9 tips on how to go green in the honey sector

Last updated:
11 November 2024

Sustainability and being a responsible exporter are increasingly important in the European honey sector. Buyers in Europe are increasingly prioritising sustainably sourced honey. This makes it crucial for you to adopt environmentally friendly practices and demonstrate them effectively. Integrating green principles and practices into your supply chain benefits both the health of bees and the long-term success of your business.

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1. Understand the vital connection between bees and the environment

To make your honey exporting business more environmentally friendly, it is essential to begin by learning about the intrinsic connection between bees and the environment. Bees are not only key players in honey production but also vital contributors to the health of ecosystems. As pollinators, they support biodiversity, agriculture and the sustainability of natural resources. As a honey exporter, recognising this will help you adopt practices that protect both the environment and your bees, ensuring the long-term viability of your business.

Honeybees are among the most efficient pollinators in the world. This process is vital for maintaining plant biodiversity, which in turn supports a range of animal species and helps sustain entire ecosystems. Without bees, numerous plant species would struggle to reproduce, resulting in a cascading loss of biodiversity. In addition, bees pollinate approximately 75% of the crops that produce the fruits, vegetables and seeds consumed by humans. Therefore, the health of bee populations directly affects food security and crop production.

As a result, healthy bee populations are linked to broader environmental sustainability. Bees are often considered a key indicator of environmental well-being. This means their health reflects the overall condition of the environment. Over the past decades there has been an alarming decline in bee populations, particularly in the colonies in North America and Europe. This is driven by habitat loss, monoculture farming and widespread

pesticide usage. Climate change worsens these challenges by disrupting the balance of ecosystems, leading to a mismatch between when bees forage and when flowers produce nectar. Climate change is considered to be the most prominent threat to pollinators and humans and the most difficult threat to control.

As an exporter, demonstrating that you are aware of and are addressing these environmental challenges will improve the sustainability of your operations. Sustainable honey production requires a holistic approach, where the health of bee populations, the protection of natural resources and economic viability are interconnected.

Your sustainability efforts must begin with protecting the health of your bees and extend to the natural resources on which they depend. Honeybees require access to diverse plants and flowers for foraging, which is vital not only for their survival but also for maintaining the ecosystems they pollinate. In this context, sustainable land use practices, such as avoiding monocultures and reducing pesticide usage, are crucial for your business. By tackling the environmental threats that affect bees, you can ensure your honey production supports both bee populations and the planet's sustainability.

Tips:

- Watch Apimondia's videos on pollinators and pollination services to gain a deeper understanding of the critical role of bees. You can also use them in your promotional materials to highlight your commitment to sustainability.
- Go to Promote Pollinators to check if your country is a member of this coalition of countries. If it is, find out what the current situation is in your country in terms of pollinators.
- Read this European Commission (EC) mini-paper listing the stress factors affecting the well-being of bees to get a general overview of the risks and possible solutions.

2. Highlight your sustainability commitment clearly to stand out in the market

You can help your honey product stand out in the competitive honey market by using environmental sustainability as a unique selling point (USP). Demonstrating a commitment to sustainability makes your product more appealing and builds trust with buyers, leading to long-lasting relationships. As sustainability regulations become stricter, suppliers who take action on environmental issues will be in a better position to meet these new standards, staying ahead of the competition.

Knowing what your (potential) buyers care about is key. An increasing number of buyers are starting to care about environmental responsibility and bee welfare. For example, major importers like Honey Green in Spain value the protection of bees and the environment and consider them priorities in their business. This shows that sustainability is not just a nice-to-have, but an essential requirement for some buyers.

'Respect for the environment is part of our company philosophy. We want to take care of the environment and even improve it to contribute to a better and healthier future. We have implemented actions to control energy and waste and raise awareness about the importance of caring for bees'. - Honey Green commitments

To effectively communicate your sustainability efforts, incorporate them into your marketing strategy. Let buyers know about the actions you are taking to protect the environment and improve bee health. Sustainability in honey production focuses on protecting the environment, keeping bees healthy and supporting beekeepers. You should concentrate mainly on preserving biodiversity, managing natural resources and maintaining or increasing bee populations. Some examples of sustainable practices you could emphasise include the planting of diverse crops and native flowers for bees, lowering carbon emissions, restoring habitats, and using renewable energy to reduce the effects of climate change on honey production.

