



## BUILDING RESILIENCE FROM THE GROUND UP: REGENERATIVELY GROWN WHEAT IN EUROPE

**HARMONY PROGRAM BY MONDELĒZ** 

www.saiplatform.org
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## INTRODUCTION

Wheat is one of the world's most important staple crops, with over 700 million metric tons produced annually. It is also a key ingredient in Mondelēz International's biscuit portfolio. In 2024, Europe remained one of the leading wheat-producing regions, growing more than 120 million metric tons<sup>[1]</sup>. Within Europe, France leads production with 27 million tons per year, followed by Türkiye and Germany.

To support its biscuit business, Mondelēz International sources approximately 400,000 tons of wheat annually from over 1,200 farmers across seven European countries (Figure 1).

Raw material sourcing accounts for roughly 70% of the company's total carbon footprint, with wheat contributing to around 3% of those emissions [2]. However, wheat production in Europe faces increasing environmental pressures, including climate change - with more frequent extreme weather events such as prolonged droughts - and biodiversity loss driven by monocropping and intensive farming practices.

<sup>[1]</sup> Agricultural production - crops [Internet]. [cited 2025 Mar 27]. Available from: https://ec.europa.eu/eurostat/ statistics-explained/index.php? title=Agricultural\_ production\_-\_crops

<sup>[2]</sup> For Scope 3 emissions reporting, Mondelēz applies the Corporate Value Chain (Scope 3) Accounting and Reporting Standard (supplement to the GHG Protocol Corporate Accounting and Reporting Standard).

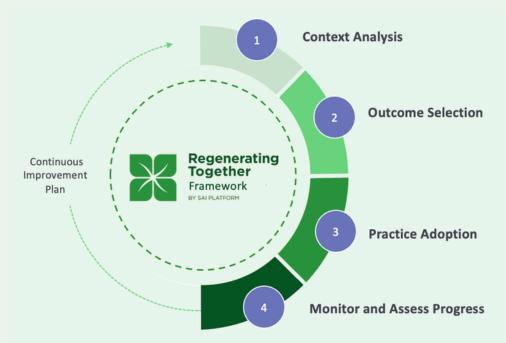


**Figure 1:** Mondelēz biscuit factories (green dots) and major wheat sourcing regions across Europe.

In 2008, Mondelēz International launched the **Harmony Program** in France in collaboration with wheat value chain partners. The main objective being to reduce the environmental footprint of wheat as the main ingredient in its biscuits. Since then, the program has grown steadily, and by 2024, 100% of Mondelēz International's European wheat chain was engaged in the Regenerative Harmony Charter.

Looking ahead, the renewed *Harmony Ambition 2030* seeks to accelerate the program's impact by fully embracing regenerative agriculture. This approach focuses on producing high-quality crops while restoring natural ecosystems. It supports farmers and suppliers in reducing greenhouse gas emissions, enhancing biodiversity, and soil health.

This renewed Harmony Program is aligned with <u>SAI Platform's</u> <u>Regenerating Together Framework</u>, adapting its four core modules (Figure 2) to wheat farming in Europe with context-specific outcomes, indicators, and practices. It addresses the five key impact areas of soil health, water, biodiversity, climate and farmer livelihoods (Figure 3).



**Figure 2:** The four modules of SAI Platform's Regenerating Together Framework to guide the context-relevant selection of regenerative agriculture outcomes, indicators and agricultural practices.

IMPACT AREAS	QUALITIES
Soil Health	Enhance soil structure, fertility, and biological activity, promote nutrient cycling, water retention, and carbon sequestration, leading to resilient and productive ecosystems.
<b>⊘</b> ♦♦♦ Water	Ensure optimal water use, reduce runoff and pollution, and enhance water retention in soils, maintain a balanced water cycle and support long-term sustainability for agriculture and surrounding ecosystems.
<b>Biodiversity</b>	Promote the diversity of species and ecosystems above and below ground, support pollination, pest control, and genetic resilience, while preventing habitat loss and invasive species.
Climate	Minimise greenhouse gas emissions and enhance carbon sequestration, while enabling farms to adapt to climate change, supporting resilience in farming systems and communities.
Farmer Livelihoods	Promote the socio-economic well-being of farmers by enhancing productivity, supporting farm profitability and ensuring income stability. This also includes ensuring fair labour conditions, access to healthcare, education, and essential services, and fostering resilience against economic shocks.

