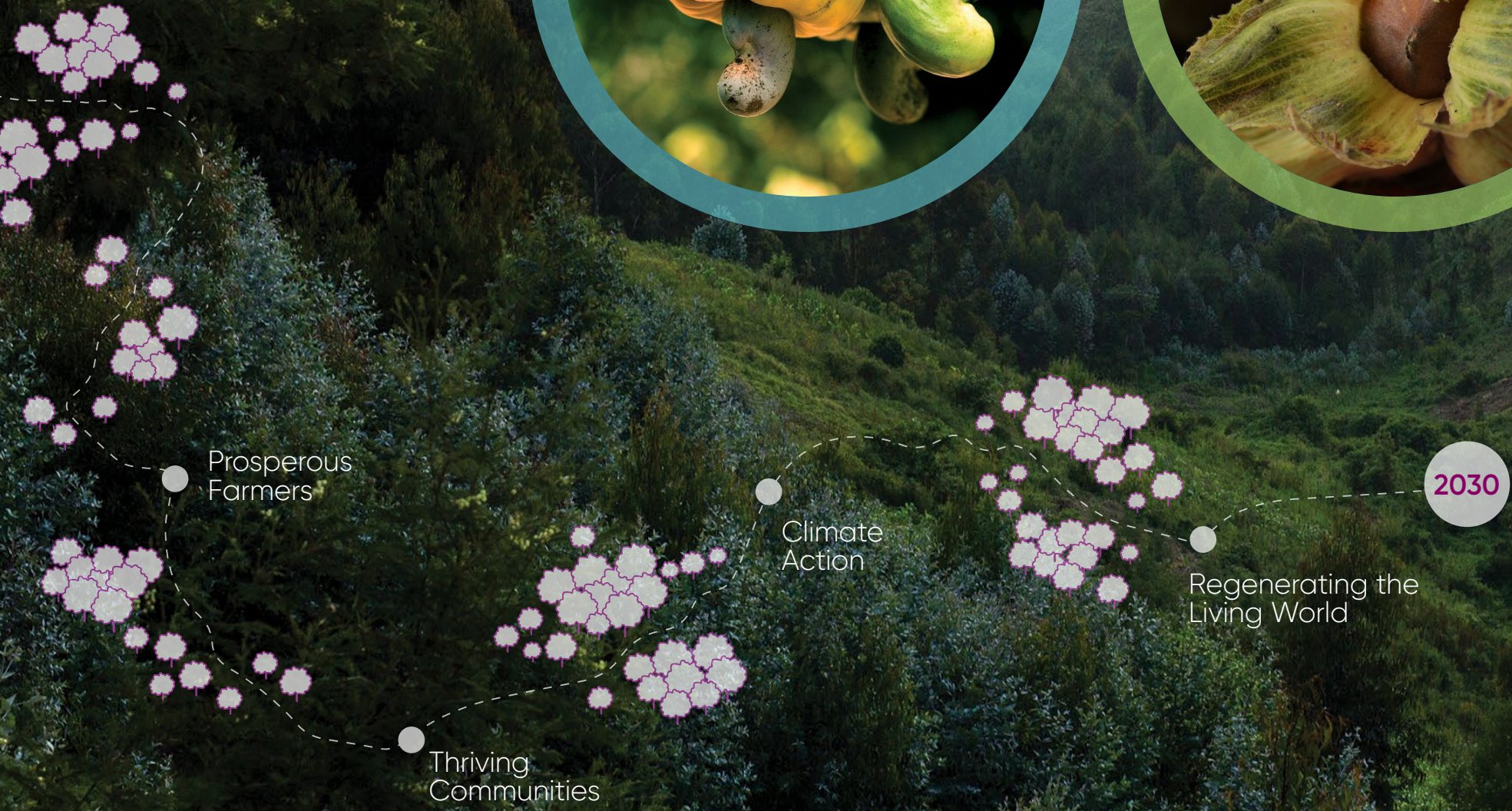


# Nut Trails

## 2023 Impact Report



Charting our journey to sustainable cashews, hazelnuts and almonds with impactful choices



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



Sourcing Cashews



Processing facilities



Sourcing Hazelnuts



Processing facilities



Sourcing Almonds



Processing facilities

United States

Burkina Faso

Côte d'Ivoire

Ghana



Nigeria



Turkey

Australia

Vietnam

Vietnam



# A message from Ashok Krishen

CEO - ofi's nuts platform

Welcome to ofi's 2023 Nut Trails Impact Report, charting our journey to more sustainable nut supply chains and the choices we're making to help farmers prosper, protect the rights of children and workers, and promote regenerative agriculture. These choices are guided by and contribute to ofi's overarching sustainability strategy Choices for Change.

