



Cultivating Investment

Resilient Agriculture Can Pay Off
for Food Companies

September 2026





Key Takeaways

Extreme weather events, fueled by climate change, are causing yield losses across major commodities. Coffee, cocoa, corn, soy, dairy, and beef production are all experiencing disruptions from extreme temperatures, drought, flooding, and shifting pest and disease pressures.

While traditional risk-hedging strategies have protected companies from commodity shocks, their effectiveness is eroding. Businesses have relied on well-established risk management tools, including diversifying sourcing, forward contracts for commodities, and passing costs on to customers. These approaches worked well when volatility followed historical patterns of supply and price.

But as climate change accelerates, predictability is disappearing. Today, these risk management strategies may delay the financial impact of disruption, but they cannot eliminate the underlying and growing risks posed by increasingly frequent and intense extreme weather events.

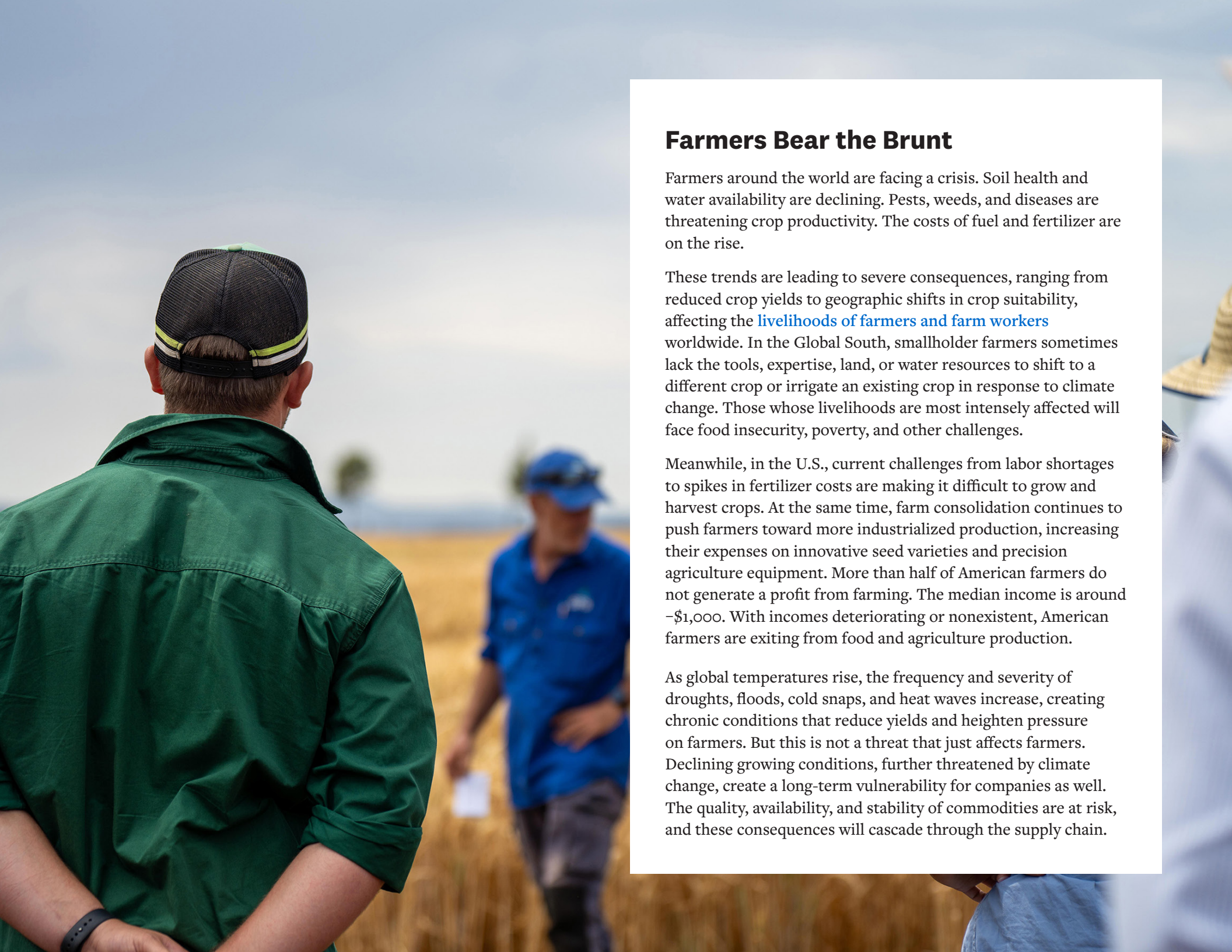
The financial impacts are being felt now. Tyson [recently closed a facility in Nebraska](#) and [reduced operations in Texas](#) due to high beef prices and low domestic supply. Cocoa prices surged in 2024, creating market volatility in 2025, and squeezing profits and margins for [Barry Callebaut](#) and [Mondelēz International](#). As emissions continue, these extreme weather events would be more intense and frequent, costing companies up to six times more.