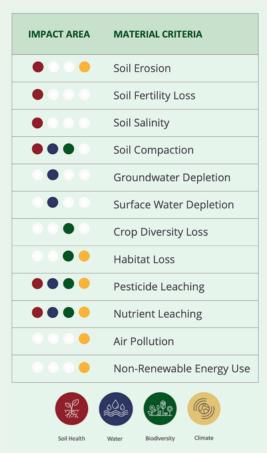
**Figure 3:** The impact areas of SAI Platform's Regenerating Together Framework and their respective qualities.

### **CONTEXT ANALYSIS**

To strengthen the Harmony Charter and align it with regenerative agriculture principles, Mondelēz International collaborated with suppliers, researchers, and agricultural practitioners. Together, they conducted a comprehensive review of agricultural policies, current farming practices, and environmental challenges in key sourcing regions. This analysis informed a co-creation process with local wheat value chain experts to tailor the Charter to regional needs and risks.

As a result, the following priority material criteria were identified from SAI Platform's Regenerating Together Framework context analysis (Figure 4):

- Soil Erosion and Soil Fertility Loss: The loss of soil structure and soil organic matter reduces water availability, crop resilience, and productivity.
- **Crop Diversity and Habitat Loss:** Increased monocropping reduces crop diversity, with adverse effects on soil fertility, disease management, and on-farm biodiversity.



**Figure 4:** Overview of SAI Platform's Regenerating Together Framework 12 material criteria across the four environmental impact areas of soil health, water, biodiversity, and climate.

## **OUTCOME SELECTION**

Based on the context analysis, the Harmony Program identified key outcomes and indicators to monitor and report progress against, as shown in Table 1. This selection was shaped by ongoing collaboration with farmers and suppliers to ensure that monitoring efforts build on existing systems and capabilities. The goal was to enable effective, farm-level reporting while minimizing duplication and administrative burden.

OUTCOMES	EXAMPLES OF INDICATORS SELECTED BY HARMONY PROGRAM				
Increase soil health and fertility	Maximized soil cover     Organic matter returned				
Increase nutrient use efficiency	Nitrogen use efficiency     Low carbon fertilizer				
Enhance on farm habitat provision	Total EFA (Ecological Focus Areas) Non-Productive EFA EFA connectivity				
Increase cultivated crop biodiversity	Melliferous area surface     Crop rotation     Linear meters of hedges				
Optimize crop protection	Adoption of integrated pest management strategies     Area covered with prophylactic measures     Ban of pesticides with health hazard				
Improve farmer livelihoods	Farmers loyalties over time     Premium supporting farm profitability and resilience     Regenerative agriculture training				

**Table 1:** Selection of priority regenerative agriculture outcomes and indicators by the Harmony Program to report progress towards regenerative agriculture in wheat production in Europe.



### PRACTICE ADOPTION

SAI Platform's Regenerating Together Framework outlines a range of practices that support regenerative agriculture outcomes (Figure 5). In close collaboration with farmers, researchers, and subject matter experts, the Harmony Program has prioritized practices specifically suited to arable wheat production in Europe. These practices are actively promoted and monitored across participating farms and include:

- Maintaining continuous soil cover to reduce erosion and enhance soil fertility.
- **Implementing diverse crop rotations** to improve nutrient use efficiency, soil health, and on-farm biodiversity.
- **Reducing soil disturbance** through minimum tillage techniques to preserve soil structure, increase organic matter, and prevent erosion.
- Establishing green buffers, such as melliferous fallows, to support pollinators and enhance biodiversity.
- Adopting integrated soil fertility and pest management strategies to optimize input use and reduce environmental impact.

These practices are implemented, tracked, and reported across all Mondelēz International wheat supply chains in Europe, ensuring consistent data collection at the farm level.

