



CGF Commodity masterclass

FERRERO Hazelnut



26th June 2025





Provide overview on commodity context



Share regional specificities



Agenda

Present **solutions** + case studies



Questions, answers & next masterclass in series

Discussion on opportunities to partner & scale for impact

Unrecorded section

About the Ferrero Group



About Ferrero Group

Ferrero began its journey in the small town of Alba in Piedmont, Italy, in 1946. Today, we are one of the world's largest sweetpackaged food companies, with 39 brands. The Ferrero Group brings joy to people around the world with much-loved treats and snacks, including our iconic brands: Nutella, Kinder, Tic Tac and Ferrero Rocher.

KEY FIGURES FOR FY2023/24











OUR GLOBAL PRESENCE MANUFACTURING PLANTS. HAZELNUT COMPANY Ferrero Group is present in more than 50 countries with 37 manufacturing plants across four geographic areas.

FERRERO MANUFACTURING PLANTS¹

Argentina: La	Ecuador: Quito		
Pastora	France: Villers-		
Australia: Lithgow	Ecolles		
Belgium: Arlon	Germany:		
Brazil: Poços de Caldas	Stadtallendorf. Faulbach		
Canada: Brantford	India: Baramati		
China: Hangzhou	Ireland: Cark		

Italy: Alba, Pozzuolo	Russia: Viodimi	
Martesana, Balvano. S. Angelo Dei	South Africa: Walkerville	
Lombardi, Castel D'ario, Calvano	Spain: Alzira	
Mexico: S José	Türkiye: Maniso	
Iturbide Poland: Belsk Duzy	United Kingdon Alfreton Halste	
Funding, Decise Longy		

FHCo U.S.: North Conton. Bloomington, Turkiye Frenklin Park. Louisville, Florence. Chile Augusta, Chicago, Le U.S. Mars North, Le Mars Italy South, Henderson. France Georgia Dunkirk Argenting Serbia

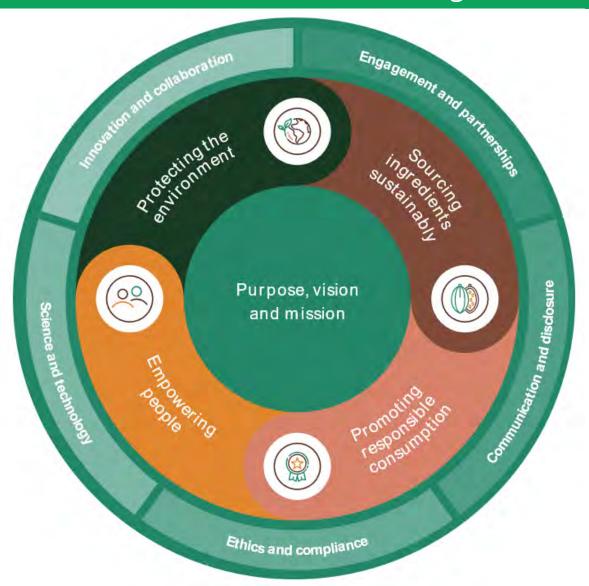
1 The production plants in scope for FY 2023/24, unless stated otherwise in the report, exclude Alara, Castel d'Anie, Halstead, Le Mars North, Le Mars South Henderson, Dunkirk, Calvano, Faulbach, and Vladimir.



FERRERO - Our Sustainability Framework

We monitor, measure, manage and aim to reduce our environmental impact across the value chain.

We care about the people working with us across >50 countries, and aim to build a culture of trust, respect, and opportunity for all.