As we work towards finding more creative, productive and sustainable ways of supplying almond, cashew and hazelnut ingredients, we're seeing new spaces for nuts to play in providing healthier snack and plant-based choices for consumers, who are also showing more interest in food provenance.

Our extensive farmer programs and innovation capabilities mean we can help satisfy this demand, with quality ingredients, from whole nuts and pieces to nut milks and powders, that deliver flavor and functionality. At the same time, we are also able to add value for the farmers and communities they come from, through a variety of tailored programs and technology.

I'm extremely proud that this year we earned America's first Rainforest Alliance certification for our almond orchards in California, which is good news for both makers and consumers of almond-based food and drink products by providing high-quality, flavorful almonds with assurances on ofi's responsible almond sourcing practices.

Behind every nut are differing and varied sustainability challenges, requiring specific approaches, investments and partnerships. With almond-growing regions increasingly prone to drought, installing state-of-the-art irrigation systems in our orchards is a priority to optimize water use. Having

achieved our 2030 target last year with moisture monitoring covering 100% of our almond orchards, our focus now is to enhance efficiency through automation. Whereas in Turkey, our hazelnut teams prioritized training farmers on crop residue management and composting practices, reaching over 7,000 farmers last year, as more meaningful interventions towards our environmental goals. This is why we are working towards dedicated targets for our cashew, hazelnut and almond operations and why we now update on progress towards all three strategies in this report.

The common thread linking how we approach the challenges in different nut supply chains is collaboration. Our progress in 2023 has been made possible only through partnerships with our customers, industry partners and local governments. These programs span many farming communities across our nut products and origins, from California, where we're working with Mars on the KIND Almond Acres project to generate proven and scalable regen ag. best practices, to Côte d'Ivoire, where we're partnering with the National Nutrition Program (PNN) to tackle malnutrition in cashew communities by using geo-location to screen over 14,000 children last year.

I want to thank all our customers and partners who have contributed to our joint progress, helping us realize our vision to be the preferred partner for positive change. I look forward to continuing our work together and would like to invite others to discover how they can be the change with us to deliver more sustainable choices from seed to snack.





# Looking to 2030

The progress we make towards our 2030 Nut Trails targets is guided by **ofi**'s overarching sustainability strategy Choices for Change.

**Focused on four interconnected pillars, built on the foundation of supply chain excellence**

Every day, we make choices. Choices create both opportunities and consequences. Enabling better choices to be made, across the value chain, is the essence of this strategy. We aim to view every choice we make through the lens of our purpose to **'Be the change for good food and a healthy future'**. And every choice must seek to deliver an impact that is real and measurable.

As sustainability experts embedded in farming communities, we offer our customers and partners the traceability, capability, insight and choices to drive positive change.

To learn more about Choices for Change, visit [ofi.com/sustainability](https://ofi.com/sustainability)







## Prosperous farmers










Nut Category	2030 Goal	Progress for 2023	Overall Status
	250,000 cashew farmers trained in Good Agricultural Practices	5,429	25,574
	US\$4mn distributed in premiums to cashew farmers globally	\$963,026	\$1,977,356
	250,000 cashew households supported for enhanced livelihoods	5,419	41,650
	50% yield increase for cashew farmers (baseline: 2021 crop)	8.27%	8.27%
	50,000 farmers trained on literacy and numeracy	4,211	7,877
	100,000 farmers trained on business and marketing skills	0	0
	100% of <b>ofi</b> employees in processing facilities have access to professional skills and development opportunities	100%	100%
	100% of registered women farmers participate in farmer training programs	52% (4,752/9,217)	52% (4,752/9,217)
	5,000 women have access to village savings and loans associations (VSLAs)	110	110
	50,000 women benefitting from labor saving tools and equipment	0	0
	30% of registered farmers are women	24.7%	24.7%





Nut Category	2030 Goal	Progress for 2023	Overall Status
	100% of women farmers trained on Good Agricultural Practices (GAP) and Good Social Practices (GSP)	100%	100%
	50,000 farmers trained on Good Agricultural Practices (GAP)	7,288 (8,470 hazelnut farmers received training in Good Agricultural Practices in 2023. Of these, only 7,288 were new farmers)	14,352
	30% average yield increase for farmers (baseline: 2020 crop) <sup>1</sup>	213 kg/ha	16.39%
	Ensure 100% of <b>ofi</b> employees in processing facilities and orchards have access to professional skills and development opportunities	100%	100%



<sup>1</sup> 28% of the farmers in 2020 were still in our supply chain in 2023 and their yield increase is recorded as 16% compared to 2020. Türkiye's general yield increase was stated as 7,82% between 2020 and 2023.

