



# The Dole Way

Our commitment to provide safe, high-quality fresh produce that's good for people, for nature, and for food.

# Letter from our CEO

“Dole is committed to being honest and transparent about our efforts and our impacts.”



Over a century ago, Dole was founded on the principle of “quality, quality, quality.”

This commitment is still just as true today. Our dedication to quality drove the company to control the process of growing and delivering products to consumers and helped build our strong reputation, making Dole a leading brand worldwide.

Today the quality concept is broader than the product itself. It also includes sustainability, transparency, corporate responsibility and trust. All of this is at the heart of our quality promise to consumers, retail and food service customers, suppliers, parents, governments, NGOs and all other stakeholders.

We strive for open dialogue — including all critical voices — and are pledged to continuously improving opportunities for communities around the world. Stakeholders expect this of us. They want us to help find solutions and to make a measurable and meaningful difference for people and the planet.

Dole is committed to being honest and transparent about our efforts and our impacts, so I am pleased to share with you Dole’s Sustainability Report that details both qualitatively and quantitatively our sustainability progress through the end of 2019.

This recent progress builds on a long legacy of responsible behavior at Dole, thanks to the know-how and commitment of our local teams working together globally, including the significant advances made over previous years in improving labor and environmental standards within the banana supply chain.

Dole believes that our scale and experience as a global leader in fresh produce means we can and must be an important actor and agent for change by creating products and services that society values, establishing primary jobs, efficiently using resources and leveraging our research capabilities and partnerships to find solutions to challenges affecting food safety and supply.

To support these ambitions Dole has developed a new framework called *The Dole Way* and a new set of sustainability goals that will add momentum across our operations, worldwide. Rooted in Dole’s values and legacy of sustainable action, the new framework and goals are designed to align with our internal business objectives and global frameworks such as the United Nations Sustainability Development Goals (UN SDGs). Together they make it clearer than ever what our commitments are and where we plan to focus our efforts in the coming years — for people, for nature, for food.

Without a doubt sustainability and respect for human rights are fundamental to Dole’s way of operating and are essential to the long-term growth of our business. This should always be top-of-mind and part of what we do every day, throughout our value chain, wherever we operate.

Following the principles of our founder, James Dole, we have been leaders and innovators in our industry and have taken seriously the many challenges facing our business and our world. As has always been, our journey and dedication to being a responsible corporate steward of our communities will continue into our future and Dole will continuously live up to our promise to be a good neighbor in the areas in which we grow, and a good citizen in all places where we operate.

**Johan Linden**  
President and Chief Executive Officer,  
Dole Food Company

## About Dole

# A worldwide commitment to quality

**Dole Food Company is one of the world's largest producers and marketers of high-quality fresh fruit and vegetables. We're an industry leader in many of the products we sell.**

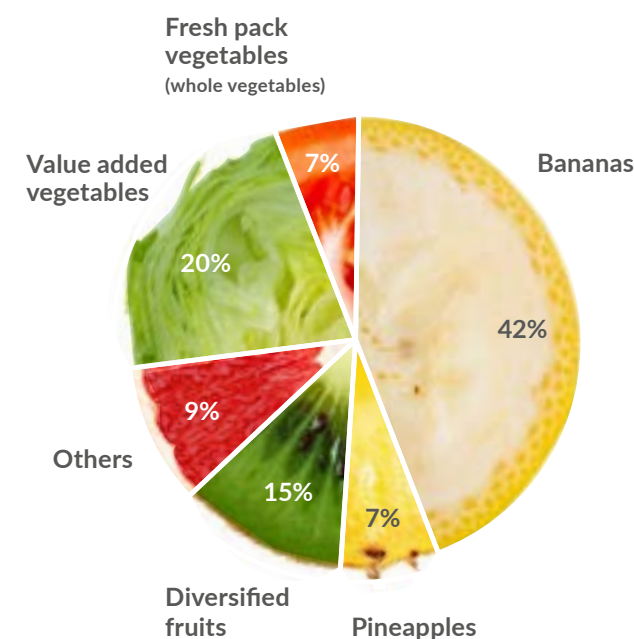
Our team of employees, growers, packers, processors, shippers, and marketers is committed to consistently providing safe, high-quality fresh fruit, vegetables and food products. Dole's dedication to quality is a commitment solidly backed by: comprehensive programs for food safety, scientific crop protection programs, stringent quality control measures, decades of farming expertise, state-of-the-art production and transportation technologies, research and innovations for continuous improvement and value-adding products, a global focus on healthy produce and dedication to the safety of our employees, communities and the environment.

Dole has three main business divisions globally: Dole Tropical Fruits (based in Costa Rica), which grows and distributes bananas, pineapples and other tropical fruits; Dole Diversified (based in Chile), which focuses on grapes, apples and cherries; and Dole Fresh Vegetables (based in California, USA), which supplies fresh vegetables and packaged salads within North America.



## What's inside

### 2019 revenue by produce

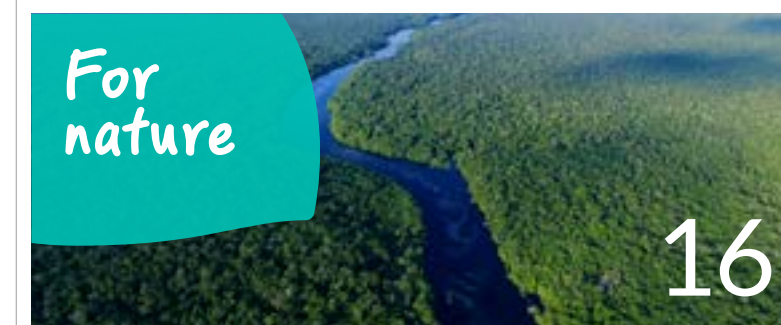


**180+**  
Dole products are sold in  
**80**  
countries worldwide

### Contents

Our Approach

4



### About this report

This report summarizes key corporate responsibility and sustainability-related impacts and initiatives of Dole Food Company between 2017-2019, reported as of December 31, 2019. Unless otherwise stated, the information contained in this report pertains only to Dole's wholly owned operations and the company's own employee workforce. Topics addressed in this report were selected in reference to the Global Reporting Initiative (GRI) framework.

# Our sustainable legacy

Dole's focus on improving lives and respecting nature through our work has its roots in the early years of the company.

In the early part of the 20th century, Dole's evolution as a large-scale producer and distributor of tropical fruits took the company into isolated locations with limited infrastructure. Growing our business in these areas presented both a necessity and an opportunity to do much more than planting and picking fruit. It meant that our presence could make a big difference to local economies and that we could make an even bigger difference by directly supporting employees' and communities' health, education and other needs.