Regenerative agriculture is a risk management strategy that builds resilience in the agricultural system. Investments in farmers and commodity supply sheds can help stabilize supply, buffer environmental shocks, and reduce market volatility, benefiting companies that rely on agricultural products as well as the full food and agriculture supply chain.

The business case is measurable. Ceres' analysis shows that by making meaningful investments in regenerative agriculture programs, companies are better positioned to protect long-term value. For example, were the food industry to adopt a full suite of regenerative practices, future damages from climate-related price spikes could be reduced.

Up to \$500 million annually
Potential profits food companies like Tyson Foods and General Mills could safeguard annually through regenerative agriculture.

For investors, regenerative agriculture creates significant risk management and investment opportunities. This report examines how companies are increasingly impacted by climate change, identifying key elements of an effective regenerative agriculture program that can help investors engage with companies on risk management and identify investment opportunities in leading-edge companies and solutions.



Farmers Bear the Brunt

Farmers around the world are facing a crisis. Soil health and water availability are declining. Pests, weeds, and diseases are threatening crop productivity. The costs of fuel and fertilizer are on the rise.

These trends are leading to severe consequences, ranging from reduced crop yields to geographic shifts in crop suitability, affecting the [livelihoods of farmers and farm workers](#) worldwide. In the Global South, smallholder farmers sometimes lack the tools, expertise, land, or water resources to shift to a different crop or irrigate an existing crop in response to climate change. Those whose livelihoods are most intensely affected will face food insecurity, poverty, and other challenges.

Meanwhile, in the U.S., current challenges from labor shortages to spikes in fertilizer costs are making it difficult to grow and harvest crops. At the same time, farm consolidation continues to push farmers toward more industrialized production, increasing their expenses on innovative seed varieties and precision agriculture equipment. More than half of American farmers do not generate a profit from farming. The median income is around -\$1,000. With incomes deteriorating or nonexistent, American farmers are exiting from food and agriculture production.

As global temperatures rise, the frequency and severity of droughts, floods, cold snaps, and heat waves increase, creating chronic conditions that reduce yields and heighten pressure on farmers. But this is not a threat that just affects farmers. Declining growing conditions, further threatened by climate change, create a long-term vulnerability for companies as well. The quality, availability, and stability of commodities are at risk, and these consequences will cascade through the supply chain.



The Cascading Effect on Companies

While climate change is recognized as a material financial risk, Ceres’ analysis shows that specific extreme weather events are already translating into measurable financial impacts for food companies. Across sub-industries and for major commodities, the evidence is mounting: climate-driven disruptions are affecting production, destabilizing supply chains, and eroding financial performance.

Some companies feel the effects of yield losses and their associated price spikes directly. Others use strategies that buffer the direct effects of low yields, but they are experiencing price volatility, quality decline, or tightening of global supply. Regardless of what the company sells or where it is positioned in the value chain, no company is insulated.

As climate change continues, modeling shows that at 3°C of warming by 2060, companies purchasing beef, cocoa, coffee, corn, dairy, or soy could see a twofold to sixfold increase in damages from climate-driven price spikes.

Climate Risks Could Sharply Increase Commodity Prices by 2060

Commodity	Damage increase
Beef	> 2 x
Cocoa	> 3 x
Coffee	~ 4 x
Corn	> 6 x
Dairy	> 2 x
Soy	> 3 x



Tyson Foods: Cattle herds at a historic low

Climate impacts show up unevenly across the food sector.

Companies such as Tyson Foods feel the effects immediately through declines in cattle herds and surging prices that may not be recouped. Most recently, Tyson Foods reported operating losses in its beef segment for fiscal years 2024 (\$381 million) and 2025 (\$1.135 billion) that were directly linked to a prolonged drought in the U.S. From 2021 to 2025, the drought created

several unprecedented conditions for raising beef cattle. The pastures the cattle graze on failed, corn and soy yields that produce feed were down, lowering feed availability, and heat stress reduced cattle productivity. All these factors **increased cattle prices** by 83% between 2021 and 2025 and **reduced herd size** by 7% in the U.S.

Impact of drought on cattle production: lower supply, higher prices, profits drop

The cause

Severe droughts between 2021 and 2025

Observed effects

Failing pastures lead to **less available feed**

Reduced yields for other inputs (corn and soy) **increase feed prices**

Heat stress **reduces beef cattle productivity**

Market effects

7% cattle decline 2021 - 2025, smallest herds since 1950s

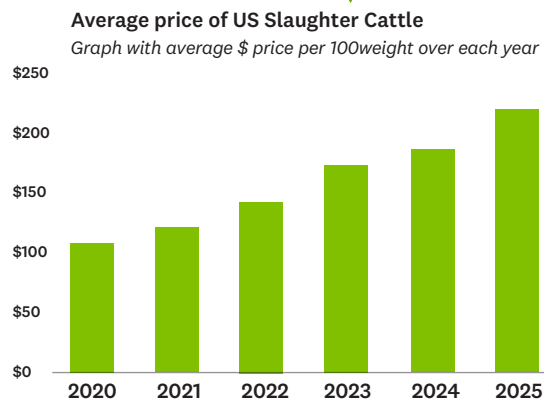
Cattle prices rise 83% 2021 - 2025, highest to date

