



OUTCOME REPORT

2023 – 2024





Outcome Report 2023–2024
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Authors: Laura Ferreira, Beth Hearn and Norma Tregurtha
Data Analysis: Camila Barrera-Orjuela, Matthew Sullivan,
Nisha Mundanthara Suresh Babu
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Bonsucro is a company registered in England and Wales,
company number 06798568

Contact: info@bonsucro.com
www.bonsucro.com

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INTRODUCTION FROM OUR CEO

Over the course of 2023–2024, Bonsucro took big strides forward. More Bonsucro certified sugarcane was produced; more workers benefitted from the protections in our Standards; more producers and companies joined us on the journey towards a more sustainable sugarcane sector. We bring people and organisations together as a movement for positive change, and our collective impact is getting bigger every year.

We also deepened our efforts by forming new partnerships in several countries and launching initiatives that will allow members to take their sustainability commitments further. For example, our ClimateCane Tracker is making it possible for farms, mills and buyers to set science-based targets for their greenhouse gas (GHG) emissions. The Bonsucro Impact Fund has now awarded more than £1 million and leveraged an additional £1.3 million from co-applicants for 14 projects supporting climate action and human rights across 13 countries.

Our world and the sugarcane sector face many challenges and there is so much more to be done, especially around building the market for more sustainable sugarcane and recognising the hard work of producers. Bonsucro is a remarkable global community of organisations and people working together to make a difference every day as we work towards our shared goal to accelerate sustainability along the sugarcane value chain. We would like to thank all our members for their commitment and hard work in driving progress and delivering change and we look forward your continued partnership.

Danielle Morley, CEO, Bonsucro



ABOUT BONSUCCRO AND THIS REPORT

Who we are

Bonsucro is the leading global sustainability platform and standard for sugarcane, one of the world’s most important crops. Our global network brings together members from more than 50 countries. They represent all areas of the sugarcane supply chain, from smallholder farmers to consumer goods manufacturers. We welcome members from across all sugarcane products and derivatives – including sugar, alcohol, molasses, biofuels and bioplastics.

What we do

Our purpose is to collectively accelerate the sustainable production and uses of sugarcane, focusing on climate action, human rights, and value in the supply chain. Through our sustainability standards, training, resources and events, we drive positive change, helping organisations improve their performance and the social and environmental impact of their businesses.

About this report

In this Outcome Report, you can read about Bonsucro’s activities in 2023–2024 and the difference they are making to the sugarcane sector.

The report is based on audit data submitted by licensed, third-party certification bodies, insights from the annual reports and Continuous Improvement surveys our members submit to us, and case studies of our members’ work in action. We’ve also detailed the range of actions we’re taking to support our members across the supply chain.

The report is structured around the outcomes identified in our theory of change and our [strategic aims](#):

- Improving environmental impact
- Strengthening human rights and decent work
- Creating value across the supply chain

For an explanation of the data used in this report, please see page 54.

BONSUCRO CERTIFICATION: A POWERFUL TOOL FOR CHANGE

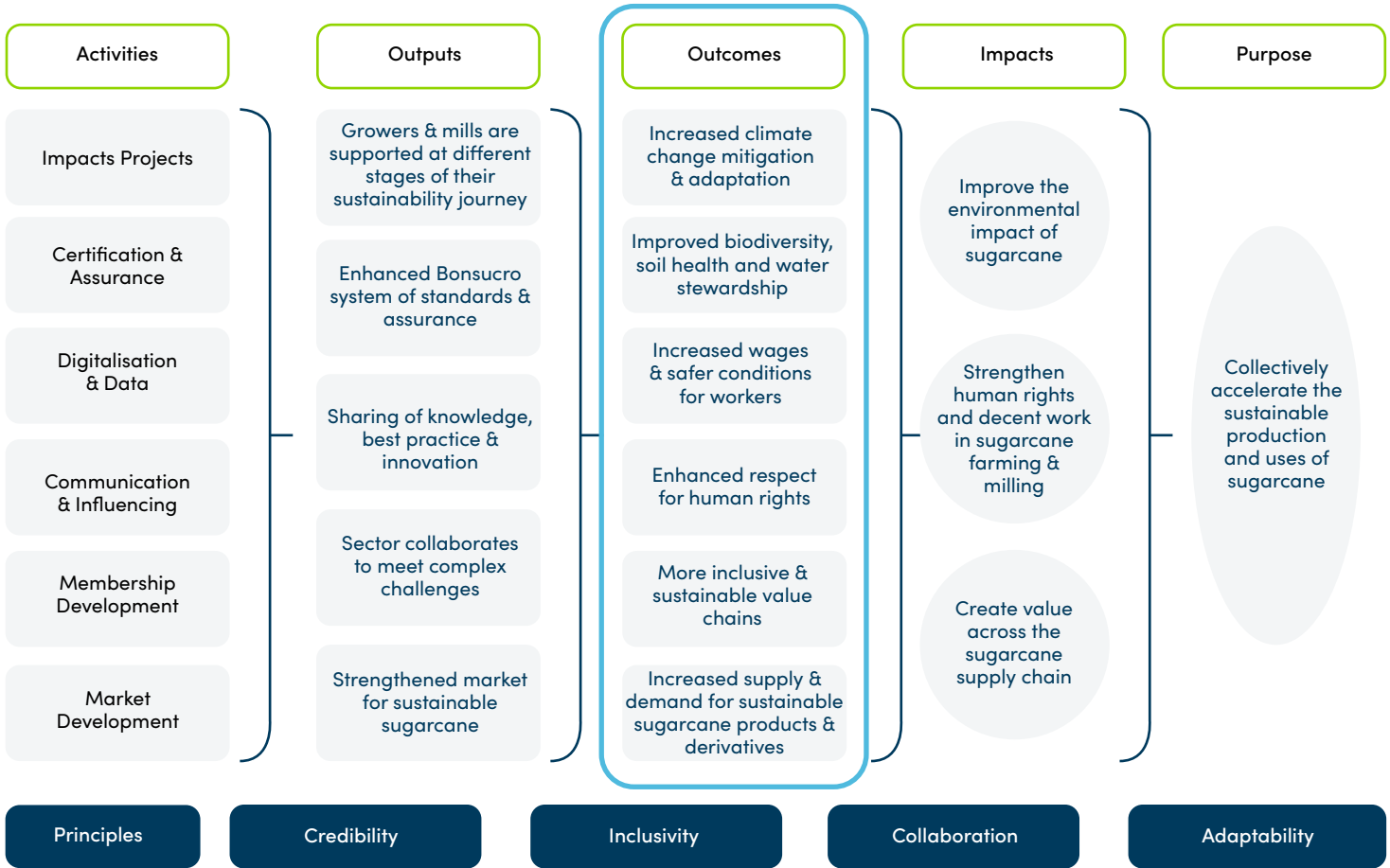
Bonsucro certification is an internationally recognised tool for change that drives environmental and social sustainability in the sugarcane sector. As well as encouraging and increasing transparency, Bonsucro certification helps producers demonstrate the difference they are making. It also helps businesses – including buyers, traders, manufacturers and retailers – to invest in and push for improvements throughout their supply chains.

To become Bonsucro certified, producers and companies must comply with our strict Standards and be assessed by third-party certification bodies.



Photo: Saraburi Sugar

Theory of change



UPDATES TO OUR STANDARDS IN 2023-24

The Bonsucro Production Standard

Version 5.2 of the Bonsucro Production Standard came into effect in December 2023. We improved the language and clarified some of the Standard’s indicators, so it’s easier for members to know what’s expected of them and for auditors to verify that operators are meeting requirements.

The main changes to the Production Standard when compared with Version 5.1 include:

- Requesting a Sustainability Management Plan, which details members’ plans, risk assessments and monitoring systems to implement good environmental, social and managerial practices.

- Introducing a new type of indicator, “Aspirational”, which requires wages to be benchmarked against the relevant living wage.
- A range of other improved environmental indicators, such as those related to agrochemicals and land conversion.

You can find details of the Bonsucro Production Standard Version 5.2 [here](#).

Bonsucro EU-RED Standard V2.1

We also updated the Bonsucro [EU-RED Standard](#) in line with new legal requirements from the European Commission for mills and businesses in the supply chain. This standard is a voluntary scheme to demonstrate that biofuels and biomass fuels made from sugarcane meet the European Union’s sustainability criteria. Half of all Bonsucro Production Standard certificate holders also hold EU-RED certification. You can find a summary of the Bonsucro EU-RED Standard changes [here](#).

OUTCOMES IN NUMBERS



43 new members joined Bonsucro from 21 countries



The area of land growing Bonsucro certified sugarcane grew by **26%**

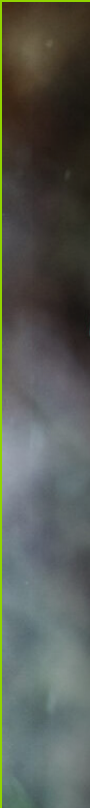


Bonsucro certified sugar represented **7.8%** of global production of sugar from sugarcane*

*ISO Sugar Yearbook 2023



IMPROVING THE ENVIRONMENTAL IMPACT OF SUGARCANE



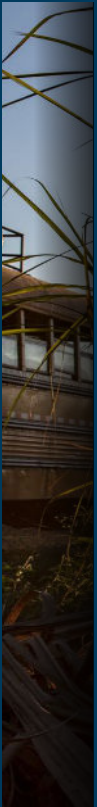
Bonsucro certified farms reduce water consumption by an average of **42%** over five years of certification



Bonsucro certified producers reduce GHG emissions an average of **14%** over five years of certification



STRENGTHENING HUMAN RIGHTS AND DECENT WORK



180,900 workers worldwide are covered by the Bonsucro Production Standard's human rights measures



120,000 farm workers received essential personal protective equipment from their employers



CREATING VALUE ACROSS THE SUPPLY CHAIN



More than **14,000** sugarcane smallholders are Bonsucro certified



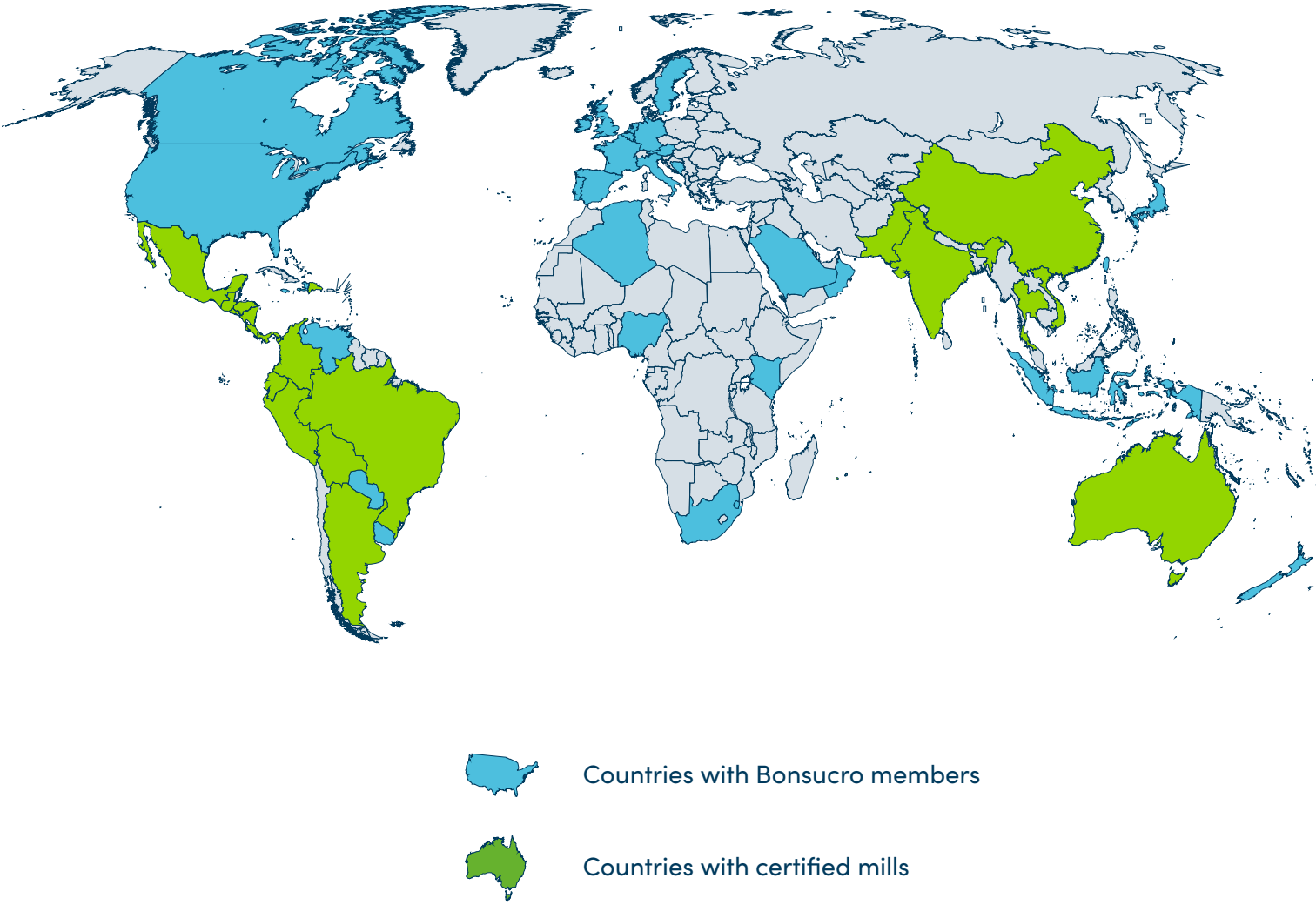
11.2 million tonnes of sugar were produced in line with the Bonsucro Production Standards – up by 18% on the previous year



Production of Bonsucro certified ethanol increased by **27%**



BONSUCRO WORLDWIDE



CENTRAL AMERICA, MEXICO & CARIBBEAN	22 certified producers 49 members 132,329 certified hectares 926,465 tonnes of certified sugar 8 organisations with Chain of Custody certification
BRAZIL	96 certified producers 68 members 2,007,670 certified hectares 8.54 million tonnes of certified sugar 20 organisations with Chain of Custody certification
SOUTH AMERICA (excluding Brazil)	10 certified producers 21 members 80,454 certified hectares 897,299 tonnes of certified sugar 2 organisations with Chain of Custody certification
AFRICA & MIDDLE EAST	3 certified producers 22 members 7,057 certified hectares 34,012 tonnes of certified sugar 3 organisations with Chain of Custody certification
ASIA	42 certified producers 73 members 87,713 certified hectares 563,804 tonnes of certified sugar 19 organisations with Chain of Custody certification
PACIFIC (Australia, New Zealand)	7 certified producers 12 members 41,093 hectares 247,834 tonnes of certified sugar 3 organisations with Chain of Custody certification
EUROPE	55 members 25 organisations with Chain of Custody certification
NORTH AMERICA	17 members 10 organisations with Chain of Custody certification

*All numbers correct as of 31 March 2024. Chain of Custody figures refer to organisations that hold this certification only i.e. certified traders, intermediaries and buyers.