Going beyond the normal expectations became an integral part of Dole's way of doing business. And that continues to define how we go about our work today.

## Key moments in our journey to date

- 1900**  First shipment of Standard Fruit bananas from Honduras to New Orleans
- 1924**  The Vicente d'Antoni Hospital is built in Honduras, providing medical care to farm workers and communities
- 1927** Mazapan School built in Honduras
- 1960** Introduction of the cardboard box to transport bananas, reducing waste in the supply chain
- 1981** First to introduce refrigerated containers for fruit transportation in 1981
- 1988** Adela Rodríguez School built in Honduras
- 1991**  Dole launches the "Dole 5 A Day" campaign to encourage kids and their families to eat nutritious fresh produce every day
- 1994**  Dole and other partners open Recyplast, which turns bags and twine from banana farming into useful products
- 1997**  After pioneering organic banana procurement in 1995, Dole planted the first organic bananas in Honduras
- 1998**  Dole is the first agricultural producer in the world to be certified to the environmental management standard ISO 14001
- 2000**  Dole is the first agricultural company to have one of its divisions certified to social accountability standard SA 8000
- 2001**  The DALE Foundation is created in Ecuador  
Vicente Piedrahita School built
- 2007**  Dole introduces a label that lets European consumers go online to track the sustainability path of bananas
- 2010** Dole's container fleet renewal program, initiated five years earlier, allows for the 13,000-unit fleet to achieve the milestone of only 2 tons of CO<sub>2</sub>e emitted from refrigerants per container, down from over 20 in 2004
- 2012**  First certification of a Dole-owned farm by Fairtrade USA
- 2020** Dole unveils its refreshed social responsibility and sustainability framework



# Our new framework The Dole Way

For over 150 years, Dole has delivered nutritious, high-quality produce around the world while preserving the land from which it is grown, as well as supporting and enhancing global communities.

We're committed to growing, processing and distributing our produce responsibly, and this is our promise – today and for every generation to come. Because being a responsible business is second nature to us.

We're making it clearer than ever what our commitments are as a company – and where we plan to focus our efforts into the future.

Dole's new framework paves the way for further improvements in areas where we believe we can make the biggest positive impacts. Developed in coordination with Dole's three main business divisions, the framework is intended to be easily understood yet thorough enough that there can be no doubt about where we're making a stand.

## For people

### We commit to:

Improve the livelihoods of individuals across our entire business – from farmers to customers

## For nature

### We commit to:

Protect the natural environments in which we operate to reduce our impact and strengthen habitats

## For food

### We commit to:









Provide retailers and consumers with safe, healthy, nutritious and responsibly grown food

# Our 2030 goals

To complement our new framework, we've introduced a new set of sustainability goals designed to translate "The Dole Way" focus areas into tangible action.

This is the first time Dole has set enterprise-wide sustainability goals – an important milestone on our sustainability journey as a company. The goals were developed in workshops attended by representatives from Dole's three divisions plus Dole Corporate, which means they reflect our combined ambitions and commitment to making a positive impact. We'll share updates on our progress in future Dole sustainability reports.

In addition to our enterprise-level goals, each Dole business division is also working to achieve its own set of goals, tailored to the specifics of the produce they grow, pack or distribute and the needs of their local communities.

	For people	For food
Goal	<b>Social impact</b> Devote at least \$0.07 per box of Dole-branded bananas and pineapples sold to fund local community impact projects for the next five years, resulting in a cumulative social investment of \$50 million by 2025	<b>Food safety</b> Implement blockchain product-tagging technology and/or advanced traceability solutions in all Dole divisions by 2025
Notes on progress	Our "For people" goals expand on Dole's long-running social impact programs which include the work of foundations in Ecuador, Peru, and Colombia with the participation of our fruit suppliers. For an update, turn to pages 14-15.	Dole is already participating in a major blockchain rollout in the U.S. – in support of supply chain transparency and food safety. To read more, turn to page 33.
UN SDGs	These goals support UN Sustainable Development Goals 2 and 3.  	This goal supports UN Sustainable Development Goals 3 and 9.  
	For nature	
Goal	<b>Water</b> Achieve 100% optimized water practices in Dole operated farms and packing facilities by 2025	<b>Farm-level GHG emissions</b> Achieve net zero carbon emissions from Dole-managed operations by 2030
Notes on progress	Each of our divisions is defining what "water optimization" looks like in its operations and has set specific targets, including: <ul style="list-style-type: none"> <li>Diversified: 100% of drip irrigation and 25% less water in fruit processing annually.</li> <li>Tropical Fruits: Implement water recycling systems in 100% of all Dole-owned banana and pineapple packing facilities, and design and install fully-automated water irrigation systems in 50% of the areas under irrigation (aim to reach 100% by 2030).</li> <li>Fresh Vegetables: 75% drip irrigation</li> </ul> For an update on water stewardship at Dole, turn to page 20.	This goal reflects the scale of Dole's ambition to make a real difference on climate change. By 2025, we will assess the feasibility of potentially expanding this goal beyond the farm-level to include Scope 1 and 2 emissions enterprise-wide. Learn more on page 24.
UN SDGs	These goals support UN Sustainable Development Goals 6, 12, 13, and 17.    	<b>Shipping GHG emissions</b> Reduce emissions from shipping by 30% by 2030 (from 2015 levels)
Notes on progress		Building on recent large scale investments in our fleet, we are committed to making significant reductions in emissions from our shipping. Learn more on our progress to date on page 25.
		<b>Waste and recycling</b> Ensure that all Dole tropical fruits packaging materials are either recyclable or compostable by 2025
		We're testing several options for compostable alternatives to conventional consumer-level packaging for fruit products, as well as options for returnable containers. Learn more about our waste and recycling efforts on page 26.

# Engaging with stakeholders

Dole engages with others across the business, governmental and the nonprofit spheres – to find solutions to pressing issues in the food and agriculture industries.

## Multi-stakeholder initiatives



### World Banana Forum

Since 2009, the World Banana Forum has played a key role in helping the banana industry to maintain industry-wide dialogue on key topics and challenges, including sustainability issues. Dole is a founding member of the Forum and participates in its steering committee and in several working groups.



### Global Food Safety Initiative

Dole is a board-level participant and takes part in working groups that set the standards issued by this global initiative, which convenes key stakeholders in the food industry and engages with governments in over 60 countries to drive continuous improvement of food safety systems around the world.



### IDH: The Sustainable Trade Initiative

With support from several European governments, IDH brings together companies, governments, nonprofits and other stakeholders to find innovative green and socially responsible approaches to economic growth. Since 2014, Dole has been active in Sustainability Initiative Fruits and Vegetables (SIFAV), which is coordinated by IDH.



