

CPG FINANCING FOR SUSTAINABLE AGRICULTURE

How food and beverage consumer packaged goods companies are funding the shift across their value chains





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INTRODUCTION

Financial barriers remain one of the biggest challenges preventing U.S. farmers from adopting more sustainable practices that boost productivity. The adoption of agricultural practices that improve soil and water health, reduce environmental impacts, and generate additional ecosystem benefits requires farmers to make substantial investments of time, labor and money. These financial barriers to sustainable agriculture are consistently cited by U.S. farmers as a top obstacle to change. Despite an increasing number of programs designed to support U.S. farmers through the financial transition to sustainable practices, farmers are held back by a status quo system that incentivizes short-term agricultural production over long-term economic viability, yield resilience, land value and associated environmental benefits.

Increasingly, large food and beverage consumer packaged goods companies ("CPGs") recognize they can play a leading role in supporting farmers to adopt sustainable agriculture practices. Analysis of the top 100 global CPG food companies shows that 40.5M acres and \$3.2B of investment are committed under a regenerative agriculture target. Although there is positive intent, there have also been barriers to turning commitments into action. CPG sustainability, procurement and finance teams are often unclear about how to fund the shift to sustainable agriculture.

This discussion brief highlights existing ways CPGs are deploying capital to advance sustainable agriculture in the U.S. and emerging strategies that present exciting opportunities. It aims to provide industry context to frame further discussions about how food and beverage CPGs in the U.S. can catalyze food system transformation, both through internal pathways and in collaboration with external partners. While there may be useful insights for a range of readers, the primary intended audience are CPG executives in sustainability, procurement and finance functions who are gaining familiarity with financing sustainable agriculture programs or have some familiarity already and are seeking to expand programs.

Broadly, we define sustainable agriculture as production systems that improve soil and water health through conservation practices (e.g., crop rotation, cover crops, no-till), reduce environmental impacts (e.g., greenhouse gas emissions, nutrient runoff), enhance farm resilience against growing climate-related risks, and generate additional ecosystem benefits.

Given the recent pullback in U.S. federal funding, successful private sector action has never been more important to accelerate adoption of sustainable agriculture. The capital deployment examples we highlight are bright spots amidst a challenging landscape and demonstrate the leading role that food and beverage CPGs continue to play. We encourage companies to use this discussion brief as a starting point to engage in candid conversation about how to unlock internal and external capital to scale sustainable agriculture in their own supply chains.

Why should CPGs invest in sustainable agriculture?

The value created by food and beverage CPGs ultimately traces back to farmland and freshwater. While most agricultural inputs are sourced upstream from a CPG company's core operations, disruption to the predictable production of agricultural inputs places massive financial value at stake — a risk already heightened by climate instability and water scarcity.

From a financial perspective, companies create more financial value when they generate higher free cash flow over the long term.³ Past performance documents historical competitive advantages but does not guarantee sustained competitive advantages in the future. Looking ahead, future market volatility may be greater than in the recent past. For mature CPG businesses, the baseline growth outlook can be flat or even decline due to changing market trends, competitive dynamics and the disruptive impacts of climate change.

The business case for corporate action most often takes a version of quantifying value at stake. Total value at stake is the value projected under business-as-usual, plus the value associated with actions that companies can take to protect against risks and the value associated with actions to capture new opportunities.⁴ Put another way, value at stake for CPGs is the value saved from protecting today plus the value of building for tomorrow.

Business-as-usual for food and agriculture companies is increasingly affected by rising temperatures, changing hydrologic cycles and extreme weather events. In 2023 and 2024, two of the world's warmest years on record, climate change related crop failure led to record-high prices for cocoa (global), coffee (global), olive oil (global), rice (Japan/India), potatoes (Europe/India) and vegetables (U.S./China/South Korea).5

These realities have prompted companies with high near-term value at stake to move swiftly in protecting today's agricultural supply chains. Driscoll's, for example, uses forecasting models to determine which of today's growing regions may not remain viable in the future and makes capital investments to diversify future supply viability.6 As another example, in 2022 McCain Foods received 15% less volume from growers than contracted, requiring supplemental procurement from the spot market at higher prices. The Strengthening supply resiliency has been the primary driver of McCain Foods' commitment to implementing regenerative agriculture practices across 100% of potato acreage worldwide by 2030.8,9

Some companies have found building for tomorrow to be the more persuasive business case for action. Many CPGs cite demand from customers (retailers, food service or other CPGs) as the driving factor for the longevity of a sustainable agriculture program. Customer demand mirrors broader consumer trends, and consumer purchase intent for sustainability is strong and growing - half of consumers globally say they are willing to pay more for sustainable food and beverage products. 10 Encouragingly, this intent is translating into action, with ESG-linked products outperforming peers in recent years. 11 There is, however, nuance in execution: sales impact differs by category, requiring companies to potentially build a portfolio of sustainable products to increase brand equity and achieve outsized growth.¹²

As climate change increasingly influences how businesses operate, CPG investment in sustainable agriculture is a strategic investment in protecting today and building for tomorrow. CPGs that move now - prioritizing the right crops and products - will lock in advantaged supply and growth opportunities. Those who wait will ultimately pay more for the same capabilities under stronger deadline pressure, potentially eroding financial margins and corporate performance relative to more proactive competitors.

Example actions

Benefits to CPG functions

Value at stake for CPGs

Protecting today

Actions companies take to minimize exposure to supply chain, regulatory, reputational, and climate-related market risks.

- · Reducing reliance on water-stressed regions.
- · Building traceability to understand product origin, guard against media scrutiny and achieve compliance with forthcoming standards.
- · Ensuring compliance with deforestation regulations.
- · Meeting investor environmental, social, and governance-related expectations to protect access to capital.

Procurement: Improve supply resiliency.



Finance: Prevent cash flow erosion.



Sustainability: Maintain license to operate.

Building for tomorrow

Actions companies take to capture new opportunities focused on innovation, growth, differentiation and navigating climate-related market changes.

- Marketing sustainability as a source of brand premium.
- Using sustainability leadership to win retailer partnerships or better shelf space.
- · Entering new markets with low-carbon or circular offerings.
- Developing a new sustainable product.



