoa, corn, sugar cane and palm oil, fertilizer mixing, ports and silos in its various processing plants. ADM is present in 75 countries turning these materials into products for food, animal feed, and biofuels in its 265 plants. In 1997, ADM began operations in Brazil, focused on the production, processing, and selling of products such as soybeans, cocoa, wheat, fertilizer, animal feed ingredients, biofuels and chemicals.

Some outstanding commitments made by ADM reveal its responsibility as an influential part of the agricultural production chain. The company does not sell grain produced in areas embargoed by IBAMA, and does not negotiate the sale of materials or provides financing to businesses located in these areas. At the same time, ADM is a signatory of the Soy Moratorium commitment and thus meets international market demand for responsible soy, not being associated with deforestation in the Amazon.

The National Pact for the Eradication of Slave Labor is another important ADM commitment since 2007. The company does not negotiate with customers or suppliers whose names appear on the Ministry of Labor's Slave Labor list.⁽⁷⁸⁾ This pact is an agreement among companies and private entities to ensure there is no use of slave labor in the production chain. It aims to formalize the work relations of all those supplying the organizations involved, implying the fulfillment of health care obligations and safety guarantees for the workers.⁽⁷⁹⁾

The Doing it Right Program, considered by ADM as its most important initiative in Brazil for the development of a sustainable supply chain for soybeans, was devel-

oped in partnership with the NGO Aliança da Terra^a in order to encourage more sustainable practices in the Brazilian soybean harvest. These practices seek to reduce the environmental impact associated with soybean cultivation, and ensure good working conditions for farm employees.

One of the first steps of the Doing it Right Program is a visit by Aliança da Terra technicians to properties they need to map. Agricultural operations are analyzed, identifying the positive points and surveyed areas that may require improvements. From this first assessment, the information generated is used to develop a socio-environmental diagnosis of the property that is made available to producers.⁽⁷⁸⁾



The second step consists of an improvement action plan that offers guidance and technical suggestions on how to minimize negative aspects and promote more sustainable agricultural production. Compliance with the Plan of Action is checked annually by the Aliança da Terra, which returns to the property to assess performance and progress as outlined in the plan.⁽⁷⁸⁾

^a Aliança da Terra: <http://www.aliancadaterra.org.br>

COMMITMENTS AND AGREEMENTS

The commitments and/ or agreements are initiatives aimed at the adoption of practices that promote sustainability in the agricultural production chain. One of the socio-environmental and economic goals agreed upon by governments, civil society organizations, companies, producers and other stakeholders in the sector, is the establishing of principles and rules that once internalized by the system will ensure their productive and operational potential, fully respecting the environment and people. Some of these commitments and agreements are discussed below.

Basel Criteria – BC

The Basel Criteria (BC) for the responsible soy production were developed by the consultant ProForest^a as part of a cooperation between the WWF Switzerland Institute and Swiss retailer Coop Switzerland. It addresses issues such as legal and environmental compliance, conversion of forest to other uses, and workers' rights.⁽³⁶⁾

The criteria^b were released in August 2004, driving the development of certifiable standards and international agreements for the responsible production of soy. The BC aims to provide an operational definition of adequate soy production to be used by individual retailers or producers. Three goals have underlined the development of criteria:

- Providing a working definition for soybean production that is environmentally, socially and economically responsible;
- The feasibility of buying soy from responsibly managed properties;
- The contribution to the development of internationally applicable and accepted criteria, focused on sustainable soybean production through a process involving various stakeholders, and that is the result of a negotiated international roundtable on sustainable soy.

The manner in which the criteria were established allows for its application in all soy products, and on all scales, anywhere in the world. ⁽³⁷⁾

^a ProForest: www.proforest.net.

^b Brazilian Interpretation of the Basel Criteria: www.proforest.net/objects/publications/Basel%20Criteria%20%20port.pdf.

Responsible soy production, according to the BC, should be based on the principle of sustainability, which requires the proper balance between economic, social, and environmental management. One must further consider the possibility of a product tracking system so that buyers can be sure they are purchasing products in accordance with the standard.

The scope of the BC covers aspects of compliance with relevant legislation; technical and production management; environmental management; social management; continuous improvement and the possibility of product tracking. Compliance with the BC standard is verified by independent bodies.⁽³⁷⁾

Dutch Sustainable Trade Initiative (*Initiatief Duurzame Handel* – IDH)

IDH^c is an example of the transition to sustainability in the production of soybeans. This Dutch initiative seeks to use 100% responsible soybean in its production by the year 2015. The Netherlands is the second largest buyer of Brazilian soy products, after China.⁽³⁸⁾

IDH programs aim to make international supply chains more sustainable, working to address the social, environmental and economic deficiencies in the soybean sector in developing countries. Joint actions are driven by improvements in the sector, and include governments, the private sector, trade unions, and non-governmental organizations in order to contribute to the Millennium Development Goals (MDG) with regard to poverty, hunger, the environment, and fair trade. Through an alignment between public and private interests that unites forces and knowledge, IDH programs help make sustainability a new standard. Consequently, the commitments seek to bring institutionalized responsibility to the soybean industry.⁽³⁹⁾

The IDH accelerates and develops sustainable trade by building clusters of high influence among large multinationals, civil society organizations, governments and other stakeholders.⁽³⁹⁾ Regarding soybeans, the IDH stimulates production and trade under the certification criteria established by the Roundtable on Responsible Soy (RTRS), which will be further detailed in this document. The RTRS is a Swiss organization founded in 2006 by various entities involved in the soybean value chain. Other European countries also made commitments based on RTRS, such as Belgium, Britain, Denmark and Sweden.

^c IDH: <http://www.idhsustainabletrade.com>.