### Center for Produce Safety

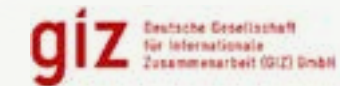
Dole is on the board of this industry-wide partnership, which brings together leaders from business, government, scientific and academic communities to identify and advance the research needed to continuously enhance food safety. Dole also takes part in a research-related working group.

## Sustainability partnerships



### WWF

Dole, WWF and Germany's largest retailer, EDEKA, worked together to bring sustainably certified WWF labeled bananas grown in Ecuador and Colombia to EDEKA stores. It was the first time WWF has put its name on a conventionally grown food product.



### GIZ

With GIZ, a Germany-government agency that specializes in sustainable development, Dole has completed a Public/Private Partnership project for integrated sustainable management of a Dole-owned banana plantation in Costa Rica – a model that may be applied to additional sites in the future and which included efforts in biodiversity, renewable energy, environmental education, reforestation and climate quality.



### Produce for Better Health Foundation

Dole is a board-level member of the Produce for Better Health Foundation, a U.S.-based nonprofit that promotes increased daily consumption of fruits and vegetables.



### Action for Healthy Kids

Through a strategic partnership with Action for Healthy Kids that began in 2019, Dole is delivering a new digital nutrition toolkit that provides 140,000 parents and educators with dozens of interactive resources to support healthy eating, reaching more than 22 million children in the United States.



### Musa Breeding Corporation

Dole, in conjunction with other industry partners and the Honduran Research Foundation (FHIA), is working on the development of banana varieties that are resistant to Tropical Race 4 (TR4), a disease affecting banana crops in several production regions.

# For People



Dole is committed to continuously improving the lives and livelihoods of people and communities across our entire company.

Dole employees around the world share a common purpose – providing nutritious, high-quality fresh fruit and vegetables to help feed the world. Together, we take pride in making that happen, every day.

Our main core values of Integrity, Loyalty, Commitment and Respect are there to guide every decision we make, and to inspire everyone at Dole to constantly go further in positively impacting people's lives through our work.

Everywhere Dole operates, we have policies that respect human rights and the International Labor Organization (ILO) conventions. And we take steps not only to support our employees with education, training and good working conditions, but also to positively impact their families and the wider communities, too.

# Supporting employees

In many rural agricultural areas around the world, there is little economic development and limited job opportunities. Dole's presence has the potential to make a real difference in our employees' lives. We see this as one of our most important social impacts – and aim to cultivate good employee relationships that will grow and develop over many years of service within the company.

## Training and career development

Education and continuous training are cornerstones of Dole's approach to talent management. Dole has a longstanding culture of helping employees to acquire new skills and move up the ranks within the company. Talent development is managed at the divisional and site level, with each division offering programs and opportunities that are relevant to its workforce.

At Dole's salad processing plant in Soledad, California, for example, employees are offered free English and high school classes each weekday afternoon, as well as skills training in areas such as packaging machine operation, forklift driving and supervisory skills.

## Workplace equality

Non-discrimination in the workplace is a hallmark of Dole's working practices, as required by the Dole Code of Conduct. In the U.S., for example, Dole voluntarily implements an affirmative action plan to promote equal opportunities and conducts an annual audit to assess progress against the plan. The plan calls for hiring that reflects the local demographics in the communities around Dole's facilities, and each facility sets targets based on those demographics.

### Supporting female workers in Costa Rica

**In Costa Rica, Dole continues to recruit female workers on pineapple plantations, in an effort to make pineapple cultivation more gender inclusive.**

By actively recruiting female workers, Dole aims to support gender equity in an area of Costa Rican agriculture that has traditionally been dominated by all-male crews. Across our four pineapple plantations in the country, 90% of the harvest crews included female members as of early 2019.



**9.79**  
As of 2018, Dole employees globally had been with the company for an average of 9.79 years.



# Good working conditions

Dole wants to be viewed as the employer of choice everywhere we operate around the world. So complying with applicable labor codes is often just the beginning of what we do.

## Health, safety and welfare

Dole is committed to providing a safe, healthy working environment to all employees, whatever their role. Farms and facilities are regularly audited to check for worker welfare, such as ensuring that someone at the site is clearly responsible for workers' health, safety and welfare and that workers have access to clean drinking water and other basic amenities. In Dole's Tropical Fruits Division, these checks are managed under our own integrated management system, and many Dole and supplier sites around the world are audited against social standards and company requirements.

In Ecuador and Peru, the DALE Foundation, with the support of Dole and independent growers, has a program to help growers enhance the health and safety programs at their sites. The foundation provides infrastructure to two schools, runs courses and workshops to improve health and safety for households, and helps the local community develop small businesses to forward livelihoods.

## Fair wages

Dole's employees always receive the legally required compensation and benefits. Throughout Latin America, the wages paid by Dole are on average 20% above the legal minimum. Dole has also been actively involved in living wage initiatives in the produce industry, as new methodologies emerge and the awareness grows around the issue.

## Fair employment practices

Dole does not engage in or condone forced labor of any kind, and everyone throughout the company's workforce is required to comply with all relevant laws and regulations related to child labor. Our Code of Conduct prohibits Dole from doing business with any individual or company who is engaged in child labor, slavery or human trafficking.

In Latin America and South America specifically, Dole's management practices include checks to avoid child labor, and there are clauses in suppliers' contracts requiring them not to engage in these practices. Where relevant, Dole also provides training to ensure site managers understand these issues. In reality, forced or child labor is not prevalent in our industry, in part because governments in key fruit and vegetable producing countries have implemented stringent regulations and laws to prevent these practices.

## Freedom of association

Dole respects the International Labor Organization (ILO) conventions on freedom of association. Dole employees are free to join labor unions and to participate in collective bargaining through representatives of their own choosing. More than 11,000 Dole employees around the world were members of trade unions as of the end of 2018. We have many ongoing agreements in place, and we maintain positive relationships with the unions and other labor organizations.

### Understanding employees' living conditions

**Dole is the first agricultural company in the world to apply the Oxford University-developed Multi-Dimensional Poverty Index (MPI) to its own workers.**

The MPI – which is the United Nation's official poverty index – was originally created to analyze poverty country-by-country, and the methodology has been pioneered by Costa Rica for use by companies.

We are interviewing every Dole worker in Costa Rica. The objective is to better understand their socio-economic conditions – information that could help the company to identify the most vulnerable populations and prioritize efforts to improve their livelihoods. To that end, Dole plans to involve various national stakeholders, from government agencies to private organizations and social services agencies that might have programs in place to assist. The MPI program might also be expanded to other Dole locations across Latin America in the future.