MEMBERSHIP IN 2023-24

From Algeria to Australia, Bosnia to Barbados, Bonsucro members are working hard to make sugarcane more sustainable across the world. Whether they are smallholder farmers or international corporations, when our members join our network they commit to continuously improving their practices and transparently sharing their progress each year.

After becoming Bonsucro members, many organisations go on to become certified against our globally recognised Standards. Find out who holds certification [here](#).

From 1 April 2023 to 31 March 2024, our membership continued to grow around the globe.

- We welcomed 43 new members from 21 countries, bringing our total membership to 318 by March 2024, including our first members from Vietnam and Nigeria.
- We saw strong growth in membership in Brazil, Pakistan and Switzerland.
- We had 13 new members in Asia, from China, India, Indonesia, Pakistan and Thailand.
- We also saw a 14% increase in buyer and trader members, bringing the total number to 64 in March 2024.

New sectors included the spirits and ethanol supply chains, with strong growth in new members from rum production and sugarcane-based energy generation. We also saw a considerable increase in applications from refineries globally, mainly in the Middle East, Southeast Asia, Europe and North America. This appears to be driven by companies further along the supply chain that have committed to sourcing Bonsucro certified material.

HOW WE REFER TO OUR MEMBERS IN THIS REPORT

Producers – this includes farmers, mills, farmer associations and mill associations.

Intermediaries – these are traders, companies providing services to the sugarcane industry, and companies that process sugarcane derivatives. For example, rum distilleries and bioplastics manufacturers.

End-users, also known as buyers – these are companies that sell processed, packaged goods, made with sugarcane derivatives, to consumers.

You can find a [list of our members here](#).

Bonsucro membership by type of organisation (31 March 2024)

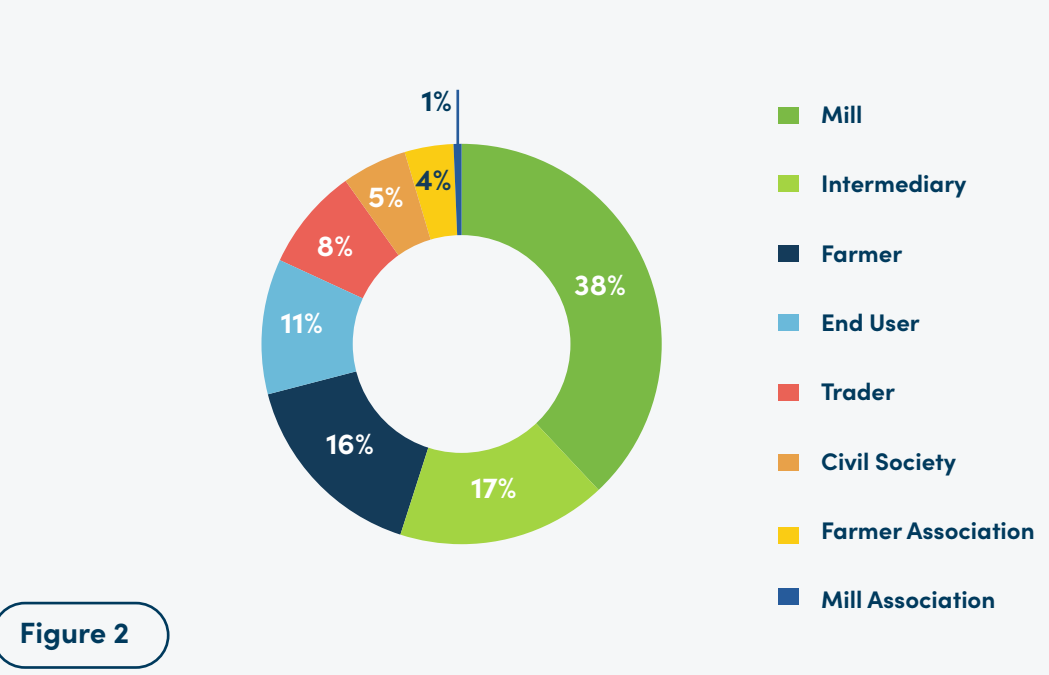


Figure 2

FOUR YEARS OF THE BONSUCRO CODE OF CONDUCT FOR MEMBERS

When our members join Bonsucro, they commit to a shared vision of collectively accelerating the sustainable production and uses of sugarcane. To help make this happen, they also agree to a Code of Conduct.

We updated our Code of Conduct in 2020, consulting with members before making changes. The new Code of Conduct better reflects the need for robust systems – and aligns with global frameworks, such as the United Nations Guiding Principles for Business and Human Rights (UNGPs).

We didn't shy away from the changes needed to make sugarcane production more environmentally and socially sustainable. So, our revised Code of Conduct boldly states that members must commit to protecting human rights and natural ecosystems.

What impact has our Code of Conduct had?

We regularly see members go above and beyond, improving their policies and mainstreaming sustainability practices within their management systems and supplier agreements. We also see increasing reports of investment from both producers and businesses in the supply chain in a range of improvement projects like the ones you will read about in this report.

Bonsucro membership by region (31 March 2024)

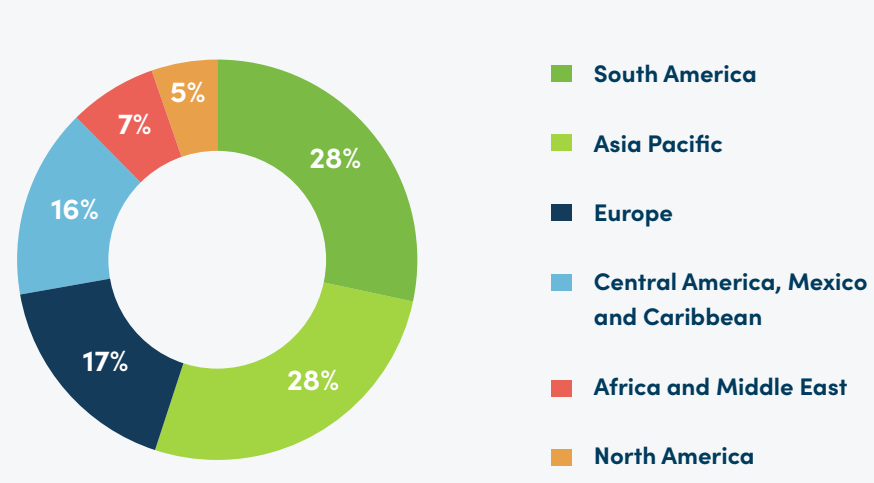


Figure 1

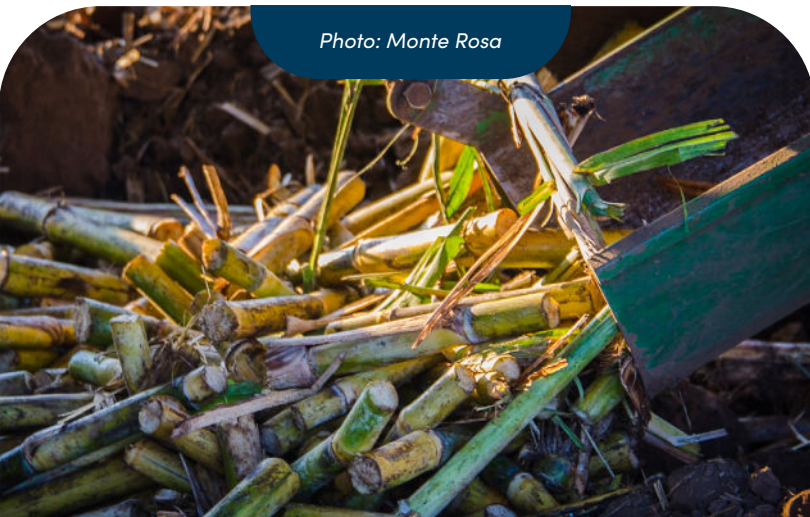


Photo: Monte Rosa

Aligning business policies with the Bonsucro Code of Conduct

When new members join Bonsucro they must demonstrate that they comply with our Code of Conduct. When companies are nearer the start of their sustainability journey, they don't always meet all of the criteria.

For example, in 2022 a large, progressive mill group applied to join Bonsucro. They were eager to start their certification journey immediately so they could communicate their impressive sustainability performance with their clients. However, when Bonsucro evaluated their compliance with our Code of Conduct, we identified several gaps. The mill group had all the building blocks of a human rights policy, but these were not consolidated into a single, accessible document and signed off by their CEO. We also identified some policy gaps, such as a specific gender discrimination policy. They had a functioning grievance mechanism but it was not publicly displayed and readily accessible on their website. The company also shared with us that they had recently admitted liability and been fined for an environmental incident.

Issues like this are common, and we work with potential members to ensure that they are addressed before they are granted membership. In the case of this mill group, we elected to extend their candidacy period to give them more time to improve their due diligence systems before welcoming them into Bonsucro.



Photo: Usina Açucareira São Manoel

CONVENING OUR MEMBERS: BONSUERO EVENTS AND TRAINING

Every year, Bonsucro runs a series of tailored events and training sessions. We share knowledge and offer expert advice to help our members tackle the challenges facing the sugarcane sector, as well as celebrating their successes. The events and training sessions also provide an opportunity for members to network and find like-minded organisations to collaborate with.

19 in-person events in 2023-24:

- Technical training on the Production Standard in India, Thailand, Brazil and Colombia.
- Field visits, consultations and workshops on human rights, climate change and regenerative agriculture.

26 webinars in 2023-24:

- Topics included heat stress, human rights, EU policy, the Bonsucro Calculator, and the Bonsucro Impact Fund.
- Webinars delivered in English, Spanish and Portuguese.
- 536 people joined our webinars – from 39 countries and 266 organisations.

Bonsucro Global Week

The world's leading event for sugarcane sustainability, [Bonsucro Global Week](#), took place in Mexico in May 2024. It was our biggest and most diverse conference yet, with 250 participants from more than 30 countries. As always, attendees represented the entire sugarcane supply chain, but also civil society, certification bodies, training providers and researchers.

Highlights included sessions on:

- How Mexican producers are responding to droughts and extreme heat – while maintaining production and, crucially, staying competitive. Solutions discussed included more efficient use of water, chemical fertiliser reduction, and enforcing stronger health and safety measures.
- The role the finance sector can play in advancing sustainability. Attendees were introduced to Socicana's Green Rural Credit programme, which offers better interest rates based on a farmer's level of sustainability.
- How Bonsucro's [ClimateCane Tracker](#) can help with decarbonising operations and minimising their environmental impact. Sixty people joined our workshop to explore the tool and the part it can play in setting GHG reduction targets.

Other topics included sugar prices, human rights due diligence, advances in technology in the sector and sustainable fuels. As always, we shared certification stories from around the world, focusing on how it can help mitigate challenges and build resilience.

"Bonsucro Global Week is an exceptional platform to learn, be inspired, and connect with industry leaders who share a commitment to sustainability."

Darlin Mejia, Grupo Pantaleon



Photo: Ed Kashi/Diageo

IMPROVING THE ENVIRONMENTAL IMPACT OF SUGARCANE

What's at stake?

Sugarcane is one of the world's most important crops. But as with so many forms of agriculture, producing it comes with challenges for the planet. Improving the environmental impact of sugarcane is core to Bonsucro's mission. Along with our members and partners, we're dedicated to finding innovative and sustainable ways to reduce the use of water and chemicals, lower GHG emissions, improve biodiversity and adapt to climate change – while supporting the sugarcane industry to thrive.

A bold ambition: Working to eliminate chemical fertilisers

Sugarcane farmers around the world rely on chemical fertilisers to boost the quantity and quality of their crops. But as well as causing environmental damage, these fertilisers can be expensive – especially if they are imported.

[BP Bunge Bioenergia](#), one of Brazil's leading bioenergy companies, came up with a way to eliminate the use of chemical fertilisers across their 11 production units. They used 'organomineral fertilisation', which involves fertilising soil with organic materials derived from recycled industrial waste, such as vinasse and ash. They also replaced nitrogen and phosphate fertilisers with specific, naturally-occurring bacteria that can improve plant health and soil fertility. The result? Less environmental impact – and greatly reduced costs.

This strategy contributed to a 34% reduction in emissions during the last harvest. Between 2021 and 2024, they reduced the proportion of the budget spent on fertilisers from 44% to just 12%. The project won Best Environmental Sustainability Initiative at the 2023 [Bonsucro Inspire Awards](#).

MITIGATING AND ADAPTING TO CLIMATE CHANGE

More extreme storms. Unpredictable rainfall. Intense heat and droughts. All these consequences of climate change have a major impact on sugarcane production, affecting the quality and quantity of what producers grow. Not only does this disrupt their livelihoods, it makes for an uncertain future – particularly as sugarcane production can also contribute to climate change, exacerbating the issues the industry already suffers from.

Across the world, producers have already made many improvements to the way they grow sugarcane, helping mitigate climate change. But much more needs to be done.

GHG emissions by production phase at Bonsucro certified farms and mills

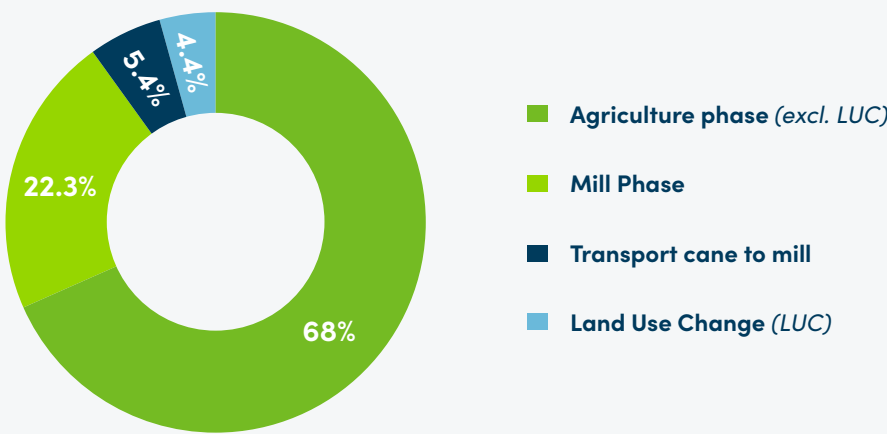


Figure 3



Photo: BP Bunge Bioenergia



HOW BONSUCRO CERTIFICATION
MAKES A DIFFERENCE

To meet our Production Standard, organisations must have plans in place to monitor and reduce their environmental impact, and stay below set thresholds for their GHG emissions per tonne of product.

We offer training on adapting to climate change, provide data-driven insights and share expertise from throughout our network. We also invest in projects and develop tools to help members keep track of and reduce their emissions.



Our certification data shows that 68% of GHG emissions from producing sugar and ethanol happen during the agricultural phase – that is, the growing and farming stages (see figure 3).*

Bonsucro certified producers reduce GHG emissions of sugar production by an average of 14% within five years (see figure 4).