Procurement: Open dialogue for supplier innovation and collaboration.



Finance: Create scenarios for financial upside.



Sustainability: Build brand equity and consumer trust.

BARRIERS TO CPG CAPITAL DEPLOYMENT

CPG investment in sustainable agriculture has the potential to catalyze food system transformation for participants across the value chain. But the reality is that companies face a range of challenges in deploying capital to sustainable agriculture. Interviews with CPG professionals indicate four types of barriers: financial constraints, psychological constraints, organizational constraints, and lack of sufficient enabling conditions.

Financial constraints

Common challenges

Competing for scarce annual operating budget dollars: Absent major strategic shifts, annual operating budgets typically reflect incremental changes from the prior year's budget. CPG functions must make compelling cases for funding requests amongst competing priorities . e.g., increase marketing spend,

hold budget for anticipated cost of goods sold ("COGS")

increase, or expand sustainability efforts.

Unclear ROI for sustainable agriculture investments: The benefits of sustainable agriculture investments are often difficult to quantify. Sustainability benefits may not match core business key performance indicators ("KPIs") and may not hit financial return on investment ("ROI") thresholds used

to assess more conventional uses of CPG capital.

Financial short-termism: The desire to maximize short-term shareholder value results in companies prioritizing quick financial gains over long-term investment. This pressure is particularly strong for public companies subject to quarterly reporting and intense financial metrics scrutiny (e.g., an uphill battle for any program that increases COGS). By prioritizing immediate returns, companies may underinvest in areas that are crucial for long-term competitiveness, such as sustainable agriculture.

Sharing financial cost across the value chain: While CPGs are well positioned to kick-start change in sustainable agriculture practice adoption, the benefits of those practices are distributed across the entire value chain - from farmers to suppliers to retailers to consumers. Because CPGs only capture a portion of benefits, they see a need for sharing responsibility and financial costs across the value chain and across external beneficiaries to ensure fairness and scalability.

Prospective solutions

- Increase cross-functional financial literacy.
- Collaborate on workarounds to internal finance and accounting processes.
- · Collaborate with value chain stakeholders.
- Collaborate with sources of external capital.

Psychological constraints

Anchoring to existing market expectations: Societal stakeholders of CPG companies (e.g., consumers, customers, employees, investors, and others) hold market expectations around food prices, production costs, gross margins and profit allocation that are shaped by system subsidies and externalities. These expectations create strong psychological anchors, making shifts such as increased costs to source sustainably grown ingredients difficult for societal stakeholders to

Risk perceptions of sustainable agriculture **investments**: Perceptions of risk in sustainable agriculture investments may exceed the magnitude of actual risk factors. CPG professionals may be overconfident in existing practices and hesitant to disrupt established systems. Concerns about operational impacts, unfamiliarity with implementation requirements, and fear of greenwashing accusations or internal reputational damage further reinforce this aversion to change.

Psychological short-termism: Due to the human tendency to value the present more than the future, CPG leaders may discount the impact of their individual actions today to shaping the future. Organizations may be structured with incentives that reward short-term performance, further solidifying this mindset.

Status quo bias: Cognitive biases lead to tendencies to prefer the status quo over new options, even when new options offer more benefits. Biases such as finding comfort in the familiar and feeling the pain of losses more strongly than gains may mean leaders are reluctant to spend social capital advocating for new ideas.

- · Go big on communication.

Organizational constraints

Sustainability is bolt-on, not built-in: Most CPGs hold core values central to their mission of making high quality products, with sustainability later incorporated but not built into core values. As a result, sustainability efforts often sit in silos, with narrow functional ownership, bottlenecks in executive decision-making and misaligned KPIs and incentives that hinder progress toward sustainable outcomes.

Requirements for sourcing flexibility: To preserve the flexibility of sourcing to match evolving business needs or sourcing to increase business competitiveness, CPGs tend to prioritize flexibility in their supply base rather than commit to long-term relationships with specific suppliers. This reduces the incentive for CPGs to invest in improving agricultural practices, as any improvements they help make in a producer's practices may be lost if they later switch suppliers.

Leadership changes and employee turnover: Changes in leadership or key employees are disruptive to workflows. Months or years of internal progress on certain initiatives can be set back when strategies shift, priorities change or internal stakeholders are shuffled to reflect changes in personnel or leadership agendas.

Scaling pilots requires operational change: Many CPGs cite successful pilots in sustainable agriculture but struggle to scale up initiatives. Due to the complexity of CPG supply chains, the scaling of initiatives often requires significant operational change. This may include stakeholder coordination across multiple functions along with change management and new systems implementation across large numbers of employees in disparate functions.

- Horizontally integrate sustainability via corporate level KPIs.
- Increase cross-functional sustainability literacy.
- · Re-assess strategic tradeoffs.
- Decentralize decision-making / increase empowerment.

Lack of sufficient enabling conditions

Lack of collective industry advancement: Many CPGs are averse to being first movers in strategic initiatives and act only when others in the industry do so, creating inertia for the status quo. Risk aversion to deviation from industry standards contributes to a lack of individual company progress without collective industry advancement. Antitrust concerns, disagreement on impact measurement and unclear ecological benefits allocation often impedes industry partnership.

Narrow perception of the role of CPGs in the value chain: CPGs play a specific role in the value chain – transforming raw materials into products and marketing and distributing those products. Deploying capital to producers upstream is often considered out of scope for CPGs.

Lack of sufficient data on the impact of sustainable agriculture: Conventional agriculture has widely accepted datasets due to decades of research and implementation. Datasets that include sustainable practices are still growing. A lack of robust data on costs / benefits / impacts, coupled with the long data collection time affiliated with agricultural research, hinders CPG decision-making for sustainable agriculture.

Lack of aligned government policies: In the U.S., agricultural system subsidies and externalities have impacted the true cost of food. Policies have established a system that incentivizes short-term production maximization over long-term economic viability, yield resilience and environmental benefits. Regulatory uncertainty around the role of CPGs in climate change adaptation and mitigation further exacerbates planning and implementation challenges.

- Advocate for policy change.
- Collaborate with key partners on data collection (e.g., start-ups and academia).