Getting involved with your community can also strengthen your commitment to sustainability. By participating in local environmental projects, you can build a stronger connection with the areas in which you operate. Beekeeping offers a sustainable income, improves family health and creates educational opportunities.

A successful example of a honey exporter using this tip is Forested in Ethiopia. Their website has a page dedicated to their vision and regenerative agricultural principles. These include:

- protecting native ecosystems through sustainable foraging;
- promoting intercropping;
- increasing pollinator abundance;
- avoiding synthetic chemicals for pest and weed management; and
- using renewable energy to lower their carbon footprint.

Tips:

Read our study on trends in the European honey market to learn more about why and how buyers are taking action to source honey responsibly.

Visit the EU Pollinator Information Hive to find out what is being done across the EU to halt the decline of wild pollinators. Get inspired on how you can help. They also have a guide on pollinator-friendly farming.

Read Apimondia's report on how beekeeping contributes to the Sustainable Development Goals. Use this information to enhance your promotional materials. Since many buyers and consumers are familiar with the SDGs, showcasing your alignment with them can make your product more appealing.

Use your website, social media and other channels to highlight your sustainable practices. Share clear and truthful information about how you are reducing your environmental impact. Make sure your sustainability claims are backed up by evidence.

3. Understand your carbon footprint at every stage of production and try to reduce it

Carbon footprint reduction is becoming increasingly important for many companies in Europe. When you understand the environmental impact of your operations, you can start to adopt green practices and align with sustainability regulations and buyer requirements.

Measuring your carbon footprint is a critical first step. A carbon footprint measures how much greenhouse gas (GHG) is produced and released through your operations. These emissions, often measured in kilograms or metric tonnes of carbon dioxide equivalent (CO_2e), are key to identifying areas for improvement and ensuring your honey production minimises harm to the environment.

Honey, by its nature, is a low-emission product compared to other commodities like coffee or sugar. Its

production requires fewer resources, no fertilisers, and has a simple process from hive to jar. However, despite honey being considered a more sustainable sweetener, its production still emits GHG. On average, producing one kilogram of honey generates 1.5 kg of CO_2e, with variations based on origin, transportation methods and beekeeping practices. For instance, the carbon footprint of honey from China and Mexico is estimated at 0.8 kg CO_2e per kilogram and 0.70 kg CO_2e per kilogram, while that of Italian and Spanish honey can be as much as 1.44 kg CO_2e per kilogram and 1.20 kg CO_2e per kilogram. This variance highlights the importance of analysing your own production practices to reduce emissions.

Figure 1: Example of a system boundary diagram of honey production and processing

Source: ProFound based on Kendall, Yuan, Brodt & Kramer, 2024

One of the biggest contributors to GHG emissions in honey production is transportation, particularly in migratory beekeeping systems. These systems, which involve relocating hives to follow seasonal blooms, rely on diesel-powered vehicles, resulting in significant emissions. Comparatively, stationary beekeeping, where hives remain in one location, has a much lower carbon footprint. Therefore, exporters and beekeepers should evaluate their hive management systems and, where possible, adopt stationary practices or reduce transportation distances to lower emissions.

To further reduce your carbon footprint, consider using energy-efficient or renewable-energy-powered vehicles for transport, and adopt renewable energy sources like solar or wind for your honey-processing facilities. Additionally, focusing on local sourcing for materials and inputs can reduce the need for long-distance transport, further cutting down on GHG emissions.

By minimising emissions, you can lower your environmental impact and mitigate climate change. Adopting this proactive approach will help you demonstrate your commitment to sustainability, which is becoming a key factor in buyer decision-making.

Tips:

- Use free tools such as the Business Carbon Calculator powered by Normative to estimate your company's carbon footprint.
- Set an appropriate system boundary when calculating your carbon footprint. This involves defining the activities that should be included in your GHG emissions assessment. Be sure to consider both direct and indirect emissions.
- Consult the Greenhouse Gas Protocol's standards for guidance on measuring and managing emissions. These standards are used by companies, governments and other entities around the world.