In order to create more incentives for soybean producers, the IDH also unites with international and local banks, in addition to local producer organizations. Together they work to increase preferential access to the best lines of funding and services for agricultural producers that operate in compliance and that are certified.⁽³⁹⁾

The Soy Fast Track Fund, created by the IDH, supports the adaptation of the soy industry in South America so that it can meet the criteria required for RTRS certification. Private investments are sent to producers so that they can conduct training on good agricultural practices.⁽⁴⁰⁾ These investments enable the improvement required to obtain RTRS certification, both in agricultural production, as well as in its supply chain.

According to experts, initiatives that support producers, such as those by the Dutch government and the IDH, are very important at this early stage because they promote the RTRS technical suitability criteria, increasing production efficiency and reducing costs. The challenge is to increase awareness among producers so that they understand that certification is not only a market opportunity, but also an opportunity in the social, environmental and technical management of properties.⁽³⁸⁾

The Soy Moratorium (Moratória da Soja)

Another example of great relevance in the context of Brazilian soy is the Soy Moratorium, a governance program or agreement, whose aims is the non-commercialization and financing of soybean crops from deforested areas within the Amazon biome. The Moratorium was established in on July 24, 2006 and renewed until January 31, 2013, by the Soybean Working Group (GTS), formed by member companies of the Brazilian Association of Vegetable Oil Industries (ABIOVE)^a and the National Association of Grain Exporters (ANEC), the Ministry of the Environment (MMA), Bank of Brazil and civil society organizations (Conservation International, IPAM, Greenpeace, The Nature Conservancy and WWF-Brazil).

This commitment answers the demands for internationally responsible soy that is not produced in deforested areas in the Amazon forest. In 2008, due to the excellent results obtained, the program gained the support of the Federal Government (via Ministry of the Environment - MMA), and despite the fact that it was to last only two years, it has been repeatedly renewed. European and

other customers such as Ahold, ASDA, Carrefour, Co-operative, Kraft, Marks & Spencer, McDonald's, Nutreco, Ritter-Sport, Sainsbury's, Waitrose and Walmart, as well as civil society itself, recognized the pact, supporting the positive development of its work.⁽⁴¹⁾

As part of the operationalization of the Soy Moratorium, the National Institute for Space Research (INPE) identifies the areas that have been cleared through satellite images. Overflights are also conducted to identify the use and occupation of land. Soybean produced in Amazon deforested areas are excluded from the market, suffering a boycott from buyers in favor of the environment. Consequently, only responsible soy cultivation is accepted by the market.

The Soy Moratorium proposes to end the purchase of soybean grown in areas where the forest was illegally cut and burned after July 2006. Participants of the Moratorium refuse to work with soy producers that disrespect environmental laws, workers, and local populations, prioritizing those that are socio-environmentally responsible. The purpose of the Moratorium is to reduce, and eventually wipe out, illegal deforestation for agricultural purposes in the Amazon, proving that it is possible to combine development and sustainability with the support of society.⁽⁴²⁾

Renewable Energy Directive of the European Union - EU-RED

In 2009, the European Union (EU) launched the Renewable Energy Directive^b with ambitious targets for its member states. The Policy established how countries should work together to achieve the target of 20% renewable energy by 2020. . The Policy provides

^a ABIOVE – Moratória da Soja:
www.abiove.com.br/ss_moratoria_br.html.

^b European Commission – Energy:
www.ec.europa.eu/energy/renewables/index_en.htm.

sustainability goals for biofuels so that they can be considered sustainable energy sources and, therefore, be included in this goal.⁽⁴³⁾

Based on the Policy, the EU has to encourage supplier organizations to adopt voluntary certification schemes for biofuels produced under the criteria of environmental sustainability. Consequently, organizations can demonstrate, through recognized certification procedures, the origins of biofuels and the observation of precepts of sustainability throughout the supply chain. Consequently, each country that buys certified biofuel makes its contribution to the goal of having 20% of EU energy use come from renewable sources.

In order to ensure that countries use their sustainability criteria, the EU seeks to limit the expansion of biofuels that do not generate net savings of greenhouse gas emissions or that negatively impact the environment, biodiversity and land use. These criteria are divided into 12 areas: Legal; Human and Labor Rights; Local Food Safety; Greenhouse Gas emissions Territorial Rights; Rural and Social Development; Planning; Monitoring and Continuous Improvement; Conservation; Use of Technology; Inputs and Waste, Water, Soil and Air Management.

In July 2011, the EU announced the first seven approved certification procedures to be valid for the following five years, authorizing the issuance of licenses for products that meet the Policy criteria. They are:⁽⁴³⁾

- International Sustainability and Carbon Certification (ISCC);
- Bonsucro;
- Round Table on Responsible Soy (RTRS)
- Round Table on Sustainable Biofuels (RSB);

- Biomass Biofuel, Sustainability Voluntary Scheme (2BSvs);
- RED Bioenergy Sustainability Assurance (RBSA); and
- Greenergy Brazilian Bioethanol verification program.



SOCIO-ENVIRONMENTAL CERTIFICATION SCHEMES

Socio-environmental certification is a process whereby an enterprise checks and confirms their compliance with a series of socio-environmental criteria prescribed by a certain "standard". Once the company has been deemed compliant through systematic independent verification, a certificate for products or services can be issued. Upon certification, the project shall be monitored and reviewed periodically to ensure that it continues adhering to standards and maintaining the level of improvement achieved after each cycle of recertification.

The certification standards required for the company (its processes, products or services) normally are beyond mere integral legislation compliance. In the case of socio-environmental certification in agriculture, various national and international certifiable standards have been developed, opening a wide range of possibilities for the producer to choose the most convenient in the pursuit of their certification goals, whether they are environmental, social and/ or economic.

The advantages of agricultural socio-environmental certification are obvious: with it, the company can attest to all its stakeholders – those directly or indirectly involved – that it is fully compliant with environmental and labor legislation, that it uses the appropriate agricultural practices, respecting human rights and other criteria required by mandatory certification schemes. Thus, the certified company gains preference in markets that are keen to observe pressing social and environmental issues, and are increasingly concerned with relationships that show greater respect for people and the environment.

Given the incipience of agricultural certification in the world, many of the standards are in a consolidation and market recognition phase.