Globally, there’s a trend that the longer producers are certified, the greater their reductions in emissions. This is largely achieved by producers reducing the amount of electricity and nitrogen fertiliser they use. One large producer in Brazil with a history of higher-than-average GHG emissions has achieved an astonishing 96% reduction in fertiliser use over two years, as part of a focused drive to reduce their carbon footprint.

After three years of certification, Bonsucro certified producers achieve an average GHG saving of 12.28 tonnes of CO₂ equivalent per ton of sugar.

On average, mill emissions account for 22% of the carbon footprint per tonne of Bonsucro certified sugar. A major contributor to mill GHG emissions comes from bagasse (a by-product of the sugarcane crushing process) being used as renewable fuel.

As a global average for 2022-23, GHG emissions from land use change (LUC) account for just 4.4% of the carbon emissions released in the production of Bonsucro certified sugar. However, unlike other sources of emissions like fuel use, land use change has a long-term emissions burden and continues to be accounted for over a period of 20 years.

* In 2024, Bonsucro updated the methodology used to calculate GHGs emitted in the production and processing of sugarcane. This involved updating certain calculations and conversion factors to bring them in line with recent science. As a result, some elements of the GHG footprint of sugarcane have changed emphasis since our last Outcome Report, but major trends remain.

GHG emissions by source in the agriculture and mill phases, by number of years certified

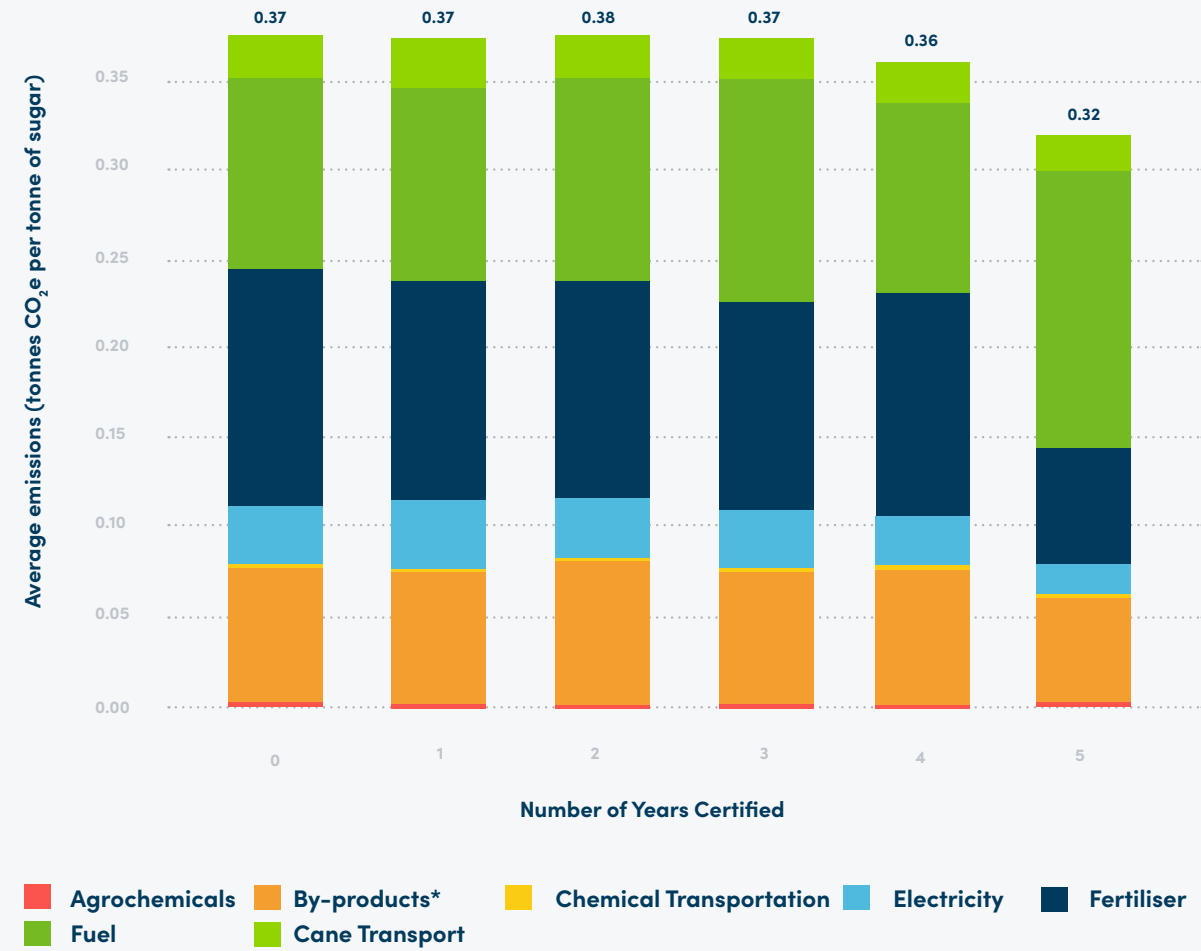


Figure 4

*By-products includes emissions from cane residues, process water, effluent etc. Fuel includes diesel, coal, natural gas and bagasse.

Area converted and reported
as land use change, by year

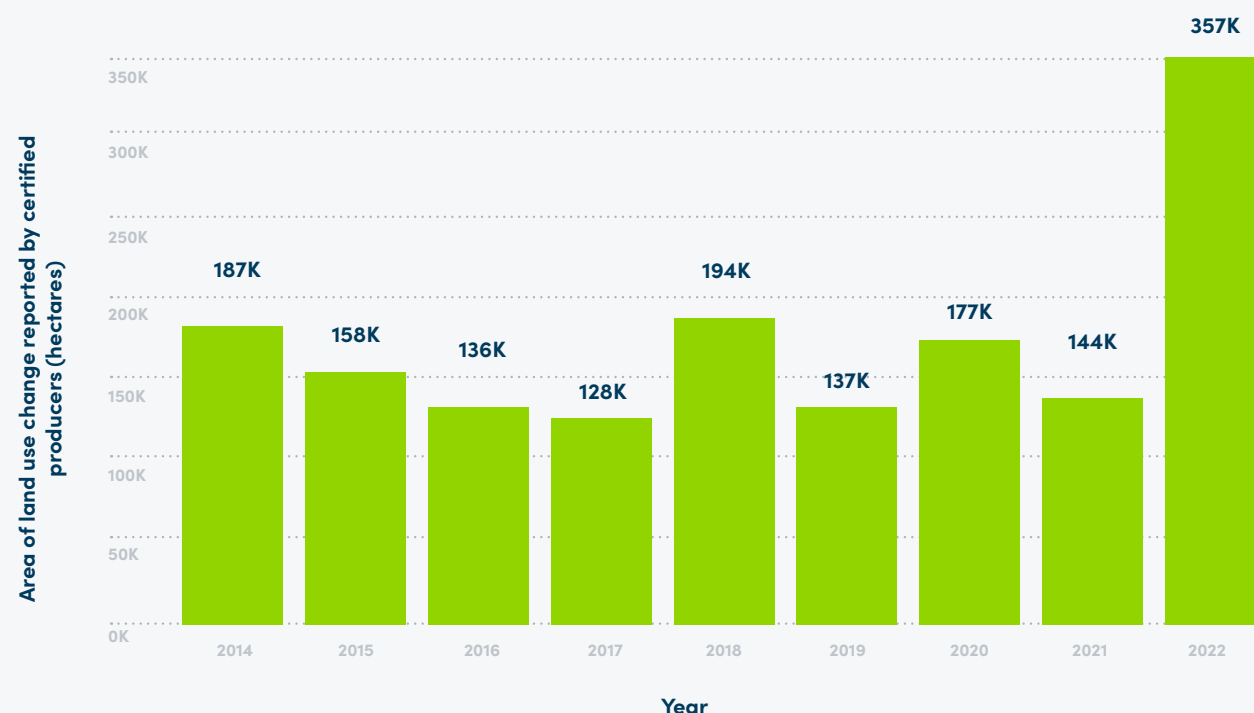


Figure 5

Land use change

When we talk about ‘land use change’ at Bonsucro, we’re referring to when land is converted directly from one use, such as grassland or forestry, to the cultivation of sugarcane. This process has a significant impact on GHG emissions. For example, if trees are cut down and soil is disturbed, the carbon stored can be released into the atmosphere as CO₂, contributing to climate change. To reduce the impact on the environment, land use change has to be managed carefully.

Bonsucro has a strict policy against deforestation, for example, and members sign up to this principle as part of the Bonsucro Code of Conduct. Our Production Standard mandates that ‘high conservation value areas’ or natural ecosystems are not converted into agriculture. Conversions that are allowed, such as grassland and cropland change, need to be accounted for in terms of land use change emissions in the total GHG emissions.

- Brazil has the largest area of Bonsucro certified land in the world, and also the largest total area of land use change reported. In 2022–2023, 96% of all hectares reported as land use change were in Brazil, where conversions are commonly from grassland to sugarcane production.
- In 2022, the new Bonsucro Production Standard version 5.1 came into effect, followed by version 5.2 in December 2023. We saw a significant increase in reported hectares of land use change for the 2022–23 sugarcane season. It is possible that the level of land use change reporting has been influenced by clarified guidance in the new standard.

TACKLING CLIMATE CHANGE TOGETHER

There’s a growing expectation for businesses to not only reduce their GHG emissions but to report on how they are doing it and the difference it’s making. If we want organisations to do everything they can to lower their carbon footprint, they need to:

- be confident in measuring it
- be able to calculate how much to reduce it by
- eventually, in the future, understand how claims about lowering their carbon footprint can be transferred down the supply chain.

Bonsucro is here to support members at every stage of this journey.

Measuring emissions: the Bonsucro Calculator

Our members use the [Bonsucro Calculator](#) to collect and share data on GHG emissions to comply with our Standards. The tool uses the GHG protocol, a widely recognised accounting tool used to measure, manage and report organisations’ GHG emissions.

In 2024, we made several updates to improve the Bonsucro Calculator. Using a series of dashboards, the user can now see the makeup of their emissions and the scope and areas they fall into. Having this detail helps members to focus on the most important areas for improvement and assess the impact of any interventions.



Setting targets: the ClimateCane Tracker

Another tool that helps with calculating and reporting is our [ClimateCane Tracker](#). Launched in 2023, this helps sugarcane farms and mills, and buyers of sugarcane derivatives, to set targets to reduce emissions in line with climate science. The tool was designed specifically for the sugarcane sector using Science Based Targets (SBT). (Developed by the [Science Based Targets initiative](#), an SBT quantifies the GHG emissions reductions that a company needs to achieve to align with the aims of the Paris Agreement – to limit global warming to below 1.5°C.) The ClimateCane Tracker can be used in conjunction with the Bonsucro Calculator.

Research study into carbon claims

Much of the sugarcane sector is working hard to reduce GHG emissions. But we know from listening to our members that it can be difficult to present their achievements to the wider world in a clear and credible way. That’s why Bonsucro is exploring ways to make carbon reduction claims possible. In 2023, we commissioned a study by Proforest to explore how to make credible claims about carbon footprint throughout the supply chain. It will be possible to make further progress on this area of work when the GHG Protocol suite of standards and guidance has been finalised in 2025–2026.

Climate Action Toolkit

In May 2024, we announced a new initiative that will drive climate action in both sugarcane and cotton production. [The Climate Action Toolkit](#) project is a partnership with Better Cotton, supported by the ISEAL Innovations Fund and the Bonsucro Impact Fund.



- 33% of our members responding to the Bonsucro Continuous Improvement survey identified climate change as a key challenge in meeting sustainability targets and commitments.
- 53% are investing in projects that make an impact in reducing GHG emissions.
- 43% are investing in projects that make an impact in climate change adaptation.
- This is in addition to members reporting that they are investing in projects on topics such as water, soil health and biodiversity, which are also linked to climate change mitigation and adaptation.

“In the last year, we have learned the importance of continuous innovation to overcome obstacles such as climate change. The adoption of more sustainable agricultural practices, such as integrated pest management and the optimisation of the use of natural resources, proved to be essential.”

Sugarcane mill in Brazil

CASE STUDY

Training smallholder farmers to build resilience against the climate crisis

Over 2,000 farmers in Pakistan have been trained at farmer field schools to adapt to the impact of the climate crisis, in a project funded by the Bonsucro Impact Fund.

Almost two-thirds (64%) of sugarcane in Pakistan is grown by smallholder farmers – a group extremely vulnerable to the impact of climate change. Local NGO [WWF-Pakistan](#) is working in partnership with [Shakarganj Limited](#), a sugar milling company, to support these farmers in better understanding climate change and the steps they can take to adapt and thrive.

Using the Bonsucro Production Standard as a guide, they were trained in using efficient methods to conserve water, reduce the use of chemical fertilisers, and cut and store the cane to increase yield.

As well as mitigating climate change, there were economic benefits for farmers, most of whom saw higher yields, with weight improving by over 12% and costs being reduced by as much as 35%. By helping farmers build stronger relationships with mills, they also achieved better prices for their crops.

The project’s long-term vision is for the sugarcane market in Pakistan to feature predominantly Bonsucro certified sugarcane by 2030.



IMPROVING WATER STEWARDSHIP

With unpredictable rainfall patterns and droughts, climate change is putting a huge strain on water sources around the world. It's hitting the sugarcane industry hard, as production relies heavily on vast amounts of water. Sugarcane farms and mills themselves can have a negative impact on the water that is available – polluting rivers and lakes with silt, nutrients, pesticides and effluents, and causing damage to ecosystems.

Water stewardship plays a crucial role in adapting to climate change – it's about making sure water is used and treated in ways that are socially equitable, environmentally sustainable, and economically beneficial.

