

Harvard x STF Mini-Challenge

Harvard University's Great Food Transformation course (GOV1318) partnered with the Seeding the Future Foundation (STF) and launched the Harvard x STF Mini-Challenge to empower students to devise innovative, sustainable food solutions, mirroring the impact of the [Seeding The Future Global Food System Challenge](#).

In this innovative collaboration, students were tasked with developing solutions to critical issues in food sustainability—ranging from food waste reduction to the sustainable production of food and changes in dietary habits. These Solutions were assessed for their impact, innovativeness, feasibility, clarity, and presentation quality by a panel including Dr. Bernhard van Lengerich, Dr. Sparsha Saha (Lecturer on Government and course instructor), and Teaching Fellows from Harvard Kennedy School. Students engaged deeply with the challenge, offering pitches and detailed plans, to mirror the larger-scale impacts envisioned by STF's Global Food System Challenge.

1st Place Winner - EAT Smart

Tagline

EAT Smart empowers households to dramatically reduce food waste through smart inventory management, personalized recipe suggestions, and community sharing.

Description

The winning team of the *Harvard x STF Mini-Challenge*, *EAT Smart*, developed a comprehensive app aimed at reducing household food waste, which accounts for a significant portion of U.S. food waste. The app includes three innovative features: Evaluate, Acquire, and Taste. 'Evaluate' enhances food inventory management with real-time freshness indicators and notifications for expiring items, while 'Acquire' facilitates smart shopping and community food sharing to prevent unnecessary purchases. 'Taste' uses AI to recommend recipes that prioritize soon-to-expire ingredients, promoting sustainable consumption habits. This multi-faceted approach addresses the problem holistically, aiming to significantly lower food waste and its associated environmental impacts. [Full Report](#).

Creators

Joyce Chen and Abhi Patel.

2nd Place Winner - Beyond Char

Tagline

Beyond Char turns Albania's food waste into biochar, revitalizing soil and reducing emissions for a sustainable future.

Description

The *Beyond Char* team developed a solution to transform food waste in Albania into biochar using pyrolysis. Addressing the critical waste management issues in Albania, where food waste contributes significantly to methane emissions and environmental degradation, their solution repurposes organic waste into a valuable agricultural resource. By converting food scraps into biochar, they not only propose to improve soil health and agricultural productivity but also aim to reduce greenhouse gases. This innovative approach supports Albania's infrastructural needs for sustainable waste management and offers potential economic and environmental benefits as Albania seeks EU membership.

Creators

Justin Folks, Jordan Young, and Caleb Bolden.

3rd Place Winner - Silo Milk

Tagline

Silo Milk transforms agricultural waste into sustainable plant-based milk, fostering a greener future by reducing environmental impact.

Description

The *Silo Milk* team took a novel approach to tackling the environmental impact of dairy production and agricultural waste through the creation of plant-based milks. They propose utilizing wasted crops from farms, specifically targeting those already used in popular plant milks like oats and soy, to produce an alternative dairy product. This method not only addresses the inefficiencies in food production where a significant portion of crops never reach the consumer but also reduces the demand for dairy milk, which is a major contributor to greenhouse gas emissions. Silo Milk's initiative presents a sustainable and economically beneficial solution by

converting agricultural byproducts into valuable consumer goods, thereby promoting environmental sustainability and offering farmers a profitable way to manage waste.

Creators

Sarah Fathima Mohammed, Elson Bankoff, and Akshaj Mishra.

Runner-Ups

AP Food – integrates climate and food sustainability education into the AP Environmental Science curriculum to address the educational gap on these critical issues. They aim to develop a Harvard-endorsed certification program that enhances high school students' understanding of the environmental impacts of food production and agricultural practices. This initiative is designed to empower students to make informed food choices that are beneficial for their health and the environment, thereby fostering a new generation of environmentally conscious citizens.