### Union members by location

Europe	345
Latin America	8,675
Chile	112
United States	1,712
South Africa	47





# Community development

Health, education and entrepreneurship are the key focus areas for Dole's community development efforts.

In the U.S., Dole's farms and facilities support community initiatives that have been nominated by employees or where there is a clear local need. In Salinas, California, for example, employee-led teams take part in annual "Relay for Life" events to benefit the American Cancer Society. And at our salad processing plant in Ohio, employees have taken part in an annual ALS fundraising walk to discover treatments and a cure for Amyotrophic Lateral Sclerosis. Dole was an official local sponsor of the event in 2017 and 2018.

Dole's Fresh Vegetables Division makes annual donations to the United Way and provides a payroll deduction option for employee donations. The business also supports the Boys and Girls Club by sponsoring an annual fundraising event.

In Costa Rica, three community centers have been built through a Fairtrade program established by Dole and its employees. The centers offer academic training, occupational courses and health fairs - open to everyone in the community.

### Dole gives back

At the corporate level, Dole's sponsorships and philanthropic giving focus mainly on health and exercise. For example, Dole has sponsored marathons, races and cycling events.

### GOALS

Devote at least \$0.07 per box of Dole-branded bananas and pineapples sold to fund local community impact projects for the next five years, resulting in a cumulative social investment of \$50 million by 2025.

Donate 2,500 tons of fresh fruit and produce to underserved communities by 2025.

**7,700**  
school kits were donated to the children of Dole employees in Latin America in 2018, as part of an annual initiative.

## New community centers by and for Dole pineapple workers



In 2017, Dole and Fairtrade USA inaugurated two new community centers at Dole's Muelle and Bosque pineapple farms in Costa Rica.

The community centers were made possible by Fairtrade purchases at Whole Foods Market stores, which drive additional money to pineapple farmworkers to invest in projects of their choosing.

To earn Fairtrade certification, farms must adhere to rigorous social, environmental and economic standards. Once certified as Fairtrade, Community Development Funds

are earned with every purchase. After four years, the workers chose to invest these funds into community centers. The farmworkers identified a critical need and invested in a project that will serve the community for decades to come.

To date, more than 8,400 people have benefited from activities held at the community centers, including health campaigns and fairs as well as educational and technical programs impacting our workers, families and local communities.

# DALE Foundation: Improving lives in Latin America

Nearly 20 years ago, Dole and a group of independent growers in Ecuador set up a foundation with a clear purpose: find ways to improve the lives of workers and communities in and around the companies' farms and facilities.

The DALE Foundation continues its work to fulfill that mission today in both Ecuador and Peru. In 2000, the foundation adapted mobile medical units with the objective of bringing health to the farthest places where our workers live. They also have been used to offer emergency medical interventions in the wake of events such as floods. As of 2019, there are a total of 18 medical facilities in operation, five of which are mobile. This service benefits not only agricultural workers and their families, but also others in the community who need medical assistance.

### GOAL

By 2025, our goal is to expand the role of the DALE Foundation throughout the Latin American region.

The foundation has established two schools since its founding and supports others by providing infrastructure improvements and health programs for students.

Another of the foundation's key programs is called Training for Entrepreneurship. The objective is to train people so that they can establish a small business and thus improve family income and at the same time improve their quality of life. The foundation also offers workshops and talks on topics that are relevant to communities.

The DALE Foundation's impact:

- Over 1,604,900 health interventions carried out since 2000
- 80,000 people directly benefit each year, across more than 100 communities
- In 2018, over 16,000 people took part in the foundation's training program, which covered health prevention, environment protection, entrepreneurship, and more
- 2 schools in which approximately 800 students are educated each year

**\$36M**

The DALE Foundation has invested over \$36 million to date, mainly in education, medical and community development programs, since 2005.



# For Nature

For decades, Dole has been innovating to push the boundaries of sustainable agriculture – to find more efficient and more environmentally sustainable ways to grow fruits and vegetables to help feed the world.

Today, Dole's researchers and growers are working harder than ever to scale up past innovations and implement techniques, varieties and practices that can increase yields, improve soil health and/or optimize the use of water, energy, conventional fertilizers and crop protection products.

In nature, everything is connected. So, often a single agricultural idea turns out to have multiple environmental and commercial benefits.

# Agricultural innovation

Continuous improvement is an integral part of The Dole Way. Dole's Tropical Fruits Division, based in Costa Rica, has had an active research and innovation department for almost 60 years – a rarity in the industry as a whole. Dole also has research teams in Chile, focusing on innovation in deciduous fruits, and in the U.S., supporting Dole's Fresh Vegetables business.

The main objective: continuous agricultural science and technology innovations that can help our growers to increase yields and produce fruits and vegetables more efficiently, which are often better for the planet and for society – not least because it can mean using less water, energy and land to produce nutritious food to help feed the world's growing population.

Sometimes the innovation takes the form of new varieties of produce. In Chile, for example, there have been new varieties of grapes (Autumn Crisp and Sweet Globe), cherries (Regina) and blueberries (Top Shelf), all with higher yields, sweeter taste and firmer fruit that lasts longer.

In the U.S., Dole researchers are experimenting with ways to increase plant density for vegetable crops such as cauliflower, lettuce, celery and romaine with the goal of reducing total acres farmed along with the amount of water, fertilizer and crop protection that's needed per acre. The amount of tractor work required at the end of each season is also being reduced, leading to a smaller carbon footprint.

Dole researchers in the U.S. and Costa Rica are also experimenting with the use of GPS on field prep tractors for vegetables and pineapple crops to increase tillage efficiencies – for a more precise and efficient use of heavy farm equipment resulting in better care of the soil and decreased fuel consumption.

## Organic or conventional produce? We think the best answer is a better version of both



**At Dole, we are committed to continuously improving both our conventional and organic farming techniques to make them more sustainable.**

In our tropical fruits business, for example, we work under the principles of Integrated Pest Management, reducing the need for crop protection products. We look for ways to apply or adapt organic farming techniques to conventional crops, to improve our agricultural practices, and to apply insights gained in conventional farming to help organic operations scale to meet increasing demand.

# Finding solutions to pests and diseases

Much of Dole's agricultural research has focused on ways to address pests and crop diseases – to keep them under control, which can help to reduce potential food loss.

For decades, Dole has been refining the techniques growers use to protect tropical fruit crops from diseases such as black sigatoka and pests including nematodes and weevils, as part of an integrated pest management system.