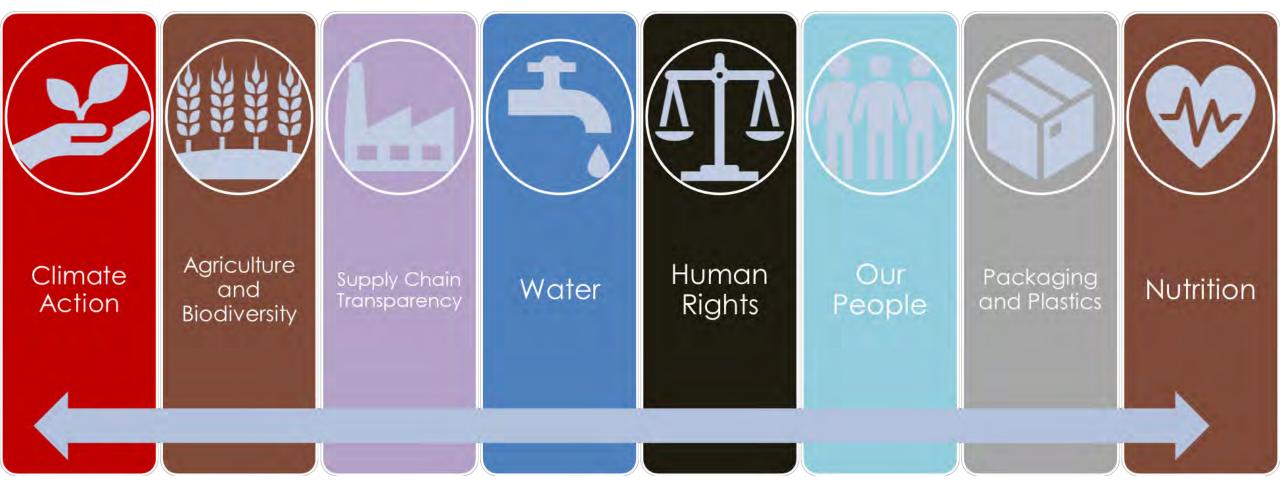


We aim to create a thriving supply chain **which benefit farmers'** livelihoods and communities, protecting people and nature.

We produce and market some of the world's best loved confectionary products, and we strive to always offer high-quality and fresh products.

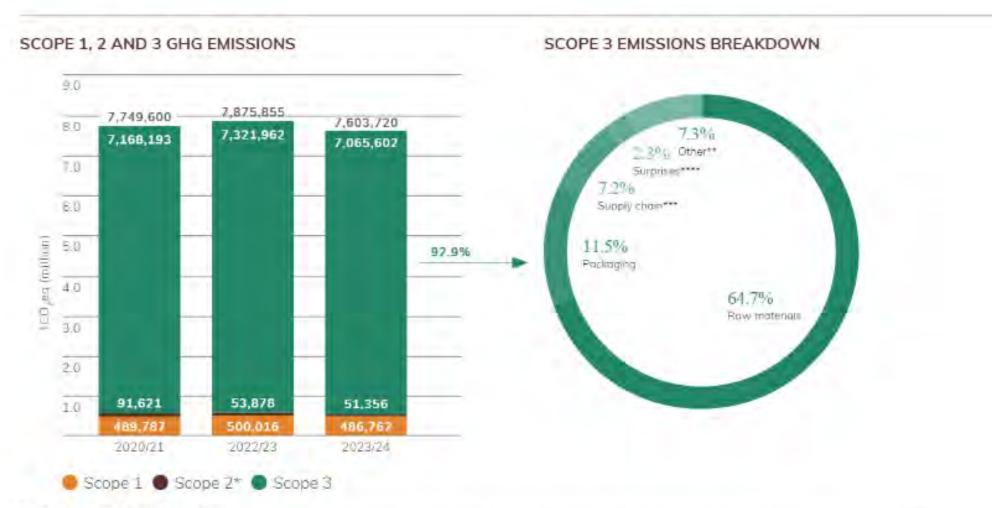


Sustainability long-term strategic priority areas for Ferrero





Ferrero GHG emissions



* Market-based Scope 2 emissions

** Employee travel - Waste and auxiliary products - Capital goods - Leased assets - Downstream transportation and distribution - End-of-life treatment of solid products

*** Logistics product transportation

**** Emissions are linked to production hubs that deliver KINDER® Surprise products to Ferrera plants, including materials, moulds and transport of the Surprises.



HCo Global Presence

Hazelnuts are at the heart of Ferrero. In 2015, the Ferrero Hazelnut Company (HCo) was established as a dedicated division to consolidate all hazelnut-related activities under one structure, driving both quality and innovation. HCo represents the first example of a fully integrated value chain company in the hazelnut industry—managing every step from farming to the final consumer.