## Thriving communities








Nut Category	2030 Goal	Progress for 2023	Overall Status
	10,000 children, from directly sourced cashew communities, benefitting from investments into education infrastructure	3,845	5,704
	Reach 500,000 people in cashew communities with nutrition and health support	116,533	222,547
	Educate 250,000 farmers on disease prevention and first aid	0	2414
	Improve health infrastructure in 1,000 cashew farming villages	1	128
	100% of <b>ofi</b> employees in processing facilities have access to nutrition programs and support	100%	100%
	100% child labor monitoring and remediation in managed programs	100%	100%
	Invest in extra-curricular activities for 10,000 children in hazelnut sourcing communities to improve their physical and mental wellbeing	114 children	350 children
	Provide science equipment and teacher training for 20 schools, to benefit 8,000 children	800 children across 2 schools benefited from the distributed science equipment in 2023.	9 schools; 3,240 children
	Distribute school stationary kits to 10,000 children to enrich education	Distributed school stationary kits to 1,429 children by the end of 2023 calendar year.	2707

Nut Category	2030 Goal	Progress for 2023	Overall Status
	100% of farmers educated on gender equality, labor rights and children's rights	100% of farmers trained on gender equality, labor rights and children's rights. (1740 in our supply chain, 7288 new farmers.)	100% (total farmers trained 14,352)
	100% of all women seasonal migrant workers trained on health, nutrition, and labor rights	42% (2,548 out of 6105) of the seasonal women migrant workers identified through internal monitoring received these trainings in 2023.	63%
	Champion agriculture as a fulfilling career by supporting 1,000 high school and university students in their research projects	Supported 46 US K-5th grade students at Bates Elementary. Purchased and helped construct 2 greenhouses, helped create curriculum for horticulture and agronomy, and coordinated a field trip to UC Davis greenhouses for the students.	46 K-5th grade students at Bates Elementary
	Train 100% of <b>ofi</b> employees in processing facilities and orchards on occupational health and safety	100%	100%

















## Climate action

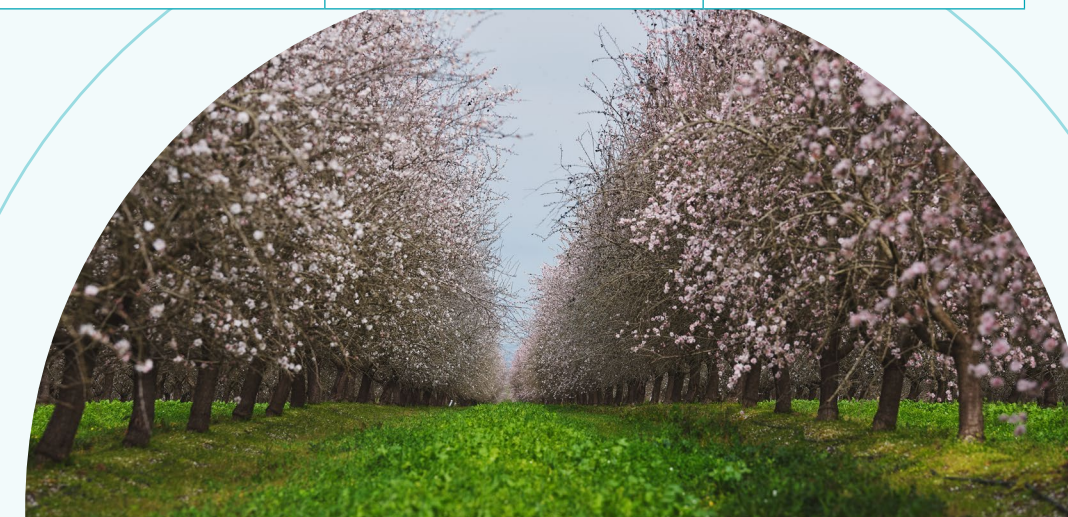
Nut Category	2030 Goal	Progress for 2023	Overall Status
	Train 250,000 farmers on climate-smart agricultural practices & reducing waste	15,991 Farmers	15,991 Farmers
	Reduce GHG emission intensity in cashew supply chains by 50%	-1.29%	-1.29%
	Increase use of renewable energy to 30% of total consumption in processing facilities	50%	50%
	6,000 farmers are engaged on nature-based climate solutions	Nature-based climate solutions were determined by our Hazelnut team, and farmers training and records began to be kept in 2024	0
	Reduce our absolute scope 1 and 2 GHG emissions by 2030 in line with the 1.5 degrees pathway	-33.49%	-33.49%
	75% of total energy use is coming from renewable energy	39.67%	39.67%
	Power 50% of mobile farm equipment with renewable energy	92%	92%