Parties interested in additional information about the types of certification presented can check the footnotes with links for web sites, and also check the list of references cited at the end of this publication.

Round Table on Responsible Soy - RTRS

RTRS is a global platform consisting of various stakeholders in the soybean value chain. It aims to promote responsible soy production through cooperation and open dialogue with the sectors involved, aimed at production that is economically viable, socially beneficial, and environmentally appropriate. Due to the efforts of producers, industry, and civil society, this standard was developed with a view to responsible soy production.⁽⁴⁴⁾

Besides the standard applicable to production, there is also a specific one for the chain of custody, which describes the requirements for the control of RTRS-certified soy, its derivatives and products.⁽⁴⁵⁾

The RTRS standards are used as requirements with a focus on preserving areas of high conservation value, promoting management best practices to ensure fair working conditions, and respecting the ownership of land.⁽⁴⁶⁾ By consensus among all the stakeholders, the "Principles and Criteria" for responsible soy was developed with the target of creating a certifiable global standard.⁽⁴⁷⁾ Thus, the RTRS has established itself as an initiative aimed at promoting the development of a global certified soy market under criteria based on respect for the environment and the rights of farmers, local communities, workers, small producers, and their families.⁽³⁸⁾

RTRS certification has a number of important characteristics: it is applicable worldwide; can be applied to soybean production intended for any use such as animal feed, human consumption or biofuels; may be adopted by any producer, regardless of type and size – small producers have, for example, mechanisms for group certification –; it is intended for all types of soy production, such as genetically modified, conventional production, and organic production; and responds to the global sus-

The RTRS standard is supported on five principles:⁽⁴⁷⁾

- 1. Legal compliance and good business practices;**
- 2. Responsible working conditions;**
- 3. Responsible relationships with communities;**
- 4. Environmental Responsibility; and**
- 5. Good Agricultural practices.**

tainability objectives, ensuring access to high-value markets, such as those of the major soybean importing countries in Europe.⁽⁴⁴⁾

More information can be found on the RTRS^a website.

The ProTerra Standard for Social Responsibility and Environmental Sustainability

The ProTerra Standard developed by CERT ID^b originated from the Basel Criteria (BC), expanding its original concept. It applies to all agricultural products and their derivatives that are produced, processed, and consumed worldwide. It is a certification standard open to all members of agricultural production systems, such as the food, feed, and natural fibers industries.

Various stakeholders participated in the development of the standard: industries, brand owners, processors, farmers, governmental regulatory agencies, non-governmental organizations, and consumers, both in developing and developed countries. This certification program is a response to the growing demand for distinct products that have the best ethical standards of production, including social responsibility and environmental sustainability.

ProTerra establishes criteria for corporate socio-environmental responsibility in the food and agricultural sectors, demanding and promoting a culture of continuous improvement that motivates companies to constantly enhance all their systems, processes and practices. In this way, ProTerra certification meets the concept of sustainability, providing businesses an independent, highly competent, and recognized mechanism to evaluate achievements in the area of environmental responsibility. ProTerra also provides means for communicating certification achievements to the world of business and consumers. The scope of certification is defined in three distinct levels of operation in the food production chain:⁽⁴⁸⁾

- Level I - Agricultural Production;
- Level II - Handling, Transport, and Storage;

^a Associação Internacional de Soja Responsável - RTRS: www.responsiblesoy.org.

^b Cert ID – ProTerra: www.cert-id.com.br/?page_id=106.

- Level III - Processing, Manufacturing and Labeling.

Finally, ProTerra provides a mechanism by which one can obtain increasingly higher socio-environmental certification levels, which are recognized and granted by the market.⁽⁴⁸⁾

Carbio Sustainability Certification Scheme for EU-RED Compliance - CSCS

CSCS, a certification scheme for Argentine soybean biodiesel, was developed to demonstrate the sustainability of biodiesel produced in the country and exported to its largest market: the European Union (EU). The certification program is based on the Renewable Energy Directive (EU-RED), which establishes mandatory principles for fuel produced or imported into that region. These principles are based on reducing greenhouse gas emissions and the non-use of raw materials from areas of high biodiversity and land with high carbon stock.

CSCS covers the entire production chain of Argentine soy biodiesel, from the grain production to the fuel refineries, shipment areas or ports. It is a certification scheme developed by the Argentine Chamber of Biofuels^c in the EU and is applicable only to the productive chain of that country.⁽⁴⁹⁾



Photo: AIBA

^c CARBIO: www.carbio.com.ar.

Biomass Biofuels Sustainability Voluntary Scheme - 2BSvs

The French 2BSvs is a voluntary certification scheme that aims to demonstrate compliance with sustainability criteria from the Renewable Energy Directive of the EU (EU – RED) through independent audits. Like other certifications aimed at meeting EU-RED, the 2BSvs allows for meeting the Directive with a focus on biomass used as a raw material and biofuels processed with that biomass.⁽⁵⁰⁾

The criteria that define the requirements to be verified in this scheme are:⁽⁵⁰⁾

- Reducing greenhouse gas emissions through the use of biofuels by 60% by 2018;
- Biomass should not come from areas with high biodiversity value, such as primary forests, protected areas and ecosystems, high-biodiversity regions, or areas with high-carbon stock, such as forests and wetlands;
- Biomass production should comply with good agricultural practices and environmental conditions, in addition to the environmental segment of the Common Agricultural Policy of the EU^a;
- Implementation of a biomass balance system for each logistical site;
- Implementation of a control system for each economic operator with documented procedures.

Certification is carried out by operational units (scopes) each of which have specific requirements. The first unit consists of biomass producers and storage units. They must comply with the "Requirements for the Verification of Biomass Production." The certification may occur in biofuel production plants where compliance must be established in relation to the "System Requirements for Mass Balance". Finally, the third certifiable unit, which is also under the "System Requirements for Mass Balance", is composed of other economic operators, which are entities that have biomass or biofuel, and/ or mediate the supply chain and biofuel product processing. Only after an audit by independent bodies and the respective certification may the company claim that it meets EU-RED sustainability criteria.

