

STONYFIELD FARM ADVANCES MORE SUSTAINABLE PACKAGING, ONE POUCH AT A TIME



NORTHEAST

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SUSTAINABILITY FROM THE START

Stonyfield Organic (“Stonyfield”) has a long history of leading in sustainability. From its roots in supporting organic agriculture to attaining B Corp certification in 2016, Stonyfield believes that healthy food, healthy businesses, and a healthy planet are essential to doing business. As part of this work, Stonyfield has committed to fighting climate change by setting a Science Based Targets initiative (SBTi)-approved greenhouse gas (GHG) reduction target to reduce absolute Scope 1, 2, and 3 GHG emissions 36% by 2030 from a 2022 baseline.¹

Behind milk and transportation and logistics, packaging is the third-largest contributor to Stonyfield’s GHG emissions, so tackling packaging is a key pillar of the company’s climate strategy. To support the Stonyfield science-based GHG reduction target and demonstrate a commitment to packaging improvement, Stonyfield set the following packaging-related targets:

- **Reduce the carbon footprint of packaging by at least 15% by 2030 from a 2020 baseline** to achieve our science-based target and reinforce our commitment to innovation with consumers.
- **Lightweight packaging components 10% by 2030 from a 2020 baseline**, by eliminating all unnecessary components and reducing packaging weight.
- Have a packaging portfolio that is entirely bio-based or made from recycled materials by 2030.
- Continue our commitment to **keep toxic materials out of our packaging**.

While Stonyfield’s science-based targets and packaging-related targets are ambitious, and our progress toward them is not always linear amid a constantly shifting business and technological landscape, Stonyfield is committed to working diligently toward them.² The packaging sustainability efforts described in this case study are just one example of the steps Stonyfield is taking to move toward its targets in support of its commitment to reduce greenhouse gas emissions across its operations.

¹ A 36% reduction represents an aggregated target across Stonyfield’s Scope 1 and 2 and Scope 3 energy & industry and forest, land and agriculture (FLAG) sub-targets. Official SBTi target language: Energy & Industry: Stonyfield commits to reduce absolute scope 1 and 2 GHG emissions 42% by 2030 from a 2022 base year.* Stonyfield also commits to reduce absolute scope 3 GHG emissions from purchased goods and services, fuel and energy related activities, upstream transportation and distribution and waste generated in operations 42% within the same timeframe. *The target boundary includes land-related emissions and removals from bioenergy feedstocks. FLAG: Stonyfield commits to reduce absolute scope 3 GHG emissions 30.3% by 2030 from a 2022 base year.* Stonyfield also commits to no deforestation across its primary deforestation-linked commodities, with a target date of December 31, 2025. *Target includes FLAG emissions and removals.

² To that end, Stonyfield regularly reviews and refines its plans, ensuring they remain relevant, practical, and effective as new data and information become available and/or circumstances change.



EXTERNAL DRIVERS FOR PACKAGING SUSTAINABILITY

Mounting external pressure to improve packaging sustainability is another driver for this work, in addition to Stonyfield's own sustainability ambitions.

Research has shown that consumers increasingly demand more eco-friendly goods that reduce their carbon footprint and conserve natural resources. Shifting to more sustainable packaging by increasing recycled content, advancing recyclability, lightweighting components, reducing plastic, and innovating on reusability creates a brand that consumers love and meets their need for a more sustainable world.

Retailers also recognize the need to transition to more sustainable packaging. In fact, retailers such as Walmart, Target, and Ahold Delhaize have all set their own packaging sustainability targets for their private label products. These retailer "own-brand" targets highlight the importance to retailers across the industry of rising to the occasion and acting on packaging.

Packaging sustainability is also receiving attention at the regulatory level, with many state and national governments introducing and passing extended producer responsibility (EPR) bills. EPR is a policy approach that holds producers financially and operationally responsible for the entire lifecycle of their products, including the recycling systems to manage packaging after use. Another key aspect of these laws is that they incentivize the shift to packaging that is recyclable and/or more sustainable. Stakeholders across the public and private sectors see packaging EPR regulation as an essential tool to address the global challenges of recycling and single-use plastic pollution. As of June 2025, seven U.S. states, including California, Colorado, Maine, Maryland, Minnesota, Oregon, and Washington, have passed packaging EPR legislation, with more states poised to set their own EPR laws in the coming years.

Responding early to consumer and customer demand and regulatory requirements for more sustainable packaging bolsters Stonyfield's position as a sustainability leader and helps mitigate future regulatory, financial, and climate risks.