More recently, Dole and its partners have been working to address the potential spread of Fusarium Wilt Tropical Race 4, or TR4, a soil-borne disease that has affected banana crops on several continents in recent years.

## Taking action to prevent the spread of TR4

Since TR4 started moving west from Asia in 2012, Dole and the industry began to develop a variety of measures aimed at containing the disease. Following the discovery of TR4 in northern Colombia in 2019, we have reinforced the protocols in order to prevent it from spreading further.

For example, we have restricted access to our farms and have issued strict guidelines and procedures for any travel by Dole personnel to countries and locations where TR4 is known to be present.

Meanwhile, each Dole banana farm has been updating and, where necessary, strengthening its site-specific TR4 prevention plans and activities. The plans are risk-based and rooted in the layout and location of the farm.

Dole also continues to share best practices with independent growers and to engage with governments, multi-stakeholder initiatives and industry partners – to ensure that our actions are coordinated with the wider response, both in Latin America and globally.



## Developing a TR4-resistant banana variety

Dole is actively engaged in the effort to ensure long-term sustainability of banana supply, despite the threat of TR4.

Since 2016, Dole has been part of a consortium that is working, with the Honduran Research Foundation (FHIA), on the development of banana varieties that are resistant to TR4. Breeding a new kind of banana is painstaking work, and few organizations have as much experience in this area as FHIA. The research team is making good progress, having made more than 10 million hand pollinations and thus bringing a new variety ever closer to becoming a reality.

# Water stewardship

Finding ways to reduce water use on farms and at packing and processing facilities is a challenge Dole has been working on for many years – with steady progress that continues today.

## Water recycling systems

A good example is water recycling. A banana packing plant with a water reuse system uses up to 80% less water than a facility without one installed. In Dole's Tropical Fruits Division, which grows and distributes bananas, pineapples and other tropical fruits, 78% of packing plants utilize water reuse systems.

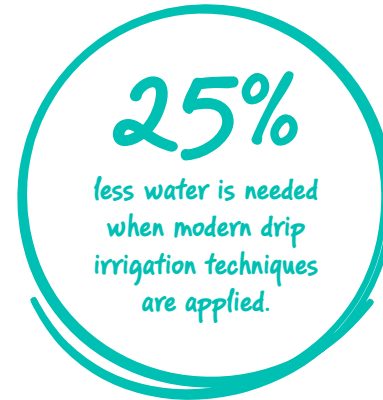
## Irrigation design and techniques

Dole's Diversified Division has been working to change over all of its agricultural sites (both those owned by Dole and those of independent growers) to drip irrigation, which uses 25% less water compared to older methods.

Under drip irrigation, plants are fed exactly the amount of water and fertilizer they need for optimal growth. By early 2019, the rollout was about 90% complete.

In South Africa, over 75% of Dole's grape farms use either drip or micro irrigation. Data from a variety of sources, including probes positioned at six depths in the soil, are continually monitored in order to schedule irrigation at times and in amounts that will be best for the plants. Water for these farms comes from the Orange River, a sustainable water source that to date has not been affected by droughts that have occurred elsewhere in South Africa. In 2018, the farms used approximately 11,500 cubic meters of source water, substantially less than the 15,000 cubic meters permitted by the relevant authority – and a testament to the ongoing water management efforts in place at these farms.

In areas of our Fresh Vegetables Division where drip irrigation would provide optimum quality or yields, 60% of the acreage operated by Dole had been converted to drip irrigation by 2018, with a goal of achieving 75% by 2025.



In our Tropical Fruits Division, research and innovation professionals design systems to optimize water use, both at company-owned farms and those of independent growers. Field research helps to determine the exact water requirements for each banana plant as well as the optimal calibration of soil moisture probes, allowing growers to establish irrigation programs that are the best for the crop while saving water. In banana farming, the water savings from the use of these modern techniques is estimated to be at least 25%.

In Hawaii, all Dole-owned farms use water-efficient drip irrigation. A real-time soil moisture monitoring system helps growers to determine when and how much to irrigate. Pineapples are planted under a mulch film, which reduces evaporation, meaning less water is needed, and all water used for Dole's Hawaiian pineapple crops is recycled or re-used surface water rather than groundwater.

## GOAL

Achieve 100% optimized water practices in Dole-managed farms and packing facilities by 2025.



# Soil conservation

Soil is the most important asset on any farm, and good soil conservation practices are a key part of sustainable agriculture.

In many locations, Dole has been farming the same land for decades. Looking after the soil is part of the job, because healthier soil can mean healthier crops with better quality, size, color, taste and shelf life. Sound soil conservation and management practices have allowed Dole farms to consistently produce high yields, healthier plants, and maintain good soil while minimizing environmental impact. Good soil practices mean less erosion, which is good for the surrounding environment.

## Pineapple growing practices

In 2008, Dole began implementing and requiring growers to make a fundamental change in pineapple production in Costa Rica. Instead of spraying the plants with herbicide and burning them after a harvest (which had been the common industry practice for many years), farms began shredding the plants, incorporating the organic matter into the soil and using micro-organisms to help break down this green matter faster, adding nutrients to the soil.

Over time, Dole and its growers began to see significant improvements in soil health. Organic matter in the soil increased by about 25%, while the need for synthetic fertilizers decreased.

## Crop rotation at vegetable farms

Vegetable farms operated by Dole use both crop and land rotation to maintain soil health and support optimal yields. Dole's researchers continually experiment with new rotation practices to discover which provide the best organic matter and are best suited to suppress diseases that may be present in the growing area.

## Soil health techniques on banana plantations



The application of beneficial micro-organisms at Dole banana plantations in Latin America is showing promising signs that increased soil health can increase yields and reduce the need for synthetic fertilizers.

At our farm in La Gomera in Guatemala, Dole has successfully introduced a practice of using micro-organisms to break down crop residue – the leaves and parts of banana plants that stay behind in the field after harvest – improving plants' root systems and increasing absorption of nutrients, for increased yields. Since the original trial in 2017, the technique is being tested at banana farms across the region to see if those farms can achieve similar results.

At a Dole organic banana plantation in Manabí, Ecuador, growers and researchers have been experimenting with the reintroduction of biological activity in compost as a way to naturally improve soil health.



# Responsible crop protection



A targeted herbicide application system developed in partnership with a local university in Costa Rica has reduced the use of herbicides on some Dole tropical fruit farms by up to 60% compared to a 2007 baseline.

Advances in planting density, crop yields and crop rotation practices can all have a positive impact on the amount of crop protection products that are needed overall.