Tyson Foods effect

Beef segment operating income drops by almost \$3 billion from 2022 - 2024

Tyson Foods reports:

- Between 2022 and 2023, Tyson's beef segment sales volumes declined by 3% (-\$0.6 billion)
- Between 2022-2025 a rise in cattle prices resulted in higher live cattle costs for Tyson (\$1.3-2.1 billion each year)
- Tyson increased its beef segment sale prices by 4.4% in 2024 and 9% in 2025
- Tyson foods reports profit drop and takes \$343 million in goodwill impairment in Q3 2025
- The company reported a loss in 2025 of \$1.1B in the beef segment in its 2025 4th quarter report

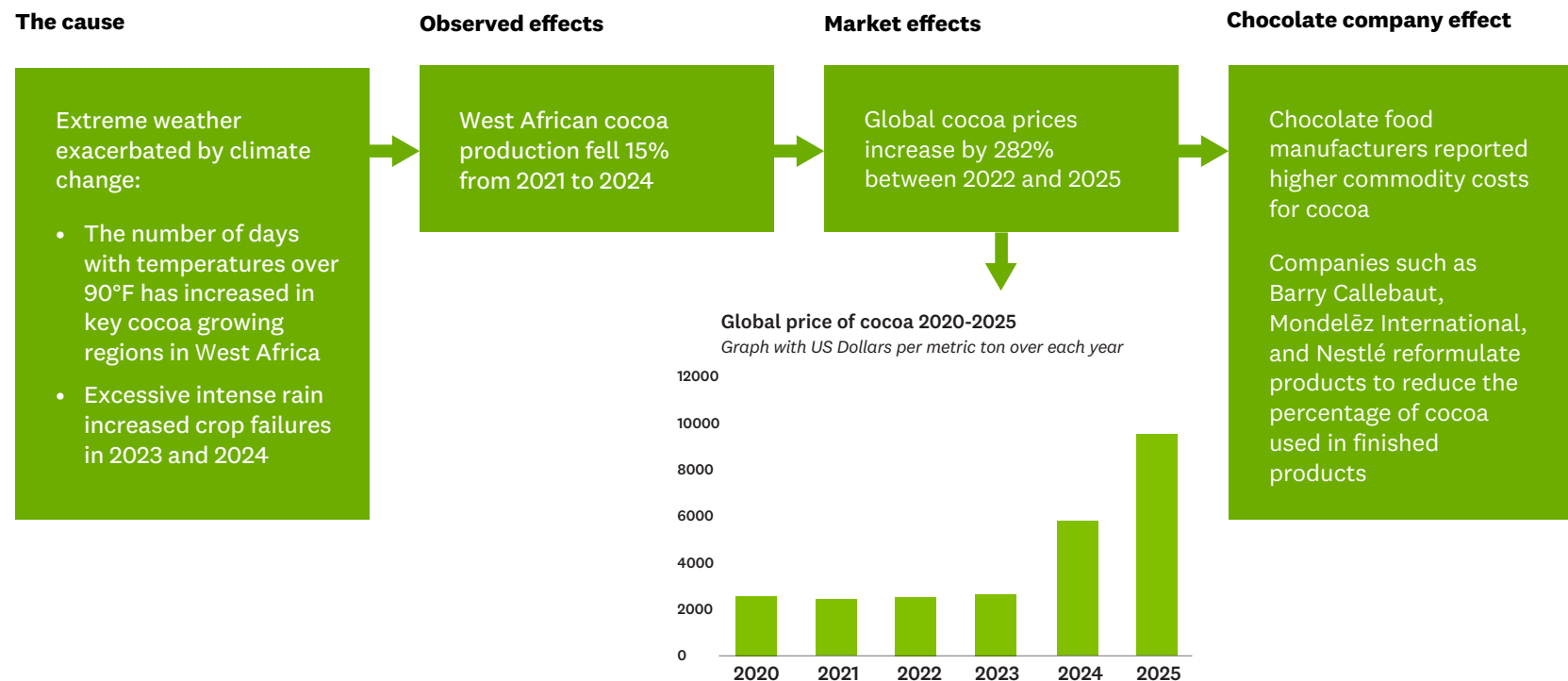


Chocolate Companies: Volatility in the futures market

Other companies feel climate impacts through increasing price volatility. Africa produces 70% of the world's cocoa supply, but cacao plants grow slowly and thrive within specific temperature and precipitation ranges. While a range of threats affect production, increasing days of excessive heat, more erratic rainfall, and disease pressure amplified by climate change caused [cocoa production to decline](#) between 2021 and 2024. On the cocoa futures market, [prices soared](#) from uncertainty in cocoa supply, before crashing later that year. This extreme volatility created

financial strain for chocolate food manufacturers, leading to shrinking margins at Barry Callebaut and Mondelēz International. Recognizing that climate-driven volatility is not a temporary threat, chocolate manufacturers are looking for more permanent cost-management strategies rather than a temporary crisis response. Companies are [reformulating products and developing chocolate alternatives](#) to reduce cocoa content and their exposure to price volatility.