	REGENERATIVE AGRICULTURE OUTCOME								
AGRICULTURAL PRACTICES	Increase soil health and fertility	Increase nutrient use efficiency	Optimise crop protection	Increase water use efficiency	Enhance on-farm habitat provision	Increase cultivated crop and pasture diversity	Improve manure management	Reduce greenhouse gas emissions	
Minimise soil disturbance	+++	~/+	-	++	++			+	
Controlled traffic farming	+++	++	++	+				+	
Cover crops	++	+	+	+	+	+	+	+	
Mulching/soil residue cover	++	+	+	++	+	+		~	
Diversified crop rotation	+	++	+	++	+			+	
Protection of on-farm habitat	++			+	++			++	
Agroforestry and silvopasture	+	~	~	+	+	+		~	
Hedgerows and green buffers	++	+	~	+	++			++	
Riparian buffers				++	+		+	+	
Integrated grazing management	+	+	~	+	+	+	+	+	
Manure management	++	+	+	+	+			~	
Integrated nutrient management	+	+		++	+		++	++	
Integrated pest management	+		+	+	+	+		+	
Irrigation management	++	++	+	++	+			++	
Feed sources from sustainable sources	+	+		+	+		+	+	
Herd/flock management	+	+		~	++	++	+	+	

**Figure 5:** Correlation indication matrix for the effect strength links between practices and SAI Platform's regenerative agriculture outcomes: High positive (+++), Moderate positive (++), Low positive (+), Inconclusive (~), Low negative (-) and empty cells indicate that there were no indications of a connection in the literature.

# MONITORING AND ASSESSING PROGRESS

The implementation of the Harmony Program has delivered measurable environmental benefits. By 2024, suppliers had established over 2,000 hectares of biodiversity fallows across participating farms (Figure 6). These habitats have contributed to greater ecological richness, with 30 butterfly species recorded on supplier farmland. Farmers and local observers have also reported healthy and sustained pollinator populations.



Figure 6: A melliferous fallow in the middle of a wheat production field in France.

France, where the Harmony Program has been active the longest and where data collection began in 2016, continues to show progress. As of 2024, over 80% continuous soil cover - both spatial and temporal - is reported on 45% of all Harmony farm plots. Reduced tillage (shallow soil cultivation) is now practiced on 75% of plots, representing a 20% increase since 2022.

Additionally, 60% of wheat crops were grown without the use of chemical growth regulators, and biocontrol products were applied on 25% of Harmony plots - a 200% increase since 2016.

# OUTLOOK: THE 2030 HARMONY AMBITION

Mondelēz International aims to grow 100% of the wheat needed for its European biscuit production under a strengthened Harmony Charter by 2030. To achieve this target, Harmony's ambition is to accelerate the progress through a robust approach to regenerative agriculture, making a lasting impact across three key areas.

#### **Environment**

Harmony Ambition 2030 is helping mitigate climate change and reverse biodiversity losses by implementing a strengthened Charter of regenerative farming practices. In April 2024, the SBTi successfully validated Mondelēz International's full value chain goal to reduce absolute end-to-end  $CO_2$ -eq emissions by 35% by 2030 and to reach net-zero by 2050 from a 2018 base year.

#### **Farmers**

Harmony Ambition 2030 is supporting Harmony farmers in their transition to regenerative agriculture, by providing a holistic package of tools. Through the Harmony Academy, Mondelēz International aims to facilitate sharing and upgrading of skills among its partners thanks to both physical (on the ground training, pilot projects) and digital projects (Learning platform). Moreover, Mondelēz International aims to empower farmers to measure their own environmental impact, informing and supporting future sustainable decision making on farms, by launching an MRV (Monitoring, Reporting and Verification) Tool in 2025.

#### Consumers

Harmony Ambition 2030 is helping consumers to play an active role in environmental and biodiversity protection and prove that biscuit brands can help contribute to a better future. A pioneering program, run by Mondelēz International's own expert research team, is looking to demonstrate that more sustainable wheat is also better-quality wheat.

Mondelēz International is committed to continuously strengthening the Harmony Program to ensure its long-term resilience and environmental impact. This commitment is supported by regular collaboration and knowledge-sharing with agricultural partners, including the biannual Wheat Chain Committees, a Harmony Tour field event in every production area and the biannual Harmony Council which convenes external experts.



Thank you to Mondelez International and the local teams for generously sharing insights and collaborating with us on the development of this case study.

We are eager to build out more case studies to demonstrate regenerative agriculture across a variety of production systems and geographies. If you are implementing regenerative agriculture using our Regenerating Together Framework and would like to showcase your learnings, please reach out!



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