## Safe use of crop protection products

Users of crop protection products receive training on the safe use and handling of agrichemicals and undergo medical examination and cholinesterase monitoring (if applicable). At each farm, management system practices thoroughly define the safety precautions that must be followed when crop protection products are applied, and audits are regularly performed to check that the procedures are being followed.



For example, to help eradicate European grapevine moth populations at farms in Chile, Dole growers have introduced pheromones designed to prevent male moths from being able to find mates and procreate.

Research innovations have helped to further optimize the use of crop protection products. On Dole tropical fruit plantations, for example, switching to more precise application methods has helped to cut the use of post-harvest fungicides by about 80% compared to a 2000 baseline.

Dole's company-wide policy is to use crop protection products only when and where necessary, and always with the proper care and in accordance with applicable laws.

Whenever possible, Dole growers make use of natural approaches for controlling pests and plant diseases, including biological controls (such as beneficial predatory wasps that attack certain harmful insect pests) and bioantagonists (micro-organisms that infect specific pests).

# Protecting nature

In some locations, Dole's agricultural operations are near or adjacent to forests, watersheds or other natural environments.

Good agricultural practices, implemented in line with applicable laws and best practices, help to prevent negative impacts to these habitats.

For example, careful soil preparation techniques are not only good for the farm itself, but can also help to prevent erosion that could impact aquatic life in nearby rivers and streams. In many locations, Dole maintains forests or other natural buffer zones between the crops and surrounding ecosystems.

## Protecting biodiversity in Costa Rica



At Valle La Estrella in Costa Rica, Dole, GIZ (a German government agency) and local NGOs have completed the "Green Star" three-year study into the biodiversity in Estrella Valley, where a Dole-owned banana plantation sits adjacent to the Hitoy Cerere Biological Reserve.

Community volunteers were given training and sent into the field for three consecutive years to catalog animal biodiversity on non-agricultural

lands around the plantation. This first-of-its-kind study documented the presence of at least 13 species of amphibians and reptiles, eight species of mammals plus a variety of beetles and aquatic micro-invertebrates.

Researchers also found that forest land within the Estrella Valley plantation boundaries make the site effectively carbon neutral. In Costa Rica, almost one-third of the land Dole owns is covered by forests or other natural ecosystems.

The Green Star study provides a baseline for additional monitoring and could offer a model for similar studies at agricultural sites in the region and beyond. By raising awareness both locally and internationally of the biodiversity found in these areas, the study will help to ensure these habitats are valued and well cared for into the future.

Dole maintains over **3,000** hectares (over 7,000 acres) of forest on its banana and pineapple farms.



# Minimizing our carbon footprint

Dole recognizes that climate change is real and that the food and agriculture industries have a role to play in mitigating its effects.

In Dole's agricultural and office-based operations, we've taken many steps to improve efficiency and save energy.

For example, one of our salad plants is installing wind turbines that, when operational, are expected to generate 5.4MW of low-carbon energy – 68% of the facility's energy needs. At Dole production facilities in California, North Carolina and Ohio, more than 4,500 light bulbs have been changed to energy-saving LEDs.

## Clean energy on Dole's farms

At the farm level, Dole continues to take many steps to reduce the carbon footprint of agricultural operations, such as replacing older farm equipment with newer, more efficient equipment and adopting methods that require fewer fertilizer and crop protection products – which ultimately means fewer emissions.

At Dole-owned farms in Hawaii, for example, over a third of crops are irrigated using a zero-electricity gravity-charged system, and at Dole's fresh fruit packing plant in Wahiawa, photovoltaic panels provide 33% of electricity. A new system that converts waste biomass to electricity is expected to be ready for use in 2020, further reducing Dole's climate footprint in Hawaii.

In Costa Rica, Dole has partnered with a local solar provider to install over 2,500 solar panels at four banana packing plants and the farm office – to supply over 90% of the electricity needs at these sites.

### GOAL

Achieve net zero carbon emissions at the farm-level from Dole-managed operations by 2030. See page 7 for details.

## Reducing CO<sub>2</sub> during shipping

Research suggests that transportation is the biggest source of CO<sub>2</sub> emissions in Dole's farm-to-retailer value chain, in some cases comprising up to about two-thirds of the carbon footprint. Specialized shipping and distribution companies carry out much of this work, but Dole has its own fleet of 15 ships and about 15,000 refrigerated containers, delivering fresh tropical fruit from Latin America to North America and Europe. That gives us an opportunity to make changes that can make a significant and positive impact.

Dole continually renews its fleet with more efficient vessels. In 2017, we brought three new ships into the fleet, reducing carbon emissions on our Pacific Coast distribution route by about 30% on a per unit basis and reducing total emissions from distribution of Central and South American-grown tropical fruits in the U.S. by about 10%.

We have also been replacing the containers we use to transport tropical fruits to the U.S., with about 500 newer and more efficient units rotated into the fleet each year. In 2004, the container fleet had 24.3 tons of CO<sub>2</sub>-equivalent emissions per unit per year, and by 2018 that number was reduced to 2.6 tons – with a total reduction of 244,000 metric tons, compared to 2004 performance, which is roughly equal to removing 53,000 average-sized passenger cars from the roads in a given year.

### GOAL

Reduce emissions from shipping by 30% by 2030 (from 2015 levels).



The International Maritime Organization has set a limit for sulphur in fuel oil used on board ships (for ships operating outside of designated emission control areas) effective from January 1, 2020. Dole fully embraces and supports this new standard, which should have major health and environmental benefits. To comply with the new standard, Dole is installing scrubber systems on five of the vessels it uses to transport tropical fruit.

## Moving fruit with electric trucks

At the Port of San Diego in California, Dole has introduced zero-emission electric trucks as part of a demonstration project that will help the San Diego Port Tenants Association fulfill its plan to reduce greenhouse gas emissions by 10% by 2020 and 25% by 2035. The electric trucks replaced diesel-fueled trucks used in the loading and unloading of bananas and pineapples, saving an estimated 40.76 metric tons of GHGs annually and helping the port to achieve a projected total reduction of 944 metric tons.

## Tech-led delivery efficiencies in Chile

Dole's business in Chile has introduced software that's helping to increase efficiency in the local distribution of vegetables.

The Quadminds software uses an algorithm to select the best routes – which means food can arrive fresher and with fewer emissions from deliveries. It's estimated that at least two fewer vehicles are now needed to cover the same number of Dole deliveries, with up to 8% less carbon emissions as a result.



# Waste reduction and recycling



The U.S. Embassy in Costa Rica presented its first-ever Environmental Sustainability Award to Recyclast in 2019, in recognition of the organization's pioneering work.