Two structures of certification requirements have been developed for the biofuel production and supply chain.

^a Mechanism that provides payments of agricultural subsidies higher than € 40 billion per year to farmers of the block, including those that produce raw materials for biofuels.⁽⁵¹⁾

One for biomass producers, cooperatives or local storage, and the sale of grain, and the other for all economic operators in subsequent processes, such as the processing chain and international trade.⁽⁵²⁾

Feed Materials Assurance Scheme - FEMAS

The purpose of FEMAS is to provide a mechanism that ensures the safety of ingredients in the animal feed industry chain. The English standard applies to all types of ingredients used in the production of feed, whether primary processing products or by-products, regardless of country of origin. There is a voluntary labeling developed by the British Agricultural Industries Confederation (AIC)^b, in response to movements in the UK and the EU for more restrictive food safety regulation. It is a standard that requires independent verification to demonstrate conformity with their requirements. After submitting to the FEMAS certification scheme and being accepted, the product (ingredient) will comply with the requirements contained in any associated documents, such as the FEMAS Scheme Manual. The scope of certification will reflect the nature of the business and shall specify products that meet the certification requirements. The scheme is open to any company involved in the production and sale of food ingredients subject to compliance with its criteria.⁽⁵³⁾

An agreement involving the schemes of the Round Table on Responsible Soy (RTRS) and FEMAS resulted in a module that can be operationalized in the context of soy certification. This new module has the following characteristics: it combines the strength of the sustainability criteria for RTRS-level properties with a safety certification of the supply chain of food ingredients, focusing on the FEMAS standard; offers dual certification, without compromising the structure of each standard; and is compatible with the FEMAS and the RTRS modules of non-genetically modified products, offering an alternative for this specific market.

To be certified in this module, one must comply with the conventional FEMAS standard and modular FEMAS and RTRS standards, in addition to showing that the soy is certified by the RTRS in the scope of the farm property.⁽⁵⁴⁾

^b AIC - FEMAS: www.agindustries.org.uk.

The Argentine No-Till Farmers Association - Aapresid/ Certified Agriculture - CA

Aapresid^a is a non-governmental Argentine association, formed by a network of agricultural producers that are interested in the conservation of soil, their main resource, and have adopted and promoted the diffusion of a new agricultural paradigm based on no-till farming.⁽⁵⁵⁾

The No-Till Farming system "is a conservation cultivation technique that seeks to always keep the soil covered with plants in development and crop residues. This coverage is intended to protect the soil from the impact of rain, runoff and erosion from water and wind [...] Indeed, no-till farming could be considered as minimum tillage since it is confined to the furrow, proceeding followed by seeding, fertilization, and possibly the application of herbicides in a single operation."⁽⁵⁶⁾

Seeking continuous improvement and the aligning of production and environmental goals, Aapresid adopted an Environmental and Productive Quality Management System called Certified Agriculture (CA), and specific production systems for no-till farming. The CA system consists of a Good Agricultural Practices manual and a Guide for Use, Measurement, and Registration of Environmental Management Indicators, focusing on natural resource "land". Conformity verification of producers in the CA system is performed by a recognized third party, an independent certification agency, to ensure the credibility and transparency of the system.⁽⁵⁷⁾

The certification process in the CA system occurs in three basic steps:

- Documentation of the process;
- Implementation of a Measure and Record management plan, and
- Auditing and compliance certification of the management plan and CA system requirements.

The adoption of the CA certification system may result in improved corporate governance, greater agricultural efficiency, and better opportunities vis a vis the increasing global demand for food that can be certified as originating from sustainable production.⁽⁵⁷⁾

International Federation of Organic Agriculture Movements – IFOAM

Trade in organic products is growing rapidly worldwide. Growth rates in the industry demonstrate that organic products are entering the mainstream market, and the total number of properties with certified organic production has already reached 26 million hectares.

IFOAM is a worldwide organization for the organic agriculture movement that brings together more than 750 member organizations in 116 countries. The Federation acts as a platform for exchange and international cooperation in the organic market. Its mission is leading, uniting, and assisting the organic movement in all its diversity.

To meet its mission, IFOAM established five medium-term: building a global platform for the organic movement; developing, communicating, and defending the principles of organic agriculture; defending and facilitating organic farming; promoting the development of organic markets; and ensuring an effectively managed organization with sufficient and sustainable resources.

The certifiable IFOAM Organic Guarantee System (OGS) establishes the boundaries between organic and non-organic products. It is a system that unites the organic products under a common set of standards, conformity verification and market identity. It paves the way for more orderly and reliable trade, enhancing recognition through the "organic" consumer brand.⁽⁵⁸⁾

The OGS is based on the Principles of Organic Agriculture, also known as biological farming, which are the roots for growth and development in organic production.

The certified organic OGS main system components are the Basic Standards and the IFOAM Accreditation Crite-

^a Aapresid: www.aapresid.org.ar.

ria. More information can be found on the entity's website^a.

Fairtrade

Fairtrade International^b is a global organization, established in Germany, which works to ensure better business for farmers and workers. The organization sets Fairtrade standards, supports producers around the world, develops strategies, and promotes global justice in international trade. Its vision is of a world in which all producers can enjoy secure and sustainable livelihoods, realizing their full potential and determining their own future. The organization's mission is to connect producers and consumers who are in disadvantageous situations, promoting fairer trade and enabling producers to combat poverty, strengthen their position and have more control over their lives.⁽⁵⁹⁾

Fairtrade standards are designed to support the development of small productive organizations and agricultural workers in the poorest countries in the world. They are based on principles such as social, economic and environmental development. The overall objectives of these standards are:⁽⁵⁹⁾

- Ensuring that producers are adequately paid, so they can cover the average costs of sustainable production;
- Providing the Fairtrade Premium, which is an additional amount paid to producers to invest in their businesses, communities, and in the livelihoods of workers, or projects that broaden socioeconomic and environmental development;
- Providing pre-financing for producers;
- Facilitating long-term trade partnerships and allowing the producer to have more control over the processes of trade;
- Establishing minimum standards and progressive enhancement to ensure that the conditions of production and trade of all Fairtrade certified products are socially, economically, and environmentally responsible.