Build proof points beyond pilots.

- Partner with cross-functional teams to provide them with wins.

HOW CPGS CURRENTLY FINANCE SUSTAINABLE AGRICULTURE

Despite the barriers, many CPG companies are actively funding the shift to sustainable agriculture in the U.S. EDF has worked with dozens of top food and beverage companies paving the way. Collaboration with sustainability, procurement and finance leaders at these companies reveal the following three insights.



Insight 1

Most CPGs use their own supply chain as the foundation for organizing sustainable agriculture initiatives.

CPGs that have high traceability to producers and build sustainable agriculture programs around their own supply chains have led much of the experimentation to date and developed the most robust initiatives. While acre-level and landscape-based approaches are generating interest, there are limited examples in the U.S. of scaled in-market programs.



	Supply chain approach: Low traceability to producers	Supply chain approach: High traceability to producers	Acre level approach	Landscape-Based approach
Description	Procured from a global trading giant, or there are multiple tiers of intermediaries between the farmer and CPG. Limited raw material traceability.	Procured directly from farmers or from a farmer group (e.g., farmer owned co-op). High raw material traceability.	Strategic partnership among buyers sourcing ingredients derived from the same farm acre in a tight geography (e.g., crop rotation).	Includes multiple actors in an ecological area and may span multiple land uses. Variations include "foodscape" and "supply shed" approaches.
Theory of change	Intermediaries in the current food system optimized for scale and efficiency are best positioned to implement sustainable agriculture programs.	CPGs who are one or two degrees removed from farmers can directly incentivize farmer behavioral change.	Ecological impact of sustainable practices can only be sustained if farmers maintain practices across all crop rotations.	Private actors can self-organize in a landscape to solve issues stemming from the "tragedy of the commons."
Challenges	Program approaches and processes are not always transparent to CPGs, limiting comparison between intermediaries and ability for CPG customization or control.	CPGs are willing to incentivize practices in the short term but do not want to pay farmer incentives in perpetuity.	It is difficult for buyers of different crops produced by the same acre to trace their crops to that acre and align on outcomes, MRV processes and environmental claims.	Most private ac-tors do not have sufficient business rationale to in-centivize farmer behavioral change in a land-scape if the pri-vate actor does not internalize 100% of benefits or only influences a fraction of the landscape.
Examples in the U.S.	ADM re:generations. ¹³	Campbell's sustainable agriculture programs in tomatoes, potatoes and wheat. ¹⁴	PepsiCo and Unilever in corn and soy (IA, NE).15	General Mills is currently exploring in the U.S. Midwest. ¹⁶



Insight 2

Despite significant interest in building co-financing partnerships for sustainable agriculture, there are currently few examples of such programs in the U.S.

Analysis of funding from six large public CPGs between 2020-2025 shows relatively few examples of co-financing partnerships among companies. Typically, funding comes from each CPG company's retained earnings, traditional corporate debt and equity (e.g., short-term working capital, longer-term corporate bonds), and green bonds or sustainability-linked loans. Co-investment, defined as when CPGs outlay capital alongside one or more organizations (e.g., customers, suppliers, other CPGs), is a growing interest area for CPGs, but there are currently few examples of such programs in the U.S.

Private co-financing partnerships for sustainable agriculture

Company	Private co-financing partnerships
PepsiCo	 Partnership with customer Walmart to jointly pursue \$120M of investments¹⁷ Partnership with non-competitive CPG, Unilever, for IA Cover Crop Program; program investment is estimated to be millions of dollars.¹⁸
Unilever	 Partnership with non-competitive CPG, PepsiCo, for IA Cover Crop Program; program investment is estimated to be millions of dollars.¹⁹
Diageo	 No publicly shared programs identified in the U.S.
General Mills	 Partnership with customer Ahold Delhaize USA in KS; sole or joint investment amount is not publicly shared.²⁰ Partnership with customer Walmart in seven U.S. states; the program receives additional federal grant funding, with sole or joint private investment amount not publicly shared.²¹
Danone	No publicly shared programs identified in the U.S.
KraftHeinz	No publicly shared programs identified in the U.S.





Insight 3

We have identified eight archetypes for CPG capital deployment in sustainable agriculture – recurring patterns of capital deployment that companies tend to follow. While companies adapt strategies to unique market contexts, these archetypes provide a framework to understand existing ways CPGs are deploying capital to advance sustainable agriculture in the U.S. and emerging strategies that present exciting opportunities.

Existing archetypes

- Voluntary participation producer programs.
- Embedding sustainability into procurement.
- Risk sharing between producers and CPGs.
- Multi-year, multi-use capital pools.

Emerging archetypes with high impact potential

- Sustainable product development.
- · Investments from corporate treasury.
- · Building regional banking partnerships.
- Using CPG capital to de-risk co-investment from financial institutions.

EXISTING ARCHETYPES

Voluntary participation producer programs

Voluntary participation producer programs are the most common way CPGs currently finance sustainable agriculture. Programs are most often structured as cost-share grants to reduce upfront expenses or payfor-practice premiums to incentivize behavioral change. Producers receive a cost-share grant or premium payment (on top of the base crop or commodity price) in exchange for implementing mutually agreed upon practices and engaging in verification activities. Since CPGs often work indirectly with producers, programs may be implemented through suppliers. Producers and suppliers may voluntarily opt-in to enroll, and participation has no effect on commercial sourcing relationships.

These programs are the most accessible entry point and allow companies to invest in sustainable agriculture at any scale, whether as a pilot project or with a large budget. Consequently, they may be established by companies that are in the earlier stages of testing sustainable agriculture programs or may not yet have Scope 3 emissions targets in place. Ecological outcomes may be uncertain at this stage. Eligible practices tend to be the most understood or straightforward practices to adopt. Technical assistance ("TA") and measurement, reporting and verification ("MRV") are usually provided by third-party partners, reflecting the exploratory nature of these efforts.