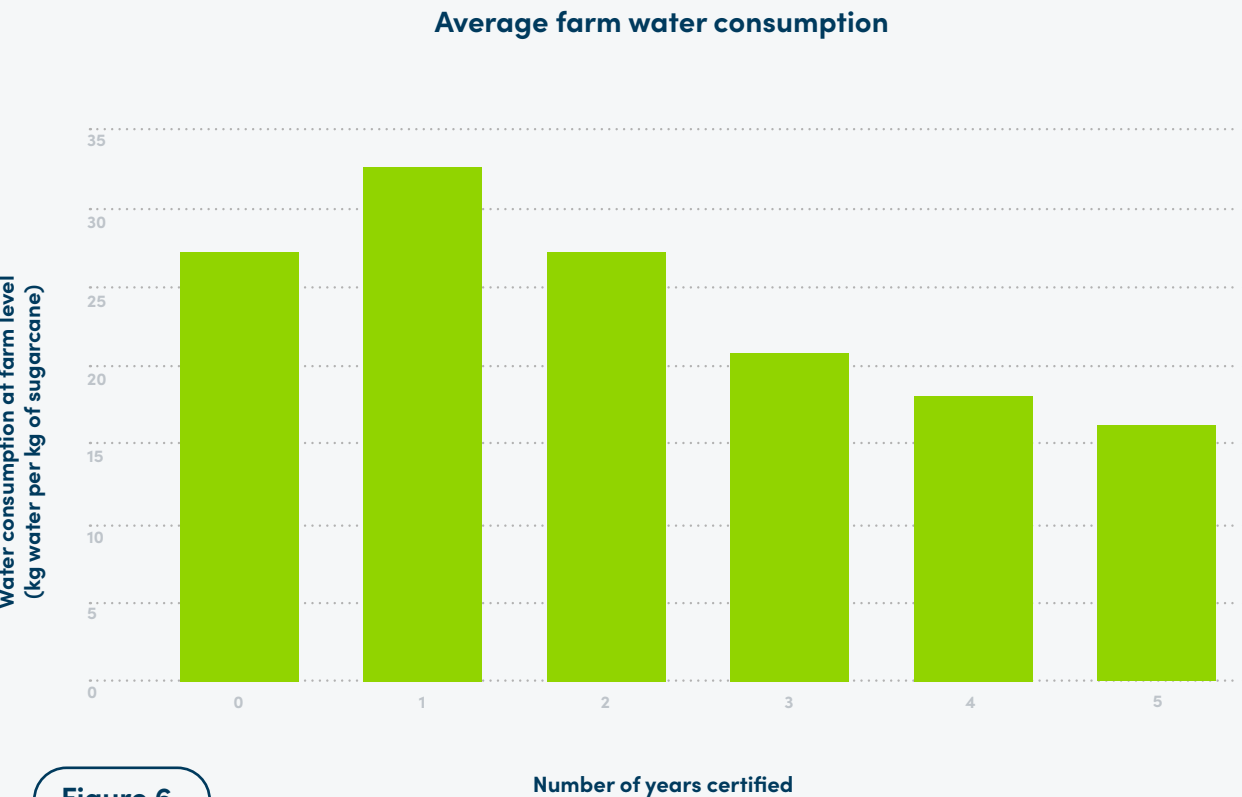


Figure 6

HOW BONSUCRO CERTIFICATION MAKES A DIFFERENCE

To achieve Bonsucro certification, farmers must create Environmental Impact Management Plans. These include objectives on water usage. Water use varies greatly around the world, so usage objectives are based on the local context. For example, extensive irrigation is necessary in some countries (including Peru and Pakistan), whereas others (such as Bolivia and Brazil) can generally rely on rainfall. As well as tracking how much water they use, Bonsucro certified members need to minimise contamination from pollutants.

Bonsucro certified members continue to explore ways to manage water resources better, improve irrigation, remove pollutants and make adaptations to address climate change. This includes using tools and technology to track, plan and manage the water they use, such as water flow meters, and low-energy, precise and effective irrigation methods.

- Bonsucro certified farms reduce water consumption by an average of 42% over five years of certification. This pattern of impact has remained broadly consistent over the last 10 years and in different world regions, even as the mix of mills in Bonsucro certification has continued to change and grow.
- Irrigated water efficiency (the cane yield per unit of water per hectare) has also been steadily improving over the last five years, with a 41% improvement on average between 2021-22 and 2022-23 (see figure 7).

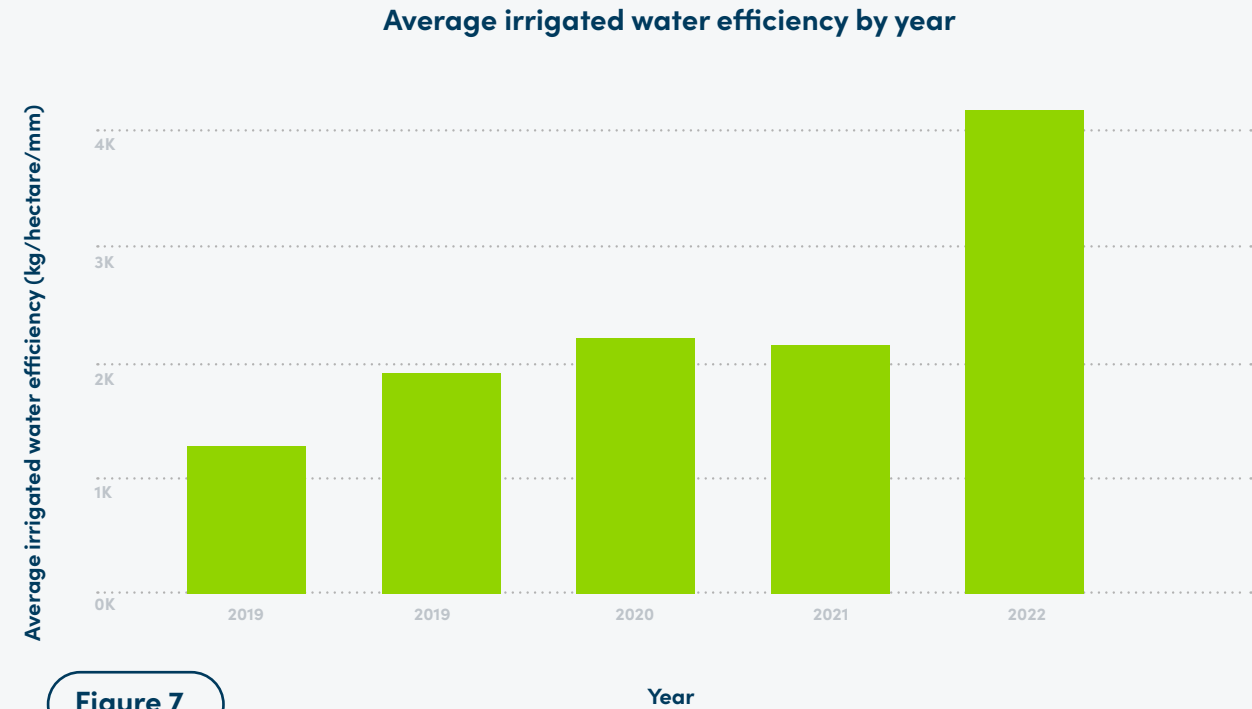


Figure 7



WHAT OUR MEMBERS SAY

- 54% of Continuous Improvement survey respondents said they are investing in projects that make an impact in increased water use efficiency.
- 51% of Continuous Improvement survey respondents said they are investing in projects that make an impact in sustainable water management.

“We have learned that precision agriculture techniques can significantly optimise the use of water and fertilisers. By employing technologies such as drip irrigation and soil moisture sensors, we have been able to reduce waste and improve resource efficiency. This has not only benefitted the environment but also reduced production costs. The key challenge remains the initial investment and the need for technical expertise among farmers.”

Sugarcane mill in the Asia Pacific region

Creating water champions in Nicaragua

Nicaragua is prone to both floods and droughts, and climate change has made rainfall increasingly irregular. Sowing Water, Harvesting Life is an ambitious project to encourage Nicaraguan sugarcane farmers to reduce the impact of climate change by using water resources more sustainably.

Working collaboratively with local producers on the hills of the San Cristóbal volcanic chain in Nicaragua, Sowing Water, Harvesting Life focuses on conserving and managing water resources, so they are available both for sugarcane plantations and the local community. The project has three main components:

- Demonstrating good practice, which includes reforestation, soil conservation, and rainwater harvesting
- Building producers’ knowledge and skills, using farmer field schools for rural training
- Creating a monitoring, impact and evaluation system, so producers can collect data and track the difference they are making.

This initiative is being led by [Ingenio San Antonio](#), a sugar mill owned by Nicaragua Sugar Estates, in partnership with [Compañía Licorera de Nicaragua](#) and the National Committee of Sugar Producers (CNPA) – with support from the Bonsucro Impact Fund.



IMPROVING SOIL HEALTH

For farmers to produce healthy sugarcane crops, they need good-quality soil. The better the soil, the more it can help mitigate climate change issues, such as flooding and soil erosion. That’s why agrochemicals are a crucial issue for our members. Nitrogen fertiliser, for example, helps maintain soil quality but it also disrupts the soil’s natural nutrient cycle. It can be a major contributor to GHG emissions and pollute water.



Project team for Sowing Water, Harvesting Life
Photo: Ingenio San Antonio

HOW BONSUCCRO CERTIFICATION MAKES A DIFFERENCE

To become Bonsucro certified, producers must have soil management plans, which include testing their soil and mapping its properties. When they apply chemical fertiliser, pesticides or herbicides, they must keep to levels that limit the negative impact on soil health and the surrounding environment. Our members are encouraged to use ‘low till’ methods. This means disturbing the soil as little as possible when planting crops with minimal digging or ploughing. Low till methods help avoid erosion, enhance soil structure, and reduce GHG emissions. Members are also encouraged to leave sugarcane tops and leaves and return organic matter from the industrial process to the fields, so the land can benefit from the nutrients.

Some members have reduced their fertiliser use by more than 90% since they first became certified, without reducing yield. Switching from chemical to organic fertilisers has improved their soil health and dramatically reduced their GHG emissions.

More than 80% of Bonsucro certified producers observe two key practices for soil health and waste management: applying filter cake and/or vinasse (organic matter) to cane fields, and leaving more than 30% groundcover with sugarcane tops and leaves post-harvest. 100% of producers certified with the Bonsucro Production Standard have soil management plans.

Bonsucro certified farms reduce their fertiliser use by an average of 11% over five years of certification. A key way they are achieving this is by using less nitrogen fertiliser (18% reduction over five years), which also has significant benefits for reducing GHG emissions.

In most regions, members reduce the amount of fertiliser they use the longer they are certified. Producers in Brazil show significantly lower fertiliser use on average compared to other regions.

Average fertiliser application, by number of years certified

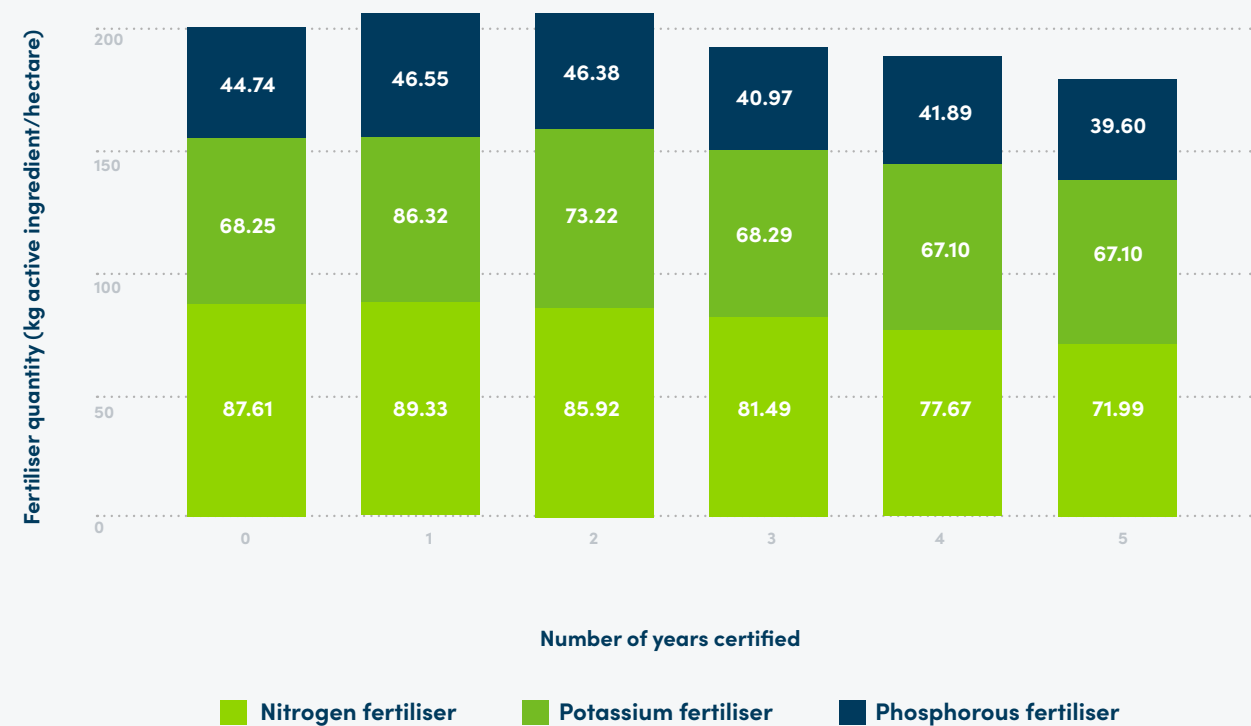


Figure 8



Improving sustainable practices in Mexico

Biofábrica Siglo XXI, an agro-biotechnological company in Mexico, and its partners, have been helping farmers develop their knowledge about their soil and production systems. Biofábrica shared its expertise through practical training on biofertilisers and intercropping to reduce the level of chemical fertiliser farmers use, helping improve sustainable practices in sugarcane production – while increasing productivity and profits.

The wider project aims to tackle multiple environmental issues, such as GHG emissions from burning and the use of chemical fertilisers and soil degradation, and crop resilience to the effects of climate change such as more frequent droughts.



WHAT OUR MEMBERS SAY

52% of Continuous Improvement survey respondents are investing in projects that make an impact in soil health.

“Our company has set several targets and plans to achieve our commitments to continuous improvement in sugarcane sourcing, production, and processing... We plan to expand the area covered under the use of organic matter. This includes incorporating compost and other organic fertilisers into our farming practices to enhance soil health and fertility, ultimately leading to more sustainable crop production... We are committed to promoting soil cover operations. This involves practices such as cover cropping and mulching, which protect the soil from erosion, improve water retention, and enhance soil organic matter content.”

Sugar mill in the Asia Pacific region

PROTECTING BIODIVERSITY

Without careful management, producing sugarcane can damage the environment and disrupt the natural habitats of insects and wildlife. Historically, this has led to biodiversity loss in many parts of the world. But things are changing. Farmers recognise that protecting healthy ecosystems can help them in several ways – such as improving soil health, conserving water, and managing pests in a sustainable way.



HOW BONSUCRO CERTIFICATION MAKES A DIFFERENCE

To become Bonsucro certified, producers need to prove that they know and understand their land. They must demonstrate how their land has been used since 2008 and show they have not converted any land from natural ecosystems to agricultural or industrial sites. Members must also have an Environmental Impact Management Plan to map, recognise and protect areas of high conservation value and take action to prevent damage and promote biodiversity.

- The use of agrochemicals, including pesticides and herbicides, remained relatively stable throughout certification, across all regions. However, in the 2022–2023 season, more agrochemicals were used than usual (see figure 10).
- Herbicides accounted for 84% of all agrochemical use, pesticides 7%, and 9% for ripeners and other chemicals.

We recognise that many factors influence the levels of chemicals used, and the local context, such as weather and land conditions, must be taken into account. Certified producers use integrated pest management plans, and the Bonsucro network has many examples of successful bio-control measures that reduce the need for chemicals.