Sec. ak

Overall hazelnut with 3.5 B\$ market value & 1.25 MT production

...> 75 % coming from the top 3 producing countries



Note: Estimated production volume in shell, thousand tonnes (kT), 2024/25 Source: INC International Nuts & Dried Fruits

3.5 B\$ market value (global, 2024/25)

1.25 MT of hazelnut produced (global, 2024/25)

Overall hazelnut value chain heavily fragmented

~1,100,000 Ha Hazelnut Orchards Worldwide

~600,000 Farmers Worldwide

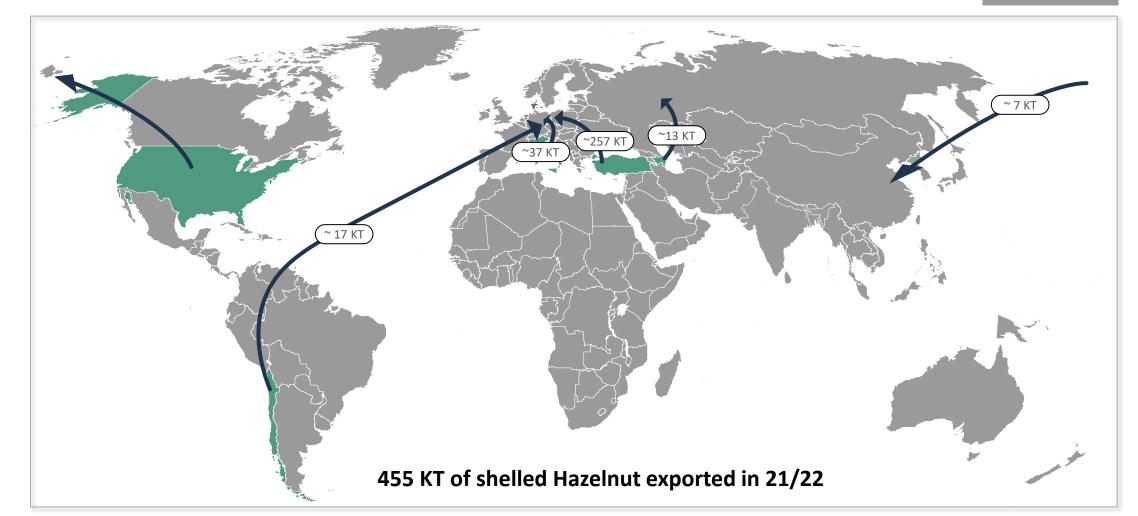
...> 90 % of the cultivated area concentrated in 5 producing countries





5 markets are top hazelnut exporters across top producing markets

Non-exhaustive



Understanding carbon sources and sinks on hazeInut farms Sink: Carbon uptake in stems, in harvest and nonharvest wood debri

Source: Fuel Combustion and on-farm electricity (CO2)

Sink: Carbon stored in soil and in the cover crop

Source: Urea Fertilization and Liming (CO2) Source: Biomass degradation (CH4 and other biogenic emissions)

Source: Field Burning residues (CO2 , N2O, CH4....)



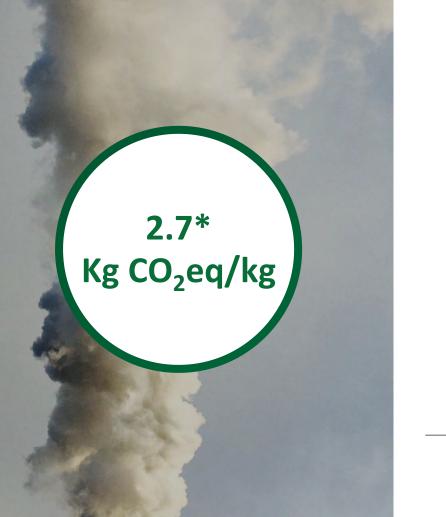
Bu bahçe FERRERO DEĞERLİ TARIM PROJESİ'nin örnek bahçesidir.

