



# Nut Trails 2.0

Impact Report  
2024



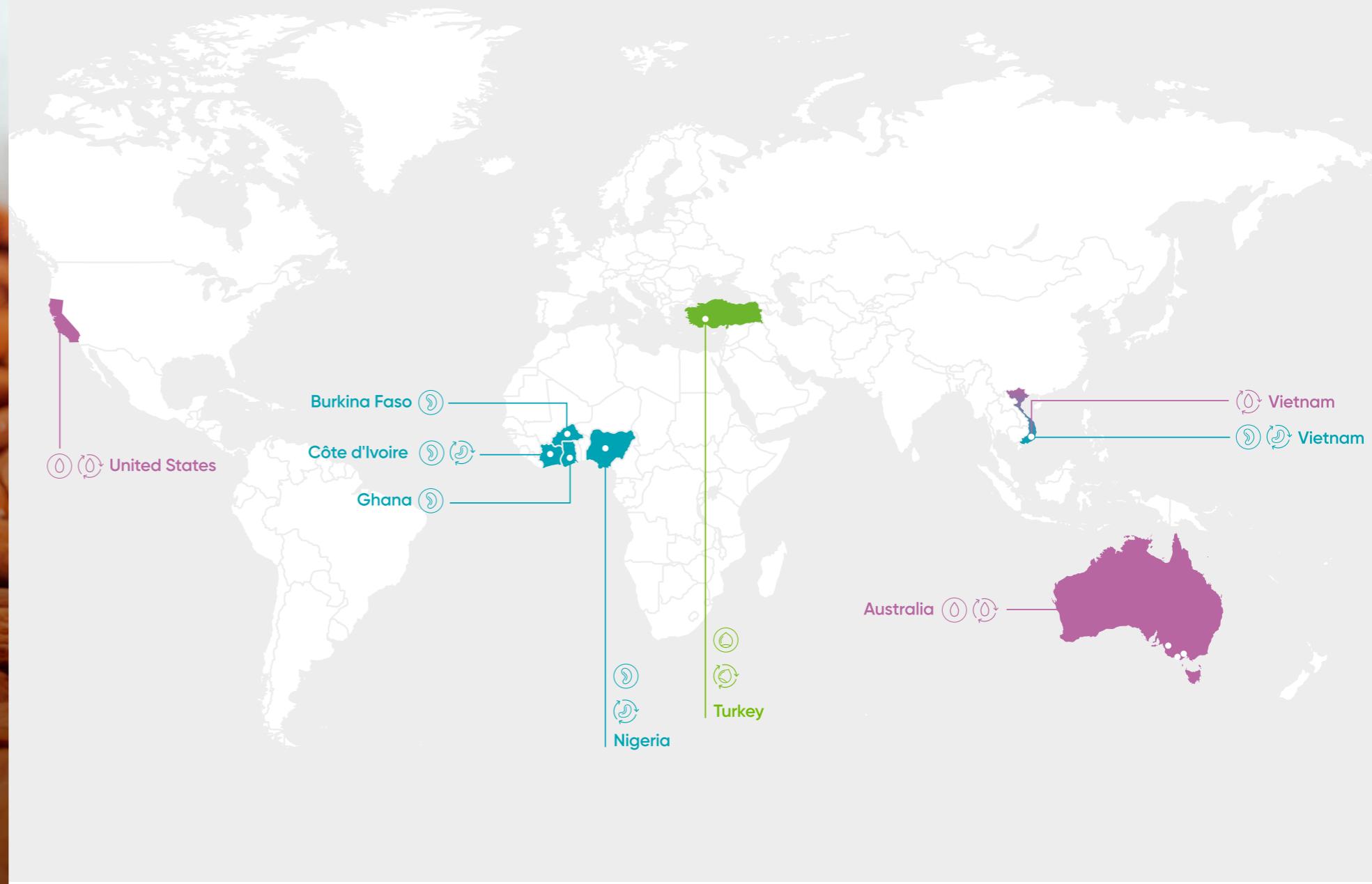
choices for  
**change**



**ofi**  
make it real

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**ofi is present in all major cashew, hazelnut, and almond origins**



Sourcing  
Cashews



Processing  
facilities



Sourcing  
Hazelnuts



Processing  
facilities



Sourcing  
Almonds



Processing  
facilities

# A message from Ashok Krishen

**The nuts industry faces unprecedented challenges from unpredictable weather, supply chain volatility, and shifting market demands. Yet with nuts leading the healthy snacking and plant-based revolution, demand has never been higher.**

**Our twenty-year sustainability journey has positioned us to meet this moment with traceable, certified offerings consumers can trust, from organic blends to sustainably sourced protein powders.**

## Aligned targets for greater impact

This year, we've refreshed our targets for almonds, cashews, and hazelnuts to align directly with **ofi**'s overarching [Choices for Change](#) sustainability strategy. This means stronger data governance, improved reporting integrity, and measurable, credible targets aligned with a low-carbon future.

## Climate action with real numbers

Our climate commitments now reflect **ofi**'s [SBTi-validated](#) corporate targets, which means we can offer our food and drink brand customers verifiable, low-carbon products backed by science.

For example, we've installed a state-of-the-art renewable energy plant at our Australian almond orchard, reducing annual CO<sub>2</sub>e emissions by ~5,500 tCO<sub>2</sub>e. But most of our footprint sits with smallholder farmers, where we're training and incentivizing climate-smart practices that deliver both economic and environmental wins.

## Protecting people & empowering communities

Sustainability means nothing without human dignity. In Turkey, our social workers conduct targeted outreach during the hazelnut harvest to safeguard the rights and welfare of female seasonal migrant workers. We're also expanding our Child Labor Monitoring and Remediation Systems in high-risk farming communities.

## Innovation meets impact

We're scaling our reach through digital tools that multiply effectiveness. In Côte d'Ivoire, an award-winning geo-location app developed by our own sustainability analyst is transforming malnutrition screening and outcomes. Meanwhile, we registered an additional 4,186 farmers in **ofi**'s farmer information system (OFIS) in 2024, bringing the total to 47,988 and expanding our access to primary data that helps us deliver meaningful impact.

## Partnerships that power progress

None of this happens in isolation. Our progress is built on partnerships with customers and industry leaders who share our vision for change, and I'm grateful for every collaboration that's moved us forward.

2025 brought a personal milestone: being elected Chairman of the International Nut and Dried Fruit Council. It's an opportunity to shape our industry's future on a global scale by leveraging the massive growth potential of health-conscious markets and pioneering sustainability across the sector.



CEO – **ofi**'s nuts platform

Chairman, International  
Nut and Dried Fruit  
Council (INC)

# Making Choices for Change

The progress we make towards our refreshed 2030 Nut Trails targets is guided by our focus on the four impact areas of ofi's overarching sustainability strategy Choices for Change.