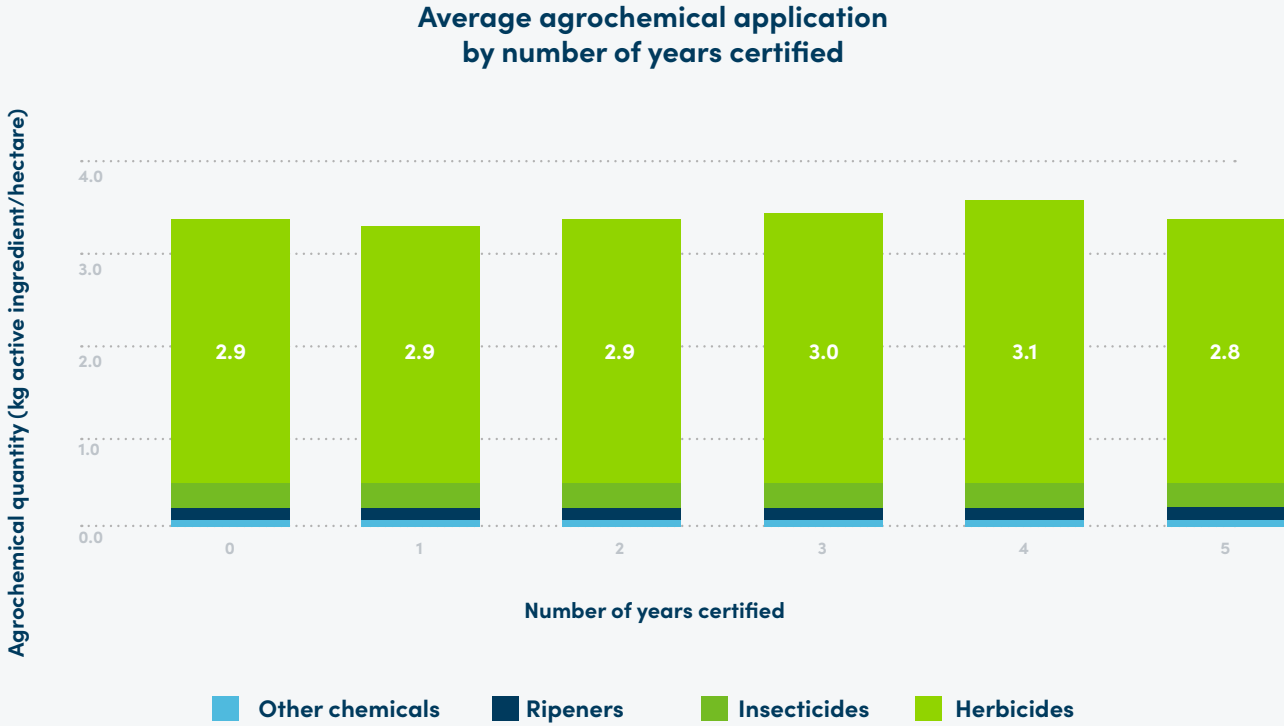


Figure 9

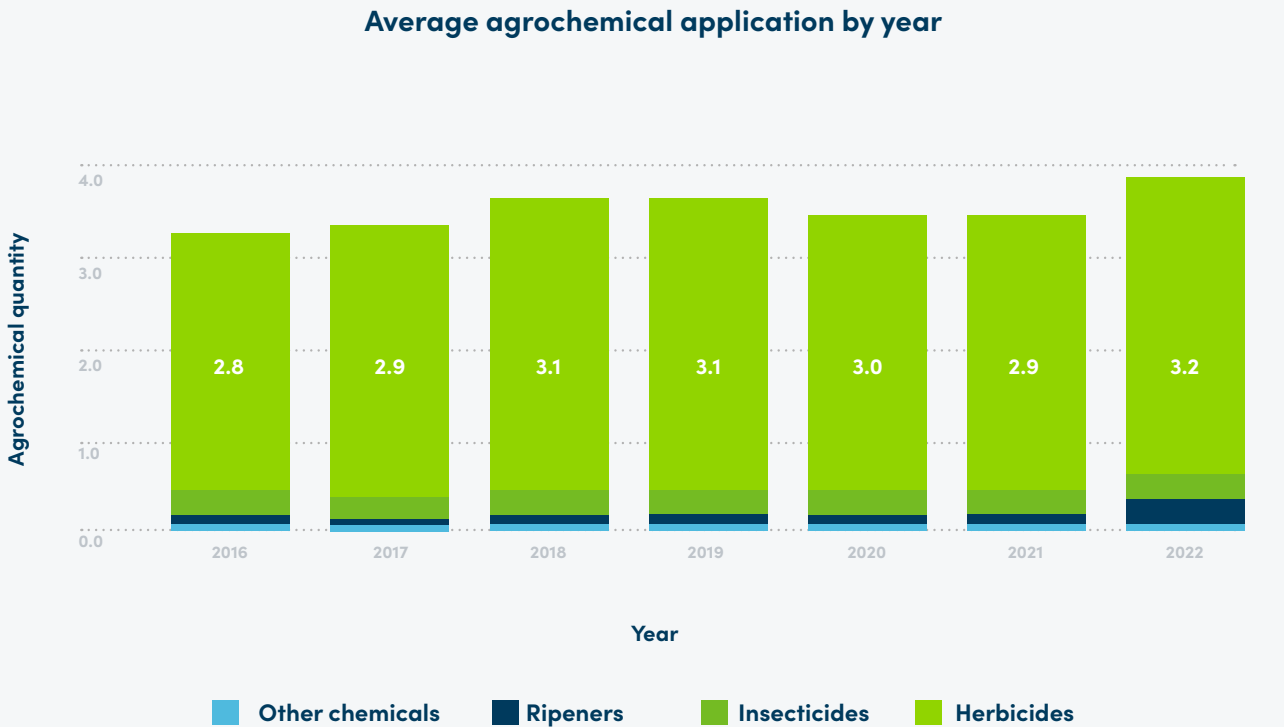


Figure 10

PROTECTING BIODIVERSITY TOGETHER

We know how important it is to work with like-minded organisations who share our commitment to environmental and social sustainability. We learn from their expertise and work together to strengthen our Standards and develop guidance for our members.

We’ve been a member of the HCV Network since 2021. They promote the high conservation value (HCV) approach – a practical method to identify and protect ecosystems, biodiversity, and the needs of Indigenous Peoples and local communities where development takes place. The [HCV Network](#) focuses on the billions of hectares worldwide that are current or potential future sites for production, including sugarcane, and may be at risk from land use change. Members of the HCV Network include the world’s most influential NGOs, producers, supply chain companies, technical service providers, and voluntary sustainability standards.

The HCV Network supported us to develop the latest version of the Bonsucro Standard and guidance for our members on some of the Standard’s requirements, such as mapping biodiversity and creating a biodiversity management plan. We worked together on other guidance, including ‘expansion of cultivation’ to help operators understand when and if they can expand their areas.

CASE STUDY

Protecting the environment and bringing benefits to the community

Brazilian sugarcane producer, [Usina Açucareira São Manoel](#), has demonstrated how it is possible to promote a more balanced ecosystem on its 57,000 hectares of cultivated land, while strengthening productivity and increasing incomes. They have pioneered two projects to preserve native fauna and flora, protect the environment and benefit the community.

The first project, Bicho Vivo, launched in 2021, involved creating a safer environment for animals. Carried out in partnership with São Paulo’s Environmental Military Police and the Environmental Surveillance of the City Hall of São Manuel, the producer built ‘ecological corridors’ that allow animals to move safely between different areas of vegetation. Since 2021, 40 different species have been identified in the area, including animals classified as endangered.

The second project is a community bee initiative that encourages the safe and rational use of chemical pesticides. Since launching in 2015, the Honey Cycle Program has seen about 2,500 bee boxes have been installed on over 500 hectares of land. An additional advantage is that local non-profits are benefitting from the sale of the honey.

WHAT OUR MEMBERS SAY

- 44% of Continuous Improvement survey respondents are investing in projects that make an impact in biodiversity.
- 25% of Continuous Improvement survey respondents are investing in projects that make an impact in high conservation value areas.

“There are many lessons learned from our work on meeting sugarcane sustainability commitments. From getting to know, for example, the local fauna, to identifying opportunities to improve the biodiversity conditions of an entire region and/or area of direct influence.”

Sugarcane mill in Brazil



Photo: Beehive at Usina Açucareira São Manoel

STRENGTHENING HUMAN RIGHTS AND DECENT WORK IN SUGARCANE FARMING AND MILLING

What's at stake?

Together with our members, we're continuing to help improve human rights throughout sugarcane supply chains. The sector has a range of challenges to tackle, including unsafe working conditions in mills and on farms, low wages, and risks of forced labour and child labour. We're working to end these unacceptable practices, reduce discrimination in all its forms and promote gender equality.

IMPROVING WORKING CONDITIONS

Exposure to chemicals. Risks of dehydration, exhaustion and respiratory illness. Injuries from machetes, machinery and cane burning. These are just some of the hazards facing workers in sugarcane farms and mills. Unsafe working conditions have serious implications for the human rights and health and wellbeing of workers and their communities. At Bonsucro, we're constantly pushing for safer working conditions across the sugarcane sector.

HOW BONSUCCRO CERTIFICATION MAKES A DIFFERENCE

To be Bonsucro certified, an organisation's labour standards and health and safety measures must be monitored and enforced in farms and mills. They must assess risks, make safety plans, give safety training, take measures to ensure safe working conditions, and provide workers with personal protective equipment.

THERE ARE ALMOST 120,000 FARM WORKERS AND MORE THAN 61,000 MILL WORKERS COVERED BY BONSUCCRO CERTIFICATION.

- On average, Bonsucro certified producers reduce the rate of accidents by 17% at mills and by 21% on farms over five years of certification.
- Overall, in the 2022-23 sugarcane season 26% of certified farms reported zero accidents resulting in time off work.

Average accident rate at farm and mill

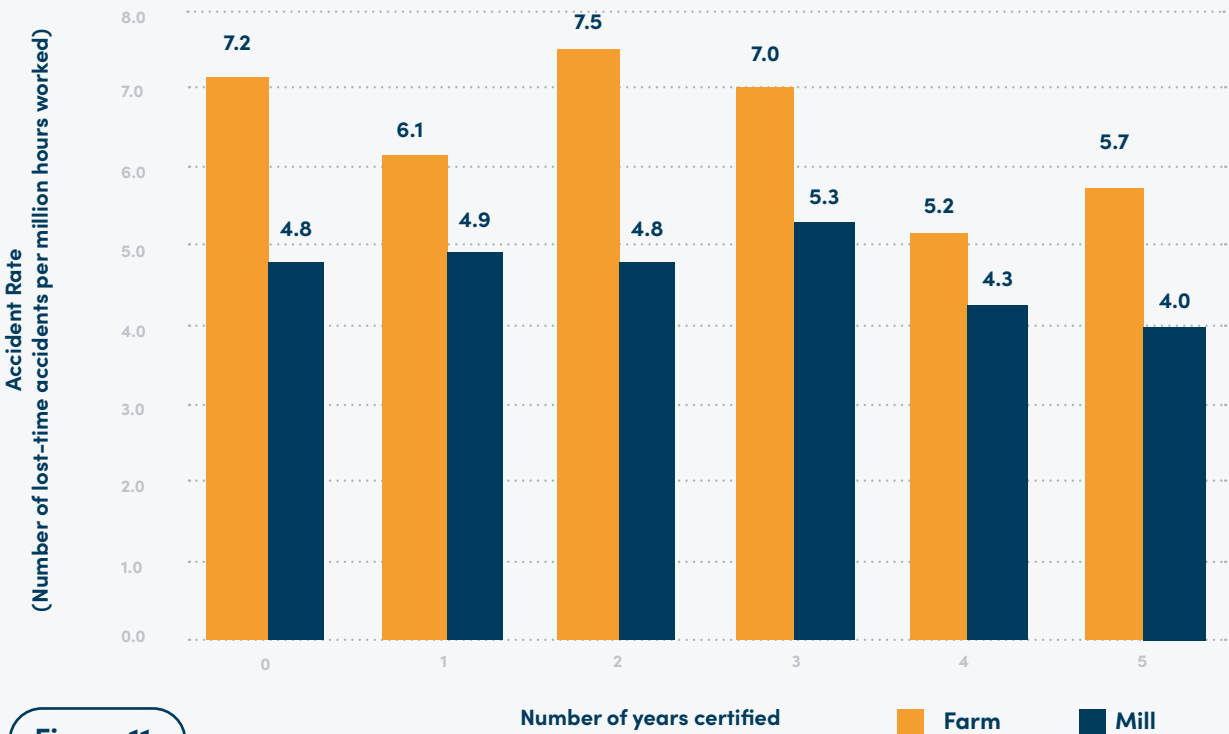


Figure 11



WHAT OUR MEMBERS SAY

- 44% of Continuous Improvement survey respondents are investing in projects that make an impact on reducing accidents.
- 25% of Continuous Improvement survey respondents are investing in projects that make an impact on promoting UNGPs.

Raising awareness of heat related dangers

At Bonsucro, we promote a vital safety message to our members: you need a 'water, rest, shade, and sanitation' protocol to protect workers who carry out hard work in high heat. Without one, workers are at risk of chronic illness and even death. In 2023, we hosted a series of webinars on the topic – 135 people attended. Feedback showed that participants increased their awareness and knowledge about heat stress protection for agricultural workers by 22% after attending.

"The most useful part of the session was the identification mechanisms for heat stress, the importance of breaks and hydration, and the positive relationship between rest and greater productivity."

Webinar participant



Driving equality: Creating opportunities for women in the sugarcane industry

In recent years, the sugarcane industry in Guatemala has suffered from labour shortages, with many people, particularly men, migrating to the USA. Guatemalan agribusiness company [Ingenio La Unión](#) has been working to address this by increasing the number of women in their agricultural workforce. They created a programme to help women develop the expertise they need to build a career in this field – including technical and transferable skills.

So far, the programme has led to 85 women being employed across two harvesting groups. Each group harvests 2,100 tonnes of cane, and currently 21% of the mill's total sugarcane is harvested by women.

Ingenio La Unión's programme has helped transform the culture of the company, which has become more accepting of women doing agricultural work. They plan to continue training women in mechanised harvesting, and to further increase the percentage of women in their workforce.

The women involved in the project have shared their experiences with other mills and producers, and the project has become a model for the Guatemalan sector. The project won the Best Social Sustainability Initiative award at the Bonsucro Inspire Awards 2024.

Ruben Faust of the Bonsucro Board of Directors presents an award to Wendy Del Cid from Ingenio La Unión



Safer working conditions for sugarcane workers in Eswatini

In Eswatini, Southern Africa, sugarcane workers often endure tough and dangerous conditions. They face risks of accidents, heat-related illnesses, and exposure to harmful chemicals.

[The Coca-Cola Company](#) in Eswatini is running a project to improve health and safety, strengthen labour rights and create a more inclusive and sustainable sector. They have partnered with the [Eswatini Sugar Association](#), an umbrella body that brings together Eswatini sugarcane growers and millers, and [Partner Africa](#), a specialist business and human rights NGO.