## Supply chain excellence

Nut Category	2030 Goal	Progress for 2023	Overall Status
	0 grievances logged by workers against farmers in managed programs	1 grievance was received from a seasonal migrant worker in 2023 harvest. discussions on the issue were held and concluded.	
	0 instances of non-compliance with <b>ofi</b> Agri Supplier Code in audited programs	No instances of non-compliance were recorded.	No instances of non-compliance were recorded.
	100% traceability in direct supply chain	74%	74%

## Regenerating the living world

Nut Category	2030 Goal	Progress for 2023	Overall Status
	Build landscape partnerships to end ecosystem losses & regenerate forests in all high-risk sourcing areas	Research & planning in progress	Research & planning in progress
	Conduct soil analysis for 10,000 farmers to optimize fertilizer use	1,014	1,756
	100% of farmers trained on crop residue management and composting practices	7,288	14,352
	Implement soil and plant moisture monitoring in 100% of orchards to optimize water efficiency	100%	100%
	Increase our irrigation distribution uniformity to 90%+ on all orchards	Baselines are currently being established, analyzing research.	Baselines are currently being established, analyzing research.
	Remediate 75% wet/saline areas in our orchards	Research and recording in progress.	Research and recording in progress.
	Achieve bee friendly certification across all orchards	17 out of 21 orchards certified, representing 81% of all orchards	17 out of 21 orchards certified, representing 81% of all orchards
	Implement annual cover cropping in 75% of all orchards	13 out of 21 orchards have cover crops which is 61.90%	13 out of 21 orchards have cover crops which is 61.90%
	Protect and expand permanent pollinator habitats to 40% of orchard fallow areas	2%	2%



# 2023 Reflections

## Adaptability and Innovation are Key

I'm proud of the progress we've made over the last year against a number of our 2030 goals, including nearly doubling the value of premiums we distributed to support cashew farmers and offsetting 85% of our total energy consumption on our Australia almond orchards through renewable sources.

But there are also many areas for growth. Implementing successful sustainability programs requires flexibility and staying open to new technologies, approaches and business models when faced with unexpected or complex challenges.

For example, smallholder farmers can gain a lot from on-farm training, yet we're seeing that many are still finding it difficult to implement and extract full value from it. Approaching it from the perspective of 'farming as a business' can help shift their focus from subsistence to profit. Good Agricultural Practices (GAP) will always be a core component of our training curriculum, but farmers should also understand better production planning, cost management, and how to use targeted investment to address areas for improvement. So we need to expand our training efforts to reach our target of building business and marketing skills for 100,000 cashew farmers by 2030.

Meanwhile, in an exciting development on our almond orchards, where we invest millions every year on pollination services, we're learning how AI and robotics are helping save millions of bees, providing a boost to both biodiversity and productivity.

## Laying the Groundwork for Change

Behind some of the less visible progress we're sharing in this report sits extensive technical and strategic work like establishing baselines and creating action plans undertaken by our central sustainability and field teams over the last year. This will enable us to create real and measurable impact towards our long-term goals.

For instance, before we could start working towards our target of engaging 6,000 hazelnut farmers on nature-based climate solutions by 2030, we needed to narrow the solutions down to context-specific practices that are feasible for smallholders to implement and applicable to the conditions and topography of Turkey's growing regions. This research phase spanned the whole of 2023 and was carried out by our agronomists in consultation with academics and Turkey's Hazelnut Research Institute.

