

edible MINNESOTA

Exploring the Stories Behind Minnesota's Food and Drink



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UPCYCLING AND REGENERATIVE SOURCING

SEVEN SUNDAYS DIGS INTO CLIMATE-SMART SOLUTIONS

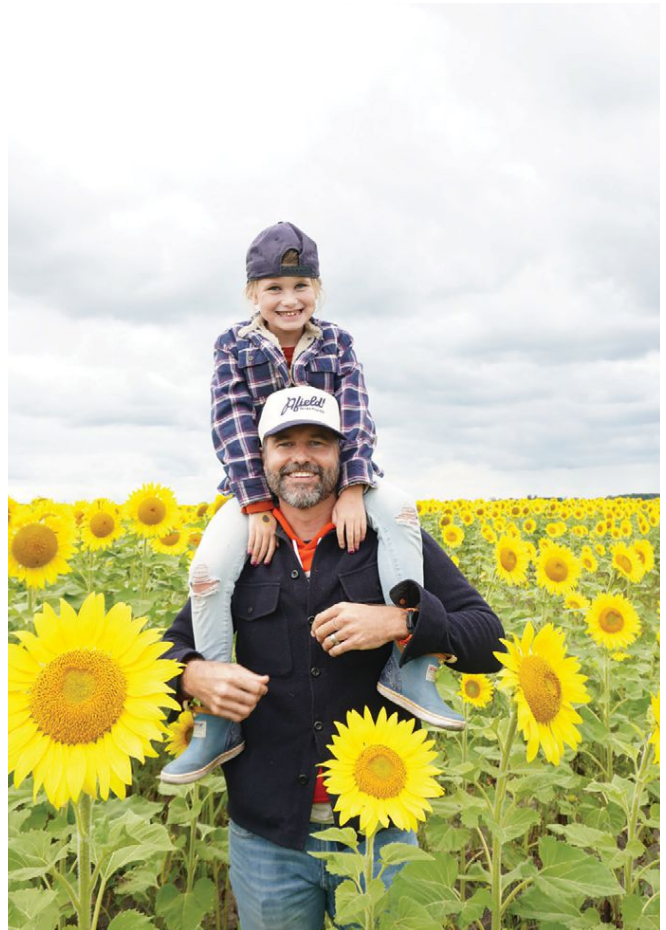
by Nani Ferreira-Mathews

If you've ever turned a stale loaf of bread into croutons or saved vegetable and chicken scraps for a homemade stock, then you are already a part of the food upcycling movement. Home upcycling is part common sense and part cultural, passed down from generation to generation as the practice of saving and making the most out of the food in our kitchens. Beyond kitchen scraps, upcycled byproducts of food preparation have long influenced our diets. Buttermilk, the soured and undesirable leftovers from butter making, was used widely in the American South, heavily influencing Southern cuisine. Gelatin recipes, the clarified remains of boiling meat or fish for hours, have been documented since the Middle Ages, at least 500 years before the advent of Jell-O.

Today, a growing number of businesses are adopting this upcycling philosophy. Among these brands is Minnesota-based Seven Sundays, a cereal company working to improve the agricultural ecosystem in the Upper Midwest through regenerative sourcing and the age-old practice of upcycling.

Brady and Hannah Barnstable started selling muesli at Minneapolis farmers markets in 2011 before growing the fledgling consumer packaged goods brand into the business it is now—Seven Sundays. In 2020, the company launched its first line of cereals that capitalized on a new and unique opportunity to reuse sunflower byproducts processed in Minnesota. Seven Sundays currently utilizes three upcycled ingredients in their cereals, oat granolas and protein oats: white corn, spent oats and sunflower protein, each a byproduct of food processing.

An Upcycled Food Association (UFA) member since 2022, Seven Sundays is committed to putting upcycled ingredients to work in their supply chain. UFA defines upcycled foods as scraps or waste that were bound for a landfill but have been diverted back into human consumption. These ingredients must have verifiable supply chains and a positive impact on the environment, which is measurable by metric tons diverted from the wastestream.



Brady Barnstable, co-owner of Seven Sundays, enjoys a visit to the sunflower fields of Cotter Farms.. The dried and unshelled seeds of the sunflowers are processed into oil before being further processed into sunflower protein, which is used in Seven Sundays' cereals. Photo courtesy of Seven Sundays.



The UFA's Upcycled Certified program is currently the only global certification for upcycled foods, requiring manufacturers to use a minimum of 10% upcycled ingredients by weight and clearly label ingredients in the ingredient list. Seven Sundays' Director of Supply Chain Emily Lafferty says, "In all cases, ours is a lot more." Lafferty has a decade of supply procurement experience and joined UFA's board of directors in 2024.

Upcycling is both a financial and nutritional consideration for farmers, processors and consumers. Human food-grade products have more monetary value than animal-grade products and upcycling creates an additional revenue stream for processors while encouraging farmers to grow food-grade crops on their land instead of export crops for ethanol or animal feed.

TOP: In 2023, Seven Sundays began incorporating a byproduct of oat milk production in a new line of cereals that boasts five grams of oat protein per serving. The leftover oat pulp from oat milk production is dried and milled to become a more nutritionally dense protein powder compared to a rolled oat. Photo by Katie Cannon.