Volatile cocoa prices and the hunt to manage costs



Coffee Companies: Single-variety reliance

Some businesses face compounding threats exacerbated by their dependence on one variety of a commodity. The global coffee supply is at risk due to frost, drought, and rising global temperatures. As global temperatures increase, land suitable for coffee production decreases, while production zones will have to shift to higher altitudes or regions further from the equator. But suitable land is scarce, and such shifts would only partially compensate for lost production of particularly sensitive coffee varieties. In 2021, droughts in South America, along with other extreme weather events across the globe, disrupted the Arabica coffee supply, causing a 6.5% drop in global coffee production and a 36% spike in global coffee price. Tough climate conditions continued, and by 2025, the global Arabica coffee price was 150% above the 2020 price.

Products that rely on a single variety of one commodity make companies particularly dependent on a reliable supply of that ingredient, such as those sourcing Arabica coffee. Coffee companies typically hedge against rising coffee prices through long-term purchase agreements and financial instruments and passing along increased costs to consumers. These hedging strategies help protect their profits in the short term, but they will have a diminishing effect as coffee prices inch upward and shocks last longer. These approaches cannot make up for supply disruptions to a single variety caused by extreme weather events or disease outbreaks. In total, these impacts can slowly erode business value and expose the company to increasing risk unless countered with proactive supply chain investments.

Fallout from coffee price spikes, despite hedging

The cause

Extreme weather exacerbated by climate change:

- Droughts in 2021 and 2024 in South America affect coffee growth, yield, and survival rates
- “Cold snap” in Brazil with frost hurts survival rate of especially young trees
- Excessive rains and cloudiness in Colombia harms the flowering period

Observed effects, 2021

Brazil: production drops 16.5% compared to 2020

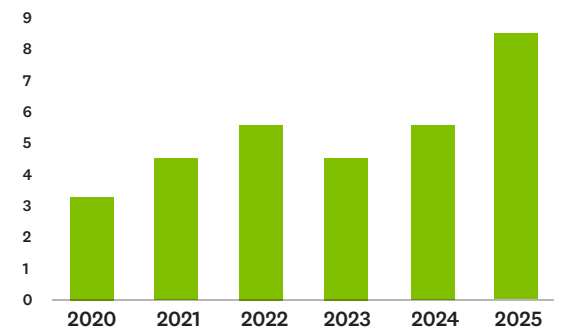
Colombia: production down 11.9% compared to 2020

Global: coffee production contracts 6.5%

Market effects

Global coffee prices up by 36% (Arabica) in 2021 vs. 2020

Global price of Coffee Arabica 2020-2025
Graph with US dollars per kilogram over each year



A constellation of factors can expose a company to risk

Regardless of a company's dependence on a specific commodity, a range of supply chain factors can influence a company's exposure to climate risk.

Risk factor	Example
Commodity or sourcing region is highly vulnerable to extreme weather events	Beef production in the U.S. is vulnerable to drought
Commodity is perishable or slow to scale/reduce production	Milk cannot be stockpiled like grain; cattle herds take years to rebuild
Supply chain is rigid or company has limited sourcing flexibility	Arabica coffee and other single origin varieties have limited growing areas
Inputs (fuel, feed, and fertilizer) face yield and price volatility	Beef production is highly reliant on feed price and availability
Company has limited ability to hedge or pass on prices	Traders can pass on costs more easily than packaged foods companies
Ingredients or product portfolios are less diversified	Retailers and restaurants are more diversified than traders and meatpackers
Physical infrastructure and operations are vulnerable to climate disruptions	Infrastructure or shipping routes can be vulnerable to flooding

The eroding effectiveness of traditional risk management

Before climate change brought unprecedented shifts to commodity markets, companies could use traditional agricultural risk management strategies to manage price volatility or supply disruptions. These traditional hedging approaches **are increasingly falling short**, and they fail to address the underlying risk.

Types of hedging	Trends eroding effectiveness
Natural: Revenues and costs are linked to the same commodity. Price increases may be offset by selling output at a higher price	The price of commodities gets so high that companies cannot raise prices enough to compensate
Contractual: Contracts are formulated to reduce risk for one or both parties, such as agreeing on a fixed price for a future date (including forward contracts and long-term agreements)	An agreement set in advance, based on historical yield data, does not effectively factor in changes in yield, quality, or price in the event of an extreme weather event
Financial: Financial instruments, typically traded on regulated exchanges, lock in price (such as options or futures contracts)	Climate and yield forecasts create speculation and extreme price volatility on regulated exchanges. The amount of leverage needed to maintain contracts becomes too high for companies to manage
Operational: Operational changes are implemented to reduce risk (such as diversifying products, buying from or selling to different countries, and stockpiling supply)	The unpredictable and systemic nature of extreme climate events affects crops and commodities grown globally, making it hard to switch sourcing and leading to diminishing stockpiles over time



Regenerative Agriculture is a Smart Investment in Supply Chain Stability

To manage risk under these changing conditions, companies recognize the need to invest in solutions that protect farmer viability, surety of supply, and cost stability, and ultimately build resilience in the agricultural supply chain.