We are also conducting extensive analysis on our almond orchards to measure whether all trees are getting the same amount of water. Our Australia team developed a new Irrigation Decision Support Tool enabling highly-accurate irrigation, based on real-time data from monitoring equipment in orchards which will support our target of achieving >90% distribution uniformity on all orchards by 2030.

## Real Progress Relies on Partnerships

We can attribute a lot of the progress we made in 2023, like hitting our annual milestones for GAP training and social programs for seasonal hazelnut workers, to the 13 impactful partnerships we have with customers, NGOs, and industry bodies, that brought a joint funding commitment of US\$2 million to our sustainability programs in 2023.

Indeed, the complexity of challenges on human rights and climate change requires a holistic and collaborative approach. This is why we choose partners like the Fair Labor Organization, UNICEF, and Helen Keller International, to scale our programs and drive change towards mutual goals.

Expanding these partnerships is a critical part of our Nut Trails journey and **ofi's** Choices for Change vision to be the preferred partner for positive change. They mean we can set up more Village Savings and Loan Associations to generate income opportunities for women, purchase more labor-saving tools for farmers to improve productivity and earnings, and incentivize more farmers to become stewards of the environment. To achieve Nut Trails' ambitious sustainability targets by 2030, we need to make significant progress that can only be possible through strong and impactful collaboration with our stakeholders.



**Burcu Turkay,**  
Global Head of  
Sustainability for Nuts



# Enabling data-led irrigation efficiencies

## Almonds

As part of ongoing efforts to improve water-efficiency on our almond orchards and get 'more crop per drop', our team in Australia have developed a new Irrigation Decision Support Tool to help make real-time, data-led decisions about water use and support our target to reach >90% irrigation distribution uniformity on all orchards by 2030.

Customers may use our almonds in a whole variety of ways, from plant-based dairy alternatives to protein powders and snacks. With this tool we are helping them minimize the water footprint of their products. This project has invested in upgrading the irrigation monitoring hardware in our orchards, building the communication network to transfer real-time data and a comprehensive, visual dashboard to make the best irrigation decision-making simple. We're confident this will help save more precious water while we deliver year-round fresh almonds to customers worldwide.

While the Irrigation Decision Support tool was designed specifically for use on our Australia orchards, the team are exploring the potential for it to be used in other parts of our business.





# How AI and robotics are helping protect pollinators and our favorite almond snacks

## Almonds

**ofi** is working extensively to support protection of bees and promote pollinator health by collaborating since 2022 in our California orchards with our partner Beewise, a company specialized in beekeeping innovations to save bees and protect the global food supply. **ofi** has replaced about 2,808 of its traditional wooden beehives, known as Langstroth hives, over the last few years with the BeeHome™, an AI and robotics-powered hive developed by Beewise, that provides remote automated beekeeping at scale. In 2023, **ofi** was able to preserve the lives of over 650,000 bees by using BeeHomes™ in its orchards in California.

“At Beewise, we believe that the solution for saving bees must scale in order to make a real impact on food systems. That’s a major reason why it’s such an honor to provide AI-powered pollination services to **ofi**, a leader in tech-driven climate action. Over the past three years, we’ve expanded our work with **ofi** from a small pilot to large-scale deployment for thousands of acres. I’m happy to say that in the process, **ofi** saved millions of bees using our technology”, said Saar Safra, CEO of Beewise.

Each of these technology-enabled hives can host up to 10 colonies, each of them composed of an average of 33,000 bees. Fully solar-powered, using high-performing materials that offer superior insulation, and designed with adequate ventilation, the hives can be controlled remotely by a team of master beekeepers. They can remotely measure and regulate the temperature, while also increasing or reducing the airflow entrance. The entrances can also be closed remotely to protect bees during the application of agricultural products in the orchards. To increase bees’ preservation, **ofi** only spray during this period of the day with products that are free from neonicotinoids, pyrethroids, non-ionic surfactants, which are among the main harmful pesticides for them. The robotic system integrated in the hives also allows for the automation of repetitive and time-consuming tasks, such as feeding the bees through a centralized syrup tank and providing an adequate amount of clean and fresh water. The net effect is fewer visits to the hives and avoided carbon emissions from beekeeper trucks and forklifts.

Certified by the Almond Board of California in 2020 with 75% of our orchards to be bee-friendly, **ofi** aims to achieve a 100% bee-friendly certification across all orchards by 2030. In the last year, **ofi** has increased the number of intelligent beehives from 724 to 3,610, contributing directly to achieving this goal.