4. Consider precision beekeeping to optimise resource use and to take care of your bees

Modern technology can help beekeepers by giving them tools to improve their work. The use of technology in beekeeping, such as hive monitoring systems and data analytics, allows beekeepers to manage their hives better, improve honey yields and reduce losses. Precision beekeeping (PB) is a good example of this new

technology and is considered a new evolutionary phase of beekeeping.

The use of PB is a powerful way for honey exporters to make their businesses more environmentally friendly while enhancing productivity. PB uses technology to monitor honeybee colonies in real time. By integrating sensors, beekeepers can measure hive weight, temperature, humidity and sound, turning traditional beekeeping into a data-driven approach. This shift towards 'smart' hives can lead to more efficient and sustainable honey production.

Smart hives continuously collect and send out data. This provides insights into the health and productivity of bee colonies, allowing beekeepers to respond quickly to any issues. For example, beekeepers can decide when to provide extra feeding or other care, making sure they use their resources efficiently and avoid waste. PB also reduces the stress and unnecessary interventions in beehives.

PB helps reduce the need for regular hive inspections. With real-time data available online, beekeepers can reduce control trips to the hives, which can lower fuel use and greenhouse gas emissions. This saves both time and money, while also reducing the environmental footprint of honey production. Additionally, PB can predict honey yields more accurately, allowing exporters to plan their operations more efficiently and optimise their use of resources.

However, there are some limitations to using PB, particularly related to mobile network coverage and the high cost of PB equipment. Although the initial cost is high, the long-term benefits are still worth it. PB can improve hive management, increase honey production and improve the quality of the product, making suppliers more resilient and sustainable. As this technology becomes more affordable and available, both the environmental and economic benefits of PB will likely outweigh the initial investment.

Figure 2: Video on precision beekeeping using the Internet of Things (IoT)

Source: BeeNEET Project, 2024

Tips:

Read this FAO guideline, particularly Chapter 19 on precision livestock farming in beekeeping, to learn about PB tools and good practices.

Try to find PB systems that can store the data collected and can send out alarms or warnings in case of any issues.

Use technology to support hive management but rely on the expertise of beekeepers for direct observation and fieldwork. This ensures the best results for hive health and productivity.

Start with a few key tools and slowly add more as you get used to the technology. Focus on the most important areas first.

5. Stay up to date about European legislation on sustainability

Understanding and aligning with the quickly changing EU regulations on sustainability is becoming not just a competitive advantage but a necessity. Both mandatory regulations and voluntary standards are increasingly viewed as minimum requirements for successfully doing business in Europe.

European Green Deal (EGD)

The European Green Deal, launched in 2019, is the EU's new growth strategy and affects all sectors of the economy. It aims to make the European Union climate neutral by 2050. To achieve this, the EU has set a target to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels. The EGD includes a range of policies related to agriculture, industry, trade, etc. which will change the way goods are produced and consumed. This means that goods sold on the EU market, including imports from third countries, will have to meet higher environmental and sustainability standards.

For you, as a honey exporter outside of Europe, this legislation means you have to ensure that your supply chain and beekeeping practices align with stricter sustainability requirements. These efforts are crucial for maintaining market access in the EU. You will need to adapt your practices to be more environmentally friendly, as buyers in Europe will increasingly prefer or require honey from suppliers that align with these sustainability goals.

Figure 3: Video on the impact of the European Green Deal

Source: European Commission, 2024

In the framework of the EGD, the EU adopted two strategies that are mutually reinforcing, bringing together nature, farmers, business and consumers to work towards a sustainable future. Both have a relevant impact on honey suppliers.

Farm to Fork Strategy

Presented in 2020, the Farm to Fork Strategy aims to make food systems more sustainable and resilient. The strategy sets specific targets such as a 50% reduction in the use and risk of pesticides by 2030 and boosting organic agriculture and consumer demand.

As the EU food system depends on global supply chains, the strategy outlines plans to collaborate with third countries and international actors to support a global transition to sustainable food systems. The EU's cooperation strategy will focus on obtaining commitments from third countries in key areas such as animal welfare and the use of pesticides.