Source: N2O from Fertilizer application

Non-exhaustive

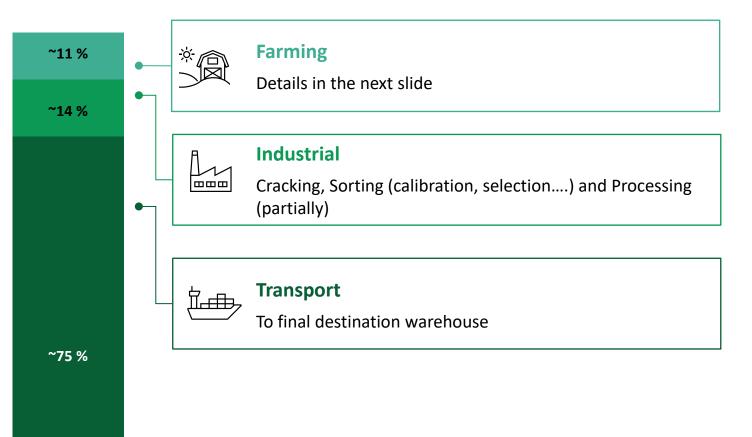


Hazelnut contribution in an integrated value chain



3 main drivers for hazelnut emissions – Wide angle

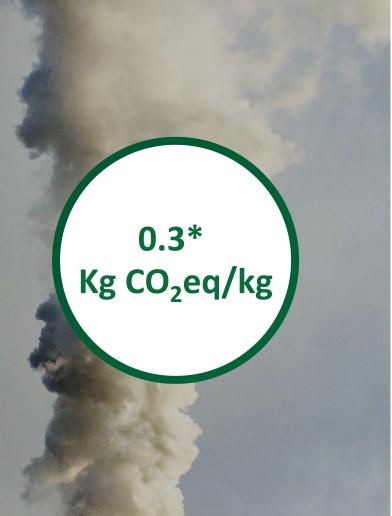
Emissions breakdown



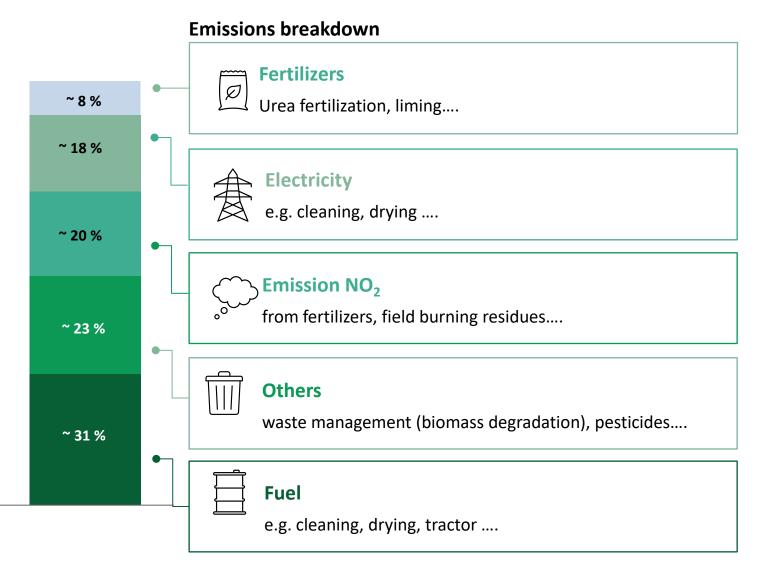
Note: *Global average emissions factor (intensity) for hazelnut.



Hazelnut Farming contribution – deep dive



5 main drivers for hazelnut emissions – Zoom



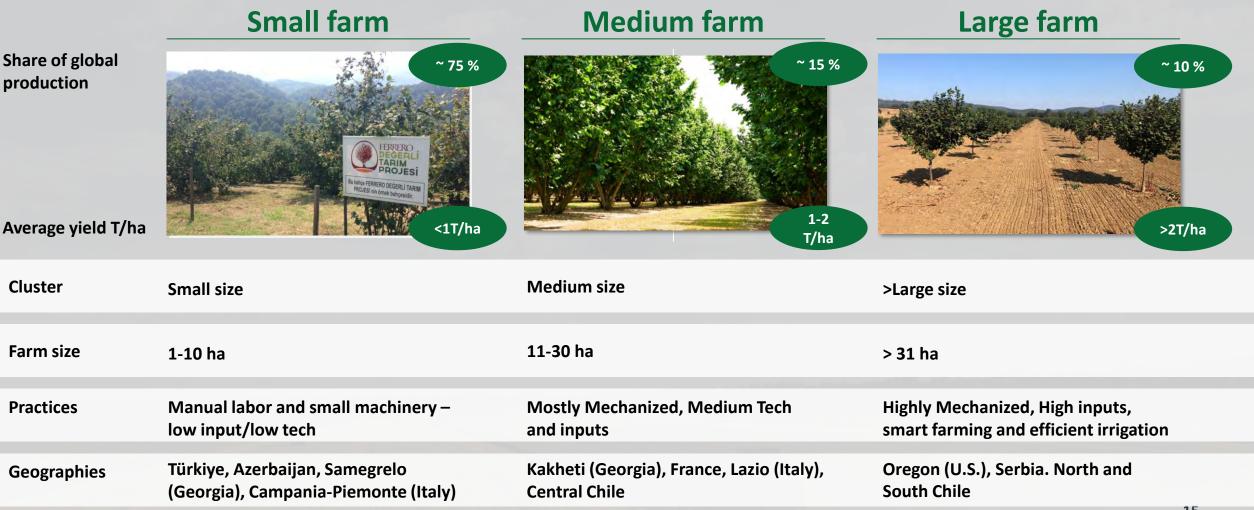
Note: *Global average emissions factor (intensity) for hazelnut.