## Nut Trails' contribution to Choices for Change by 2030

**250,000** farmer households receive livelihood support

**51,620** women farmers receive livelihood support

**18,500** children in farming communities receive education support

All **identified** child labor and human rights cases in hazelnut supply chains receive remediation actions

**500,000** households receive nutrition or health support

Increase renewable energy use to **50% of total energy use** in Tier 1 & 2 operations

All direct supply chains to be **deforestation free**

**44,078** hectares brought under regenerative agricultural practices in our supply chains

**2** living landscape partnerships established



# 2024 Reflections

## Building resilient supply chains: Q&A with our Head of Nuts and Spices Sustainability

### Why focus specifically on almonds, cashews, and hazelnuts?

Real progress demands real specificity. By zeroing in on the unique challenges facing these three supply chains, we're developing goals that reflect the actual conditions of farmers and their landscapes, rather than one-size-fits-all solutions. Our 20 years of sustainability experience gives us the foundation to build supply chains that are resilient, sustainable, and responsive to customer needs while making a tangible difference at the source.

### How are you helping farmers prosper?

In 2024, our field teams trained more than 31,450 cashew and hazelnut farmers in Good Agricultural Practices to boost yields and income. We're tailoring support to local contexts with refreshed targets to deliver livelihood support to 250,000 cashew farmers and 29,650 hazelnut farmers by 2030.

In Vietnam, we distributed 67,000 high-yielding, climate-resilient seedlings to date, projecting a 250% production increase per farmer after eight years. In Nigeria and Burkina Faso, security concerns halted field activities, but our teams persisted – establishing Village Savings and Loan Associations for 200 women and unlocking new earning opportunities. When pest infestations hit Turkish hazelnut yields, teams adapted quickly by implementing biological interventions such as light traps and pheromone applications, while educating farmers on other pest management practices. Local expertise is essential for building on-farm resilience.

### What about the next generation of farmers?

Turkey's hazelnut farmers are aging, and farm succession is a real concern. We need to meet the next generation where they are. In 2024, we published *From Our Hazelnut Farm With Love*, a children's book following hazelnuts from farm to snack. We delivered it to more than 5,980 children across 22 schools, sparking fresh interest in hazelnut farming.

### How are you protecting children and empowering women?

Education is our frontline defense against child labor. In 2024, 8,265 children in cashew communities benefited from educational support, including school kits, improved infrastructure, and vocational opportunities, to help change their trajectories.

We're advancing women's inclusion across our supply chains. In Ghana and Nigeria, women are active in farm work during harvest. In Turkey, hazelnut farmers' wives often manage relationships with seasonal migrant workers. Our digital health training reached more than 3,680 women during the 2024 harvest season.

### What role does technology play?

On our US and Australian almond orchards, we're deploying AI and automation to cut carbon and water footprints. In California, we've implemented AI-powered soil sensors for targeted water management, automated weed control, and soil health optimization. AI and robotics support our expanding solar infrastructure, which offset 56% of Scope 1 GHG emissions in 2024 while supplying power back to the grid.

### What exactly is your approach to regenerative agriculture?

For **ofi**, regenerative agriculture means climate adaptation, livelihood resilience, and ecosystem regeneration aligned with industry standards (SAI, WBSCD). We've formalized our approach with dedicated targets: expand regenerative practices across 20,000 hectares of almond, 18,000 hectares of cashew, and 5,000 hectares of hazelnut by 2030.

Our product-specific Regenerative Agriculture Playbook guides field teams in designing effective, context-specific interventions while providing a consistent framework for measuring impact.

### What's next?

Our refreshed Nut Trails 2.0 is focused on helping deliver on **ofi**'s purpose to be the change for good food and a healthy future. Strong successes behind us, ambitious work ahead. Explore our progress, our stories, and our targets as we build the future together.



**Burcu Turky,**  
Global Head of  
Sustainability for Nuts  
and Spices, **ofi**

# 2030 Targets and progress tracker



## Prosperous Farmers

Nut	2030 Target	2024 Progress
ⓘ Cashew	250,000 farmer households receive livelihood support	<b>26,310</b>
ⓘ Cashew	All cashew livelihood programs are customized to farmers' needs	<p><b>New target set in 2025:</b> The diversity of farm sizes, yields, skills, and economic context in our supply chains, means that interventions are more effective when tailored to each farmer's reality. By applying a segmentation model, we can tailor training and support to farmer's economic circumstances and willingness to invest.</p> <p>Since applying a segmentation model in our cashew supply chain in Ghana in 2021, over 400 cashew farmers have recorded a 55% yield increase following the adoption of advice from <b>ofi</b> agronomists on timely pruning and pest management.</p>
ⓘ Cashew	50,000 <b>ofi</b> women farmers receive livelihood support	<b>7,730</b>
ⓘ Cashew	15,000 youth in farming communities receive livelihood support	<b>1,330</b>
ⓘ Hazelnut	29,650 hazelnut farmer households receive livelihood support	<b>3,620</b>
ⓘ Hazelnut	All livelihood programs are customized to farmers' need	<p><b>New Target:</b> <b>ofi</b> Analysis underway in Turkey to segment farmers and identify customized interventions, eg. distributing pruning tools or low-carbon emission fertilizers.</p>
ⓘ Hazelnut	1,620 <b>ofi</b> women farmers receive livelihood support	<b>770</b>





# Thriving Communities

Nut	2030 Target	2024 Progress
⦿ Cashew	10,000 children receive education support	<b>8,440</b>
⦿ Cashew	All direct cashew supply chains have systems in place to address human rights and all human rights cases receive remediation actions	Child Labour Monitoring and Remediation System (CLMRS) established in Nigeria
⦿ Cashew	500,000 households receive nutrition or health support	<b>23,540</b>
⦿ Hazelnut	All identified child labor cases receive remediation actions	<b>99%</b> of cases remediated as part of the CLMRS process. (Sensitization sessions for farming households and labor contractors on good labor practices and children's rights, children are referred to Summer Schools or provided with alternative education support. Ongoing monitoring of child-labor risks is conducted throughout the harvest period.)
⦿ Hazelnut	7,500 children receive education support	<b>4,130</b>
⦿ Hazelnut	22,500 seasonal migrant workers trained on children's and human rights	<b>New Target:</b> Builds on existing engagement since 2013 between ofi's social workers and seasonal migrant workers through training programs labor rights and working conditions.
⦿ Hazelnut	All identified human rights cases receive remediation actions	No other human rights cases reported.
⦿ Hazelnut	12,500 women seasonal migrant workers trained on health and nutrition	<b>3,680</b>
⦿ Almond	1,000 agriculture students receive vocational support	<b>19 students</b>