Examples

The **Campbell's** Sustainable Practices Adoption Fund is a grant program for producers for adopting soil health practices. Campbell's provides cost-share support to help producers offset the costs of piloting new sustainable practices or scaling up existing soil health practices. Grants are awarded to producers for projects incorporating the use of cover crops, compost, manure, biochar, microbial products and other practices. To facilitate peer learning, producers who receive funding document lessons learned in case studies shared across Campbell's grower network.²²



Perdue announced a partnership in 2022 with Bayer's ForGround, a digital platform designed to help farmers adopt regenerative agriculture practices.²³ Through this initiative, Perdue offers farmers \$10 per acre for implementing no-till practices and an additional \$10 per acre for planting cover crops.²⁴ Farmers enrolled in ForGround receive support from a sustainable agronomy team through on-farm visits, remote assistance and access to the latest research. ForGround also connects farmers to a broader ecosystem of third-party service and product providers that can help farmers overcome barriers to transition.





Critical success factors

The size of voluntary participation producer programs is usually determined by the internal budget, which then funds the cost-share arrangement or pay-for-practice farmer incentive payment. Producer adoption depends on ease of enrollment, size of the incentive payment relative to the cost and ease of practice adoption, and complexity of data collection and impact verification processes.

Importantly, structuring program set-up in the right way to collect ongoing data that supports the business case to connect the program to core commercial value proposition is imperative for program continuation and growth beyond the pilot.

EXISTING ARCHETYPES

Embedding sustainability into procurement

CPGs embedding sustainability into procurement processes incorporate sustainability criteria as a core part of how they buy crops, commodities or ingredients. This can involve integrating sustainability into commercial sourcing relationships, such as evaluating suppliers not only on cost and quality but also on sustainability performance. Ultimately, the goal is to ensure purchasing decisions support corporate commitments on climate, nature, water, sustainable agriculture or other related impact areas.

Embedding sustainability into procurement can create programs with higher durability and longevity. This can be achieved through partnering with suppliers or by building processes in-house.

Supplier partnership models include a supplier willing to implement sustainable practices within their producer network. Suppliers may, but do not always, play a role in program marketing and rollout, TA, MRV, and payment aggregation. Most functions are outsourced from the CPG, preserving maximum sourcing flexibility (i.e., the ability to switch suppliers as needed).

CPGs that build programs in-house typically have more direct relationships with producers and fewer crops and/or commodities to manage. Consequently, companies often build in-house capabilities for data, MRV and TA for key crops. They hold deep expertise in the fewer key crops they source and may even have in-house agronomic teams who hold dotted line relationships to procurement and sustainability functions.





Examples

Since **Mars** launched the multi-billion dollars Mars Sustainable in a Generation Plan, the company has reduced absolute greenhouse gas emissions by 16% (vs. 2015 baseline) while growing the business by over 60%.²⁵ With Scope 3 emissions accounting for 96% of total emissions, Mars tracks carbon intensity as a differentiating criteria among suppliers to encourage adoption of sustainable practices.²⁶ As part of the company's \$47 million Moo'ving Dairy Forward Plan, Mars is working with suppliers Land O'Lakes, Fonterra, Interfood and FrieslandCampina to lower its dairy carbon footprint.²⁷ Supplier partnership is key to farmer action, and farmer incentives are directed through Mars' supplier contracts to help producers adopt climate-smart practices.²⁸ In the U.S., through longtime supplier Land O'Lakes, Mars is providing funding, technical support and farmer incentives to enable manure management projects.²⁹ Through Fonterra in New Zealand, Mars has incorporated gamification elements into the supplier contract – funding is partly used to roll out existing tools and technologies to the supplier's producer network and partly used to financially reward the top tier of producers who make the most progress against sustainability goals each season.³⁰



AB InBev was one of the first companies to set a SBTi 1.5°C goal and has an ambition to be net zero by 2040 across the value chain. The procurement team for AB InBev is staffed with in-house agronomists who not only maintain relationships with producers and provide technical assistance but are also responsible for raw materials sourcing. This is a unique example where the direct procurement team also has deep expertise in sustainable agriculture practices and the capability to ensure that those practices are reflected in the farms from which they source. Over the past decade, the company has invested in an in-house digital platform for key crops, allowing growers to report data, benchmark performance, exchange best practices, and access support. These processes are enabling AB InBev to tie how crops are grown to the specific ingredients they are purchasing.





Critical success factors

The company typically sets specific goals for the quantity of raw materials sourced with sustainable attributes. While goals are often communicated as broad, long-term commitments (e.g., 100% sustainable sourcing by 2035), many companies phase their approach through interim milestones. These incremental targets provide business functions with the time and flexibility needed to develop and refine execution plans, while also allowing any financial costs to be invested more gradually. This makes progress toward the long-term ambition more manageable and creates a more predictable operational and financial planning trajectory for management and investors.

There is organizational buy-in across leadership and across business unit functions that investing in sustainable agriculture is critical for the current or future financial value of the business. The procurement team is allocated an annual operating budget to purchase raw materials sourced with sustainable attributes. The procurement team has culturally internalized the business case rationale and thoroughly supports it. Processes are established for MRV, data reconciliation, etc. Execution of these processes may be performed in-house or outsourced to third-party services.

EXISTING ARCHETYPES

Risk sharing between producers and CPGs

Traditionally, producers bear the full financial and operational risk of transitioning to new farming practices. To encourage greater producer adoption of sustainable practices, some CPGs are stepping up to share in the financial and operational uncertainty of transitioning to sustainable practices so that producers are not bearing all of the risk alone. Risk sharing cushions producers if the new practice does not work out as expected. By creating programs that provide protection against potential risks or losses for producers, CPGs help reduce exposure to unpredictable outcomes so producers feel more secure experimenting with new practices.

CPGs may participate in risk sharing with producers through smaller pilot programs or larger scaled programs. Importantly, these programs reduce risk for both producers and for the CPG company.

Smaller pilot programs typically involve one or two critical implementation partners and have small to moderate sized budgets (e.g., hundreds of thousands of dollars to low millions of dollars). Companies are often willing to make decisions with imperfect information for pilot programs.

Larger scaled programs are more difficult to achieve but can create lasting impact. Often, they include foundational shifts in existing business practices and require broad-based adoption from the whole organization. The company must hold a core belief that farming resiliency is critical for future business viability and be open to making short-term vs. long-term trade-offs, strategically and financially. These programs can be highly durable and difficult to shift once implemented due to their interconnectedness across business operations.