# KIND Almond Acres Initiative



## Almonds

Our highly mechanized almond farms utilize the latest in irrigation infrastructure, technology and agronomy practices, in efforts to produce high-quality almonds with an optimal environmental footprint. However, in order to deliver sustainability at an impactful scale, we rely on collaborative partnerships with partners that share our drive to be the change for good food and a healthy future.

In April 2023, KIND Snacks launched the KIND Almond Acres Initiative, a three-year pilot project testing a combination of regenerative agriculture practices (Regen Ag) and modern technologies. **ofi** was selected as their partner to perform the initiative across 500 acres in California. Their goal is to source 100% of their almonds from farms leveraging regenerative agriculture practices on a mass balance basis by 2030. This is in addition to their commitment to source 100% of their almonds from bee-friendly farms on a mass-balance basis by 2025.

KIND and **ofi** hope to gather the data and learnings needed to find the best combination of practices that will provide measurable benefits to the soil, the farm as a whole and the planet. The learnings from this pilot will help set environmental targets and help inform how KIND will reach its goal by 2030. For **ofi**, this research aligns with goals outlined in our Almond Trail, especially those focusing on Healthy Ecosystems & Biodiversity, Water and Climate Action.

Strategically chosen by **ofi** and KIND, the practices on the ground include:

ACTION	DETAILS	DESIRED OUTCOMES
Cover Crops	Using a blend of five cover crops.	Healthier Soil, Happier Pollinators, Reduced Water Use
Subsurface Irrigation	An irrigation system that allows growers to ensure more of the water applied is used directly by the tree.	Reduced Water Use
Whole Orchard Recycling	Removing trees at the end of their productive life, grinding into chips and reapplying back on the orchard floor. Dedicating 38 acres to testing	Healthier Soil, Carbon Sequestration
Compost & BioChar	Combining compost & Biochar, a charcoal-like substance created from slow-burning almond shells.	Healthier Soil, Carbon Sequestration
Off-Ground Harvesting	Collecting the almonds off trees instead of off the ground. <i>Note: Traditionally, almonds are harvested by shaking them off the tree, then sweeping them into rows.</i>	Healthier Soil
Low Carbon Fertilizer	Using a nitrogen-based fertilizer with a significantly lower manufacturing carbon footprint.	Lower Emissions



**ofi's** partnership with KIND represents a massive joint effort in regenerative agriculture. We are learning how to pair innovative sustainable technology with traditional farming practices, so we can find a combination that creates a positive change for the planet. Efforts like these leverage our global expertise to build a more sustainable way of farming almonds.

**Zac Ellis,**  
Senior Director of Agronomy at **ofi**





# Boosting educational opportunities in cashew-growing communities



## Cashews

### From distributing bicycles to refurbishing schools, ofi teams are tackling barriers to education.

At **ofi**, our cashew nuts hail from six distinct origins in two continents: Vietnam and Cambodia in Asia, and Côte d'Ivoire, Ghana, Nigeria, and Burkina Faso on the African continent. Despite the differences between these countries, cashew production has certain similarities across these various origins. Over 3 million small farm holders, and their farms represent their primary source of income. Most cashew farmers and their families live in remote rural areas. These communities often lack proper access to education and health services.

### Supporting more equitable access to education for children in Nigeria and Ghana.

Within our cashew supply chain, we have distributed school kits, including notebooks, paper pads, and pencils in cashew communities to support children's access to education. In addition, our Nigeria team distributed 1,000 school kits to children of our factory's employees in Okanle, Afin, Ifesowapo and Idera communities, and nine children received scholarships. As adequate sanitation and hygiene conditions can positively impact learning environments and the

quality of education infrastructure, the **ofi** cashew team in Ghana provided the Techiman Zongo M/A Primary School with 150 handwashing stations, soaps and hand sanitizers. By providing the necessary tools and resources for proper handwashing and hygiene practices, the school can promote a healthier environment for its pupils and staff. Ghana cashew team constructed a mechanized borehole to serve households and school pupils in the Nchira community. We have also built a toilet facility with 6 handwashing stations for the Ansaru Islam Community School in Nigeria where 445 children have benefitted.