In this context, honey exporters will need to adopt more sustainable practices to comply with the stricter requirements of the European market. This includes ensuring that bee products are free from pesticides and microbial active substances, ensuring that honey and beeswax meet EU organic standards, and implementing traceability systems.

EU Biodiversity Strategy for 2030 and EU Pollinators Initiative

The EU Biodiversity Strategy for 2030, launched in 2020, is a plan to protect nature and reverse ecosystem degradation. It aims to tackle the key drivers of biodiversity loss. The strategy includes concrete steps to put Europe's biodiversity on the path to recovery by 2030. This includes bringing back high-diversity landscape features on at least 10% of agricultural land. The strategy also aims to increase organic farming and to bring back pollinators to agricultural land, among other things.

The EU Pollinators Initiative (adopted in 2018 and revised in 2023) contains specific actions and commitments to halt the decline of pollinators by 2030. To foster pollination restoration, the EU calls for the protection of key

habitats and for the inclusion of EU-wide binding pesticide reduction targets.

Both initiatives affect honey exporters outside of Europe by introducing higher standards and expectations for sustainability. Suppliers will need to adopt practices that protect biodiversity and pollinators, like reducing the use of pesticides, planting native plants and avoiding habitat destruction. Exporters who follow the EU's biodiversity goals will have a better chance of being able to compete, as many European buyers prefer suppliers who actively contribute to biodiversity conservation.

Corporate Sustainability Due Diligence Directive (CSDDD)

The Corporate Sustainability Due Diligence Directive requires companies to identify and address negative environmental and human rights impacts in their operations and supply chains. This legislation, which entered into force in July 2024, applies to European companies and large non-EU companies that sell products or services in the EU. SMEs are not directly affected by the CSDDD. However, they may be required to collect information on adverse (potential) impacts and share this with larger business partners, and help resolve these issues.

The CSDDD may increase short-term costs, as you will need to implement systems and processes for supply chain due diligence. These systems will ensure your activities do not contribute to deforestation, excessive GHG emissions or human rights violations. To follow the CSDDD, you should start by mapping out your supply chain and finding areas where environmental damage or unethical practices could occur. Work with your suppliers to ensure they follow similar standards and provide clear information to European buyers about your sustainability efforts. This will not only help you meet legal requirements but also build trust with European importers.

Corporate Sustainability Reporting Directive (CSRD)

The Corporate Sustainability Reporting Directive encourages accountability and transparency by requiring companies to report on their sustainability practices. From 2024 onwards, the CSRD will become mandatory for European companies with over 250 employees and annual turnover exceeding €40 million. While smaller honey exporters outside of Europe may not fall directly under this directive, the CSRD has indirect implications for them as well. Large buyers and importers who do fall under this directive may require you to provide detailed information about your environmental practices to meet their own reporting obligations.

Tips:

- Check out the European Commission's factsheets to learn more about the EGD and all its related strategies through visual aids.
- Visit the 'Delivering the European Green Deal' website to keep up with the latest developments.
- Read the CSDDD Frequently Asked Questions to understand the impact of this regulation on developing countries.
- Read our study entitled The EU Green Deal – How will it impact my business? for more information on the impact of the EGD on exporters in third countries. You will also find tips on how to take advantage of related opportunities.

6. Make sure to have a code of conduct outlining your green

principles

A code of conduct (CoC) is a set of guidelines a company adopts to address what behaviours are expected and appropriate. They are valuable both within and outside the company because they show your company's values and commitment to high standards. If you do not have a CoC already, it is a good idea to write one for your business. If you already have one, review it carefully and consider adding specific green principles to it.

Important green principles to consider in your CoC include minimising the use of pesticides, preserving biodiversity, protecting natural habitats, reducing waste and energy consumption, cutting emissions, and saving water. Write down concisely what your company specifically believes in and give guidelines on how to achieve that.

You can strengthen your market position by aligning your code of conduct with global environmental standards and the expectations of your buyers. It helps you meet buyers' needs and boosts your credibility as a responsible company. Many honey buyers have their own supplier codes of conduct that include environmental requirements. The German company Norevo, for example, which specialises in trading and processing natural raw ingredients like honey, has a supplier code of conduct. Suppliers are required to meet demands such as:

- no discrimination;
- fair remuneration for workers;
- no child labour;
- avoiding environmental degradation; and
- no corruption, bribery, etc.