# Climate Action

Nut	2030 Target (2020 baseline)	2024 Progress (Emissions data represents absolute emissions in 2024) <sup>1</sup>
ⓘ Cashew	Reduce absolute scope 1, 2 & 3 emissions in line with <b>ofi</b> 's approved SBTi targets: Scope 1&2: >50% reduction Scope 3: >30% reduction	<p><b>Scope 1 reductions:</b> Vietnam processing: 18,720.6 MTCO<sub>2</sub>eq <sup>(2)</sup></p> <p><b>Scope 3:</b> Côte d'Ivoire: 1,074,059.5 MTCO<sub>2</sub>eq Ghana: 292,204.3 MTCO<sub>2</sub>eq Nigeria: 209,093.2 MTCO<sub>2</sub>eq Vietnam: 1,418,716.8 MTCO<sub>2</sub>eq</p>
ⓘ Cashew	Increase renewable energy use to 50% of total energy use in Tier 1 & 2 operations	<b>40%</b> renewable energy (including tier 1 + 2)
ⓘ Hazelnut	Reduce absolute scope 1, 2 & 3 emissions in line with <b>ofi</b> 's approved SBTi targets: Scope 1&2: >50% reduction Scope 3: >30% reduction	<p><b>Scope 1 and 2</b> Turkey: 2,291.5 MTCO<sub>2</sub>eq</p> <p><b>Scope 3</b> Turkey: 281,259.18 MTCO<sub>2</sub>eq</p>
ⓘ Hazelnut	Increase renewable energy use to 50% of total energy use in Tier 1 & 2 operations	<b>5%</b> of our total energy consumption came from renewable sources
ⓘ Almond	Reduce absolute scope 1 FLAG GHG emissions by 30%	Australia: 169,004.96 MTCO <sub>2</sub> eq The United States: 27,942.55 MTCO <sub>2</sub> eq
ⓘ Almond	Increase renewable energy use to 50% of total energy use in Tier 1 operations	<b>20%</b>

# Supply Chain Excellence

Nut	2030 Target	2024 Progress
ⓘ Hazelnut	100% traceable hazelnut volumes	<b>80%</b>

<sup>(1)</sup> The Nuts business actively tracks its GHGs emissions as part of our broader commitment to Climate Action environmental responsibility. We are reporting annual GHG emissions not the percentages because we are currently updating our inventory methodology to align with our baseline approach. This will enable a more accurate comparison and allow us to clearly communicate percentage progress against our targets in our future Impact Report.

<sup>(2)</sup> Currently, **ofi** is yet to estimate GHG emissions from Tier 2 facilities. Cashew business has one Tier 1 facility, which is in Vietnam.



# Regenerating the Living World

Nut	2030 Target	2024 Progress
ⓘ Cashew	All <b>ofi</b> direct supply chains are deforestation-free	<b>New Target:</b> <b>ofi</b> 's cashew sustainability teams in Cote d'Ivoire, Ghana and Nigeria have started using <b>ofi</b> 's farmer information system (OFIS) to map the farmers with single point GPS or polygons to monitor deforestation risks.
ⓘ Cashew	18,000 ha brought under regenerative agricultural practices in our supply chains	<b>New Target:</b> Refined wording: <b>ofi</b> 's Impact team, in collaboration with our local agronomists and field officers, is developing a cashew-specific Regenerative Agriculture Playbook. They are evaluating cashew farm practices across different regions, with a focus on finding innovative uses for cashew apple waste in Africa and Asia. Current pilot projects include producing cashew apple juice and biochar from the leftover cashew apples.
ⓘ Cashew	1 established living landscape partnership	<b>New Target:</b> <b>ofi</b> teams have been actively seeking multi-stakeholder collaborations with NGOs, universities, and customers to establish a strong foundation for achieving this target.
ⓘ Hazelnut	5,000 ha brought under regenerative agricultural practices in our supply chains	<b>New Target:</b> A hazelnut-specific Regenerative Agriculture Playbook of best practices has been developed to guide our field teams.
ⓘ Hazelnut	1 established living landscape partnership	<b>New Target:</b> <b>ofi</b> teams actively seeking multi-stakeholder collaborations with NGOs, universities, and customers to establish a strong foundation for achieving this target.
ⓘ Hazelnut	All <b>ofi</b> hazelnut direct supply chains are deforestation-free	<b>New Target:</b> <b>ofi</b> 's hazelnut team is working with Rainforest Alliance to certify farmers in Turkey, using polygon mapping to assess deforestation risks among farmers and implementing remediation measures when risks are identified.
ⓘ Almond	Water efficiency optimized in 100% of almond orchards	All US orchards are equipped with Phytech plant dendrometers and soil sensors, installed at a density of three dendrometers on three consecutive trees—covering both non-pareil and one pollinator variety—averaging one set per 60 acres. Distribution Uniformity (DU) baseline tests have been completed, and a second round of testing is scheduled for 2025 to assess whether recent improvements to our irrigation infrastructure are enhancing DU performance.
ⓘ Almond	21,078 ha brought under regenerative agricultural practices	<b>New Target:</b> Cover crops planted across 113 ha in our Kerabury and Tocabil orchards, Australia out of 10 orchards. US almonds also had cover crops across 55 ha on 7 of 8 orchards (KG ranch, Golden Eagle Ranch, Chowchilla ranch, Southern Star ranch, Lucero ranch, Stella ranch, Puma ranch).
ⓘ Almond	Bee Friendly Farming certification achieved across all orchards	80% certified (All 10 Australia orchards and 5 out of 8 US orchards)





# Prosperous farmers – Our impact

Within the first few months, two of the cows gave birth, and all five animals have shown healthy growth, gaining an average of 25 kilograms. Additionally, farmers began using the cows' manure to fertilize their cashew orchards, improving soil quality and reducing the reliance on synthetic inputs. Over time, this approach is expected to yield significant benefits, as each farmer is projected to earn more than 28 million Vietnamese dong (around \$1,158 USD) within three years from the sale of cattle, calves, and organic fertilizer.



"This is just the start. By building solutions tailored to the needs of specific communities, we're helping farmers make small changes to improve their incomes. Ultimately, it aims to create more resilient and prosperous farming communities and is part of a broader goal to support 250,000 cashew households with enhanced income opportunities."

**KULKANS SINGHVI**

ofi's Nuts Sustainability Manager for Vietnam

## Improving incomes and opportunities with GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) in West Africa

In Ghana, our collaboration with GIZ's Market-Oriented Value Chain for Jobs and Growth in the ECOWAS Region (MOVE-ComCashew) is making a lasting impact. Together, we are training 1,000 women and youth in Bono and Bono East on how to process and add value to cashew apples. The goal: make every part of the cashew crop count for local communities. Alongside hands-on training, women and young people are building business and marketing skills that create jobs and keep income close to home.

## CASHEWS Improving farmer incomes with cashews and cows

In Vietnam's Ia Grai District, **ofi** is piloting new approaches to improve income stability for cashew farmers with limited resources. Launched in September 2024, the program focuses on alternative livelihoods that are both practical and sustainable, starting with livestock support in Ia To and Ia Khai Communes.