Examples

In 2021, PepsiCo and Precision Conservation Management ("PCM") partnered to launch a sustainability-linked crop insurance subsidy at a pilot level. PepsiCo provided a per acre subsidy to help cover part of the extra crop insurance producers could voluntarily buy to hedge against potential yield loss associated with reducing nitrogen use. The crop insurance subsidy incentivized farmers to curb nitrogen loss, while any carbon assets generated were claimed by PepsiCo. PepsiCo and PCM built on learnings from the pilot and have since evolved the program to be one component of a more comprehensive supply chain incentive payment program that includes per acre payments for cover crops, no-till / strip till, and crop insurance subsidies. For PepsiCo, risk sharing with producers is one way to act on their desire to be in business 100 years from now.³²



Danone's procurement team uses a unique "cost-plus" model with key milk producers in the U.S. that scales risk sharing across one-third of the milk sourced in the U.S.³³ Under the cost-plus model, Danone agrees to long-term offtake agreements (averaging three to five years) and provides payment to producers that covers a portion of the producer's operating costs and adds a profit margin for the producer. This arrangement creates strong incentive alignment between the company and producers, allowing Danone to support producers directly in the adoption of sustainable agriculture practices and sharing in farm resiliency gains. Financially, the company and producers gain predictability in cost and revenue, respectively.³⁴ The model has allowed the company to maintain strong cost controls despite the volatility of global feed and milk prices in recent years. It also enables longer-term investments and partnerships with critical suppliers, opening opportunities for innovation discussions in the buyer/seller relationship around greenhouse gas emissions mitigation and long-term business and ecosystem resilience.





Critical success factors

Pilot programs typically face fewer barriers in securing organizational approval compared to other investments. Often, a strong internal executive, senior or even mid-level champion is sufficient to mobilize resources for a pilot. Thoughtful planning and execution of program rollout, communications and KPI collection is essential for pilot success.

Larger scaled programs require consistent socialization by a strong executive or senior level champion with other executives for an extended period – a socialization period that may span years. This is supported by years of formal and informal data collection, which eventually informs a feasibility study. Positive feasibility study results become part of the business case rationale, and multiple scenarios and back-up contingency plans are considered before organizational support is won.

EXISTING ARCHETYPES

Multi-year, multi-use capital pools

In recent years, several companies have publicly announced large, flexible multi-use capital pools dedicated to allocating current and future company resources to sustainability initiatives. In contrast to the typical annual operating budget cycle, these commitments provide a multi-year green light and indicate a strategic priority that is partially buffered from leadership changes and investor expectations.

Individual capital allocation decisions are evaluated at the time of allocation and must meet evaluation criteria administered through a pre-determined governance process. There is flexibility in whether resources are P&L expenses (e.g., procurement or brand marketing expenditure) now or in future years, capital outlay into a legal fund, or other uses of the company's balance sheet. There may also be flexibility in deploying capital for opportunistic investment mid-year between budget cycles.

Today, most flexible capital pools continue to focus on projects and programs that can accrue maximal direct benefit to the CPG, while some are beginning to explore how their flexible use of funds may support broader system change within a given crop and/or geography.





Examples

Launched in 2020, **Unilever's** Climate and Nature Fund is a commitment to invest €1 billion in climate, nature and resource efficiency projects.³⁵ The Climate and Nature Fund is managed internally and is a fund in name only, not an external legal fund managed by a third-party investment adviser.³⁶ Unilever has deployed capital into brand-level initiatives for company brands including Colman's, Knorr and Ben & Jerry's.³⁷ Additionally, Unilever is a founding partner and investor in the Regenerative Agriculture Fund (external legal fund) and a limited partner in the Rimba Collective for forest protection and restoration.





Critical success factors

Because the upfront capital commitment is decoupled from capital allocation, there must be clear processes in place to make individual capital allocation decisions and quickly escalate unplanned opportunities. Best practice calls for established tools for opportunity tracking with people or teams assigned to follow relevant areas, and ongoing maintenance of a strong project pipeline to align capital pools with shovel-ready projects.

Management of large multi-use capital pools may fall outside the scope of traditional CPG finance functions. Consequently, companies may need to build dedicated strategic finance capabilities that integrate financial management with strategic planning and offer cross-functional partnership for innovative capital use.

Multi-use capital pools often use processes that allow a portion of investment in sustainable agriculture programs to be accounted for separate from COGS on the brand profit and loss (P&L) or regional P&L. These finance and accounting processes offer workarounds to a common financial barrier (i.e., an uphill battle for any program that increases COGS). Anecdotally, some of these pools have also been made possible only because a CPG has identified offsetting cost savings elsewhere in the business.

EMERGING ARCHETYPES WITH HIGH IMPACT POTENTIAL

Sustainability product development

To respond to consumer demand and to capture higher prices capable of paying for more investment in sustainable practices, some CPGs are developing sustainable products. The sustainable product development process includes the end-to-end execution of design, sourcing, manufacturing, distribution, premiumization and value proposition communication for a new product. These products serve as proof points for overall brand value when a brand stands for supporting elements of sustainability (e.g., farmer livelihoods or organic agriculture). Costs and margins are carefully integrated into the process, with higher production costs offset by premium pricing strategies. To strengthen credibility, these products often carry third-party certifications to validate product claims. Marketing is typically directed toward consumers who prioritize health, environmental sustainability and ethical consumption in purchase decisions, and are willing to pay higher prices for sustainable and better-for-you products.