The choice of Fairtrade standards is limited to certain countries where producers can submit for certification. Brazil is one of the countries in which the Fairtrade certification is permissible and has an organization licensed to use this brand and its processes: Fairtrade-Brazil. The Brazilian delegation is committed to conducting its activ-

ities in accordance with the principles of fairness, justice, transparency, non-discrimination and mutual respect.

Compliance with Fairtrade standards is certified by an independent third party (FLO-CERT), which certifies the entire production chain, from farmers' associations to the wholesaler.

Certified products can be recognized by consumers through the Fairtrade label. The label guarantees that farmers receive fair prices covering their production costs and have been duly instructed to use the Fairtrade Premium in improving their socioeconomic conditions, with respect to the environment.⁽⁶⁰⁾

IBD – The EcoSocial Seal

IBD Certifications^c is a Brazilian company that develops inspection and certification activities for agricultural processing and extractive, organic, biodynamic products and the fair trade market. IBD operates throughout Brazil and South America and is accredited by four international agencies, including IFOAM, to certify organic products.

Among the various certifications (or seals) administered by the IBD, the Eco-Social Seal is a socio-environmental certification program that verifies fair trade relations in the sale of products. IBD EcoSocial is a certification system that evaluates the performance of enterprises with regard to economic, environmental, human, and social development. Certified projects must meet minimum standard criteria, two progress (improvement) criteria related to environmental development, and two criteria related to human and social factors in the year of certification.

With this certification standard, IBD seeks the maximum involvement of stakeholders in implementation and monitoring of program activities in order to increase awareness and participation in all of the enterprise's environmental development and fair trade. EcoSocial Certification applies to companies with hired labor, small groups of producers and trade operators related to a variety of business sectors such as agriculture, textiles, industrial products, cosmetics, mineral water, and other service providers.⁽⁶¹⁾

^a IFOAM: www.ifoam.org.

^b Fairtrade International: www.fairtrade.net.

^c IBD: www.ibd.com.br.

Imaflora Sustainable Agriculture Network (SAN) - Rainforest Alliance Certified™ Seal

The Institute for Forest and Agricultural Management and Certification (Imaflora)^a is a Brazilian nonprofit organization, dedicated to promoting conservation and the sustainable use of natural resources, and to generating social benefits in the forestry and agricultural sectors. Imaflora implements the Agricultural Certification Program through the Sustainable Agriculture Network (SAN). The SAN is a network of non-governmental conservation organizations and Imaflora is their representative in Brazil.

This network is responsible for developing standards for agriculture, systemizing crops of great social and environmental impact. Imaflora applies these standards to enterprises that want to be certified according to Imaflora's requirements and submit results for assessment by the Sustainable Farm Certification (SFC), a subsidiary of the Rainforest Alliance, and an authorized body within the SAN certification standards. Certified parties receive the Rainforest Alliance Certified™ Seal and authorization to use it in their products and promotional materials, allowing consumers to identify the source of sustainable agricultural products. The agricultural enterprises interested in this certification must therefore meet the criteria of the Sustainable Agriculture Standard.

The SAN principles of sustainable agriculture determine that properties:⁽⁶²⁾

- Promote a system of environmental and social management;
- Preserve ecosystems;
- Protect wildlife;
- Preserve water resources;
- Promote fair treatment and good working conditions;
- Respect health and safety;
- Establish relationships with communities;
- Develop integrated management for cultivation;
- Develop management and soil conservation; and
- Manage waste in an integrated manner.

Imaflora works with the Agricultural Production Unit Certification (in the field) and with the Chain of Custody Approval, in which industries and processors confirm the use of certified raw materials. The

certification is valid for three years and can be given to individuals or to independent groups, cooperatives, or associations.⁽⁶²⁾

Global Good Agricultural Practices - GlobalGAP

GlobalGAP^b is a private organization that sets voluntary standards for agricultural product certification around the world. It developed the standard that bears its name to reassure consumers that farm food production is done with the mitigation of negative environmental impact, minimizing the use of chemical inputs and ensuring a responsible approach to the health and safety of workers and animals. It is a manual for Good Agricultural Practice (GAP) through which producers can obtain certification. This certification applies to producers around the world and is offered by more than 100 independent organizations officially recognized in over 80 countries.

Once GlobalGAP certification is obtained, whether for fruits and vegetables or for bovine and ovine products, the producer is expected to demonstrate that he/she will:⁽⁶⁴⁾

- Respect the law;
- Uphold consumer confidence with regard to food quality and safety;
- Minimize negative environmental impacts;
- Reduce use of agricultural pesticides;
- Increase efficiency of resources used;
- Be responsible for health and worker safety;
- Provide adequate facilities;
- Train and qualify all employees;
- Create control documents for the stages of the production process;
- Have greater operational control of activities and processes;
- Ensure transparency and credibility on the part of suppliers and customers;
- Promote Development and improvement of human resources;
- Ensure traceability of animals.

^a Imaflora: www.imaflora.org.

^b GlobalGAP: www.globalgap.org.

It is a standard that applies even before the product leaves the production unit, meaning that the certificate includes the entire production process. The scope of certification is initiated by inputs, includes agricultural activities, and ends when the product leaves the plant. The seal obtained by GlobalGAP certification is only intended for use in business to business relationships, and it is not visible to the consumer.

The principles on which the GlobalGAP scheme is supported are based on the parameters of food security, environmental protection, decent working conditions, the traceability of products, and health and safety of workers.⁽⁶³⁾

A prominent Brazilian example based on this scheme is given by the Nova Mutum Certification Program for Sustainable Agricultural and Livestock Production, an initiative being implemented by the city of Nova Mutum^a, in Mato Grosso. The objective of this program, called MUTUMGAP, is to develop certification criteria for properties and products originating in the various existing production chains, adding value to agricultural products produced in the municipality.