The project aims to deliver 20 workshops to 1,000 sugarcane farm workers, which will cover health and safety, grievance mechanisms and sustainable practices. Using a new digital tool, they will carry out anonymous surveys to allow workers to give honest feedback on work-related issues. Around 300 workers will also receive personal protective equipment to help keep them safe.

Data collected through the project will be used to raise concerns and contribute to action plans. The project partners will support employers to respect workers' rights and improve working conditions.

INCREASING WORKERS' WAGES

Sugarcane farm work is physically demanding and involves long hours – it's not unusual for cutters to have to work 12 to 15 hours a day. And yet, many workers are not earning enough to live off. Some countries don't have a set minimum wage, paid leave or social security benefits. When wages are low, workers often take on overtime or extra jobs to try to earn enough to support their families. This can increase the chance of accidents and injury at work. A lack of income security affects families and communities, too. Without a living wage, people may have their children work instead of going to school.

HOW BONSURO CERTIFICATION MAKES A DIFFERENCE

Our Production Standard has always required the lowest-paid workers to earn the national minimum wage. Version 5.1 of the Production Standard also introduced 'piece-rate wages' (where employees are paid for each unit of work or task they complete) that guarantee a salary at least equal to minimum wage.

Currently, on average, Bonsucro certified farms pay 13% above the national minimum wage. But we know there's a long way to go.

Our latest Production Standard asks businesses to start collecting data on wages being paid and compare them to a living wage reference value. It's an 'aspirational' indicator, which means businesses choose whether to meet this requirement or not. However, including it in the Production Standard means those who aren't ready to benchmark right now can start preparing.

Collecting this data will help us understand potential gaps between the wages being paid and the living wage in the region. We can use this vital information to work with members to improve wages in sugarcane production.

- There is a trend towards better pay linked to longer Bonsucro certification in both farms and mills (see figure 12). The wage ratio increases by 4% over five years of certification on farms and by 3% in mills.
- After five years of certification, lowest-wage mill workers are paid, on average, 20% more than the minimum wage. This compares to 17% at the point of certification.
- During the 2022-23 sugarcane season, on average, Bonsucro certified mills paid their lowest-wage workers 10% above minimum wage.
- However, we see that globally, since 2014 there has been an overall trend of lowest-paid worker wages moving closer to minimum wage rather than increasing towards a living wage (see figure 13). This may reflect a range of socio-economic factors, including a rising bar of national minimum wage levels over the last decade. This is particularly true for Brazil, where minimum wages have increased on average by 9.5% per year over the last ten years.* It also perhaps demonstrates how difficult the issue of wages is to influence.
- Anecdotal information shared with us is that the distribution of wages in the sector has changed in the wake of increased mechanisation, with the number of workers paid at minimum wage as a declining percentage.

180,900 WORKERS WORLDWIDE ARE COVERED BY THE HUMAN RIGHTS MEASURES DETAILED IN THE BONSURO PRODUCTION STANDARD.

**International Labour Organisation*



Figure 12

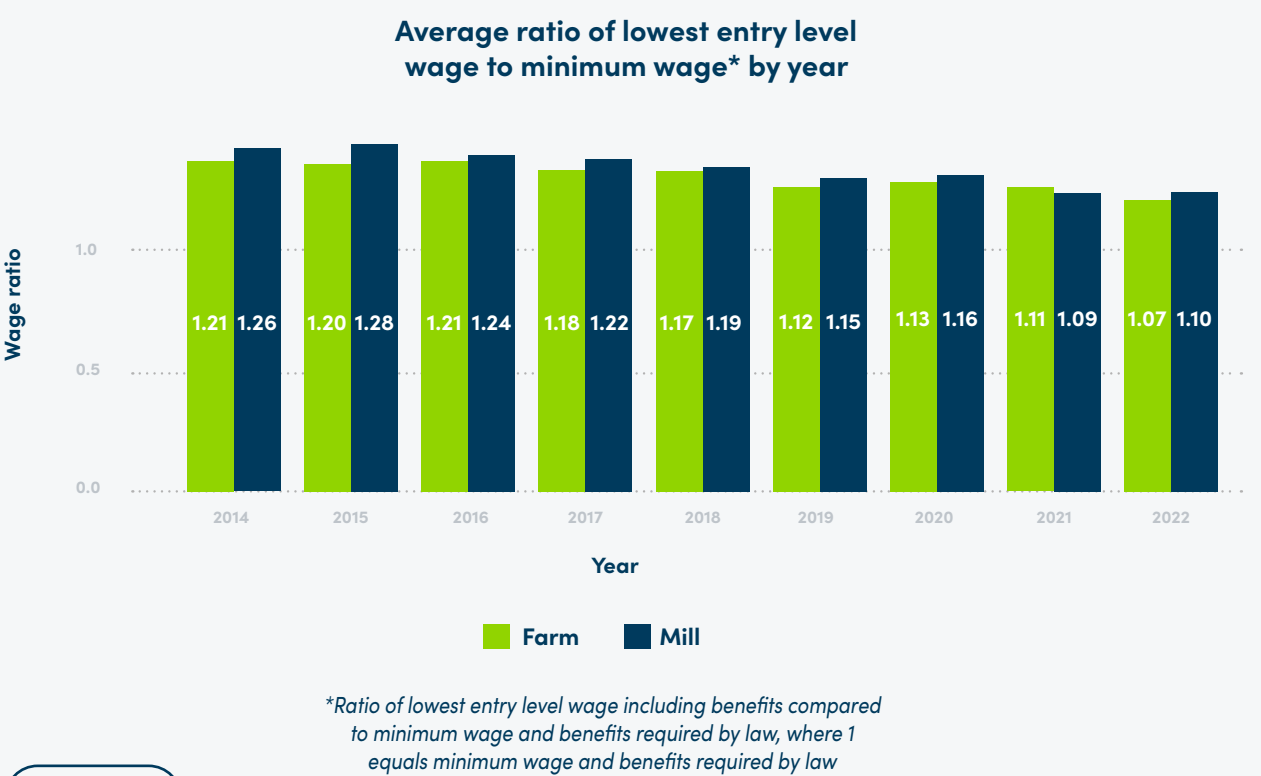


Figure 13

IMPROVING WAGES TOGETHER

Making the vital changes needed to ensure farmers and workers receive living wages for their work is one of the toughest issues we tackle at Bonsucro. We can't do it alone. So we've been collaborating with a range of local, national and global organisations.

Brands and end users are increasingly making commitments to promoting living wages in their supply chains. However, producers are concerned that this requires more investment and distribution of value throughout the chain – and therefore higher prices – to allow them to pay higher wages.

For several years we've been part of the [Global Living Wage Coalition](#), whose vision is for workers around the world to be able to afford a decent life for themselves and their families.

We've been working with [IDH – the sustainable trade initiative](#) on the implementation of our new Production Standard requirement related to living wages. We've tested their salary matrix tool with four certified producers, and plan to use it for data collection in Bonsucro certification. The tool will give us greater insight into the complex issue of wage distribution across the industry.

Our [Living Wage Working Group](#) guides our work in this area. Set up in 2022, the group aims to raise awareness and provide advice about incomes in the sugarcane industry and helps to put Bonsucro Production Standard requirements on the living wage into practice. The group is made up of Bonsucro members from throughout the sugarcane supply chain, NGOs and government organisations, and industry experts.

STRENGTHENING HUMAN RIGHTS

Some farmers and workers in the sugarcane industry face major human rights risks. Seasonal workers can be in danger of being trafficked from other countries and forced to pay off fees linked to their recruitment. In some countries, sugarcane farms and mills employ children, who miss out on education and risk their health. There are reports of violence and harassment against workers and communities and examples of where Indigenous Peoples and local communities have been forced from their land to make way for sugarcane plantations.

HOW BONSUCCRO CERTIFICATION MAKES A DIFFERENCE

Our Production Standard has always featured explicit requirements on workers' rights. The updates in Version 5.1 brought greater focus and more specific obligations on better working conditions, including sanitation facilities, drinking water, shade and rest. It added mental health into the health and safety risk assessment requirements, and brought in 'social dialogue requirements' about addressing and resolving workplace issues.

All members, including those that are not certified, must comply with the Bonsucro Code of Conduct. Every year, we assess our members to make sure they have human rights policies and commitments in place. We have a grievance process so anyone can raise a concern or issue about one of our members.

85% of Bonsucro members had a human rights policy in 2023 – a 4% increase compared to 2022. Those without one could explain how human rights were covered by other policies and management systems. Some members shared examples of their own codes of conduct, which they use internally and with their suppliers.

55% of members made commitments to international or sector-specific standards on human rights – a 4% increase compared to 2022. Examples of the standards include: the United Nations Guiding Principles on Business and Human Rights (UNGP), United Nations Global Compact, and Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises on Responsible Business Conduct.

95% of members had systems to act on human rights risks in their production or supply chain.

70% of members had a remediation or grievance mechanism to address adverse environmental and social impacts they caused or were directly linked to.





STRENGTHENING HUMAN RIGHTS TOGETHER

The ongoing challenges relating to human rights in the sugarcane sector are systematic issues. We need to join forces across the industry, with governments and civil society to make change. Awareness continues to increase around regulations, due diligence and risk management.

There were two Calls for Proposals focused on human rights for the Bonsucro Impact Fund, in May 2023 and May 2024. One of the projects that came out of these calls is featured on page 37: Safer working conditions for sugarcane workers in Eswatini.

Over 100 people took part in our webinars on 'Implementing human rights policies and grievance mechanisms'. Feedback showed that participants increased their awareness and knowledge of the subject by 38% following the session. Aspects of the session they found most helpful were complaint and grievance mechanisms, practical examples, and guidance on human rights policies and communications.



WHAT OUR MEMBERS SAY

"We plan to conduct human rights due diligence assessments of all major suppliers within the next year to identify and address potential risks of human rights violations in the supply chain."

Sugarcane mill in the Asia Pacific region

CASE STUDY

Supporting businesses on human rights issues in Brazil

If we're going to improve human rights in the sugarcane industry, businesses need to be clear about how to identify and respond to risks. But they often lack the tools to do this effectively.

Proforest and the Brazilian NGO, Imaflora, have joined forces to address this in Brazil – one of the world's biggest sugarcane-producing countries, but where there is little material available in Portuguese on how to conduct human rights due diligence.

With funding from the Bonsucro Impact Fund and Nestlé, General Mills, Hershey, ASR Group and Barry Callebaut, they are creating a practical toolkit that guides mills through the due diligence process, and offers tools to help implement it. The aim is to improve human rights in sugarcane mills, as well as among suppliers and service providers.

A due diligence mechanism not only helps mills decide when to take direct action, it can indicate when they need to involve others – such as government and NGOs. This can help raise standards and drive change on important human rights issues across the sector, such as protecting migrant workers or tackling child labour.

This project will also provide practical tools for interpreting the UNGPs and the OECD guidelines, which now form part of Bonsucro's Code of Conduct for members in the Brazilian sugarcane sector.

Photo: Felipe Abreu/Solidaridad



CREATING VALUE ACROSS THE SUGARCANE SUPPLY CHAIN

What's at stake?

The sugarcane industry is made up of a huge variety of businesses – from individual farmers to multinational corporations. They have a wide range of needs and ambitions. At Bonsucro, we want to drive sustainable change that works for everyone. We are working hard to make sure environmental, social and economic risks and responsibilities are shared throughout supply chains.

MORE INCLUSIVE AND SUSTAINABLE SUPPLY CHAINS

Each year, increasing numbers of consumers and businesses become aware of the environmental and social impact of producing sugarcane. As a result, demand for sugarcane that meets sustainability standards continues to increase steadily. Governments and regulators are also taking action by implementing policies to reduce GHG emissions, protect natural resources, and promote human rights.

However, there are still barriers and challenges to sustainability in the sugarcane market. Certification, better equipment, infrastructure and training can all be expensive. There is a need for greater investment and collaboration to make supply chains more sustainable.

HOW BONSUCCRO CERTIFICATION MAKES A DIFFERENCE

Supporting smallholder farmers

Smallholder farmers are a crucial foundation of many sugarcane supply chains around the world and are responsible for vast amounts of sugarcane farmland. For example, 6 million smallholder farmers grow sugarcane in India alone. Yet, they often face the biggest barriers to improving sustainability, including a lack of information, resources and finance needed to make changes and manage risks.

Our Production Standard for Smallholder Farmers makes sustainability practices and certification more accessible for smallholders. Through Bonsucro certification, smallholder farmers learn to improve their production methods, better manage the water and fertiliser they use, and gain knowledge of human rights issues. The certification process also helps to build stronger relationships between farmers and mills.

- The total number of smallholder farms certified by Bonsucro reached 14,079 in 2023, covering almost 44,000 hectares of land.
- Around 3,200 of those farms were certified under the full Bonsucro Production Standard. However, the vast majority were certified under the Production Standard for Smallholder Farmers.
- In 2023, 600 new farmers became certified under the Bonsucro Production Standard for Smallholder Farmers.
- Several mills in Pakistan have recently achieved certification using the Production Standard for Smallholder Farmers.



PARTNERSHIPS TO DRIVE SUSTAINABLE SUPPLY AND DEMAND

At Bonsucro, we form partnerships with a range of organisations to help create a more sustainable future for sugarcane around the world. Some of our recent collaborations include:

- [Indian Sugar and Bio-energy Manufacturers Association \(ISMA\)](#): We agreed to share knowledge and develop joint initiatives with the ISMA to help accelerate sustainability practices in the Indian sugar industry.
- [Organization of Cane Producers Associations in Brazil \(ORPLANA\)](#): We formed a partnership with ORPLANA to work towards greater sustainability in the sugarcane sector in Brazil. Our Cooperation Agreement includes commitments to share knowledge and collaborate on a range of sustainability initiatives.
- [National Bioenergy Union \(UDOP\)](#): We committed to working together with UDOP to prioritise and boost sustainability in the sugarcane sector in Brazil. Our technical cooperation agreement covers collaborating on sustainability tools and technical cooperation programmes.
- [National Agency of Petroleum, Natural Gas and Biofuels \(ANP\)](#): We agreed to build a shared procedure for sugarcane ethanol producers in Brazil to obtain both Bonsucro and RenovaBio certifications. We'll exchange experiences and knowledge about the certification process and aim to improve both schemes.

SUPPORTING SUSTAINABLE PRODUCTION WITH BONSUERO CREDITS'

[Bonsucro's Credit Trading Platform](#) is a tool that connects buyers and producers of sustainable sugarcane. A Bonsucro Credit* is proof that a unit of sugarcane, raw sugar, ethanol or molasses has been sustainably produced in accordance with Bonsucro's Production Standard.

- In 2023-24 we saw a 49% increase in credit buying compared to the previous year.
- Compared to 2022, we see a diversification in the global buyers' market for credits, with four new countries represented among the credit buyers in 2023-2024.
- The most commonly traded credits are raw sugar credits, although credits are possible for sugarcane, ethanol and molasses.
- Organisations that buy the most credits are based in the United States of America and the Netherlands.