Examples



Kellanova has teamed up with Ahold Delhaize USA and Bartlett in North Carolina on a farm-to-shelf regenerative agriculture pilot to grow regenerative wheat for Cheez-It and Club crackers.³⁸ Launched in summer 2024, the pilot involves financial investments from all three partners.³⁹ Bartlett harvests the wheat, and their crop advisors help provide TA to producers implementing conservation practices. Kellanova uses the regenerative wheat alongside conventionally grown wheat to produce Cheez-It and Club crackers. The crackers are also made at Kellanova's Cary, North Carolina plant, facilitating a local farm-to-factory integrated supply chain. The products are expected to be available as an exclusive across Ahold Delhaize USA's more than 2,000 local brand stores in 2025.⁴⁰



Critical success factors

Because the dominant culture of large CPG companies is innovation through acquisition, successful sustainable product innovation requires willingness from cross-functional CPG teams to think outside the box. This may include R&D with novel ingredients, experimentation with new manufacturing processes, procurement flexibility to source smaller quantities, procurement from outside existing systems, and unconventional category marketing and other strategies. Other success factors true of any new product launch include positive responses from market testing – including alignment on taste, shelf-life and price – and customers (retailers, food service providers or other CPGs) committed to initial small-scale trials.

EMERGING ARCHETYPES WITH HIGH IMPACT POTENTIAL

Investments from corporate treasury

In this context, investments from treasury means taking money from the company's cash holdings and investing in sustainable agriculture programs to generate interest income. The money is pulled from the company's central pool of financial assets (the treasury), not from operational budgets. Due to the large size of treasury cash reserves, the size for individual investments needs to be larger (e.g., minimum of millions). To preserve the value of capital, there are often market-rate return expectations (i.e., this would not be grant capital). Because treasury cash reserves are managed separately, there may be flexibility for deploying capital outside of annual budget cycles. Investments from the corporate treasury to advance sustainable agriculture in the value chain are currently rare.



Examples

The **Starbucks** Global Farmer Fund provides essential business financing to coffee farmers around the world. Enabled by an initial contribution of \$50 million from the company's treasury and periodically replenished, the Global Farmer Fund has deployed over \$88 million in loans to support soil management, crop production, nature restoration and infrastructure improvements. Over time, the company has shifted from funding general commitments with sustainability bonds to more specific targets using the balance sheet. The Global Farmer Fund is just one part of Starbucks' comprehensive approach to advancing sustainable agriculture. The company also provides technical assistance, business planning support, price risk management training, hybrid varietals and runs ten Farmer Support Centers open to suppliers and non-suppliers to advance sustainable agriculture practice adoption.



Critical success factors

In contrast to the functional silos that often exist, there must be strong cross-functional trust, partnership and shared values between impact-related functions and treasury. This means impact-related functions have financial literacy and financial functions have impact literacy. Other internal success factors include existing corporate commitments, established standards for on-farm interventions and robust MRV processes. Externally, the company has strong relationships with partner financial institutions that help to co-manage treasury cash reserves, financial intermediaries and on-the-ground implementation partners.

EMERGING ARCHETYPES WITH HIGH IMPACT POTENTIAL

Building regional banking partnerships

Traditionally, producers are responsible for finding their own financing to cover the costs of running their operations. Adopting new practices and securing financing for incremental costs just adds more work, often more than producers have capacity to manage. Regional banking partnerships set up by CPG companies can play a role in making the transition to sustainable practices more attainable for producers. CPGs collaborate with local or regional banks to expand producers' access to capital that supports sustainable practices. Rather than subsidizing via cost-share or offering premiums to producers directly, CPGs instead partner with a bank and flow incentive payments to producers through the bank, often in the form of rebates or reduced interest rates for producers. Each banking partnership is built around a predetermined use of funds – for example, financing a mutually agreed upon list of sustainable practices for producers that grow a specific crop or commodity in a set region.

Building regional banking partnerships is one way that CPGs can kick-start change in sustainable practice adoption while mobilizing external co-financing to meet the scale of capital needed for systemic transformation.



Examples

McCain Foods has a goal of implementing regenerative agriculture practices across 100% of potato acreage by 2030.⁴² To support growers financially through the transition, McCain has set up financing partnerships with top tier banks in regions including Canada (with Farm Credit Canada), UK (with NatWest), Netherlands (with Rabobank), Poland (with BNP Paribas Bank Polska), Australia / New Zealand (with AGCO and Rabobank), and France (with GAPPI and Credit Agricole).⁴³ McCain's role in each partnership varies and spans contributing to TA/MRV, providing matching funds to grower incentive payments, contributing to interest payable for assets that support regenerative transition, leveraging their offtake into reduced loan guarantee provisions, and other financing mechanisms.



Critical success factors

The CPG is prepared to contribute financially to the partnership to unlock additional capital from banking partners and build programs for producers at scale. There is a strong foundational understanding of the business case for action (e.g., projecting the benefits of investing in supply chain resiliency against the risks and costs of inaction). Incentives for producers (flowed through the bank) are carefully designed to fit the unique context of regional financing practices and the ways in which farmers currently access and use capital. The costs of TA and MRV are often paid for by the CPG to further reduce barriers for producers and banking partners.

Operationally, there is alignment between the CPG and banking partners on the scale of opportunity – including how many producers are likely to participate, the financing required, how funds will be used to support on-farm interventions and how impact will be measured. Banking partners understand that adopting resiliency-improving practices benefits their farmer-customers and help translate CPG contributions into financial benefits for farmers. Banking partners may also contribute financially or in-kind to the partnership (e.g., fee waivers, loan discounts, matching funds, farmer workshops, digital tools).