Five farmers were each given one cow, chosen not only for its immediate value but also for its contributions to lowering costs of production and improving soil health. During the rainy season, the cows grazed freely among the cashew trees, eliminating the need for expensive grass-cutting equipment and labor, and providing organic fertilizer. In the dry season, farmers adapted by taking their cows to graze in rice fields or by feeding them stored straw at home.

In Côte d'Ivoire, our cashew supply chain continues to advance through The Cashew Project. In partnership with the Forager Project, GIZ, and local stakeholders, we have supported 1,000 women with gender-based leadership training module Gender makes Business Senseplus (GmBSplus) and reached 9,000 farmers with hands-on instruction in Good Agricultural and Climate-Smart Practices. We also assisted 1,000 farmers in achieving organic certification and distributed quality improvement kits. Additionally, the construction of a drying yard and the refurbishment of a local warehouse enables communities to process and store their harvests more efficiently, reducing losses and increasing income.



Implemented by  
**giz**  
Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH



# Prosperous farmers – Our impact

## HAZELNUTS

### Promoting environmental stewardship through Good Agricultural Practices

Like many agricultural crops, hazelnuts are affected by extreme temperature changes, water availability, and weather events catalyzed by climate change. These factors threaten crop yields and quality, as well as the livelihoods of the farmers that depend on them. To help build long-term resilience, our field teams in Turkey are prioritizing regenerative agricultural practices that restore soil health, enhance ecosystem services, and strengthen local farming communities.

Through **ofi**'s Good Agricultural Practices trainings, hazelnut farmers in Turkey are learning how soil analysis, smart fertilization, and integrated pest management can boost both productivity and long-term resilience.



"I learned farming from my father and grandfather. For years, we did things the same way. But as yields dropped and costs rose, I knew something had to change. After I attended the trainings, I adopted new practices such as correct pruning practices, pest detection and control practices that improved both my orchard's health and economic return. Even my local buying agent said it was the best quality hazelnuts I've ever brought in. Now we know what our soil needs. We're using fewer pesticides and saving money too."

**MUSTAFA ÖZTÜRK**

Hazelnut farmer, Ordu, Turkey



"The project aims to improve the livelihoods of 1,000 women and youth cashew farmers by introducing home-based, small-scale processing of cashew apples currently discarded as waste. It aligns with MOVE's objective to create income and foster growth."

**BEATE WEISKOPF**

Project Lead, GIZ/MOVE-ComCashew



# Thriving communities – Our impact

The Infant Malnutrition Screening Alert (IMSA) app, developed by **ofi** sustainability analyst Dr. Stéphanie Konan and winner of the 'Social Sustainability Project of the Year' category at the 2025 Edie awards, streamlines the identification and referral process for children suffering from malnutrition, allowing for real-time tracking and data sharing among healthcare providers. More than 22,000 children in the Béoumi district have been screened using IMSA, resulting in 370 cases of moderate or acute malnutrition being referred to for treatment. The use of the IMSA app also supports **ofi**'s role in convening with project partners like PNN, UNICEF, and Helen Keller International to scale impact. Field agents, local nurses, and volunteers that are part of this consortium also delivered deworming medication, vitamin A supplements, and nutrition education to families. IMSA is now being considered for expansion across other West African countries.

## CASHEWS Tackling infant malnutrition in cashew communities

In 2024, **ofi**'s partnership with Côte d'Ivoire's National Nutrition Program (PNN) expanded the use of a smartphone-based application to address high-rates of infant malnutrition in Côte d'Ivoire.



## Progress highlights for 2024:

**22,000+ children** screened for malnutrition using IMSA in Côte d'Ivoire's Béoumi District with **370 cases** of moderate and acute malnutrition referred for treatment



# Thriving communities – Our impact

## HAZELNUTS

### Supporting Women on the Roads for Hazelnuts

Seasonal migrant women play a crucial role in Turkey's hazelnut harvest. They rely on a seasonal workforce that migrates from poorer regions. Mostly women, they often lack access to essential health services and information, especially regarding reproductive health, disease prevention, and family planning. Since 2020, **ofi** has partnered with the Health Rights Association to provide mobile health training directly on hazelnut farms through the Women on the Roads for Hazelnut Project. Volunteer doctors and nurses conduct accessible and culturally sensitive workshops in the fields, offering vital education and resources to women who might otherwise be excluded from healthcare. 2,477 women received training on hygiene, infectious disease prevention, breast self-examination in 2024.



"At first, I was embarrassed. In our culture, we don't talk about these things. But people should have access to healthcare support without feeling ashamed. We're here to collect hazelnuts but this knowledge helps in the cotton fields too."

Seasonal worker from Şanlıurfa, Turkey



"As the Health Right Association, we are close witnesses to the profound difficulties seasonal migrant women face in accessing health services and information. The success of the model we use under the "Women on the Roads for Hazelnut" Project would not have been possible without the visionary support and operational strength of a stakeholder like **ofi**. This collaboration is a tangible proof of how sustainability can go beyond paper and produce direct, effective solutions for the most urgent needs on the ground. In particular, **ofi**'s sustainability team's practical knowledge of the workers, labor contractors, and farmers, along with their dynamic and planned structure, plays a critical role in the project's success by prioritizing and closely monitoring all women's access to services."

**DR. EŞREF BILE UĞURLU,**  
President of Health Right Association

## Progress highlights for 2024:

**2,477 female** hazelnut workers trained in reproductive and general health during the 2024 harvest





# Climate action – Our impact

## Scaling renewable energy in almond production

In Australia, our commitment to climate action is driving bold investments in clean energy. As one of the first major agribusinesses to sign a renewable energy offtake agreement, we achieved an impressive 74% offset of our total orchard energy consumption through renewable sources in 2024. This progress accelerated in early 2025 with the commissioning of a solar power plant at Kerabury Orchard near Griffith, New South Wales. The facility features over 10,000 sun-tracking solar panels and a 4.5 MWh battery system, expected to supply up to 83% of the orchard's annual energy needs.

By integrating into a Virtual Power Plant (VPP), the system can also export excess energy back to the grid, supporting local energy stability and further reducing dependence on diesel and grid electricity. The installation is projected to reduce greenhouse gas emissions by 5,500 tonnes of CO<sub>2</sub>e annually.

**ofi** remains committed to increasing renewable energy use to 50% across our Tier 1 and 2 operations as we lead the energy transition in agribusiness.