**Credits are equal to one tonne of the product they represent. The statistics here refer to raw sugar equivalent credits. We have converted ethanol and sugarcane credits into raw sugar credits to develop with these figures.*



Trade of Bonsucro credits by country and product between 1 April 2023 and 31 March 2024

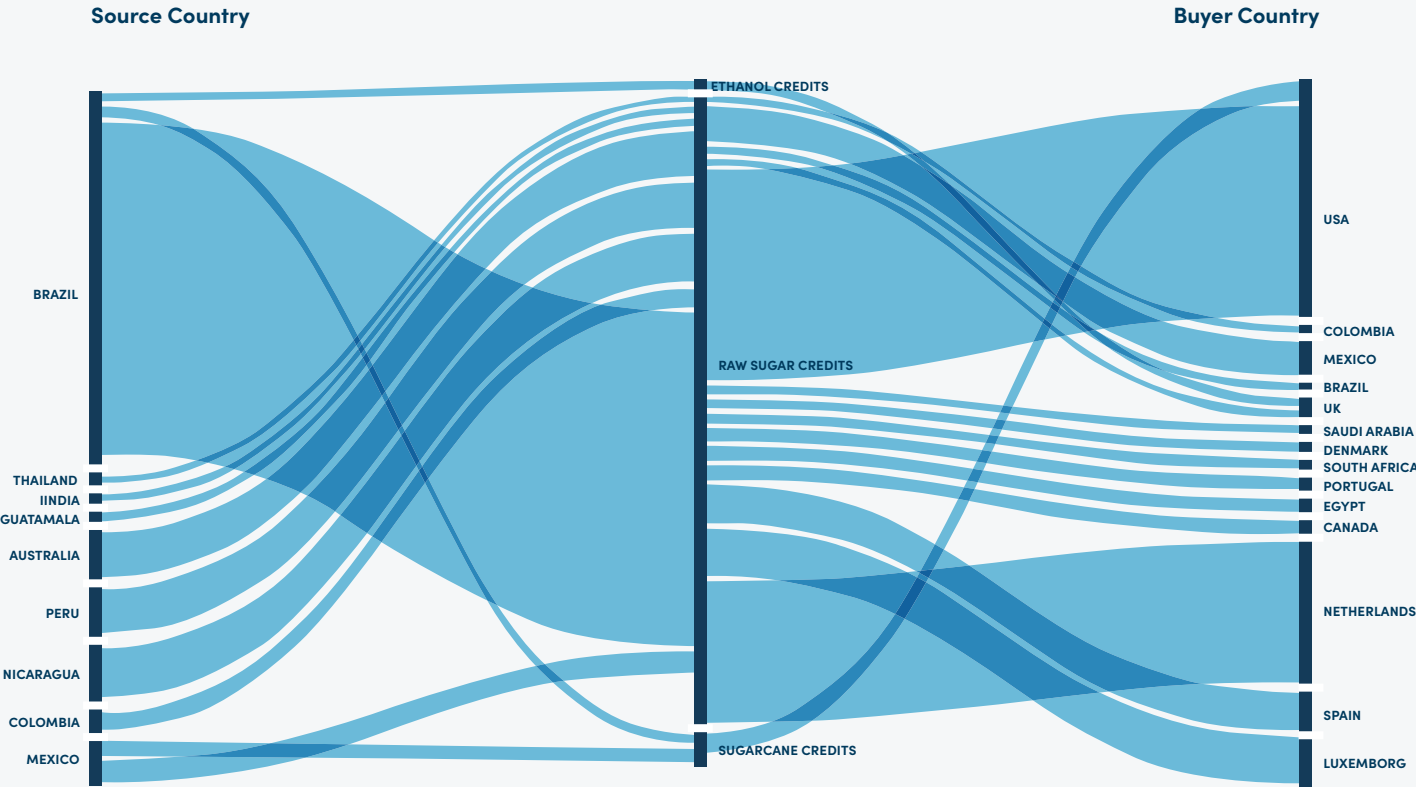


Figure: 14



CASE STUDY

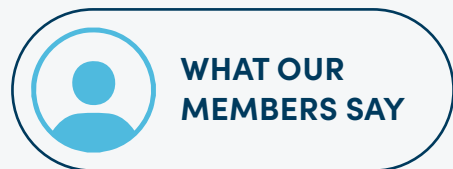
Getting green finance to sugarcane farmers

Green finance has a crucial role to play in tackling climate change. As well as investing in initiatives that benefit the environment, it helps ensure sustainability principles are considered in business decisions.

However, green finance isn't always available to sugarcane farmers. It's a complex landscape, and investments are often higher than farmers need or can afford. Socicana, a Brazilian association of sugarcane farmers, was keen to democratise sustainable finance and support farmers, incentivising them to continue investing in sustainability.

In partnership with credit cooperative [Sicoob Coopecredi](#), Socicana launched the Green Rural Loan. This new line of financing offers interest-rate discounts on loans, in line with how sustainable the farmer's production practices are – they can save up to 20% on a loan. The scheme is exclusive to farmers with proven sustainability credentials through Bonsucro certification or Top Cana, Socicana's sustainable development programme.

Between January 2021 and January 2024, Green Rural Loan has provided \$US 8.57 million to 25 farmers through 42 different loans, which have financed over 8,000 hectares of sugarcane land. The project has also generated greater interest in Bonsucro certification among Socicana's members – 13 farmers are now certified, up from four in 2021.



WHAT OUR MEMBERS SAY

In our 2022 Continuous Improvement report, we shared that producers are doing the heavy lifting when it comes to investing in improvement projects. In 2023–24 we saw positive progress, with a significant increase in the number of intermediaries, traders and buyers investing in improvement projects to achieve tangible economic, social and environmental outcomes

Percentage of Bonsucro members investing in improvement projects for economic, social and environmental outcomes:

"A key challenge is navigating and understanding suppliers' obstacles to obtaining certification (cost, timing, contracts, access to raw materials, supply security) and what we can do to support this."

Buyer in the Asia Pacific region



82%
FARMERS



100%
FARMERS
ASSOCIATIONS



63%
INTERMEDIARIES
/TRADERS



89%
MILLS



71%
END-USERS

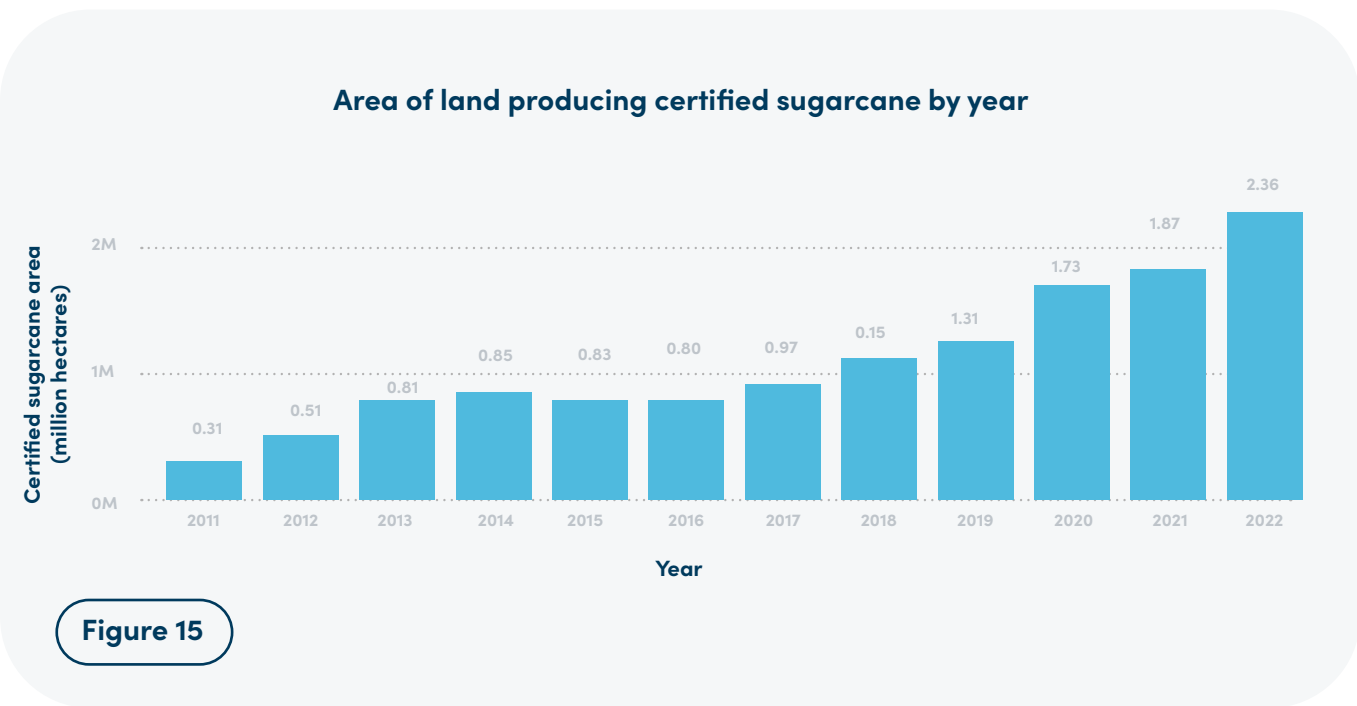
INCREASING SUPPLY AND DEMAND FOR MORE SUSTAINABLE SUGARCANE

CHANGES IN SUPPLY OF BONSUCRO CERTIFIED SUGARCANE AND DERIVATIVES

Sugar, ethanol and molasses are the major sugarcane-derived products we report on, but the uses of sugarcane are diversifying. Sugarcane is increasingly used for other products such as bioplastics, biomethane, bagasse fibre and energy generation.

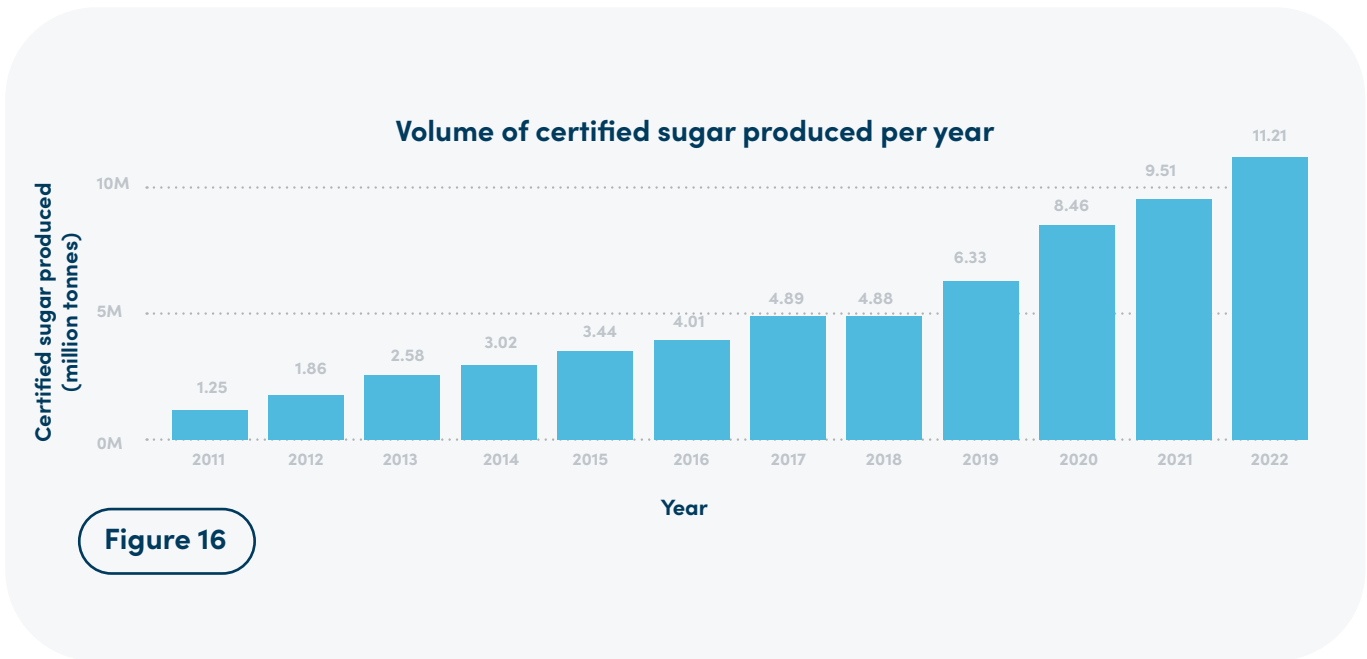
Certified land area

- Bonsucro is the world's largest voluntary sustainability standard certifier of sugarcane. In 2022-23, Bonsucro certified sugarcane represented approximately 7.8% of global production – that's 149 million tonnes of Bonsucro certified sugarcane out of a total of 1,922 million tonnes globally.
- In the 2022-23 season, the amount of Bonsucro certified land used to grow sugarcane increased by 482,216 hectares (26%). That is more than double the growth we saw in the 2021-22 season.
- 53% of the growth in certified hectares came from producers becoming newly certified, and 47% from existing producers expanding the amount of land that is certified in their supply base.



Derivatives from sugarcane: sugar

- Supply of Bonsucro certified sugar has grown steadily. In the 2022-23 sugarcane season, production volumes grew by 18%, which means 1.7 million tonnes were added to the global supply of Bonsucro certified sugar.
- Supply of Bonsucro certified sugar has more than doubled over the last five years. Nearly three-quarters (76%) is currently produced in Brazil, with Ecuador, Thailand, Colombia and Guatemala in the top five producer countries by certified volumes in 2022-23.