On farms and in processing plants, Dole's "reduce, reuse and recycle" approach continues to foster initiatives aimed at creating less waste.

## Plastic recycling and reuse

On Dole's banana plantations, plastic field bags and sheaths used to protect banana stems from insects and damage during growing are reused or recycled. Plastic twine used in the growing process is also recycled.

Recyclast, a joint venture recycling company established in Costa Rica by Dole, Del Monte and the Montecristo Group, celebrated its 25th anniversary in 2018. Recyclast was created to recycle banana bags and twine from farms into plastic corner boards used to maintain pallets during transport. Over the years, Recyclast has expanded to receive plastic from other agricultural operations such as pineapples and melons. In addition to agricultural plastics, the facility now relies on post-consumer plastic waste, including materials sourced from small, woman-owned organizations in Costa Rica.

Dole's Diversified Division is experimenting with more sustainable alternatives to the use of conventional plastic that fruit is packed in to prevent ripening during transport. Two new fruit-bag technologies are being assessed to determine their suitability as a large-scale substitute for conventional materials.

Dole salad processing facilities in North Carolina and Ohio have introduced reuse and recycling of cardboard cartons and bins. Fiber bins used for transporting bulk vegetables are reused three times, on average. The North Carolina salad facility recycled nearly three million pounds of cardboard in 2018.

## Less waste during vegetable processing

Dole's vegetable processing plants in the U.S. have launched several initiatives aimed at reducing waste, including sending all vegetable matter culled during salad preparation for composting rather than to landfills. The installation of new, precision equipment, combined with process improvements, are helping to reduce food waste during processing – and there are plans for additional installations that could further reduce food waste.

Over one million pounds of raw vegetable material had been saved at Dole's North Carolina salad processing facility by the middle of 2019, thanks to yield improvements.

## Consumer packaging innovations

Dole supports the recent push within the banana industry to replace plastic consumer bags with bands of tape to reduce the overall use of plastic. But we believe it is also possible to go further. We're testing several options for compostable alternatives to conventional consumer-level packaging for these products, as well as options for returnable containers.

### GOAL

Ensure that all Dole tropical fruits packaging materials are either recyclable or compostable by 2025.

# Our standards and certifications

Dole's senior leadership sets the company's approach to corporate responsibility and sustainability in broad terms, and the Dole Code of Conduct establishes core values and expectations that apply to all Dole employees everywhere in the world.

Each division, operation and employee is responsible for managing their work in ways that live up to those standards. Dole businesses develop and maintain management practices in line with a deep understanding of the agricultural, scientific and social aspects of the work in that part of our company – as well as the expectations of the division's key stakeholders, wherever they may be in the world.

## The Dole Code of Conduct

Dole requires all employees, long-term contractors and key suppliers to affirm their commitment to uphold the principles defined in the Dole Code of Conduct Code of Conduct, and to regularly reaffirm that commitment. The Code includes key policies and expectations on a wide range of topics, from ethics and legal requirements to our commitment to support local communities and our policies on workplace behavior, community impacts and the responsible use of crop protection products. Stakeholders are encouraged to report any concerns via Dole's internet or telephone hotline (via contact details found within the Code of Conduct itself).

## Sustainability certifications

Third-party certifications and audits, along with stringent Dole-implemented standards developed over many years, help our customers and other stakeholders to know that the fruit and vegetables we sell have been produced in accordance with the highest environmental and labor standards. Additionally, many large retailers have their own detailed requirements for the fresh produce sold in their stores – and require regular audits to confirm compliance with those requirements.

### ISO 14001 and SA 8000

Dole was the first agricultural company to achieve these international environmental and social certifications, which along with Dole's own standards formed the basis for development of the Dole integrated management system that is used by the company's tropical fruits business.

### Global GAP and GFSI

Many major retailers require Global Good Agricultural Practice certification and/or certifications against one of the programs recognized by the Global Food Safety Initiative. In 2018, all products shipped by Dole Fresh Vegetables were grown on GFSI-compliant farms, for example.

### Certified organic

Dole is the world's largest shipper of certified-organic bananas and pineapples and has a growing footprint as a distributor of organic vegetables and packaged salads, too. In 2018, Dole shipped 270,00 metric tons of organic bananas and pineapples globally.

### Fairtrade

Dole distributes Fairtrade-certified bananas from the Dominican Republic, Ecuador, Colombia, Costa Rica and Peru and Fairtrade-certified pineapples from Costa Rica to markets in Europe and the United States.

### Rainforest Alliance

A majority of Dole banana and pineapple operations have been certified by the Rainforest Alliance, signaling that the fruit is grown on farms that meet stringent sustainable agriculture criteria.

## Sustainability in Dole's supply chain

In addition to Dole's own farms, the company sources fresh fruit and vegetables from independent growers around the world. Many of our supplier relationships stretch back over many years of knowledge sharing and mutual growth. Growers are required to comply with the Dole Code of Conduct and Supplier Manual and conduct regular audits to help to ensure that good agricultural and social practices are followed. In many cases, Dole customers require their own audits, and the same certifications that are required of Dole operations are also required of the independent grower.



# For Food

As one of the world's leading food companies, Dole stands for quality fresh produce – and to us, that means safe, nutritious fruits and vegetables that taste as good as they look.

Everyone who works at Dole is passionate about providing safe, high-quality fruit and vegetables that help feed the world. And we're all united by a shared desire to make sure it's the freshest, safest and most nutritious produce on the market.

Our ultimate goal as a company is to support healthy living through nutritious food. We're constantly innovating to bring consumers tastier, simpler products and to find creative, scientifically backed ways to promote nutrition – especially among kids.

And we're working tirelessly with our partners and other stakeholders around the world to increase the availability of fresh, delicious produce.



# Promoting healthy eating



**1M**  
 subscribers receive Dole's  
 Nutrition News newsletter  
 - with insights and tips on  
 how to enjoy a healthy,  
 plant-forward diet  
 - each month.

Fresh fruits and vegetables are a key part of a healthy diet, so it's a natural choice for Dole to take action to promote healthy eating - with a special focus on helping young people to understand the importance of healthy food.

## Nutrition education

Dole publishes dozens of plant-forward recipes each year to inspire consumers to make nutritious meals at home. Our email newsletter, *Nutrition News*, offers a monthly look at nutrition research, along with recipes and tips for greater health and wellness. We also share nutrition and wellness insights with Dole's more than 1.7 million followers on social media.

In the U.S., Dole is a founding member of the National 5 A Day For Better Health Program and is the produce industry leader in developing technology-based nutrition education programs for children.