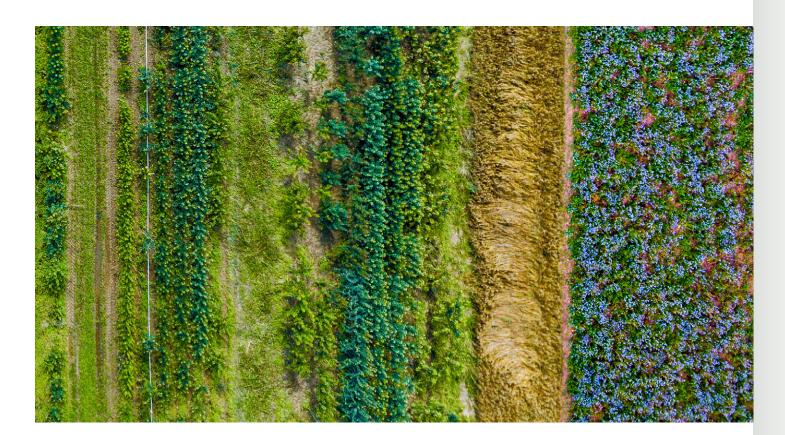


EMERGING ARCHETYPES WITH HIGH IMPACT POTENTIAL

Using CPG capital to de-risk co-investment from financial institutions

An alternative way to meet the scale of capital needed for systemic transformation involves using CPG capital to de-risk co-investment from financial institutions such as commercial banks, regional banks, and the U.S. Farm Credit system. In this blended finance model, CPGs provide concessional capital that accepts higher risk or lower returns, while financial institutions provide commercial capital that seeks market-rate returns. CPGs contribute funds that help reduce the perceived risk for financial institutions of providing transition capital to producers. For example, CPGs can absorb early losses if a producer defaults, provide partial credit guarantees on behalf of producers, agree to be repaid last or take other steps that give financial institutions more confidence to lend to producers and support farmers in adopting sustainable practices.

There is financial leverage in this co-investment model through which companies can generate greater impact for the same level of investment by utilizing their capital to unlock additional investment from external financial institutions. Put another way, each dollar the CPG invests can attract several more dollars from financial institutions, creating far greater impact than what the company could theoretically achieve on its own. CPG capital plays a catalytic role – either by launching initiatives or by de-risking the participation of financial institutions. As successful proof points become established over time, there is less reliance on CPG capital on its own to finance the sustainable agriculture transition. Financial institutions may be able to take on a larger share of the financing as they recognize shifts in their fundamental risk models (i.e., the healthier the soil, the lower the interest rate as more sustainable farms should also demonstrate more resilience in a world of climate change, water, and biodiversity challenges).





Examples

There are currently no in-market examples based in the U.S. involving CPG companies, though market intelligence suggests projects are under development. The Responsible Commodities Facility in Brazil supporting deforestation-free soy production is the closest in-market analogue, though this program is with retailers and not CPGs. 44 Launched in 2022 with an initial investment of \$11 million from three UK retailers (Tesco, Sainsbury's and Waitrose), the program has since expanded to \$60 million. Initial de-risking capital from retailers has unlocked additional capital provided by impact investors (Agri3 Fund), commercial financial institutions (Santander and Rabobank) and development banks (FMO and IDB Invest). 45



Critical success factors

To deliver a successful collaborative financing approach, the company is open to using its balance sheet in creative ways to help unlock external co-investment. From the start, the pilot should be designed with line of sight into the financial and impact proof points that need to be demonstrated to justify expansion into future phases. The blended financing approach is structured to evolve over time, moving from more concessionary terms to increasingly commercial terms. To support this progression, the company maintains relationships with a range of financial institutions, each bringing different risk and return profiles, creating flexibility as the program grows.

The company will play a leadership role in catalyzing longer term systemic change and is flexible in how it accrues and accounts for near-term benefits (which may be more diffuse initially). To create systemic change, advanced data collection on ecological outcomes is paired with farm financial performance to more directly link the ecological and financial impacts of on-farm interventions.

Companies that are successful in partnering with financial institutions to scale capital deployment will increase cross-functional literacy between sustainability and finance functions. There must be foundational understanding by CPG leadership of how agricultural finance works (e.g., what lenders look for, the frameworks that determine risk ratings and pricing models, and the incentives that drive lending). In addition, there needs to be foundational understanding by financial institution leadership of how CPGs manage and allocate capital.

CONCLUSION

Food and beverage CPGs are leading initiatives to implement sustainable agriculture practices across millions of U.S. farmland acres. Despite the many challenges, companies are successfully finding ways to support farmers in adopting practices that increase long-term economic viability, yield resilience, land value and associated environmental benefits.

As climate change increasingly influences business-as-usual, there is an unprecedented opportunity for CPGs to use sustainable agriculture as a lever to strengthen brands, future-proof supply chains, mitigate risk, and build strategic competitive differentiation. In this environment, companies leading the way in sustainable agriculture are doing three things to prepare for this next wave of opportunity.

1. Upskilling their workforces to increase cross-functional financial and sustainability literacy.

The most advanced CPGs are increasing cross-functional literacy. This means building financial literacy across sustainability teams and building sustainability literacy across procurement and finance teams. It also means using sustainability as a strategic and financial value creation lever.

2. Intentionally experimenting with new ways to deploy capital to advance sustainable agriculture and doubling down on the ways that have worked for their market context.

There is no clear playbook yet for translating sustainable agriculture commitments into action, and companies are still learning what works best, when, where and why. With numerous existing ways CPGs are deploying capital to advance sustainable agriculture in the U.S. and emerging strategies that present exciting opportunities, companies have the opportunity to identify the best path forward for their unique market context.

3. Finding innovative ways to stretch sustainability dollars further to create more impact.

While CPGs can kick-start change faster alone, there is an opportunity to build programs that are more durable and deliver change at scale by embedding sustainability into business functions internally, collaborating across the value chain and across external partners. Establishing co-financing programs with value chain partners, building regional banking partnerships and using CPG capital to de-risk co-investment from financial institutions are just a few of the innovative ways CPGs are deploying capital to generate broader impact.

As we look ahead, EDF and its partners are committed to growing the momentum to advance climate-smart agriculture in the U.S. and globally.

We welcome the opportunity to deepen engagement with companies interested in this work. We will continue supporting companies at all stages of this journey, helping to build understanding of what they can do to lead efforts that accelerate climate-smart food system transformation. Simultaneously, we will continue bringing together value chain partners and invite external collaborators to the table, because long-term systemic change will require collective action and shared vision.

Our goal is to establish pathways for capital deployment towards climate-smart agriculture and to showcase innovative approaches that have the potential to create lasting impact on a large scale, ensuring a resilient food supply for generations to come.