Suppliers must also provide documentation to show they follow the code of conduct and sign a supplier declaration. Traceability and record-keeping are key to this.

Your code of conduct should also extend to your supply chain by encouraging or requiring your suppliers to adopt similar practices. Create a CoC that sets clear expectations for the people you source from. This ensures that your green principles are upheld not just within your own operations but also by the suppliers you work with.

Tips:

Check out Deloitte's guidelines for writing a code of conduct to see what elements you should include and what potential topics you should consider when writing your code.

Review FAO's guideline on good beekeeping practices for sustainable agriculture, particularly the section on good practices related to traceability, to see some examples of documents or data you should have available.

Read the extensive list of good beekeeping practices in the TECA online platform for inspiration and consideration in your code of conduct.

7. Adopt and promote organic beekeeping practices

Organic honey is increasingly valued in the European market, not only as a table product but also as an ingredient used by various industries. Beekeeping is closely linked to the principles of organic agriculture. In some developing countries, honey production is almost organic by nature. As an exporter, you should consider adopting organic practices, regardless of whether you have organic certification. This can help you tap into

Europe’s growing organic market.

Switching to organic honey production is a key step for honey exporters seeking to become more environmentally friendly. Organic beekeeping differs from conventional beekeeping in that it follows certain restrictions on how honey should be produced and processed. To market honey as organic in the European Union, it must comply with Regulation (EU) 2018/848. Once you comply with this regulation, you will need to get certified by an authorised control body to use the EU organic production logo on your honey labels.

There are also other popular certifications for organic honey like Naturland in Germany. Naturland-certified honey must follow several requirements, which are often stricter than those of the EU organic regulation. Specific requirements are described in the Naturland Standard on Organic Beekeeping.

Figure 4: EU Organic and Naturland logos

Source: European Commission & Naturland, 2024

The main restrictions for organic honey include the placement locations for beehives, the substances used to control bee diseases, the replacement of combs during the conversion period, and what and when you are allowed to feed your bees. There are also other rules like not clipping the wings of the queens, using natural materials to build the hives, and not destroying the combs during honey collection.

A key strategy in organic beekeeping is adopting Integrated Pest Management (IPM). IPM combines cultural, mechanical and biological methods to manage pests and diseases, reducing the need for chemicals. This approach emphasises prevention as the best possible option. Regular monitoring of the hives, keeping your apiary orderly and hygienic, storing equipment correctly, and using natural treatments all contribute to healthy colonies. IPM helps you solve pest and disease problems, while reducing the risk of contamination and protecting the environment.

Tips:

- Visit the EcoHoney website (still under development) for useful resources, tools and training on producing organic honey according to EU standards.
- Read our study on certified honey for detailed information on the EU Organic Regulation and buyer requirements for organic honey.
- Note that certification is not suitable for every exporter. The certification process can be complex and costly. Before engaging in any certification programme, check if it is cost-beneficial for you.

8. Engage in activities that preserve local flora, such as growing native plants and promoting reforestation

Preserving local flora is essential for honey exporters who want to go green. Maintaining natural areas and planting a variety of native flowers and plants is one of the best ways of protecting bee populations while promoting environmentally friendly practices.

Bees, especially wild ones, need different sources of nectar and pollen throughout the year, and native plants are particularly suited to their needs. By planting local species, you create a rich environment that gives bees the nutrients they need to survive. Make sure to investigate which local native species fall into this category.

To support bee health and make your business more sustainable, follow good land management practices. These include intercropping, crop rotation, planting native species on the margins of fields and restoring patches of natural habitats. These methods will help you preserve biodiversity, improve pollination services, increase crop yields and reduce the environmental impact of conventional farming.

Flowering trees and shrubs also play an important role in protecting bees, as they are an important source of pollen and nectar. They also help reduce carbon dioxide and help fight climate change, lowering average ground temperatures and reducing global warming. You can develop forest management practices to restore degraded forests and habitats, making your honey production part of broader environmental goals.