# Climate action – Our impact

## ALMONDS

### Deploying precision agriculture to optimize inputs and cut emissions

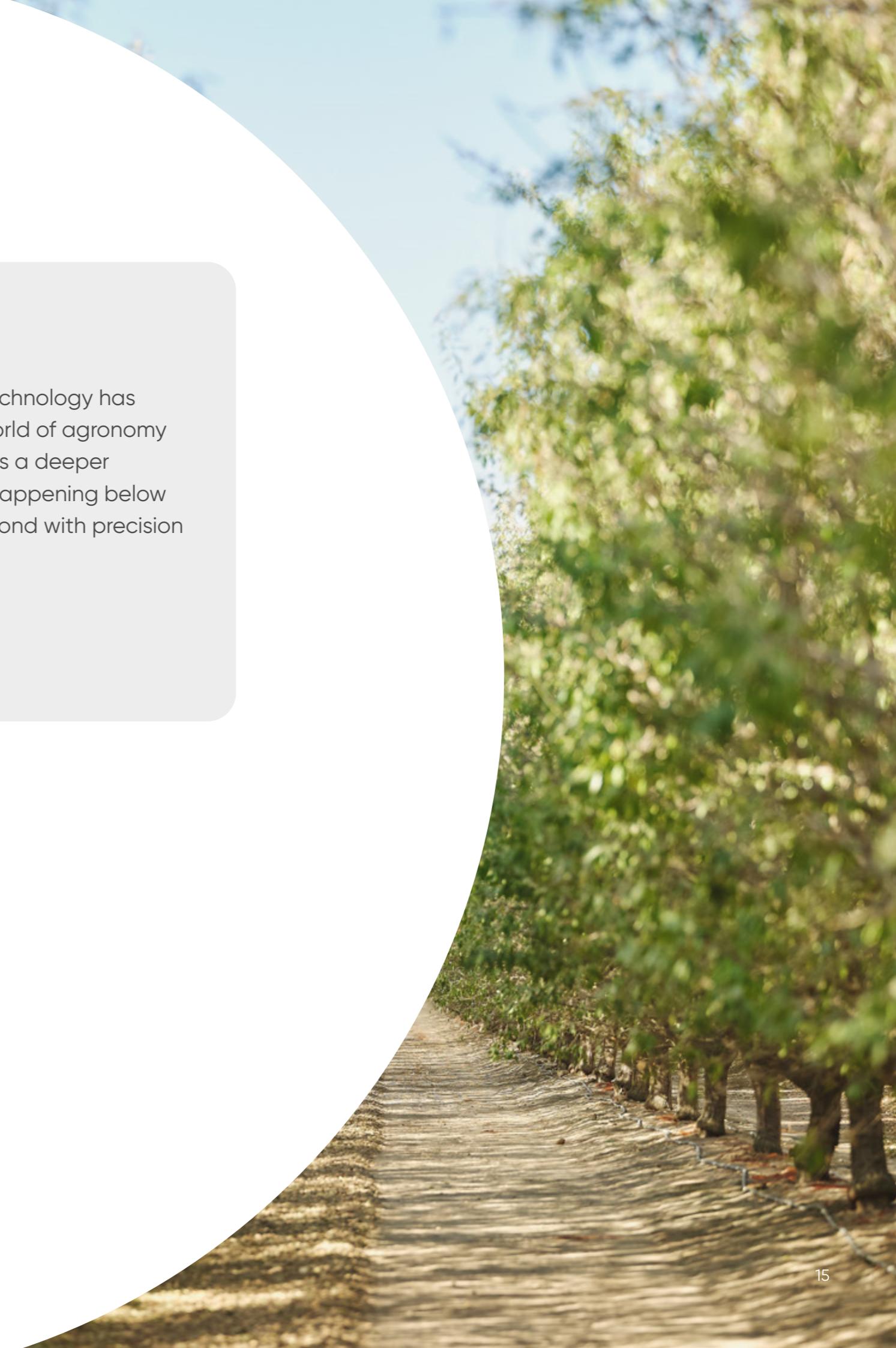
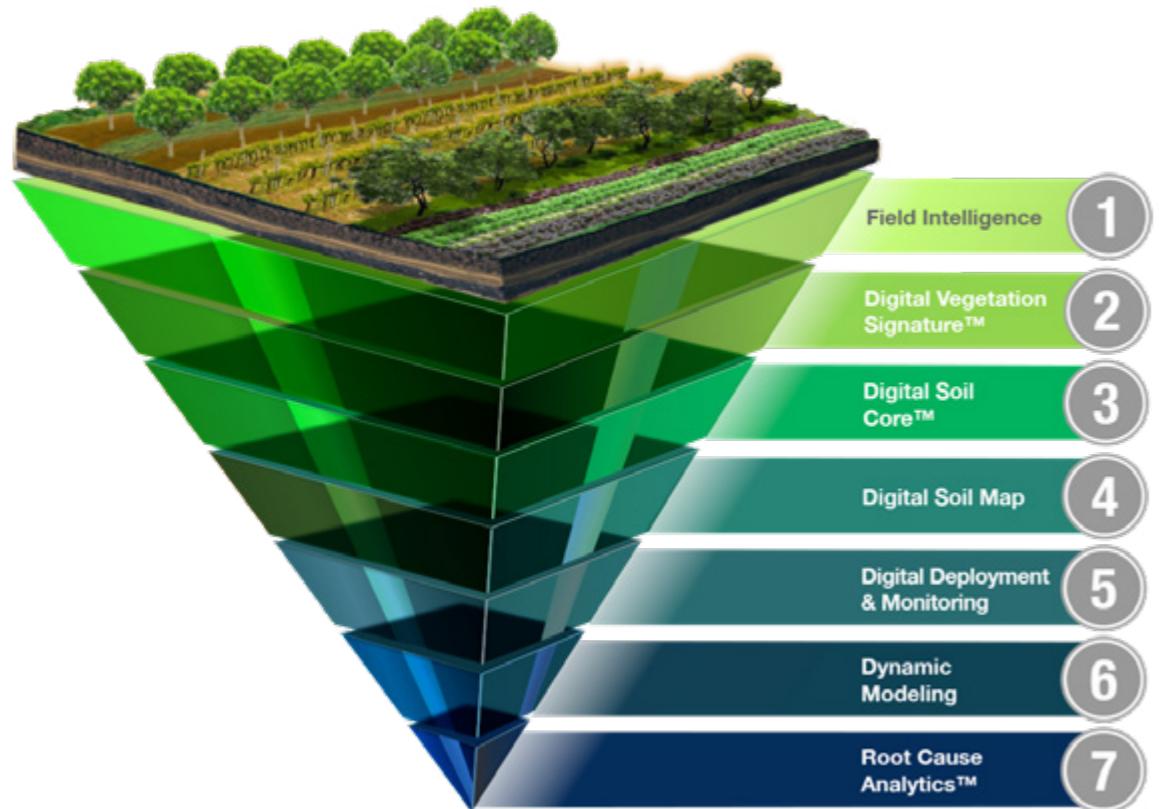
In California's Central Valley **ofi** has partnered with LandScan to implement cutting-edge digital twin technology that replaces traditional soil sampling with dynamic, high-resolution virtual models of the land. It allows our farmers to pinpoint soil constraints, target amendments precisely where needed, and deploy sensors in the most representative locations, allowing our farmers to identify soil constraints, apply amendments only where needed, and place sensors in the most representative zones.