Comfortable and adequate learning environments are key to increasing school attendance. Unfortunately, the communities where most cashew farms are located do not offer sufficient education facilities. In some situations, it's a lack of space, while in other cases, it's a question of defaced buildings and equipment. We aim to support 10,000 children, from directly sourced cashew communities, through investments into education infrastructure. In 2023, we have reached 3,854 children from 3 to 20 years old across our cashew supply chain through investment in school buildings and facilities, as well as support to access. **ofi** cashew team in Nigeria has started renovation of 2 blocks of classrooms at Ogbondoroko Community Secondary School in 2023 which will be completed in 2024.

### Vietnam: tackling diverse barriers to education through tailored initiatives

In Vietnam, 273 children across our nuts supply chain were awarded with scholarships to facilitate their education in Gia Lai province. Learning conditions are challenging in this region due to higher levels of poverty and ethnic discrimination, which affect many households that cannot afford textbooks and school materials for their children. Therefore **ofi** has distributed 300 notebooks supporting students from grade 6, 7 and 8 in Le Hong Phong Secondary School that has 683 students in total.

Rural communities also face challenges when it comes to school accessibility, especially for high school students. Some children might have to walk long distances to reach their school, making this a real barrier to pursuing schooling. Our cashew team in Vietnam's Gia Lai province identified this challenge and gave bicycles to 30 students from Luong The Vinh Secondary School and Ly Tu Trong Primary School to facilitate their commuting. These students were selected on the basis of the distance of their house from their school and the economic situation of the households.





# Safeguarding children during Türkiye's hazelnut harvest



## Hazelnuts

**Every year in August, approximately 80,000-90,000 seasonal migrant workers travel with their families to the northern Black Sea region of Türkiye where over 63.5 % of the world's hazelnuts are harvested. In some cases, migrant workers in hazelnut farming communities do not have access to adequate childcare facilities. When this happens, there is an increased risk of child labor as workers have no choice but to take their children with them to farms.**

To monitor and take action against the risk of child labor in Türkiye's hazelnut communities, **ofi** collaborates with local governments, such as the Turkish Ministry of Education, and other partners, to provide a special summer school program for children aged 5 to 17. During the 2023 harvest, 514 children benefitted from 5 summer schools.

This program is especially vital for those children who don't attend school full-time because they are travelling with their families to different parts of the country while their parents harvest different crops. As some children might have never attended school before, our program aims at getting them up to speed on core academic subjects such as math and English based on their grade-level.

Furthermore, our summer school educators have developed a more holistic curriculum tailored to the children's needs, covering topics like hygiene, emotional development, arts, and informatics. Ali Bas, a math teacher at the Islamdag Secondary School for 8 years, has been part **ofi's** summer school program in Ordu region for four out of the five years it's been running. Mr. Bas teaches robotic coding to summer school students, using special kits provided by **ofi**. According to Mr. Bas, "there are children who attend our summer school that don't know how to read and write. There are children who don't have access to education." The program starts from basics lessons and soft skills, as well as ensuring that the children get three meals a day.

"As a teacher, I've seen the direct impact this type of opportunity can have – the children are so attentive and every day I get to see first-hand how hungry they are to learn. So, we try our best to set children up for success and maximize their potential in the short months we are together", relates Mr. Bas. With this program, the children have better chances to get up to speed while learning extra skills such as robotics and programming.

Yonca Elma, who is responsible for **ofi's** hazelnut sustainability social programs, is coordinating the summer school programs in Türkiye besides other social programs such as 'Women on the Roads for Hazelnuts' that support women seasonal migrant workers on health and nutrition. Visiting the summer

schools almost every other day during the harvest, Yonca has been interacting with both children and the teachers. Yonca shared that. "As **ofi's** social workers visit migrant workers in their home cities under the Women on the Roads for hazelnut project, we sometimes get a chance to connect with the children to say a quick hello, because we visit their homes during the winter times. Some of the children are writing letters to their teachers and giving them to us, so that we can bring them to their summer school teachers."

## Education Kits

For children who are unable to attend our summer school program, **ofi** provides special education kits that includes a backpack, books and other learning materials according to the age of the child. All kits also include a newly published children's book titled as "My Name is Earthquake" that describes how the earthquakes happen, how to protect yourself during an earthquake and answers questions children may have using simple language and graphics. This book was distributed during the harvest of 2023, just six months after the 7.8 magnitude earthquake that hit southeast region of Türkiye and caused massive losses across the country – including areas where migrant workers live. In 2023, **ofi** has distributed a total of 1,429 education kits during the harvest.





# 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**