Transitioning to regenerative agriculture means switching from extractive conventional farming practices towards ones that restore and improve soil and farm ecosystems. Practices like no-till, cover cropping, and improved crop rotations can improve soil health and water quality, enabling farmers to better withstand or recover from acute and chronic climate events and stay

viable in a challenging industry. Regenerative agriculture can also reduce soil carbon losses and GHG emissions, especially when it enables reductions in synthetic fertilizer application.

Since yield improvements are not immediate, regenerative agriculture is seen as a long-term investment. Improvements in yield and resilience are tied to gradual improvements in soil, water, and ecosystem health and typically accrue over time. But these changes deliver compounding returns: beyond bolstering growing conditions and boosting productivity, regenerative agriculture can, over time, enhance the nutrient density of crops and support product differentiation. Many regenerative practices improve yields or strengthen yield stability, but those improvements are not immediate.

Regenerative agriculture can benefit companies across the value chain

The type of company	The company context	How they benefit
The company sources directly from farms	Companies with direct farm relationships such as: • Small and mid-sized companies • Companies valuing quality or origin • Companies purchasing perishable products such as beef, dairy, fresh produce	Since their inputs, costs, and revenue depend directly on these farms, direct farmer support translates to more stability and security of supply, improved quality, and potential cost benefits
The company depends on agricultural commodity markets	Companies that purchase through intermediaries such as: • Global packaged food companies • Companies buying processed products (e.g. wheat flour, oils, sweeteners)	Since their inputs, costs, and revenue depend on the health and resilience of the agricultural system, catalyzing system investments will reduce volatility and decrease costs
The company is committed to reducing its climate and nature impacts	Companies that value sustainability, such as: • Consumer-facing companies • Speciality and premium brand companies • CEO's with long-term views (e.g., family-owned companies)	In addition to the above, farm and system-level investments support a healthy U.S. farming system, creating conditions for long-term economic growth with resilient rural economies and healthy consumers

Resilience on the farm translates to resilience for companies

Farmers and producers will be the first to benefit from improved resilience at the farm level. When scaled across all agricultural landscapes, regenerative agriculture can improve the long-term

stability of production systems across an entire region, and companies in the food and agriculture industry can be buffered from future yield losses and their associated price spikes.

Climate impact	Risks under the status quo	Modeled investment benefits
<i>Future impacts modeled under a a high-emissions scenario, approaching 3°C of warming</i>		
Corn Between 2020 and 2022, global corn prices rose more than 90%. High fertilizer and energy prices and strong global demand largely drove this price spike, but our modeling attributes roughly 20 percentage points to a drought that occurred over the same period.	• Even diversified companies aren't immune. While corn is estimated to represent only 3% of General Mills' purchasing costs, a modeled drought is estimated to cut annual profit by about \$50 million. • Under a 3°C scenario, an event similar to the 2020-2022 drought is estimated to be 6 times more intense costing the company approximately \$300 million.	• For a company such as General Mills, yield losses could be reduced by 5% to 25%, which would equate to annual benefits of up to \$75 million. • Investments could incentivize practices that improve soil health, provide windbreaks, improve input-use efficiency, improve water retention, and increase overall resilience for corn production.
Beef A prolonged drought that began in 2021 continues to impact U.S. cattle production. Herd sizes have dropped, while price of cattle has increased 83%, the highest to date.	• This price spike has significantly impacted Tyson Foods. Its beef segment operating income dropped by almost \$3 billion between 2022 and 2024 and the company took a \$343 million goodwill impairment in 2025. • Estimating that the damage from the recent increase in cattle prices was \$1 billion, Tyson could experience \$2 billion in damages under a 3°C scenario.	• Tyson Foods could reduce its future damages by 5% to 25%, saving up to \$500 million. • Investment in regenerative agriculture could include practices that integrate pasture with trees, employ methane-reducing feed additives, implement manure management technologies, and improve cattle genetics.