By increasing input efficiency and optimizing production, we're helping reduce greenhouse gas emissions per kilogram of almonds produced, moving closer to our goal of reducing Scope 1 and 3 FLAG emissions by 30.3% and Scope 1 and 2 emissions by 50% by 2030.



"Applying this advanced technology has opened an entirely new world of agronomy and sustainability; giving us a deeper understanding of what is happening below our feet and ability to respond with precision ag techniques."

**ZAC ELLIS, SR. DIRECTOR,  
Agronomy, ofi**



# Regenerating the living world – Our impact



## HAZELNUTS Improving soil health for hazelnuts

ofi's agronomists in Turkey are making soil analysis part of the farmer training curriculum. Participants, who previously followed traditional farming practices, are increasingly adopting data-driven approaches to improving soil health on their farms. Retired teacher Hasan Altunbaş, gained specific insights into his soil's nutrient profile, enabling him to implement a fertilizer plan tailored to both crop requirements and long-term soil health.

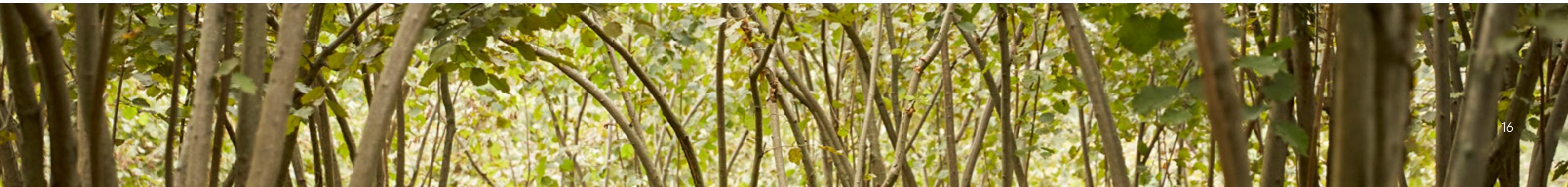
With guidance from agronomists through individualized consultancy, Hasan transitioned to using slow-release fertilizers and adjusted application timing based on agronomic recommendations. As a result, his farm recorded a 25% increase in yield per hectare and a reduction in input costs.

ofi also partners with local organizations, including the Fatsa District Directorate of National Education, Fatsa Chamber of Agriculture, and Fatsa District Directorate of Agriculture, to expand our efforts and help more hazelnut farmers mitigate the impacts of climate change. This collaboration is helping professionalize farming and minimize environmental impact by expanding tip-pruning training, launching a region-wide campaign to improve soil health and biodiversity (reaching 30% of local growers), and promoting soil analysis and sustainable pest management. As a result, we've helped farmers achieve a 30% reduction in carbon emissions through optimized fertilizer use and integrated control methods. These efforts are lowering costs, boosting productivity, and supporting long-term land stewardship.



"Throwing something into the field without understanding its impact is like driving with your eyes closed. When you work with experts who help you listen to your land, the results speak for themselves."

**HASAN ALTUNBAŞ**  
Hazelnut farmer, West Black Sea Region,  
Düzce province, Gümüşova



# Regenerating the living world – Our impact

## ALMONDS

### AI powered herbicide reduction on almond orchards

In the almond orchards of California, precision is crucial for regeneration. WEED-it, an AI-powered spraying technology, is now part of **ofi**'s expanding toolbox aimed at reducing the environmental impact of conventional herbicide use. This system utilizes real-time optical sensors to detect chlorophyll in weeds, activating individual nozzles to spray only when necessary, thus minimizing overuse and protecting beneficial plants and insects.

Used in the row middles and around trees in almond, pistachio, and walnut orchards, WEED-it is helping farmers reduce herbicide usage by up to 80%.



"WEED-it technology has the potential to completely change the way we deploy herbicides in our orchards. We're saving significant amounts of money while dramatically reducing our usage."

**MIKE RICHARDSON**

General Manager Almond Operations, **ofi**

## Scaling satellite solutions for sustainable water use

Our collaboration with Utah State University, UC Davis, USDA, and the Almond Board of California has continued to advance the T-REX (Tree-crop Remote Sensing of Evapotranspiration eXperiment) project. Since 2021, this initiative has delivered satellite-based tools and real-time field sensors to help growers optimize water usage. Refined evapotranspiration models enable even smarter irrigation solutions—conserving water while supporting healthy crops by the end of 2024. These tools are now benefiting farms across the region and contributing to more climate-resilient agriculture.

**ofi's partners for sustainable almonds:**



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**UCDAVIS**  
UNIVERSITY OF CALIFORNIA

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# Supply Chain Excellence

**Data is the backbone of our approach. We continuously invest in digital innovation to collect richer insights, enhance traceability, and improve the effectiveness of our sustainability programs.**

The **ofi** farmer information system is a cornerstone of our data strategy. It enables our field teams to gather and analyze detailed information from the first mile of the supply chain. This includes GPS mapping of farms, yield tracking, and community-level data such as access to education and healthcare. In Türkiye, for example, our hazelnut teams use this system to monitor farm productivity and identify opportunities to support local schools and promote gender inclusion. These insights help us tailor interventions that improve livelihoods and create long-term value for farming communities.

**ofi** Direct, our mobile app, brings transparency and empowerment directly to farmers. It allows them to transact with **ofi** securely, access agronomic advice, receive digital payments, and obtain inputs like seeds and fertilizers. In Côte d'Ivoire, cashew farmers using **ofi** Direct benefit from real-time market prices and financial services, helping them make informed decisions and build financial resilience. The app also enables digital traceability, linking each transaction back to the individual farmer and reinforcing trust throughout the supply chain.

Our ability to measure and communicate impact is powered by AtSource, **ofi**'s sustainable sourcing solution. It provides traceability to a product's origin and transparency on key supply chain sustainability challenges through data and insights.

It enables customers to map their unique sustainability journey, monitor performance and partner to create impact through targeted interventions. It can be used to improve monitoring efficiency, enhance due diligence with external assurance, and help ensure compliance with evolving industry standards. AtSource empowers customers to realize their individual sustainability priorities and achieve positive change from the ground up.

## **AtSource enables customers to:**

- Identify and mitigate sustainability risks across origins
- Improve performance through verified, data-driven insights
- Track progress against sustainability goals and commitments
- Communicate the impact of origin-based programs with clarity and confidence

AtSourceV and AtSource+ have been recognized as equivalent schemes against the **Sustainability Farm Assessment FSA 3.0** from the SAI Platform, obtaining the silver and gold equivalence levels for all spice products.

By integrating technology, local expertise, and a deep commitment to sustainability, **ofi**'s supply chain excellence ensures that every product—from hazelnuts and cashews to almonds—is not only responsibly sourced but also part of a broader mission to create lasting value for people and planet.