POUCHES FOR THE WIN

In 2021, Stonyfield developed a packaging roadmap to outline how it could achieve its 2030 packaging goals, aiming to reduce its packaging carbon footprint and increase the use of recycled and biobased content. Pouches are the fastest-growing format in kids yogurt, representing a significant portion of Stonyfield's total brand volume. First-generation pouches, however, are composed of multiple layers of different plastics and, in some cases, a layer of aluminum. These "multi-material" laminate pouches present recycling challenges not only due to the inherent difficulties with curbside recycling of plastic film but also because materials recovery facilities (MRFs) cannot separate the multi-material pouches into their individual components. Post-consumer recycled content made from multiple materials often lacks a likely recycling stream with a viable end market, which is a key challenge with recycling multi-material pouches. Additionally, the aluminum layer in pouches generally has a higher carbon impact due to upstream manufacturing.

Given the ongoing business growth of this product format, pouches presented an important opportunity to implement packaging initiatives aimed at developing a more sustainable option. At this stage, this meant developing an all-polyethylene (PE), lightweight pouch, as that design could achieve immediate material source reduction and packaging GHG emissions reductions, while also supporting Stonyfield's efforts toward its longer-term sustainable packaging goals.



LANDING ON AN APPROACH

Stonyfield began this work in 2022 with its YoBaby® yogurt pouches. Piloting pouch improvements with a single product line allowed Stonyfield to start this work quickly and to more seamlessly apply learnings to scale improvements to other pouch products in the future. Stonyfield embarked on this work with spouted pouch manufacturer Cheer Pack.

In early 2024, Stonyfield launched its YoBaby® yogurt pouches utilizing Cheer Pack's new CHEER-Circle™ all-PE spouted pouch. The new pouch, which replaced the prior multi-laminate pouch structure, was lightweighted by 11% compared to the prior design to reduce virgin plastic consumption and packaging GHG emissions. It was also designed with the aspiration for potential future recycling (if and when curbside recycling of flexible packaging becomes widely available).

Further, in the new YoBaby® yogurt pouches, the updated CHEERCircle™ pouch film was paired with the lightweighted PE Vizi™ cap. Replacing the standard cap with the Vizi™ cap decreased cap material weight by 17% compared to the prior design, further reducing overall package weight, plastic, and GHG emissions from the prior design.

Together, lightweighting and material changes for just the YoBaby® yogurt pouch products eliminated nearly 20,000 pounds of plastic and 143,000 pounds of carbon dioxide equivalents (CO₂e) in 2024 (as compared to projections based on the prior packaging design). That is the emissions equivalent of driving over 165,000 miles in a gasoline-powered car!

Stonyfield also successfully implemented the lightweight Vizi™ cap on another high-volume Stonyfield SKU, reducing plastic use by another 32,000 pounds and 106,000 pounds of CO₂e in 2024 (as compared to projections based on the prior packaging design). As Stonyfield continues to explore packaging improvements where feasible in the future, it expects that if implemented on all pre-formed pouches produced at Stonyfield-owned plants, converting to an all-PE pouch and lightweighting Stonyfield pouches and caps could eliminate up to 92,000 pounds of plastic and 336,000 pounds of CO₂e per year (as compared to projections based on the prior packaging design).

Lightweighting also has the potential to improve Stonyfield's transportation and logistics footprint. Stonyfield is still exploring how to quantify these packaging improvements across its value chain.

TECHNICAL CHALLENGES AND LESSONS LEARNED

In the three years since the pouch pilot began, Stonyfield has encountered technical challenges and learned many lessons, allowing this work to progress from a limited trial to full implementation on the selected product SKUs³. Before updated pouches were launched in stores, Stonyfield ran different trials to evaluate filling the pouch with product, assess material functional performance, and test shelf-life in a lab setting, all while minimizing product and packaging waste in the long term. The following are important lessons learned from trialing the new pouches, by challenge type:

FILM

- ✓ **Material change:** Since the updated pouch film was made from plastic material, transitioning from a multi-laminate to a PE pouch was relatively easy to execute, since few programming and equipment modifications were needed.



³ Three years from the time of publication.

- ✓ **Waste:** The amount of scrap (waste) produced in filling the updated pouch was the same as that of the previous pouch design.
- ✓ **Printing:** Since the new pouch material (PE) stretches more than multi-laminate film, the first batch of pouches did not initially meet Stonyfield's image quality specifications and thus failed the first "print test". The trials were done with blank pouches, so in the future, Stonyfield and others looking to replicate this work should run their trials using printed samples. Stonyfield also worked with film supplier AMCOR to modify its print press for use on PE resin. While the printing quality issues were ultimately resolved, Stonyfield recommends working with the printer to simplify graphics and avoid these pitfalls from the start.