LEFT: Hannah and Brady Barnstable with the Seven Sundays recycling bag, an environmentally friendly cereal packaging solution introduced in 2025. Photo courtesy of Seven Sundays.



Human food-grade products have more monetary value than animal-grade products, and upcycling creates an additional revenue stream for processors while encouraging farmers to grow food-grade crops on their land instead of export crops for ethanol or animal feed.

Significant capital investments and infrastructure are required to turn a processed byproduct into a usable upcycled ingredient. Farmers sell their crops to processors, who transform sunflower seeds to cold-pressed oil and oats to oat milk. The addition of milling, drying, sifting and other manipulation of the leftover byproduct can seem somewhat counterintuitive to the upcycled initiative as each additional step adds cost, often making it more expensive than sourcing a non-upcycled ingredient. Seven Sundays believes the additional costs they incur are outweighed by the environmental impact of upcycling.

Lafferty explains that the alternative to investing in the upcycling system is that the ingredient ends up in a landfill or sold for pennies to an animal feed stream. "There is an incentive there to invest capital to upcycle an ingredient and keep it in the food stream," she urges.

Minnesota's 26 million acres of agricultural land comprise about 51% of the state's land area, with the majority of planted crops being grown for export, ethanol or non-human consumption. Commodity crops like corn, soy and sugarbeets dominate the acreage of farmland in the state, and without proper crop rotation, soil health will deteriorate.

A growing network of farmers in southern Minnesota has banded together to plant oats, among other diverse crops, to improve soil health. They call themselves the Oat Mafia. The group of 60+ farmers is prioritizing food-grade oats as a primary crop. The environmental benefits of oats include reduced fertilizer use, less nitrate runoff and improved soil health, according to a five-year pilot study led by the Sustainable Food Lab.

In addition to oats, Seven Sundays sources other diversified crops from members of the Oat Mafia, including sunflowers

and buckwheat. Lafferty explains their approach to sourcing as a model of "direct trade." Seven Sundays partners with farmers to provide guaranteed markets for these diversified crops, but she admits that there is only so much they can do for a farmer as the product sourced by Seven Sundays inevitably comes from a secondary processor.

What they can do is help farmers find market access and measure those farms' environmental impact, in effect making the case for locally sourced and diverse ingredients. Seven Sundays partners with the Soil and Climate Initiative (SCI) to measure soil health among their producers, as well as add value back to farmers in the Upper Midwest. Lafferty says they have a commitment to have all their supply chain acreage "regenerative certified" by 2030. SCI also assists farmers with finding funding and grant opportunities as well as market access.

Seven Sundays began sourcing sorghum, a regenerative crop valued for its contributions to a drought-resistant farming system, in the early 2010's for their original muesli. They recently expanded their sorghum sourcing for their Little Crispies cereal line, which is similar in texture to a rice crispy or flake. Historically, it has been grown for animal feed or for a sweetener syrup and sold on the commodity market as an export. In 2026, the price for sorghum has decreased significantly as exports to China continue to be unstable. Lafferty explains that the value per acre of a farm increases when it grows food for the local market, "A lot of the times [food-grade crops] are a higher value crop for farmers than going to the commodity market," she says.

Beyond oats, sunflowers and sorghum, Seven Sundays sources Minnesota-grown flax and buckwheat. Lafferty says that she



Tom Cotter, a farmer in Austin, started growing sunflowers on his 800-acre farm in 2022. Cotter is a long-time advocate for regenerative agriculture and soil health. Photo courtesy of Seven Sundays.

hopes to expand their buckwheat sourcing in the future. "Farmers love growing buckwheat. It's a fast growing crop. It has about a three-month life cycle and it's a great pollinator source," she says.

Farmers and producers working together to grow regenerative crops and create an additional market for upcycled foods are nurturing an incredibly self-sufficient ecosystem. Businesses like Seven Sundays are a shining example of how to reimagine a food supply chain that centers environmental health, consumer wellness and local economic impact with equal importance. Oats for soil health, buckwheat for pollinators and sunflowers for beauty, Seven Sundays is on a mission to prove that Minnesota has it all. 

Nani Ferreira-Mathews is an author, freelance journalist, musician, and food pathways storyteller living in Minneapolis, Minnesota. Nani is Kanaka Maoli (Native Hawaiian), born in Oregon and raised in Georgia. Her writing focuses on race, indigeneity, decolonization, agriculture, and gender and sexuality. She holds a bachelor's degree in journalism from Georgia State University.

NETZRO

Leading the Upcycling Movement at Scale

NETZRO, a food upcycling equipment and technology company based in St. Paul, is another leader in Minnesota's upcycling movement, working to recover industrial food and beverage byproducts and transform them into safe, valuable upcycled ingredients that stay in the food chain. Eggshells, spent grains and more are processed using NETZRO's agri-food technology, which preserves the high nutrient value in the byproducts and gives new life to food that would otherwise be wasted. NETZRO is working on a uniquely industrial scale to expand the food economy without requiring any additional food to be grown. Relationships with businesses that share a mutual vision for a healthier environment through less food waste are key to their operational success.