**Farm  
Sustainability  
Assessment**  
BY SAI PLATFORM



# Scaling impact through cross-sector collaboration



## International Nut & Dried Fruit Council (INC)

**ofi** has played an active role as a INC member for over two decades, supporting its mission to enhance the value of sustainably produced products while fostering industry-wide growth. During the 2025 INC Congress in Mallorca, Ashok Krishen, Managing Director and CEO of **ofi**'s nuts business, was elected as the new INC Chairman for the next four years and is committed to the following strategic priorities:

- Leverage the industry's growth potential by accelerating the global consumption of nuts and dried fruits.
- Champion the health and wellness benefits of nuts and dried fruits through supporting continued research and clinical trials.
- Lead the INC in pioneering sustainability within the food and agriculture sectors space, particularly in the Nuts and dried fruit sector.



## Sustainable Nut Initiative (SNI)

The Sustainable Nut Initiative is a pre-competitive collaboration platform that brings together all actors of the international nut sector. SNI participants join forces to create impact on key sustainability topics in the nut supply chains.

As a participant of SNI, **ofi** collaborates with members on the Theory of Change which is a roadmap for SNI participants and their supply chain partners to work towards social and environmental sustainability in the global cashew nut sector. The Theory of Change illustrates the various steps required to achieve the desired impact on the livelihoods of stakeholders in the supply chain and on the environment. It outlines the roles and responsibilities of SNI participants and demonstrates how SNI, as a platform, supports its members in enhancing sustainability within their supply chains.

Additionally, SNI created an "ambition plan" that formulates tangible action points to create impact in line with the Theory of Change. Jointly developed with SNI participants, the ambition plan guides participants towards greater sustainability within their cashew supply chain by addressing key social and environmental sustainability challenges by 2030.



EUROPEAN FEDERATION OF THE TRADE  
EUROPEAN FEDERATION OF THE TRADE IN DRIED FRUIT, EDIBLE NUTS,  
PROCESSED FRUIT & VEGETABLES AND PROCESSED FISHERY PRODUCTS

## FRUCOM

As a longstanding member of FRUCOM, **ofi** plays an active and influential role in shaping the European sustainability agenda in the nuts sector. For the past six years, **ofi** has served as Co-chair of the Sustainability Working Group, positioning us at the forefront of important discussions and initiatives related to sustainability within the industry.

In this capacity, **ofi** collaborates closely with FRUCOM members to share information, best practices, and insights on key sustainability topics such as due diligence, environmental footprinting, and packaging. FRUCOM's sustainability working group ensures that the perspectives and interests of membership are effectively represented in ongoing dialogues with EU policymakers. This includes monitoring, interpreting, and responding to new and evolving sustainability legislation.

Additionally, as **ofi**, we actively contribute to the development of clear, accessible visual guides on EU sustainability legislation. These resources are designed to help FRUCOM members understand and meet compliance requirements.

# Sustainability glossary

**Child:** Any person under the age of 18.

**Child labor:** Work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development (work that interferes with schooling or is hazardous) (ILO convention 138). The worst forms of child labor include children being enslaved, separated from their families, exposed to serious hazards and illnesses, and/or left to fend for themselves on the streets of large cities – often at a very early age

**Child labor remediation actions:** Child labor remediation actions refer to actions taken to remove a child from child labor or mitigate the consequences of child labor by providing alternatives and promoting their safety and wellbeing.

**Child Labor Monitoring and Remediation System (CLMRS):** A system used to identify and target prevention, mitigation and remediation actions to children involved in, or at-risk of, child labor. This can be the implementation of the digital CLMRS available on OFIS or an alternative set of activities aimed at child labor sensitization, case identification, prevention and remediation.

**Community household:** A household where no household member is an **ofi** farmer. Community households can be in farming and non-farming communities.

**Customized support:** Where at least two different farmer segments are identified within a program and are provided with tailored support.

**Decarbonization:** The process by which CO<sub>2</sub> emissions associated with production activities of a company or industry (e.g.; Energy use, farm inputs use, transport) are reduced or eliminated. (Source: SBTi Glossary | Version 1.0 |).

**Deforestation-free:** Deforestation-free supply chains do not cause or contribute to deforestation, as defined by the Accountability Framework Initiative. The EU Deforestation Regulation requires a deforestation-free cut-off date of 31st December 2020.

**Education support:** An intervention aiming to improve children's access to quality education. Examples of interventions that are considered are the facilitation of birth certificates, building or repairing school infrastructure and the distribution of school material & equipment (school kits, schoolbooks, etc.).

**Farmer:** Any individual that (1) owns / co-owns a farm holding, (2) is a member of the farmer household who is working on the family farm, or (3) is employed to manage a farm or is a Tenant farmer (sharecropper). This does not include hired farm labor.

**Farming community:** The set of the people who live in rural areas in the origins where **ofi** operates.

**FLAG:** Forest, Land and Agriculture. GHG emissions from Agriculture, Forestry, and Other Land Use (AFOLU), including:

1. GHG emissions associated with land use change (LUC)
2. Emissions from land management (i.e., nitrous oxide and methane from enteric fermentation, biomass burning, nutrient management, fertilizer use and manure management); and
3. Biogenic removals (i.e., forest restoration, silvopasture, improved forest management, agroforestry and soil carbon sequestration)



# Sustainability glossary

**GHG emissions:** Refers to the release of greenhouse gases (GHGs) into the atmosphere. They include the six gases covered by the United Nations Framework Convention on Climate Change (UNFCCC) i.e. Carbon dioxide (CO<sub>2</sub>); Methane (CH<sub>4</sub>); Nitrous oxide (N<sub>2</sub>O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); and Sulphur hexafluoride (SF<sub>6</sub>).

- **Scope 1:** GHG emissions from sources that are owned or controlled by the organization. Examples: CO<sub>2</sub> emissions from fuel consumption. Note: A GHG source is any physical unit or process that releases GHG into the atmosphere.
- **Scope 2:** Greenhouse gas (GHG) emissions that result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by the organization.
- **Scope 3:** Indirect GHG emissions not included in energy (Scope 2) GHG emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions.

**Good Agricultural Practices (GAP):** As defined by Food and Agriculture Organization (FAO), a GAP is a "collection of principles to apply for on-farm production and postproduction processes, resulting in safe and healthy food and non-food agriculture products, while taking into account economic, social and environmental sustainability".

**Human rights remediation:** Remediation refers to the process or act of providing remedy, aiming to restore individuals or groups that have been harmed by business activities to the situation they would have been in had the impact not occurred. If the latter is not possible, it can involve compensation or other forms of remedy that try to make amends for the harm caused. Examples: mediation, apologies, repatriation, financial or non-financial compensation, and punitive sanctions as well the prevention of harm through, for example, sanctions or guarantees of non-repetition.