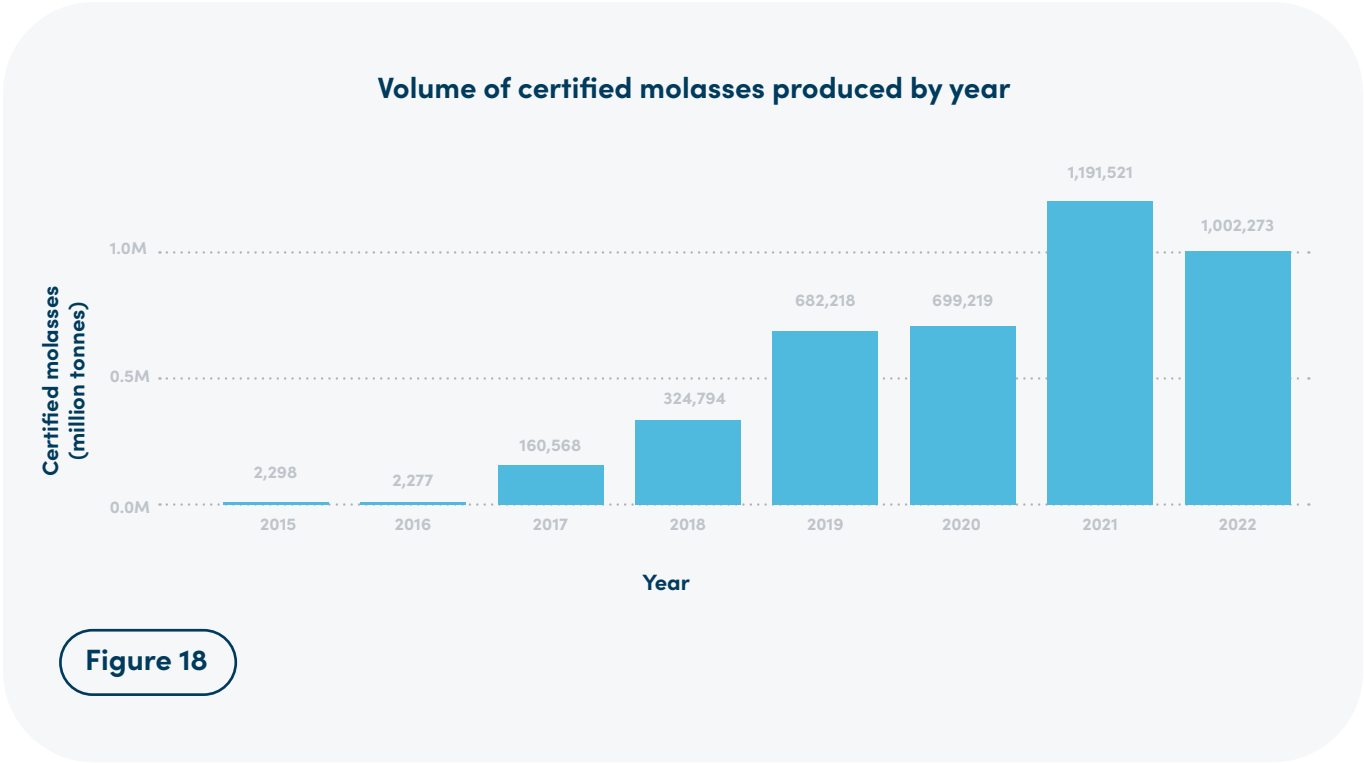
Derivatives from sugarcane: ethanol

- From 2021-22 season to 2022-23 season, certified ethanol volumes increased by 27% to 4.8 million cubic metres. This is an increase of more than 1 million cubic metres compared to the previous year. We see rapidly rising interest in biofuels produced from sugarcane, and this is reflected in Bonsucro certified ethanol supply levels. As Bonsucro has an EU RED Standard, much of this certified ethanol can be accepted in the EU market.
- Brazil is the world's largest producer of Bonsucro certified ethanol, generating 4.68 million cubic metres in the 2022-23 season, followed by Colombia (58,455 cubic metres) and Mexico (34,598 cubic metres).
- Brazil's production of Bonsucro certified ethanol increased by almost 30% from 2021-22 to 2022-23. This reflects strong feedback from members about the importance of the growing biofuels market, including interest in sustainable aviation fuels.
- Production of Bonsucro certified ethanol in Mexico, Guatemala and Thailand increased significantly in 2022-23, overtaking India in terms of certified production volumes.



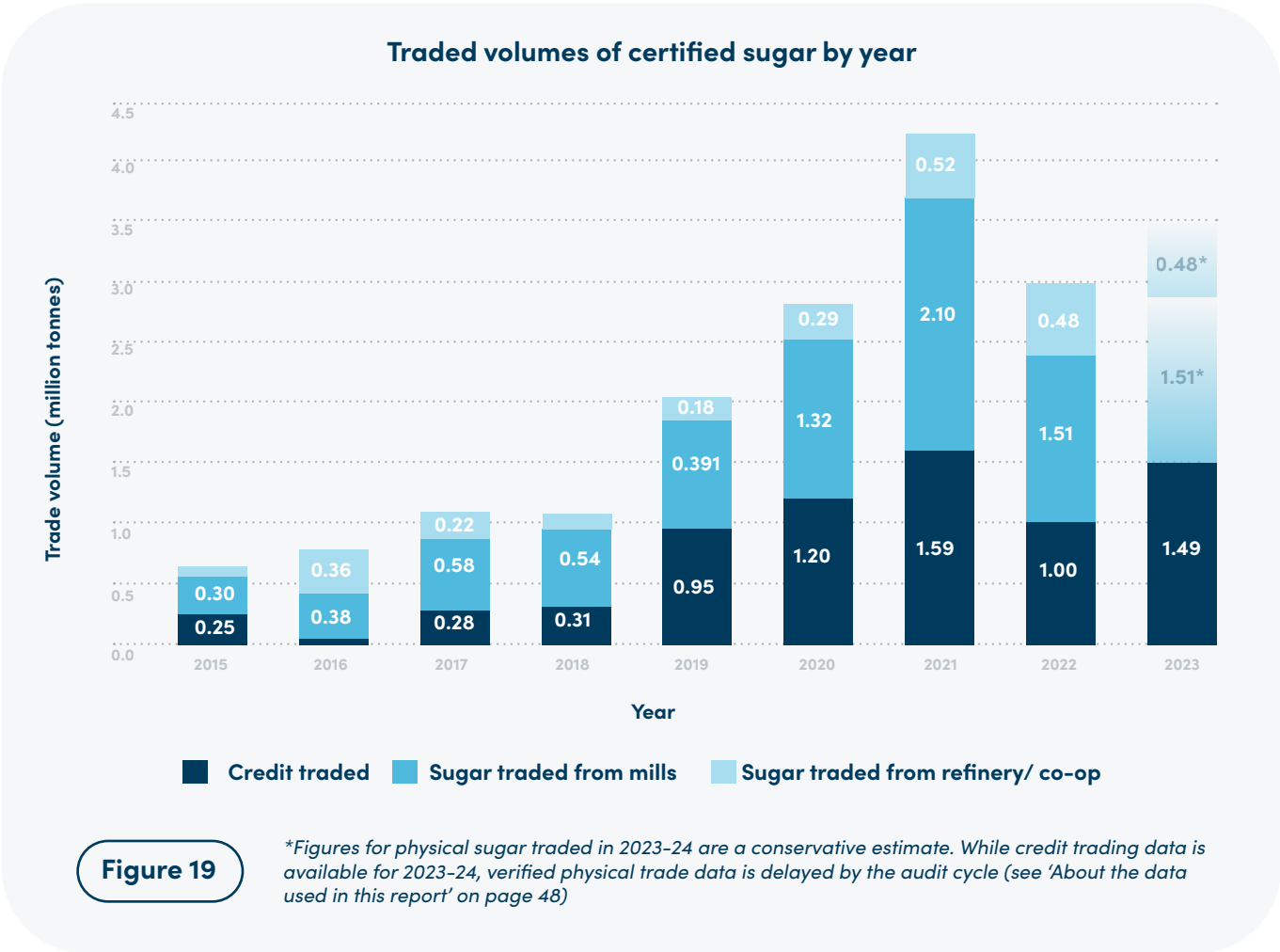
Derivatives from sugarcane: molasses

- In 2022-23, production volumes of certified molasses dropped 16%, to just over a million tonnes, but overall we continue to see a trend of growth since 2020.
- Many certificate holders have added molasses to their certification scope over recent years. There are currently 73 producers of Bonsucro certified molasses – eight times as many as there were in 2017-18.



Changes in demand for Bonsucro certified sugarcane and derivatives

- Over time, there has been a clear upward trend in market uptake. Market uptake is defined as the volume of certified product sold during the year, as a percentage of the volume of certified sugarcane produced during the year.
- 2021-2022 saw a strong increase. In 2022-2023 we saw high supply volumes and lower trade volumes that result in a market uptake percentage that is closer to 2020-2021, although there is potential for the 2022-23 season figures to grow further as more audits are finalised. The long-term trend in market uptake remains encouraging, although there is more to be done to build the market for more sustainable sugarcane, and we hope to see companies increasing their commitments and purchasing in the coming years.
- Market uptake of certified sugar (physical trades plus raw-sugar-equivalent credits) was 26% in 2022-23.
- Market uptake of certified ethanol increased in 2022-23, to 34% compared to 25% in 2020-21.
- Market uptake of Bonsucro certified molasses in 2022-23 was 4%, down from 9% in 2021-22. The overall volume traded in 2022-23 was 41,641 tonnes.



WHAT OUR MEMBERS SAY

Our Continuous Improvement survey asks our producer members about their plans to make their operations more sustainable. When it comes to our buyer members we ask about the sourcing activities and their supply chain investment plans.

48% of all Bonsucro certified producers increased their certified area in 2022-23, compared to 37% in 2021-22. This indicates that certified producers are putting their commitments into practice on expanding certification, and rolling out sustainability over larger proportions of their supply base. In the Continuous Improvement survey, 48% of certified mills reported that they have plans to extend their certification area in the next 12 months.

This can be contrasted with generally lower levels of commitment among buyers. On average, the traders, intermediaries and buyers who responded to the survey source 28% of their main sugarcane-derived product from Bonsucro certified sources. 11 companies (five based in Europe, three in Asia Pacific, one in Central America and the Caribbean, one in North America and one in Brazil) reported that 100% of their sugarcane-derived material is Bonsucro certified. Not all these companies have Chain of Custody certification, meaning they can't yet publicly communicate about their sustainable procurement success. For 15% of the companies that responded, Bonsucro certified sources account for less than 1% of their supply. Of those intermediaries, traders and buyers who are not already at 100%, 19% have made a time-bound commitment to increase their purchasing of Bonsucro certified products and/or credits.

To increase shared value in the supply chain, it will be important for the market to step up and increase their sourcing of, and support for more sustainable sugarcane.

ABOUT THE DATA USED IN THIS REPORT

This report combines the following data:

- Certification data from the 2022-23 sugarcane production season (represented in graphs as the year 2022)
- Continuous Improvement survey of Bonsucro members, carried out in 2024 and reporting on 2023
- Membership data from 1 April 2023 to 31 March 2024
- Case studies and other stories from 2023 – mid 2024
- Where relevant, we’ve included data from earlier years for context and to demonstrate the longer-term impact of our work.

Certification data

Certification data including certified hectares, certified volumes, and impact data (for example, water use efficiency, accident rates):

Each year, producers report 12 months of data. For the purpose of analysis, this data is collated according to the year at the start of the reporting period. Exact reporting periods align with producers’ audit cycles. Due to the reporting timeframe and audit cycle for data verification, trade and calculator data is reported a year in arrears. The latest complete year of data available is for the 2022-23 season. In graphs and narrative descriptions, this is sometimes shortened to 2022. The 2021-22 season is referred to as 2021, and so on. Each submission of certification data, and therefore each ‘season’, includes one harvest per producer. All certification data used in this report has been submitted by licensed certification bodies via the audit reports and the Bonsucro Calculator used by producers throughout their certification journey. The data has been verified by third-party auditors and curated by Bonsucro. Unless otherwise stated, all figures and results presented in this report are based on audit data submitted up to 3 October 2024. The full dataset includes certification information from 2014 to 2023.

'Number of years certified' or 'certification year':

Where appropriate and relevant to the analysis, data has been presented by either calendar year, or by number of years certified:

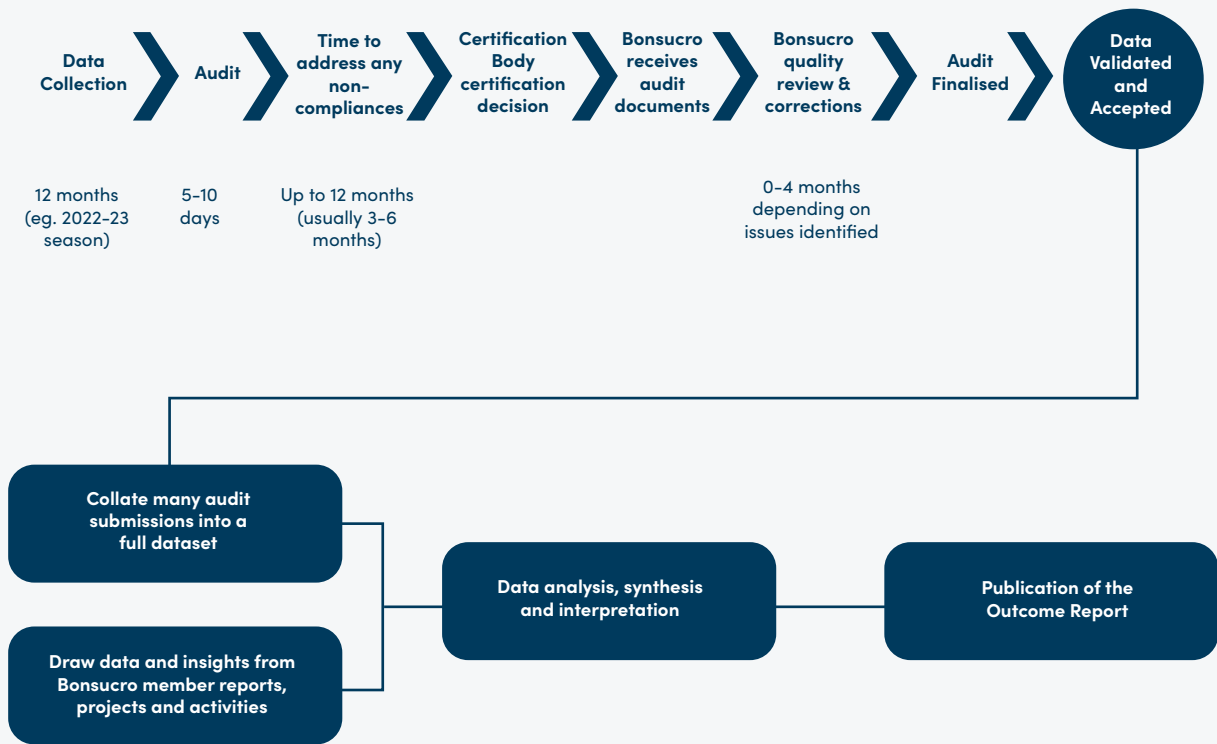
Year 0 represents the data submitted when a producer is first certified.

Year 1 represents data submitted by a producer one year after certification, and so on.

Average figures for each certification year are likely to change in successive annual summaries. This is due to year-round audit reporting which adds to the dataset each month. Each year as businesses become certified for the first time (year 0) or achieve another year of certification, the amount of data for that year category grows. Certification years above year 5 are excluded from this report due to small sample sizes.



Data Processing Chain - Per Audit



Data processing chain - outcome reporting

It can take up to 9 months of audit submissions to compile a dataset with a large enough sample for credible analysis. Mills have different audit cycle dates throughout the year, so documents and data arrive all year round.

Continuous Improvement survey

Each year we carry out a survey of our members on their commitments, progress and plans for more sustainable sugarcane production, processing and sourcing.

We collected information between April and July 2024 using an online survey tool, asking members to reflect on calendar year 2023. We received 195 responses, representing 69% of those expected to respond and 62% of total membership in March 2024. That’s an increase from the previous year, when 58% of members responded. We received a good range of responses from all membership categories and 44 out of a possible 55 countries are represented.



LinkedIn: www.linkedin.com/bonsucro
www.bonsucro.com
Email: info@bonsucro.com