Regional specificities



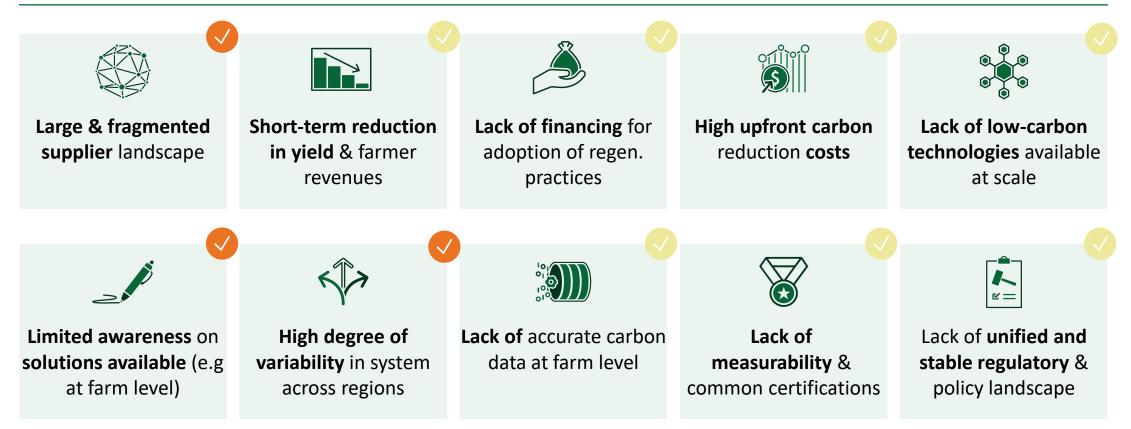
The main archetype for hazelnut production is small holder farming





Key challenges to address for hazelnut decarbonization

Key decarbonization challenges



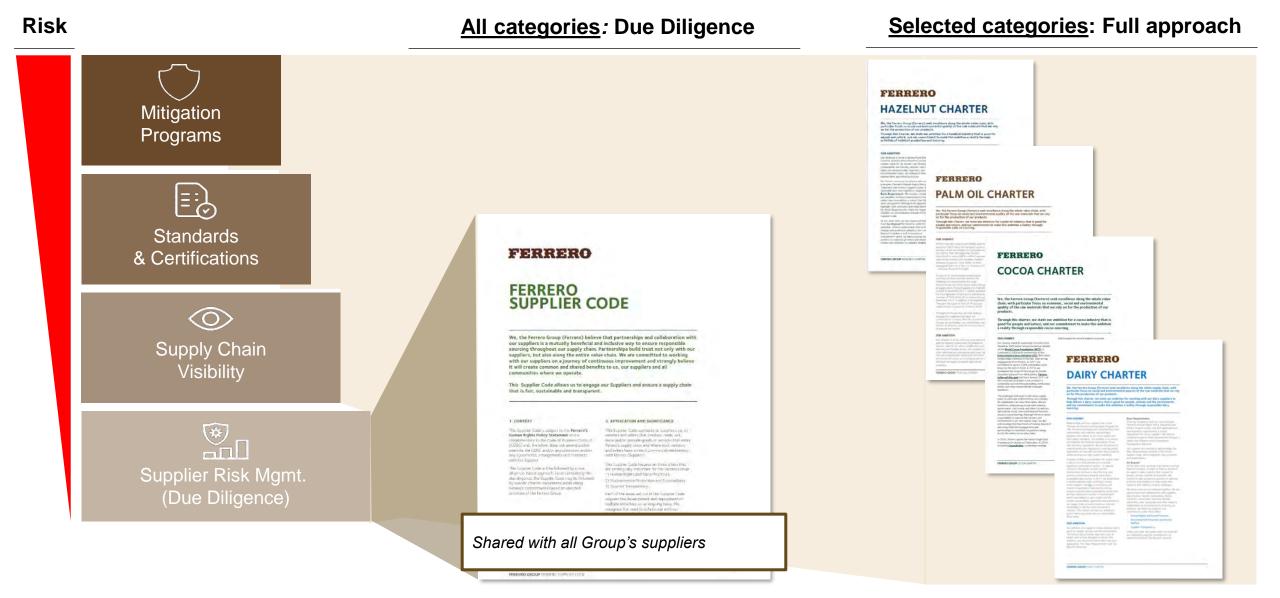
16



Solutions



Responsible sourcing strategy - 1





Responsible sourcing strategy - 2

The Ferrero Supplier Code outlines what responsible sourcing means for us, what our priorities are, and how we will work with all our suppliers to implement these along the following three pillars:





Responsible sourcing strategy - 3

Our ambition to contribute to a hazelnut industry that is good for people and nature, and our commitment to making this ambition a reality through our approach to hazelnut production and sourcing

FERERO HAZELNUT CHARTER



HUMAN RIGHTS AND SOCIAL PRACTICES

Ferrero through the on-going initiatives, committing to further improve fair and safe working conditions across its sourcing



ENVIRONMENTAL PROTECTION / SUSTAINABILITY

Ferrero promoting **the development**, **practical application and expansion of the principles** of regenerative agriculture in hazelnut production

SUPPLIER TRANSPARENCY

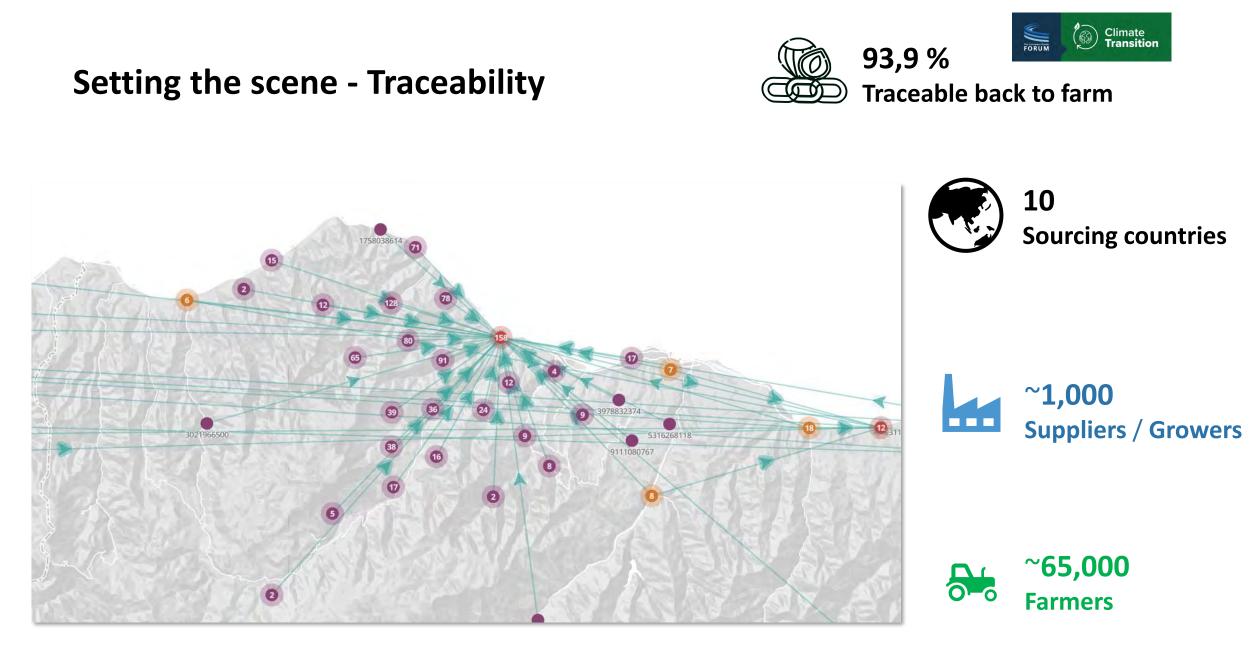
Ferrero maintaining and **straightening the level of traceability** for all its sourcing to farm level

FERRERO



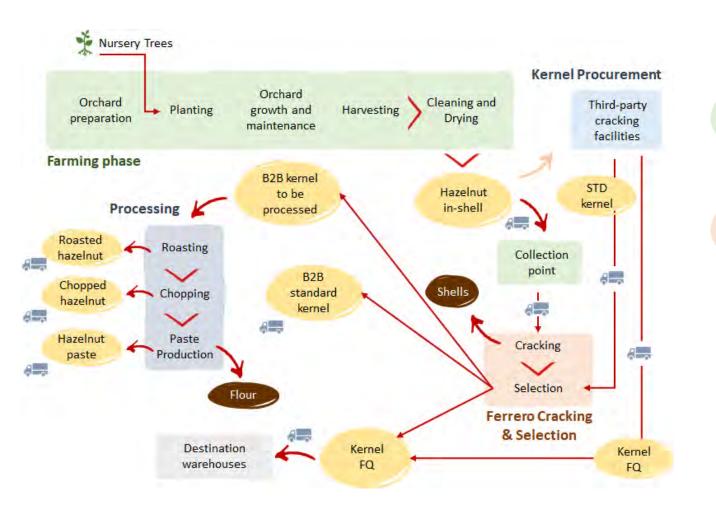
3 case studies supported our commodity decarbonization journey