**Integrated Pest Management (IPM):** Also known as integrated pest control and is a broad-based approach that integrates both chemical and non-chemical practices for economic control of pests. IPM aims to suppress pest populations below the economic injury level. This requires sound understanding and monitoring (i.e. scouting) of pests and their natural enemies.

**A livelihood program:** A program delivering livelihood support.

**Livelihood support:** At least 1 support of any type, that helps increase a farmer's income from main crop, food crops, or other farm or off-farm activities, e.g., Training, Services, Inputs & Tools, Infrastructures:

- **Training:** An activity that promotes a farmer household's knowledge, or skillset to directly improve a farmer's livelihood (e.g. Good Agriculture Practices, sewing, beekeeping, or financial training).

• **Livelihood Service:** A support provided to a farmer in the form of work accomplished directly on their farm that may or may not include supplies (e.g. a pruning service). A service is also any non-material support that is not of a training nature (e.g. financial loans). The service might be provided for free, be subsidized, or not.

• **Input/Tool:** An item provided to aid farmer's work, in most cases this will be farm tools (e.g. tarpaulin, pruning shears, moisture meter) but it can be any tool helping farmers to improve their revenue. Inputs are mainly provided for free, be subsidized, or not (e.g. fertilizer, pesticide)

• **Infrastructure:** A structure or facility provided to a farmer or a farmer group to help generate more income, save costs, or keep production value (e.g. drying tables, a road, warehouse, chicken coop).

**Living landscape partnerships:** A Living Landscape Partnership is a multi-functional sourcing area where **ofi** has a long-term and large-scale plan to achieve holistic transformational change for nature and people by leveraging multi-stakeholder partnerships that co-design & foster a common vision and goal for managing the landscape sustainably. Living landscapes are strongly rooted in a theory of change that seeks to address root causes of unsustainable outcomes across environmental and socio-economic dimensions, therefore aiming to demonstrate impact beyond program implementation.



# Sustainability glossary

**Nutrition or health intervention:** An activity that is aimed at contributing to improved nutrition or health. This can include trainings, supplies, screening & services, and infrastructure.

**ofi farmer:** An 'ofi farmer' consists of a farmer that is registered within ofi's supplier base, whether it be in OFIS or outside of OFIS.

**ofi farmer household:** A group of people living in the same dwelling who farm at least one plot together, and where 1 or more household members is an ofi farmer. An 'ofi farmer' consists of a farmer that is registered within ofi's supplier base, whether it be in OFIS or outside of OFIS.

**ofi woman farmer:** A female farmer, member of a farming household engaged in farm work or short-term/long-term farm worker working on the farm. Women farmers are registered within ofi's supplier base, whether it be in OFIS or outside of OFIS.

**Olam Farmer Information System (OFIS):** OFIS is a survey tool used by field teams to collect data, manage training activities, and track financing, input distribution and purchases precisely.

**Regenerative agriculture:** Regenerative agriculture is an approach to food production, working with nature to build and restore Natural Capital (Soil, Water, Biodiversity and Carbon) on and around farms whilst optimizing inputs and ending harmful and destructive practices. Regenerative practices are context specific, adapted to agro-ecological conditions.

**Regenerative agriculture program:** A regenerative agricultural program consists of any type of structured support activities (internal and/or with a customer or other partner support) in which regenerative agricultural practice implementation is incentivized (through financial or non-financial mechanisms), and at least 2 of the following pillars are addressed: Climate (farm carbon footprint), Soil Health, Biodiversity, and Water.

**Supply chain:** The combination of a product and its origin that ofi is directly or indirectly sourcing from.

**Sustainable volumes:** All certified and/or AtSource Plus volumes.

**Tier 1 & Tier 2 operations:** Classification of Tier 1 and 2 operation is defined by the ofi H&S department as follows:

- **Tier 1 operations:** Facilities used for the large-scale production of products are referred to large manufacturing plants. Large manufacturing plants with 3 or more of the following criteria are classified as Tier 1

operation facility as shown below: 1. Production Volume  $\geq$  10,000 MT 2. No of People  $\geq$  250 3. Capital Investment  $\geq$  \$25 Million USD 4. Process Complexity – Medium and High 5. QEHS Risks – Medium and High

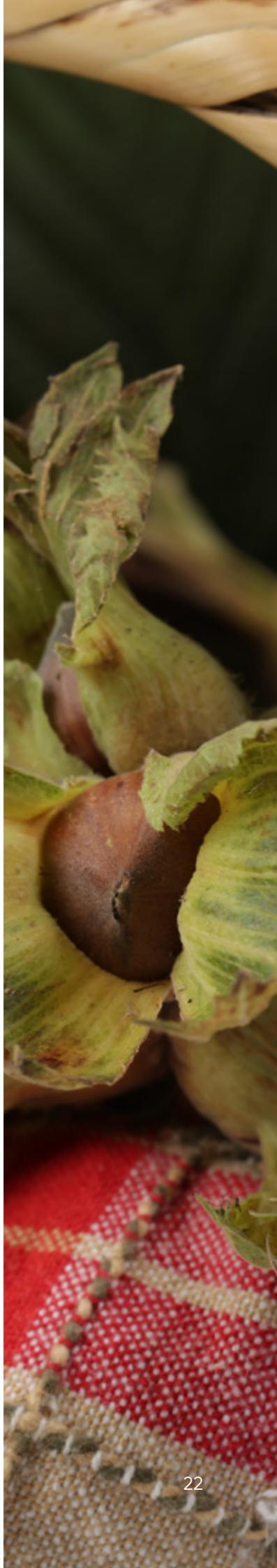
- **Tier 2 operations:** Manufacturing plants that do not fall in Tier 1 facility category will be classified as Tier 2 facility. Facilities that have processes such as cleaning, grading, sorting and packing with machineries for the operations are also classified as Tier 2 facility. Example: Small manufacturing, plantations/orchards/farming operations, packaging facilities.

**Traceable volumes:** Volumes that can be traced back to their specific producers (e.g. farmers, farming cooperatives, farmer groups) through chain of custody documentation.

**Transparency:** Supply chain transparency refers to the strategy of how to disclose supply chain and sourcing information to stakeholders. Transparency is defined by what data you are going to be transparent about, to whom, and how often, or when. Any company pursuing visibility needs to consider transparency upfront. (Source: BSR, 2019).

**Youth:** Individuals aged 15-24.

SEE ofi'S FULL SUSTAINABILITY GLOSSARY IN THE CHOICES FOR CHANGE STRATEGY [HERE](#).



## Three ways to engage

- Contribute to existing or new initiatives, based on premiums or a one-off payment.
- Be a strategic or implementation partner, by volunteering personal time, technical expertise or resources for new and exciting initiatives on the ground.
- Participate in ofi's AtSource programs, which provide customers with engagement options tailored to individual sustainability ambitions.



**Be the change  
for good food and  
a healthy future**

2030