CAPS

- ✓ **Cap size:** When constructing the first pouch line, changing the pouch cap size caused more issues than changing the film material. Since the new Vizi™ cap was smaller than the previous cap, it was more prone to moving and jamming on the line, resulting in operational inefficiencies. Several iterations of equipment modifications were required to accommodate the new cap shape and return to baseline efficiency.
- ✓ **Manufacturing infrastructure:** It is critical to incorporate all packaging configurations into the early design of equipment, since modifications after production are more costly and time-consuming. Before constructing its second pouch production line, Stonyfield was able to integrate lessons learned from the construction of the first line to ensure the second was compatible with running the new Vizi™ caps.
- ✓ **Dual sourcing:** When sourcing materials from multiple cap and pouch suppliers, it is critical to design manufacturing equipment capable of seamlessly running different materials from different suppliers. This flexibility reduces the dependency on a single supplier and provides future adaptability for subsequent changes and optimizations.
- ✓ **Future planning:** Stonyfield anticipates that all of its pouch production lines will ultimately be designed to be compatible with multiple cap styles. This will enable Stonyfield to migrate other pouch product lines, such as Stonyfield Kids, to new lightweight caps, even in cases where it does not yet have the capacity to produce such products using the new, all-PE film.

RECYCLING

- ✓ **Recyclability:** The redesigned pouches are not yet "recyclable" due to recycling system and infrastructure challenges that must be addressed to ensure they can be collected, sorted, processed, and used for recycled content. However, the overall design follows current best practices for plastic film and flexible packaging, aiming for eventual acceptance alongside other PE-based packaging.
- ✓ **APR recognition:** While film supplier AMCOR has obtained APR recognition for the all-PE film component of the pouch, APR has not yet recognized the entire package with all of its component parts. Stonyfield is currently engaged with its supplier, Cheer Pack, to obtain APR Design® for Recyclability Recognition for the whole package.



GENERAL

- ✓ **Incremental costs:** Though Stonyfield only piloted the improved Cheer Pack CHEERCircle™ pouch design on Stonyfield's YoBaby® yogurt pouch products, which represent a small percentage of total volume, it came at an incremental cost. The key driver of this cost was switching from a multi-laminate film resin to a PE film resin. Reducing the cap size was cost-neutral.
- ✓ **Replication:** Replicating this work and building capacity for improved pouches in other geographies, with different suppliers, or with other products would result in lower costs since many challenges have already been addressed.
- ✓ **Adaptability:** For others looking to replicate this work, Stonyfield recommends a fluid mindset, understanding that the market is not static, and suppliers adapt to new technology, which may provide opportunities for cost savings along the way.

ENGAGING WITH STAKEHOLDERS

Stonyfield has had to work with a number of stakeholders to get to this point in the effort to improve the pouch, and has more to do to advance this effort. Such stakeholders have included suppliers, industry groups, customers, and consumers.

Packaging suppliers are essential partners in developing next-generation solutions to optimize packaging for improved sustainability outcomes. Optimizing cost, ensuring material availability, and reducing time to market are all critical factors in a successful collaboration. Stonyfield's relationship with Cheer Pack enabled the collaboration on new pouch formats, which has spurred similar work and relationships with other U.S. packaging providers.

Stonyfield also engages with pre-competitive circular packaging stakeholder groups, including the Association of Plastic Recyclers and AmeriPen. By engaging with these groups, Stonyfield can continue to learn about packaging sustainability best practices and engage with other like-minded brands working through similar challenges.

Engaging customers in this work can help build capacity and support packaging sustainability efforts across the value chain. To further this ambition, downstream retail partners interested in packaging sustainability can support brands by providing merchandising efforts, offering in-store recycling programs, promoting the adoption of more sustainable packaging, facilitating consumer education, and implementing other initiatives. Value chain collaboration can also enable all parties to claim GHG reductions across different stages of their respective value chains, creating a win-win on sustainability. Stonyfield looks forward to future opportunities to collaborate with retail customers on packaging improvement efforts.



Consumer acceptance of novel packaging is essential to bring these solutions to market. Since the updated all-PE pouches launched in February of 2024, Stonyfield has not reported any negative consumer responses regarding the new materials. Additionally, as part of a YoBaby® yogurt brand refresh, Stonyfield is exploring a potential redesign of its pouch packaging to include an on-pack QR code, which would explain the pouch's improved sustainability attributes.

FUTURE POUCH IMPROVEMENTS

Stonyfield's work on pouches is just the beginning. The YoBaby® yogurt pouch improvement pilot is the first step in a multi-year, ongoing project to improve the pouches' GHG footprint and recyclability. Specifically, Stonyfield plans to explore opportunities to expand these packaging improvements to all pouch lines and production sites, when and where feasible. Stonyfield also intends to explore how to add recycled resin to the pouch and cap to reduce the use of virgin plastics and enhance recycling infrastructure so these pouches can ultimately be recycled curbside. The pouch packaging improvements completed to date, along with future pouch innovations, will contribute to Stonyfield's sustainability goals and meet the demands of consumers and retailers to reduce the use of virgin plastic and GHG emissions, ultimately improving the overall environmental impact of product packaging.