Setting the scene – Life cycle assessment



Most farms have a negative carbon balance due to:

- C sequestration in above and below ground biomass.
- Land Use Change (conversion from annual crops to orchards)

Main emission contributors are:

- Farming inputs (Fertilizers) and diesel
- Electricity

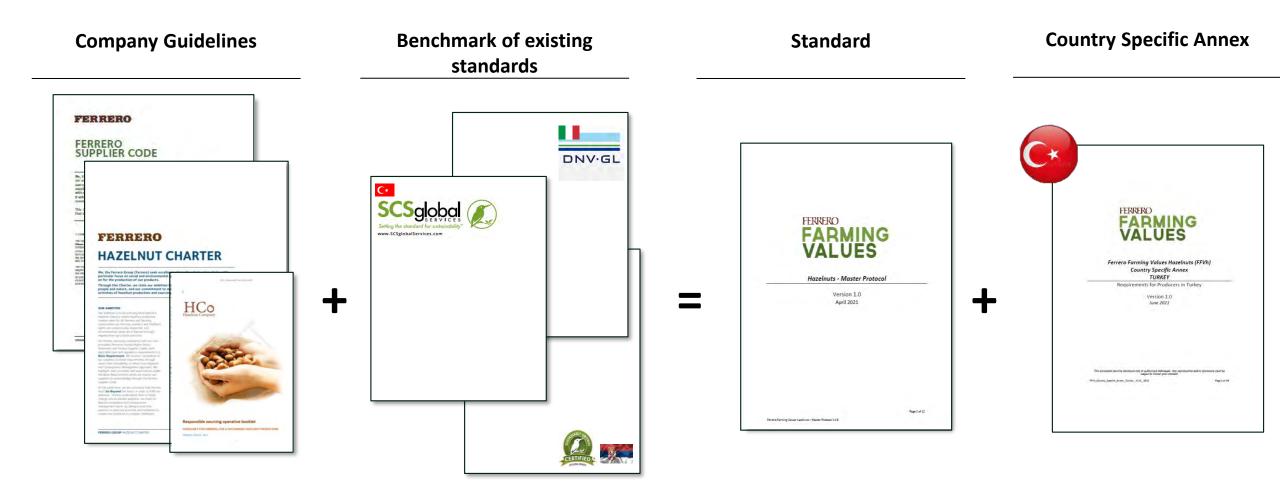
D

П.

• Significant emissions from **transport** to warehouse/processing facilities



Standard and Certification- Ferrero Farming Value



Through the **Ferrero Farming Values** (FFV) programme, we work to make more quality sustainable hazelnuts available, with a focus on sustainable agricultural and social practices, and on enhancing traceability.²⁴



Standard & Certification - Ferrero Farming Value

24,958 FFV Farmers in Turkey



81,611 Ha of orchards under FFV



Agrifarms Certified SCS

sustainably grown



4,800 Ha of orchards certified

SOIL CONSERVATION	BIODIVERSITY PROTECTION	WATER MANAGEMENT CONSERVATION	PLANTS PROTECTION AND NUTRITION	WASTE MANAGEMENT
Soil health is crucial to preserve ecosystem services, mitigate climate change and achieving sustainable food productivity.	Biodiversity on the orchard is key for a balanced ecosystem. A wide range of heterogeneous plants and wildlife will increase the resilience of the plantation.	Water saving irrigation systems are essential. Ferrero believes we can make a positive impact on the cultivation system, promoting efficient water management practices.	It is fundamental, to minimize external inputs and work to rebuilt organic components of soil and hence sequester carbon within it. An integrated pest management approach is preferred.	Ferrero promotes the reduction of waste generation and its correct disposal, in order to protect the health of the environment and people.



Knowledge - Guidelines for Sustainable Hazelnut Production



Note: The International Union for Conservation of Nature (IUCN) is a membership Union uniquely composed of both government and civil society organizations. They have been selected and engaged for the **endorsement** of the booklet.