In 2019, Dole signed on for a one-year partnership with the nonprofit Action for Healthy Kids, to develop toolkits and programs to help teachers and parents deliver health and wellness messages to kids.

## Healthy, nutritious salads

In the U.S., Dole is constantly innovating to bring tasty, nutritious salad options to grocery store shelves, giving consumers a quick and easy way to create healthy meals at home. For example, our new Bountiful Kits™ combine fresh vegetables with custom dressings and hearty, plant-based ingredients. Inside each bag is a packet with different combinations of fresh grains, seeds, corn, lentils, beans or peppers which provide a satiating salad that "eats like a meal."

Dole's new salad graphics, launched in late 2017, were designed to make it easy for consumers to review nutritional and ingredient information when making decisions in-store.

## GOAL

Reach 750 million cumulative impressions annually across all of Dole's health, nutrition and wellness initiatives programs by 2025.



## Putting our commitment into practice

Disney's movie characters have appeared on more than  
**9B**  
 servings of Dole produce since 2016.



## Dole and Disney: encouraging kids to choose fruit

Since 2016, The Walt Disney Company-owned movie characters have been appearing on Dole products such as bananas, pineapples and vegetables at grocery stores across the U.S.

The idea behind the collaboration is to give parents a helping hand in getting their kids to choose healthier meals and snacks, while giving kids an added reason to be excited about choosing healthier foods.

Promotions are timed to coincide with Disney releases. For example, Star Wars™ imagery appeared on Dole products and in advertising in 2017 during the release of *The Last Jedi*™ and more recently *Captain Marvel*™ characters appeared on stickers in spring 2019 to coincide with a movie release.



## Bringing nutrition education to schools in Greece

In Greece, Dole has been funding nutrition education programs in schools since 2012 in partnership with the Greek Ministry of Education.

Each year, Dole-sponsored nutritionists hold hundreds of sessions with groups of students, to teach them about the principles of healthy eating. The program has so far reached over 710,000 students and faculty in more than 4,000 schools, and successive governments have praised its value in helping to tackle the country's growing obesity problem.

# Doing good through food

Dole supports food- and nutrition-related causes through monetary and in-kind donations and through employee-organized volunteering. We're also taking steps to tackle food waste, especially in our U.S. vegetables and salads business.

**52M LBS**

*In 2018, Dole donated 52 million LBS portions or tons of fresh fruit and vegetables to food banks, schools and other philanthropic organizations globally.*

## Supporting food causes

Dole's salad processing facilities in the U.S. donated 247,380 cases of salads and vegetables to local community organizations in 2018, equivalent to about five million servings. Employees also give their time to support food causes. For example, employees at our salad plant in Ohio volunteer at the Springfield Soup Kitchen throughout the year, and at Dole's Soledad salad plant in California, all managers commit to volunteer at least twice each year at the Food Bank of Monterey County.

Dole has donated more than 80 salad bars to U.S. schools through the United Fresh Start Foundation's "Salad Bars to Schools" initiative – to give kids a healthy option during the school day.

In Chile, Dole is a collaborating partner of Red de Alimentos, a nonprofit that rescues food that is suitable for human consumption, reducing waste and providing food to those most in need.

Red de Alimentos has helped more than 200,000 people have access to nutritious food. To date, Dole has donated over 24,000 kilograms (about 53,000 pounds) of vegetables to support the organization's work.

In Honduras, Dole donates approximately 11,700 tons of fruit to employees and their families per year.

## Reducing food waste from packaged salads

Dole is conscious of the increasing issue of food waste in the developed world – including the social as well as environmental implications when large quantities of food are discarded either by retailers or by consumers.

Dole's Fresh Vegetables Division in the U.S. has taken a number of steps aimed at reducing food waste from its products. For example, products carry "Best If Used By" dates instead of "Use By" dates, and the products are formulated to provide the most shelf life for retailers while still ensuring an excellent eating experience for consumers, helping to minimize supermarket disposals.

# Maintaining food safety

Dole's global food safety program is risk-based and grounded in the latest science. Each Dole division has a food safety team working to deliver a common strategy, including compliance with Dole's global management system, which gives each division scope to execute food safety controls in ways that are appropriate to its work.

All divisions use a global set of standards and processes for supplier approvals, based on a shared understanding of the risks associated with each type of food product.

We're continuously working to further strengthen the system. For example, at the end of 2017, we rolled out a harmonized worldwide system for recalls – a set of processes that are the same, in the event of a recall, everywhere in the world. More recently, we clarified the water treatment standards that we require from leafy greens suppliers.

*All Dole suppliers are required to be certified by a program benchmarked against Global Food Safety Initiative requirements.*

On food safety, Dole works not just with growers but also with our peers and competitors – through participation in multi-stakeholder initiatives such as the Global Food Safety Initiative and collaboration with pan-industry organizations such as the California and Arizona Leafy Greens Marketing Associations – to raise the bar on food safety and put additional standards into place. We're also working with researchers to better understand the challenges and to strengthen prevention strategies and controls.

## Food safety controls, step by step

We have robust environmental controls and monitor both the product and the environment at every step of the process, including:

- On the farm, Dole has clear requirements on what can be added to the soil – and when it can be added – as the soil is prepared for planting.
- During growing, controls include irrigation specifications, water testing and pest management procedures.
- Pre-harvest testing: if anything unacceptable is detected, the relevant crop is tilled under.
- At harvest, equipment controls and hygiene requirements help to protect the produce.
- In coolers, storage temperatures are controlled to maintain quality and food safety.
- At sorting facilities, there are strict handling practices and environmental controls – as the produce is washed, dried, sorted and packed.

## The blockchain solution

**Dole has teamed up with Walmart, IBM and other partners to demonstrate the potential for blockchain – a technology that has been used by financial institutions for years – to bring about a step change in food safety.**

Blockchain cuts the average time needed for food safety investigations from weeks to mere seconds. Produce that's been logged via blockchain can be instantly tracked back through the supply chain, giving retailers and consumers confidence in the event of a recall. Eventually, consumers will be able to scan each bag of salad or package of vegetables in-store to get information about its journey from farm to store shelf.

Dole has implemented blockchain in its supply chain for salads and fresh vegetables, and as of early 2019, the data was already being shared with several retail customers. Security measures built into the system prevent each retailer from seeing proprietary information about another retailer's products and vice versa. There are plans to roll out the technology for other Dole produce items in the near future.

## GOAL

**Implement blockchain product tagging technology and/or advanced traceability solutions in all Dole divisions by 2025.**



Dole Food Company, Inc.  
200 South Tryon Street, Ste 600  
Charlotte, NC 28202

[www.Dole.com](http://www.Dole.com)