The program proposes to adopt responsible agricultural concepts and practices that will help guide the certification of products from the Nova Mutum agricultural production chain. As a result, a process of continuous improvement of local production, reduced environmental impact, compliance with labor laws and the adoption of production best practices are expected.

The creation of this certification program, along with a pilot project for the certification of farms, will help demonstrate that farmers and the municipality as a whole are concerned with environmental and social issues and GAPS. Consequently, international recognition of the municipality as one of the first to implement a program of Good Agricultural Practice in the region known as Legal Amazon is expected. In addition, MUTUMGAP expects its program to be equivalent to other seals and global food security, environmental and best practice protocols.

Other major benefits are:⁽⁶⁵⁾

- Strengthening the image of the municipality and promoting good sustainability initiatives in the region;

- Strengthening of local supply chains, providing added value and changing the way producers relate to the consumer market;
- Alliances with the entire supply chain, industry, investors, and consumers;
- Use of certification standards for Food Safety, Good Agricultural Practices, Sustainable Biomass and Biofuels;
- Reduced risk and adding sustainable value relative as compared to other products available in the domestic and international market;
- Capacity-building and training of workers involved in production activities; and
- Creation of a "brand" and "production concept" for the municipality's products.

Round Table on Sustainable Biofuels - RSB

The initiative brings together international RSB farmers, companies, non-governmental organizations, experts, and governments concerned with ensuring the sustainability of biofuel production and processing. Developed by the Lausanne Federal Polytechnic School (Ecole Polytechnique Fédérale de Lausanne - EPFL), in Switzerland, it is open to any organization committed to the sustainability of the biofuel industry.⁽⁶⁶⁾

RSB has developed a system of third party certification, covering environmental, social, and economic principles and criteria. The system is consolidated by means of an open and transparent process, involving multiple stakeholders.

There are 12 pillars that form the principles of the RSB certification model: Legal; Planning; Monitoring and Continuous Improvement; Greenhouse Gas emissions; Human and Workers' Rights; Rural and Social Development; Local Food Safety; Conservation; Soil; Water; Air; Use of Technology; Raw Materials and Waste Management; and Land Tenure Rights.⁽⁶⁷⁾

In this scheme there are two structures to the certification standards. The first covers the requirements for any type of biofuel worldwide. Those enterprises that also strive to gain certification in accordance with the Renewable Energy Directive (EU - RED) - for the export of products to the block - should use the second structure standards outlined by the RSB with a focus on compliance with this Policy.⁽⁶⁶⁾

^a Produção Agrícola e Pecuária de Nova Mutum: www.novamutum.mt.gov.br/uploads/secretarias/ee808c8e6b.pdf.

Additional information can be obtained at the electronic address of the EPFL^a.⁽⁶⁶⁾

International Sustainability and Carbon Certification - ISCC

ISCC^b is a certification system applicable to biomass and bioenergy. Its purpose is to promote the reduction of GHG emissions, the sustainable use of land, protection of the natural biosphere, and social responsibility.

Based on experience, efficiency and effectiveness, the ISCC scheme provides greater security for organizations since it covers aspects of social sustainability. It encompasses the global market and is also applicable to the European Unit market (EU), covering all types of biomass.

According to the ISCC, the characteristics of this certification system are independence, transparency and its international applicability. It is a reliable method to differentiate sustainable biomass and bioenergy from those that are unsustainable. It seeks to motivate farmers and processors to promote greater sustainability in their daily activities.⁽⁶⁸⁾

Since 2011, biofuels exported to Germany must be produced and certified by the ISCC scheme.⁽⁶¹⁾

The ISCC is recognized by all members of the European Commission, with no restrictions, and is considered a reliable proof of compliance with the Renewable Energy Directive (EU - RED).⁽⁶⁹⁾

The system is supported by six sustainability principles:⁽⁷⁰⁾

1. Biomass shall not be produced on land with high biodiversity value or high carbon stock;
2. Biomass shall be produced in an environmentally responsible way. This includes the protection of soil, water and air and the application of Good Agricultural Practices;
3. Safe working conditions through training and education, use of protective clothing and proper and timely assistance in the event of accidents;
4. Biomass production shall not violate human rights, labor rights or land rights. It shall promote responsible la-

bor conditions and workers' health, safety and welfare and shall be based on responsible community relations;

5. Biomass production shall take place in compliance with all applicable regional and national laws and shall follow relevant international treaties; and

6. Good management practices shall be implemented.

Netherlands Technical Agreement - NTA 8080

It is a scheme established on the basis of a Dutch volunteer agreement (NTA) of requirements for biomass sustainability and was established by various stakeholders, such as market agents, governments and civil society organizations.

NTA is a certification scheme aimed at:

- Producers of primary biomass or those who collect biomass waste streams;
- Processors that treat or process the primary biomass;
- Organizations that sell biomass; and
- Final consumers that use biomass to produce electricity, heat, biogas or biofuel for transport.

Photo: Adolfo Dallapria / Gabriel Daldegan

^a EPFL: www.rsb.epfl.ch.

^b ISCC: www.iscc-system.org.

The fulfillment of the standard requirements arising from this Agreement (NTA 8080)^a allows a company to demonstrate that the biomass produced, converted, sold or used complies with international standards of sustainability. This standard was developed under the German rules and criteria of sustainability, and also under the Renewable Energy Directive of the EU, establishing itself as a system of verifiable certification requirements. Thus, biomass suppliers and buyers have a way of distinguishing sustainable biomass goods from those that are not sustainable.⁽⁷¹⁾

The requirements outlined by the NTA technical agreement are intended for biomass produced for energy applications such as power generation, heating and cooling processes, and transport fuels.⁽⁷¹⁾ They apply to solid, liquid and gas biomass, covering six themes: GHG balance, competition with food, and biodiversity; three themes that focus on biomass itself: prosperity, welfare and the environment, all related to the approach of the Triple-P: People, Planet, and Profit.⁽⁷²⁾

The certification system includes the following normative documents:⁽⁷¹⁾

- NTA 8080, which prescribes the biomass sustainability requirements;
- NTA 8081, which prescribes the certification scheme;
- Documents for the interpretation of the NTA 8080 requirements;
- Document establishing rates for certification.