SaveWell Solutions (Irissa Machetta and Catherine Bravo) – combats the significant issue of food waste in the retail sector in the United States. Their approach involves a volume-based waste management system where retailers pay based on the actual quantity of waste they produce, incentivizing them to minimize waste. This solution is supported by partnerships with organizations like *Hazel Technologies* for extending the shelf life of produce and *Wasteless* for optimizing sales through dynamic pricing, aiming to significantly reduce waste while enhancing efficiency and profitability for retailers.

Roots of Empathy (Julian Handler and Michelle Wong) – addresses the crucial role of dietary choices in climate and environmental health, proposing empathy education for school-aged children to promote ethical eating habits. Their program plans to involve students in experiential learning through visits to animal sanctuaries, aiming to cultivate empathy towards farm animals and encourage plant-based diets. This educational approach seeks to instill a deeper understanding and respect for the environmental impacts of dietary choices at a formative age, supporting a shift towards sustainable consumption patterns.

Lomekwi (Su Jean Park) – proposes an innovative approach to address masculine reluctance towards adopting plant-based diets, which is crucial for the environmental and health challenges highlighted by the EAT-Lancet Commission. They aim to create high-quality, male-oriented alternative protein food products and educational programs that affirm masculinity while promoting sustainable dietary choices. This initiative not only addresses environmental

concerns but also engages men in a positive transformation of eating habits by connecting dietary changes with masculinity affirmation, potentially reducing health disparities and environmental impact.

Urban Roots – transforms urban areas into sustainable food production centers to address the dual challenges of environmental degradation and food access inequality. They plan to establish a collective of urban farms that produce both fresh produce and value-added products like sauces and condiments, focusing on making healthy, plant-based foods accessible and affordable. This strategy not only aims to decrease reliance on environmentally harmful animal agriculture but also provides economic opportunities in low-income, minoritized neighborhoods, fostering both community and environmental resilience.

Team Greens (Christopher Ruiz, Amarachi Nwogu, and Anthony Miguel) – changes public attitudes towards animal-sourced foods (ASFs) by using social media and pop culture to promote plant-based alternatives. Their strategy is to engage celebrities and influencers to make plant-based diets more appealing and accessible, moving away from traditional meat and dairy (over)consumption. This approach leverages the influence of well-known personalities to reach a wide audience, encouraging a shift towards more sustainable eating habits without directly confronting or alienating those who may be resistant to such changes.

Plant Powered (Ja'Karri Pierre and Lucas Cohen-d'Arbeloff) – offers an innovative educational initiative aimed at shifting the dietary habits of students towards more sustainable, plant-based options. This program intends to integrate EAT-Lancet dietary guidelines into the K-12 curriculum, promoting environmental sustainability and better health outcomes. Through engaging educational materials and parent-involved competitions, the initiative seeks to plant the seeds of dietary change that extend beyond the classroom into families' homes, fostering a generation more attuned to the health and environmental impacts of their food choices.

Personality Picks (Alexa Shumway) – mitigates food waste by rebranding and promoting the consumption of 'ugly' produce through direct grocery store channels. This project not only addresses environmental impacts by reducing food waste but also tackles consumer bias against imperfect produce. By partnering with influencers and utilizing strategic marketing, this solution aims to reshape consumer perceptions, making the selection of misshapen fruits and vegetables a normative, positive choice. This approach promises both environmental benefits and enhanced accessibility to affordable, fresh produce, especially in underserved communities.

Growing Cities – advocates for the integration of urban farming into cities, focusing on rooftop gardens to counter the environmental degradation caused by industrial farming and to provide fresh produce to underserved communities. By implementing these gardens in schools

throughout the southern United States, the initiative not only proposes to enhance students' nutritional intake and education on sustainable practices but also aims to empower communities by improving access to healthy food.

Carbon Cuisine (Ellie Tunnell and Han Nguyen) – introduces a revolutionary mobile app aimed at enhancing consumer awareness of the carbon footprint associated with their food choices. By providing detailed comparisons of greenhouse gas emissions for different food products and brands, this app enables consumers to make more environmentally conscious decisions, particularly encouraging a reduction in meat consumption due to its higher environmental impact.