A practical example of this, currently being promoted by several programmes around the world, is the integration of beekeeping and coffee production in agroforestry systems. Bees are well adapted to coffee growing conditions, and coffee trees provide an excellent food source for bees. In fact, bees are highly attracted to the caffeine in coffee flower nectar. In addition, beekeeping benefits coffee growers because bees can increase the success of crop pollination, resulting in increased fruit development. It can also lead to new, more resilient hybrid varietals, as well as produce honey and other by-products that provide an additional income for local communities. It should be noted, however, that this interaction is only consistent with green practices as long as coffee is grown in agroforestry systems. The presence of tree diversity is fundamental to the successful balance between bees and their ecosystem.

Tips:

Consider joining global initiatives like Apimondia's "Trees for Bees" campaign to further your environmental efforts. This campaign promotes the planting of trees and shrubs that benefit pollinators.

Research the best native plants to support bee populations. Use search terms like pollinator-friendly native plants in [your country] to find specific information tailored to your region.

9. Mitigate potential risks by securing funding for your sustainable honey business

Transitioning to environmentally friendly honey production can be expensive. A major risk of the 'going green' process is the financial investment needed for new technologies, renewable energy and certifications. Sustainable honey producers also face the challenge of maintaining profitability while adopting eco-friendly practices. Competing with conventional honey producers, who can sell at lower prices, can be very challenging. The global issue of honey adulteration adds to this risk, by negatively impacting market dynamics and causing economic losses.

Securing the right funding, partners and investors can help you overcome these financial hurdles. Partnerships with local NGOs or government agencies can also raise awareness about sustainable honey production without extra costs for your business. There are many sources of funding, including international organisations, government aid programmes and agricultural development banks. Many large organisations offer funding opportunities on their websites, making the internet a valuable resource for finding financial support.

Government programmes and development banks

Start by looking into government grants and programmes that encourage sustainable agriculture. Many countries have specific support schemes for agricultural businesses aiming to become eco-friendly.

Development banks in your region might also offer loans or financing options tailored to agriculture. For example, the African Development Bank has funded honey projects like the Rwanda Honey Value Chain Project and the Trade and Institutional Capacity Building in Apiculture Project in Zambia. The bank has also provided over USD 5 million in grants through its YouthADAPT initiative, some of which have supported honey production innovations.

NGOs and international organisations

Many international organisations, NGOs and governments support sustainable beekeeping projects in developing countries. These organisations offer grants, technical support and training to help honey producers become more eco-friendly. These organisations often look for interested parties who want to participate in their projects. It's a good idea to register in their databases and stay informed about their upcoming projects.

Here are some examples of organisations that provide support and funding for sustainable honey production:

- GIZ – German development agency that provides services for sustainable development projects worldwide. GIZ funded and developed a project in Indonesia to foster forest conservation through beekeeping, with a focus on empowering women.
- World Bank – International financial institution that provides loans and grants to governments of low and middle-income countries. Over the past years, the World Bank funded projects in Yemen and Benin to support small-scale beekeepers, fund the creation of honey cooperatives and promote eco-friendly beekeeping practices.
- USAID – US government agency that provides foreign aid to promote economic growth, health, education and democracy in developing countries. A few years ago, USAID funded a project in Colombia to promote beekeeping as a sustainable and legal economic activity, benefitting rural communities. USAID has also supported honey firms in Tanzania through grants and investment, helping to boost trade.
- IFAD – Specialised agency of the United Nations that invests in rural communities to improve agriculture and reduce poverty. IFAD has supported beekeeping projects in Mexico and in Kenya, where they promote forest conservation and the protection of ancestral honey production practices.

Build partnerships

Collaboration with other farmers, cooperatives or local organisations can also be an effective way to pool resources and share expertise. By joining forces with others in the honey industry, you can collectively implement sustainable practices. This makes it easier to access funding and support. Cooperatives, in particular, can strengthen your position when applying for grants or loans, as they often have more resources and a larger network of partners.

Tips:

Read the Bees for Development article on finding funding to learn some tips on how to approach a funding organisation.

Visit the Funds for NGOs website to search for available funding for agriculture, food and nutrition companies.

Get to know your local beekeeping organisations to find out more about grants available in your area.

ProFound – Advisers in Development carried out this study on behalf of CBI.

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