Photo: AIBA

^a NTA: www.sustainable-biomass.org.

RURAL ENVIRONMENTAL REGISTRY - CAR

In December 2009, Decree 7,029 was issued, establishing the Rural Environmental Registry (Cadastro Ambiental Rural – CAR) under the Ministry of the Environment and as part of the National Information System on Environment (SINIMA). It is an important tool for environmental control, as well as for evaluating the effectiveness of farm surveillance and monitoring policies.⁽⁷³⁾

The CAR is a georeferenced electronic identification for rural property, which contains the delimitation of Permanent Preservation Areas (PPA), Legal Reserve (LR) and remnants of native vegetation located within the property.⁽⁷⁴⁾

For the farmer, the CAR also offers the opportunity to make adjustment to the property as covered under environmental licenses, and within specific deadlines avoiding any possible legal proceedings arising from the inspection of this area.⁽⁷⁵⁾

Through a concerted effort between environmental departments, municipalities, NGOs, trade unions, farmers, and rural workers, the CAR is now a welcomed instrument, the result of experiences in building a new model of production and socioeconomic development. It can be understood as an "identity card" for rural properties.⁽⁷⁶⁾

The CAR is already a reality in the states of Mato Grosso and Pará and is operationalized through the mapping of rural properties with the help of satellite images produced for georeferencing. This mapping subsidizes the identification of potential environmental liabilities and helps the producer plan for the restoration of these areas when necessary.

The CAR has been established as a mandatory requirement so that farmers can obtain licenses and environmental permits for any economic activity, farming or forestry. It reflects producers' commitment to their environmental obligations, responding to the pressures of society and the consumer market in relation to environmental protection in the productive rural environment. The data generated through this registry will serve for the preparation of the Recovery of Degraded Areas Plan.^(76, 77)

Properties classified as family farms have free registration in the CAR, and are offered technical and legal support from the government, including georeferencing services.⁽⁷⁷⁾

The Rural Environmental Registry has at least three functions as an instrument for land and environmental management:

1. The planning of rural properties, defining the location of production areas, the PPA and the LR (supporting the planning of the landscape, through the formation of forest corridors within the rural group of local or regional properties);
2. The environmental regularization of rural property (which gives legal guarantees to production and sales and allows access to official credit); and
3. Remote monitoring of deforestation.

Several initiatives to support farmers in the registration process are being implemented with the support of non-governmental organizations, municipalities, SISNAMA (National System of the Environment) entities, and companies. The following are some examples of this initiative.

In August 2010, The Nature Conservancy (TNC), in partnership with financial institutions and government, developed the "Technical Assistance for the Rural Environmental Registry" project, which produced an operating manual to help farmers make adjustments

to their properties in accordance with relevant environmental legislation. The project attempted to relate the technical information necessary for monitoring and controlling rural properties in selected cities in the states of Mato Grosso and Pará.

Qualified as a prototype, the project includes the municipalities of Feliz Natal, Brasnorte, and Juína in Mato Grosso, and Santana do Araguaia and Marabá in Pará, with the following benefits: the development of a digital cartographic base (with high resolution space images), the scanned mapping of properties (georeferencing of farms with an analysis of legal reserves assets and liabilities).

ties); insertion of rural properties in the Mato Grosso and Pará State Department of the Environment Database (SIMLAM - Integrated Environmental Monitoring and Licensing System).⁽⁷³⁾

The project targets all stakeholders who could gain from the creation of productive and environmentally sustainable properties. These stakeholders include government, manufacturing, timber, and finance sectors, and rural workers and other civil society players.

The project structure is divided into the following guidelines:⁽⁷³⁾

- Information campaign, mobilization and dissemination of lessons learned;
- Mapping and georeferencing of rural properties and their integration into the CAR system; and
- Project management and administration.

In addition to this project and in partnership with other organizations, TNC has developed agriculture and conservation integration initiatives with the goal of maximizing the preservation of natural habitat where agriculture and cattle ranching activities take place. Examples of these initiatives are projects developed in the São Lourenço River Basin Project and the Lucas do Rio Verde Legal Project, in Mato Grosso. The State of Pará created a project in collaboration with the municipality of Santarém.⁽⁷³⁾

The Lucas do Rio Verde Project is a partnership between state and local governments (City of Lucas do Rio Verde, the State Department of the Environment, the State Prosecutor), the private sector (Sadia, Syngenta, Fiagril) and civil society (TNC Brazil, Rural Union of Lucas do Rio Verde, Rio Verde Foundation and Sadia Sustainability Institute). Its goal is to combine agricultural development in the municipality of Lucas do Rio Verde with environmental conservation and social responsibility. It aims to regulate the farms in the region through the compensation of Legal Reserves and implementation of continuous, native ecosystems protected areas for. Furthermore, the project seeks compliance with the Forest Code, simplifying the process and reducing environmental licensing costs for producers. It is also expected to promote the correct and safe use of pesticides in accordance with the Legal Safety and Health Rules in Agriculture, Livestock, Forestry and Aquaculture. In short, the project aims to transform the city into a rural socio-environmental model for the state of Mato Grosso.

The project developed in the São Lourenço River Basin seeks the recovery of degraded areas and involves the Federation of Agriculture and Livestock for the State of

Mato Grosso (FAMATO), the Department of the Environment, and The Nature Conservancy, with support from the National Service of Rural Learning (SENAR), and the collaboration of the Mato Grosso Research Company, Assistance and Rural Extension (EMPAER) and the Luiz de Queiroz School of Agriculture (University of São Paulo - Laboratory of Forest Ecology and Recovery).