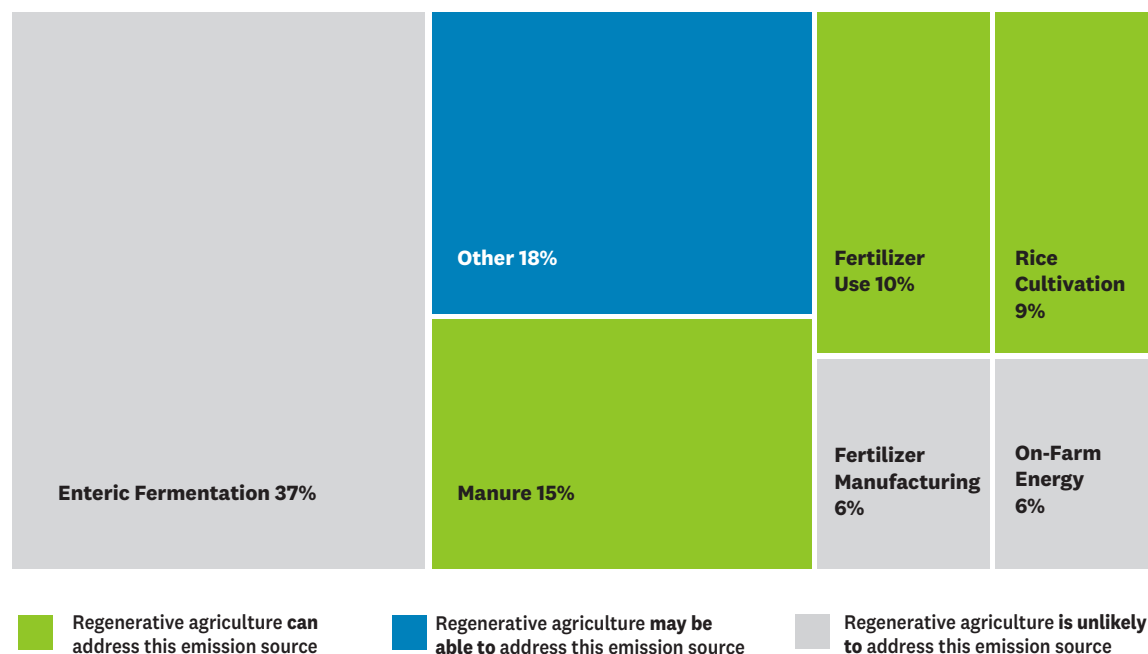
Climate mitigation remains a priority

Regenerative agriculture practices are an adaptation measure that can help limit—not eliminate—losses from extreme weather events. Climate mitigation remains a necessary part of climate action for agricultural companies seeking to maintain profitability in the future. While adaptation can protect companies from some of the hazards of rising global temperatures, mitigating greenhouse gas emissions is the only way to reduce the intensity and frequency of extreme weather events caused by climate change. Even with “perfect” farm management and regenerative agriculture implementation, adaptation cannot prevent circumstances such as extreme heat during critical growth periods, extended droughts, or market oversupply in years of local failure, all of which can imperil farmer livelihoods. Without mitigating emissions, warming will continue beyond 2°C and make these occurrences more frequent and severe.

Global temperatures crossing the 2°C threshold will increase the intensity and frequency of hazards beyond the effective limits of adaptation actions. If summer temperatures frequently exceed the critical growing threshold for commodities like corn, adaptation cannot reduce the risk of crop failure, which can in turn destroy farmer livelihoods and cause price volatility. Eventually, climate change may not only impact price volatility, but also commodity availability.

Companies will benefit significantly from practices that combine adaptation and mitigation. Practices like no-till, cover cropping, and crop rotation produce benefits at the farm level while sequestering carbon in the soil and limiting nitrous oxide emissions by reducing the amount of fertilizer needed to achieve the same yield.

In addition to removing carbon dioxide, regenerative agriculture has the potential to reduce greenhouse gas emissions by tackling some major sources



- Practices like cover cropping, crop rotation, and reduced tillage may reduce nitrous oxide emissions by decreasing fertilizer requirements, preventing run-off, and reducing soil disturbance.
- Alternative manure management practices, such as composting, can reduce methane emissions.
- Improved irrigation practices can reduce rice methane emissions.

Source: FAOSTAT

Regenerative Agriculture

While there is [no universal definition of regenerative agriculture](#), the most effective programs will take a whole-systems approach to rebuilding soil health, protecting water resources, supporting biodiversity, reducing emissions, and strengthening livelihoods.

A range of programs, frameworks, certifications, and standards from [the International Finance Corporation \(IFC\)](#), [Sustainable Agriculture Initiative \(SAI\) Platform](#), [World Business Council for Sustainable Development \(WBCSD\)](#), and [Regen10](#) identify components of a regenerative agriculture program. Some focus on key regenerative practices while others focus on regenerative outcomes.

The range and flexibility of approaches are intentional, allowing farmers and ranchers to implement practices based on their specific circumstances.



But this also means that regenerative agriculture programs that are overly generalized or vague are susceptible to claims of greenwashing. For regenerative practices to be effective, they must be location- and context-specific.

Paired with investing in regenerative agriculture at the farm level, companies can implement operational changes that further support agricultural resilience. Diversification of ingredient sourcing and shifting away from animal-source ingredients or those especially vulnerable to climate change help create enabling conditions for regenerative agriculture by increasing demand for rotational crops while also mitigating climate risk.

The following elements will be useful in formulating or evaluating a regenerative agriculture plan to improve supply chain resilience.

Elements of a successful regenerative agriculture program

- 1 / Define what regenerative agriculture means for the company
- 2 / Clarify the scope of the program
- 3 / Choose an approach to implementation and reporting results

Elements of a successful regenerative agriculture program

1 / Define what regenerative agriculture means for the company

Companies should specify what regenerative agriculture means and state their objectives for implementing a regenerative agriculture strategy. A robust program takes a whole system approach aimed at driving change across four major categories: climate, soil, water, and biodiversity. Companies will also need to ensure that regenerative agriculture programs support farmer livelihoods. Farm profitability and technical support ensure that farmers are well positioned to sustain regenerative agriculture practices and are essential to a robust program. While a regenerative agriculture strategy can be a critical component of a climate plan, it should not replace emissions reduction targets. Despite the climate benefits of certain regenerative practices, companies still need to address emissions sources that create risks for them and that regenerative agriculture does not effectively reduce.