Knowledge - Guidelines for Sustainable Hazelnut Production

PROTECTION / SUSTAINABILITY



It includes some practical suggestions about what to do to be more sustainable

"Food for thoughts" A list of topics to explore, some extra explanations, etc.

WHY ARE HCV AREAS SO RELEVANT? High Conservation Value (HCV) areas contain rich biological, ecological, social, or cultural values that are important to protect for nature or local communities. Our experience in the hazelnut sector shows us that that these habitats can be overlooked or degraded. It is easy to overlook and degrade the mentioned habitats. The long-term sustainability of the forest can be evaluated through management practices aimed at supporting natural ecosystems. maintaining biodiversity and protecting

TABLE OF

PRIART

ENVIRONMENTAL

REFERENCE

PILLAR 2

WHAT WE RECOMMEND

TABLE OF

Create **buffer zones to help develop biodiversity**; accordingly, we recommend the establishment of the following elements: • **floral corridors** along the borders of the eligible planting areas;

windbreaks, to create barriers against strong winds;

flora and fauna in their natural habitats

- a mix of different species of plants (including woody and herbaceous vegetation);
- native bushes and grassland patches to be protected within the buffers, which will undergo natural re-growth and re-establishment;
- undisturbed 15-meter-wide strip zones, adjacent to natural water bodies and between cultivated and HCV areas.

WHY ARE BUFFER ZONES SO RELEVANT? Buffer zones with native vegetation promote the re-establishment and natural growth of local ecosystems, enhancing biodiversity. Such corridors represent a beneficial habitat for wildlife and beneficial insects. Vegetation stabilizes river banks, reduces soil erosion, and helps to prevent pollutants (sediment, nitrogen, phosphorus, pesticides, and others) from reaching water courses.

22 From farm to factory

WATER MANAGEMENT CONSERVATION

PILLARS

REFERENCE

WHAT WE BELIEVE AND WHY

Water plays a very important role in the ecosystem, and it is a productivity limiting factor. RA approaches water management by conservating natural bodies of water, wetland, streams, groundwater and by implementing sustainable imigation systems.

Hazelnuts are sensitive to water stress, thus, it is highly recommended to complement the rainfall water with an efficient irrigation system. Depending on age, local climatic conditions, and soil type a hazelnut orchard needs different volumes of water. Therefore, precise water management is key for not only plant growth, but also to limit or avoid run-off and leaching of nutrients that could contaminate the environment.

We promote the use of efficient water management practices including water saving irrigation systems.



DEFINITION

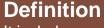
HCo

WHAT DOES "ENVIRONMENTAL PROTECTION AND SUSTAINABILITY"

e totality of the actions aligned to ecosystems and their constituent any (HCo) is committed id sustainability in hazelnut growing Regenerative Agriculture (RA), and appropriate technology will squestration, biodiversity resilience vill have a positive impact the farmer.

Guidelines for Sustain

HCo



It includes a description of the topic all the specific definitions

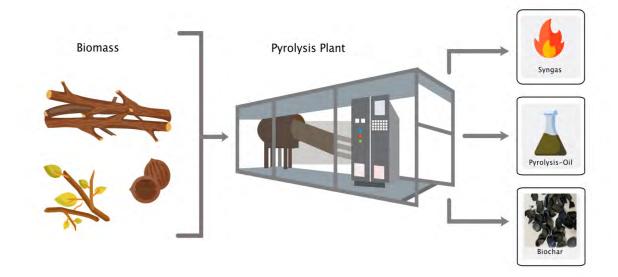
What we believe and why

It includes our view about what matters for the sustainability. It is always followed by why that is important



Innovation - Shells management through pyrolysis

- Pyrolysis is the thermo-chemical conversion of organic materials (hazelnut shells, pruning) into **energy sources** (bio-oil, syngas) and **biochar**.
- Biochar is an organic material very rich in carbon (~ 90%) which can remain stable in the soil for centuries. For this reason, it's considered one of the **most** effective ways of capturing carbon.



Different burning temperature generates **Pyrolysis (4-500°)** - High production of biochar, low energy production

Gasification (7-900°) - Low production of biochar, high production of energy

Challenges

Potential

- High **capex** cost Need to build a **new supply chain**
- Low demand for Biochar
- Great carbon sequestration (Carbon farming)
- Potential for circular economy
- Synergies with pruning management



Trial of biochar application in a hazelnut orchard (Italy 2024)

Time for your questions

Not recorded – will not be available to the public

Open discussion - Do we see opportunities to partner & scale for impact?

Thank you