REFERENCES

- ¹ CREO Syndicate (2024). "Summary: Regenerative Ag CPG Targets Mapping the Landscape of Corporate Engagement."
- This report uses the terminology "sustainable agriculture" to broadly refer to production systems that improve soil and water health through conservation practices, reduce environmental impacts, enhance farm resilience against growing climate-related risks, and generate additional ecosystem benefits. Use of the terminology "regenerative agriculture" only occurs when source material references regenerative agriculture. The definition of regenerative agriculture in these contexts will be based on how the source material defines the term.
- ³ Assumes the cost of capital is constant.
- ⁴ Value associated with actions is calculated net of investments.
- ⁵ World Economic Forum (2024). "Extreme weather is driving food prices higher."
- ⁶ Climate AI (2022). "The future of berries amid climate change: a townhall discussion with Soren Bjorn, President of Driscoll's."
- ⁷ McCain Foods GB Ltd (2023). Written evidence submitted to the House of Commons Environmental Audit Committee.
- 8 House of Commons (2023). "Oral Evidence: Environmental Change and Food Security, HC 880."
- This report uses the terminology "sustainable agriculture" to broadly refer to production systems that improve soil and water health through conservation practices, reduce environmental impacts, enhance farm resilience against growing climate-related risks, and generate additional ecosystem benefits. Use of the terminology "regenerative agriculture" only occurs when source material references regenerative agriculture. The definition of regenerative agriculture in these contexts will be based on how the source material defines the term.
- L.E.K. Consulting Consumer Sustainability Survey (2024). "Survey questions: For each of the following categories, how likely are you to pay more for a sustainable version of the regular products you buy? Thinking about standard/sustainable product, what price do you think is too expensive/too cheap that you would not consider purchasing?"
- ¹¹ McKinsey & Company and NielsenIQ (2023). "Consumers care about sustainability—and backit up with their wallets."
- 12 Ibid.
- ¹³ ADM Advantage (2025). Overview of ADM:regenerations.
- ¹⁴ Campbell's (2024). 2024 Corporate Responsibility Report.
- ¹⁵ Midwest Row Crop Collaborative (2022). "Iowa farmers improve soil quality through cover crop program led by PepsiCo and Unilever."
- ¹⁶ General Mills, Inc. (2025). 2025 Global Responsibility Report.
- ¹⁷ Agriculture Dive (2023). "PepsiCo, Walmart team on \$120M investment in regenerative agriculture."
- ¹⁸ Field to Market (2022). "Partnering Across the Rotation: PepsiCo–Unilever Soil Health Innovation Project Recognized for Efforts to Support Iowa Farmers in De-Risking Regenerative Agriculture Practices."
- ¹⁹ Unilever. "Growing a sustainable future." Soybeans: Iowa, USA, 2023-2027.
- ²⁰ General Mills, Inc. (2024). "Ahold Delhaize USA and General Mills Collaborate to Decrease Value Chain Emissions."
- ²¹ General Mills, Inc. (2023). "General Mills and Walmart join forces to advance regenerative agriculture across 600,000 acres by 2030."
- ²² Campbell's (2024). 2024 Corporate Responsibility Report.
- This report uses the terminology "sustainable agriculture" to broadly refer to production systems that improve soil and water health through conservation practices, reduce environmental impacts, enhance farm resilience against growing climate-related risks, and generate additional ecosystem benefits. Use of the terminology "regenerative agriculture" only occurs when source material references regenerative agriculture. The definition of regenerative agriculture in these contexts will be based on how the source material defines the term.
- ²⁴ AgFunder News (2024). "Bayer and Perdue share learnings from three-year regenerative agriculture partnership."
- ²⁵ Mars, Inc. (2024). "2024 Sustainable in a Generation Report."
- ²⁶ Agriculture Dive (2023). "Mars pushes regenerative agriculture in \$1B climate initiative."

- ²⁷ Confectionary News (2024), "Mars scales its sustainable dairy sourcing efforts,"
- ²⁸ Mars, Inc. (2024). "Mars Unveils Multi-Million Dollar Sustainable Dairy Plan, Moo'ving Dairy Forward."
- ²⁹ Land O' Lakes Inc. (2025). "Mars and Land O'Lakes team up to support shared on-farm conservation goals."
- 30 Bloomberg (2025). "Mars Joins With Fonterra to Cut New Zealand Farm Emissions."
- ³¹ Food Dive (2020), "Farm to pint: How Anheuser-Busch cultivates its ingredients amid a changing climate and consumer."
- 32 Impact Podcast (2025). "Leading Sustainable Outcomes with Margaret Henry of PepsiCo."
- 33 Danone Shareholders' Meeting (2025). "Answers to Written Questions from Shareholders."
- ³⁴ Feedstuffs (2019). "New Ohio dairy to help supply Danone yogurt plant."
- 35 Trellis (2020). "Unilever unveils climate and nature fund worth more than \$1 billion."
- ³⁶ Unilever (2023). "What on Earth does your Climate & Nature Fund do?"
- ³⁷ Unilever, "Unilever Climate & Nature Fund."
- ³⁸ This report uses the terminology "sustainable agriculture" to broadly refer to production systems that improve soil and water health through conservation practices, reduce environmental impacts, enhance farm resilience against growing climate-related risks, and generate additional ecosystem benefits. Use of the terminology "regenerative agriculture" only occurs when source material references regenerative agriculture. The definition of regenerative agriculture in these contexts will be based on how the source material defines the term.
- ³⁹ Kellanova (2024). "Ahold Delhaize USA, Kellanova, Bartlett Announce Farm-to-Shelf Regenerative Agriculture Pilot to Decrease Emissions Across Value Chain."
- ⁴⁰ Ahold Delhaize (2025). "Collaborating for a more sustainable food system."
- ⁴¹ Starbucks Global Impact Report (2024).
- ⁴² This report uses the terminology "sustainable agriculture" to broadly refer to production systems that improve soil and water health through conservation practices, reduce environmental impacts, enhance farm resilience against growing climate-related risks, and generate additional ecosystem benefits. Use of the terminology "regenerative agriculture" only occurs when source material references regenerative agriculture. The definition of regenerative agriculture in these contexts will be based on how the source material defines the term.
- ⁴³ McCain Foods (2024), "Supporting our Potato Farmers through Regenerative Financing Partnerships."
- ⁴⁴ Green Finance Institute (2024). "Case Study: Responsible Commodities Facility."
- ⁴⁵ Agri3 Fund (2025). News, "Responsible Commodities Facility Expands."



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