Nestlé has adopted the following definition of regenerative agriculture in line with the SAI Platform: “An approach to farming which aims to conserve and restore natural resources, primarily soil, as well as water and biodiversity, while capturing carbon in soils and plant biomass, and to support farmers’ livelihoods.” The company measures the level of adoption of regenerative agriculture using the **Farm Assessment Tool** which evaluates a set of regenerative practices and desired outcomes, tailored to crop-specific production. This definition and mode of implementation allows farmers flexibility while clearly delineating what the company considers to be regenerative. Alongside implementation of a regenerative program, Nestlé is working to reduce total emissions across all scopes including FLAG emissions by 50% by 2030.

2 / Clarify the scope of the program

Companies should specify the timeframe for implementing and scaling the program (such as how many months or years it expects producers and partners to adopt regenerative agriculture), the geographies within its scope, and the commodities included. They should also put the scale of the program in context by sharing their relative impact.

For example, a company can disclose what proportion of its procurement volume or sourcing footprint is in the regenerative agriculture program. Without this information, a program could fail to address large portions of a company’s supply chain or be small relative to the scale of its sourcing.

Danone set a goal of sourcing 30% of key ingredients from farms transitioning to regenerative practices by 2025. The company reports having already achieved 42% of ingredients—a significant portion of its supply chains.

3 / Choose an approach to implementation and reporting results

Regenerative agriculture programs tend to focus either on practices or outcomes. A practice-based approach focuses on the adoption of practices by farmers that are assumed to lead to regenerative outcomes. An outcome-based approach is agnostic about specific farming or ranching practices and focuses instead on measurable changes in soil, water, biodiversity, climate, and livelihoods.

Identify the intended outcomes

An outcome-based approach recognizes that farmers need flexibility in deciding which practices suit the crops they grow and the region's growing conditions. It gives farmers the option of identifying the most appropriate farming practices, which are suited to their circumstances.

While there is no set of agreed-upon metrics for regenerative agriculture, common outcome metrics that companies can track include:

Soil Health	• soil erosion or stability • soil water holding capacity • soil organic carbon • carbon mineralization potential
Water Health	• water use efficiency • water availability • nutrient runoff
Biodiversity	• pollution • land use efficiency
Climate	• soil carbon sequestration • GHG emissions • input use
Livelihoods	• farm profitability • farmer access to finance

Regenerative agriculture programs that do not include outcomes in all five outcome areas may result in tradeoffs. Companies and investors should be aware of negative impacts and develop regenerative agriculture programs that aim to minimize unintended consequences and lead to positive outcomes across all five categories.

Identifying the intended outcomes of the strategy gives investors and stakeholders a clear understanding of the company's goals. Measuring and reporting progress towards outcomes demonstrates that the regenerative agriculture strategy is helping the company achieve its goals. While reporting outcomes is considered a best practice, it may not be practical for farmers or companies to measure outcomes across all geographies and commodities.

Archer Daniels Midland awards financial incentives of up to \$40 per acre equivalent if growers can demonstrate reductions in nitrogen, phosphate, and potassium fertilizers, lime, pesticides, and fuel and energy. Farmers have the flexibility to implement whichever practices work best for their crops and geography. Reduced input demonstrates that farmers are shifting from conventional farming practices towards more regenerative approaches. To go a step further, the company could disclose the overall impact of its program.

Practices as a proxy of outcomes

Since measuring and reporting progress toward outcomes can be challenging across a range of commodities and growing regions, focusing on the implementation of regenerative agriculture practices can be a reasonable proxy for outcomes, particularly for companies with diversified global sourcing. Additionally, improvements in soil, water, biodiversity, and climate can take years to accrue. A practice-based regenerative agriculture program enables farmers to transition away from conventional farming practices and can be a good starting point for companies.

The right practice will depend on what crops are being grown and in which region production takes place. Making improvements to soil, water, climate, and biodiversity will be best achieved by deploying a range of practices on the farm. Adopting a single practice will lead to limited results and may not fully contribute to improved resilience. For example, shifting to no-till or minimal tilling can help protect against soil erosion, but it could result in increased use of herbicides to reduce competition from weeds. Most frameworks emphasize that to achieve the best results, regenerative practices should be implemented as a system.

These practices include cover cropping, reduced tillage, diversified crop rotations, interspersed trees and shrubs between productive rows, nutrient management, and rotational grazing. Recognizing that practices will vary based on what crops are being grown and in which region production takes place, **IFC**'s practice-oriented approach proposes minimum criteria for a holistic approach to regenerative agriculture to ensure the program is indeed supporting farmland and farmer resilience. This framework recommends a suite of practices in the following farm strategies:

- Diversifying crop rotations when appropriate
- Applying at least one soil protection practice
- Integrating rotational grazing of livestock into the farming system when animals are present
- Adopting an input management strategy that increases nutrient availability
- Crop protection from natural and biological sources

This framework does not mandate specific practices. Rather, it offers categories of strategies and provides the farmer with flexibility depending on commodity or geographic constraints.