Finally, there is an initiative between TNC and APROSOJA whose goal is to promote sustainable soybean production in the State, through the environmental regulation of farms. The specific objectives of this initiative are: registering farms located in the four soybean production areas in the state through georeferencing; environmental regulation compliance of these properties; and promoting better environmental management of the properties to ensure the sustainability of production.⁽⁷³⁾

By 2010, TNC and its project partners (NGOs, government, and civil society), had already obtained several results, that included cartographic databases and property maps in Mato Grosso and Pará.

For more information about the CAR, interested parties can access the TNC website.^a



Photo: AIBA

^a TNC: www.portugues.tnc.org/tnc-no-mundo/americas/brasil/projetos/cadastro-ambiental-rural.xml.

FINAL CONSIDERATIONS

It is imperative that all stakeholders pay attention to the socio-environmental aspects and impacts linked to soy operations, especially when considering the fundamental role of soy and its derivatives in Brazil and abroad, and the substantial growth of production in various regions of the country in recent decades. The evaluation and control of these aspects and impacts is a mandatory condition that is already a reality in national and international trade agenda.

This publication has sought to illustrate the movement of the agricultural sector towards a productive balance between development and preservation of social and environmental assets. Its goal was to provide initial information for producers and other companies who are part of this chain about the particularities of social and environmental responsibility related to agricultural commodities, especially soybean and its byproducts.

Those in the soy production chain will necessarily have to align with new principles of sustainability, both to remain in the market as well as to increase their competitiveness. The adoption of good agricultural practices or the adherence to an agreement or certification scheme is a natural way for pragmatically achieving real Socio-Environmental Responsibility in the sector.



LIST OF ABBREVIATIONS

- 2BSVs - Biomass Biofuels Sustainability Voluntary Scheme
- AAPRESID - Asociación Argentina de Productores en Siembra Directa
- ABIOVE - Associação Brasileira das Indústrias de Óleos Vegetais
- ABN AMRO - ABN (Algemene Bank Nederland) e AMRO (Amsterdam-Rotterdam Bank)
- ADSEMN - Agência de Desenvolvimento Socioeconômico Médio Norte
- AIC – Agricultural Industries Confederation
- ANEC - Associação Nacional dos Exportadores de Cereais
- APROSOJA - Associação dos Produtores de Soja e Milho do Mato Grosso
- ARES - Instituto para o Agronegócio Responsável
- BACP - Biodiversity and Agricultural Commodities Program
- BC – Basel Criteria
- CA – Certified Agriculture
- CAR – Cadastro Ambiental Rural
- CITES - Comércio Internacional de Espécies da Flora e Fauna Selvagens em Perigo de Extinção
- CREA - Conselho Regional de Engenharia e Agronomia
- CSCS - Carbio Sustainability Certification Scheme for EU – RED Compliance
- EMATER – Empresa de Assistência Técnica e Extensão Rural
- EMBRAPA - Empresa Brasileira de Pesquisa Agropecuária
- EMPAER - Empresa Mato-Grossense de Pesquisa, Assistência e Extensão Rural
- EU – European Union
- EU-RED – European Union Renewable Energy Directive
- FAMATO - Federação da Agricultura e Pecuária do Estado de Mato Grosso
- FEMAS - Feed Materials Assurance Scheme
- FUNBIO – Fundo Brasileiro para Biodiversidade
- GAP – Good Agricultural Practices
- GEF – Global Environment Facility
- GHG – Greenhouse Gas
- GMO – Genetically Modified Organism
- GPS – Global Positioning System
- GRES - Grupo Referencial de Empresas em Sustentabilidade
- GTS - Grupo de Trabalho da Soja
- IAPAR - Instituto Agronômico do Paraná
- IBD - Associação de Certificação Instituto Biodinâmico
- ICM - Indicadores do Campo ao Mercado
- IDH - Initiatief Duurzame Handel
- IFC - International Finance Corporation
- IFOAM - International Federation of Organic Agriculture Movements
- ILO – International Labour Organization
- iLPF - Integração Lavoura-Pecuária-Floresta
- INCRA – Instituto Nacional de Colonização e Reforma Agrária
- ING Bank - Internationale Nederlanden Groep
- INPE - Instituto Nacional de Pesquisas Espaciais
- inpEV - Instituto Nacional de Processamento de Embalagens Vazias
- IPAM – Instituto de Pesquisa Ambiental da Amazônia
- ISCC - International Sustainability and Carbon Certification
- ISO – International Organization for Standardization
- LERF/ESALQ/ USP - Escola Superior de Agricultura Luiz de Queiroz da Universidade de São Paulo – Laboratório de Ecologia e Recuperação Florestal
- LR – Legal Reserves
- MDG – Millennium Development Goals
- MMA - Ministério do Meio Ambiente
- NR - Norma Regulamentadora
- NTA - Netherlands Technical Agreement
- OEMA - Órgãos Estaduais do Meio Ambiente
- OGS – Organic Guarantee System
- PAR - Programa de Aplicação Responsável
- PCMSO - Plano de Controle Médico de Saúde Ocupacional
- PPA – Permanent Protection Areas
- PPE – Personal Protective Equipment
- PPL – Pessoas, Planeta e Lucro
- PPRA - Plano de Prevenção de Riscos Ambientais
- PRAD - Plano de Recuperação de Áreas Degradadas
- RSB - Round Table on Sustainable Biofuels
- RTRS - Round Table on Responsible Soy
- SAAE - Serviço Autônomo de Água e Esgoto
- SAC - Sustainable Agriculture Code
- SAN - Sustainable Agriculture Network
- SEMA - Secretaria Estadual do Meio Ambiente
- SENAR - Serviço Nacional de Aprendizagem Rural
- SFC - Sustainable Farm Certification
- SISNAMA - Sistema Nacional do Meio Ambiente
- TNC – The Nature Conservancy
- UNESP - Universidade Estadual Paulista
- WWF – World Wildlife Fund

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