Programs designed for a specific commodity and geography are better suited for mandating specific practices. For example, Mondelēz International sources 100% of its European wheat from farmers who comply with the company's **Harmony Wheat Production Charter**. This charter mandates 20 practices, including crop rotation, preservation of on-farm biodiversity and pollinator habitats, reduced tillage, soil cover, and optimized fertilizer application. Over time, shifting towards measuring and reporting progress towards outcomes would help to demonstrate that the regenerative agriculture strategy is helping the company achieve its goals.



The Investor's Role in Scaling Regenerative Agriculture

Investors can play a critical role by engaging portfolio companies in helping them develop comprehensive regenerative agriculture programs, track and disclose outcomes, and allocate capital toward building resilience in the agricultural supply chain.

Engagement Questions

To engage companies that do not yet have a regenerative agriculture program

- Has the company evaluated how a regenerative agriculture program could mitigate risk, build resilience, or create value for the company?
- Has the company experienced climate-related impacts to commodity production that may have been reduced by more resilient agricultural production?
- Does the company use hedging strategies to minimize disruption to the availability of supply? Has the company noticed any changes to the efficacy of such strategies?

To understand the quality of a company's regenerative agriculture program

The goal of the regenerative agriculture program

- Does the company clearly define regenerative agriculture?
- Do the company's objectives for its regenerative agriculture program include benefits to soil, water, climate, biodiversity, and farmer livelihoods?

The scope and materiality of the program

- Does the company specify which commodities are under the regenerative program? Why were they chosen, and how do they relate to its business?
- What is the scale of the program and how does it compare to the company's relative impact? For example, what percent of procurement volume or percent of the sourcing footprint does the program cover?
- What is the timeframe for implementing and scaling the program?

Tracking and disclosing outcomes

- Is the company using an outcomes-based or practice-based approach to implementing and reporting results?
- Has the company identified outcomes across all five areas of regenerative agriculture (soil health, water health, biodiversity, climate, livelihoods)?
- Are these outcomes measured, monitored, and reported?
- If not, has the company identified agricultural practices that are part of the regenerative agriculture program?
- Do the practices align with the stated objectives of the regenerative agriculture program?
- How does the company monitor practices that are being implemented?



Allocating capital toward building resilience in the agricultural supply chain

- Does the company provide incentives or support to farmers to enable a transition to regenerative agriculture practices?
- What is the nature of the support? What percent of suppliers receive support?
- Was the program designed with input from farmers around their needs to fully implement and achieve intended outcomes?

Pair regenerative agriculture with climate mitigation

- What are the company's plans to mitigate the remaining agricultural emissions in its supply chain, not covered by regenerative agriculture practices?

To manage risk, address impacts, and protect long-term value, investors can help ensure that corporate regenerative strategies are implemented at scale and deliver meaningful environmental and financial results.

Ceres can support investors interested in engaging on regenerative agriculture

A robust regenerative agriculture program takes a whole-systems approach to rebuilding soil health, protecting water resources, supporting biodiversity, reducing emissions, and strengthening livelihoods. Since there is no set of agreed-upon metrics for regenerative agriculture, it can be challenging to evaluate a company's program. Ceres Cultivate is aimed at helping investors navigate the complexity. Cultivate is an initiative that supports investors engaging with companies across the food and agriculture sector on climate-related financial risks and helps them capitalize on investment opportunities to accelerate the transition to a stronger, more resilient food system.

About Ceres

Ceres is a nonprofit advocacy organization working to accelerate the transition to a cleaner, more just, and resilient economy. With data-driven research and expert analysis, we inspire investors and companies to act on the world's sustainability challenges and advocate for market and policy solutions. Together, our efforts transform industries, unlock new business opportunities, and foster innovation and job growth — proving that sustainability is the bottom line. For more information, visit ceres.org.

Acknowledgments

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Thanks to the colleagues at Ceres who provided invaluable editorial review and design support with this project, including Maura Conron, Charles Gibbons, Heather Green, Caroline Grunewald, Christie Merino Jones, Allan Pearce and Meryl Richards.

The economic analysis underlying the financial impact to companies and the benefits of investing in regenerative agriculture was conducted by Clear Foresight and Partners. Ceres is grateful to Bauke ten Brinke and Sjoerd ten Brinke for their valuable contributions.

Ceres would also like to thank the following expert contributors for providing their valuable time and thoughtful feedback to this project and informing its recommendations.

Benjamin Bartley, United Natural Foods Inc
Gemma Coate, ALDI SÜD Group
Margot Conover, General Mills
Kelly Kim, WK Kellogg
Justin McAllister, Bunge
Julia Shuck, Costco
Olivia Whitener, Simple Mills

This report was made possible with the support of the Global Methane Hub and the Platform for Agriculture + Climate Transformation.

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