

Midwest Value Chain Case Studies for Continuous Living Cover Crops - This case study on marketing perennial crops is one of three in a series written by Green Lands Blue Waters, led by GLBW Research Project Specialist Evelyn Reilly, focused on building value chains for perennial and other continuous living cover crops. Find more background on CLC value chain work in the Midwest at the [end of this case study](#) and the full series [here](#).

Introduction

This case study highlights two programs focused on increasing markets for perennial crops - the Perennial Percent initiative and Audubon Conservation Ranching. In interviews with individuals at the companies and organizations involved, a key theme emerged: they help brands tell stories. Convincing consumers to change their purchasing behavior and shift to more sustainable options often depends on narratives around the products. **Both of these programs offer a shorthand for a bigger story - a type of landscape scale agriculture that represents a fundamental shift in crop production and a way of ranching that supports birds.** The on-package and in-store labels spark interest and further investigation by consumers. They evoke images of healthy agricultural systems and encourage customers to make purchases to support that vision. This case study explains the basic operation of the programs, including the goals of the organizations behind them and how producers and manufacturers are using them to help market their products.



Perennial Marketing

For Continuous Living Cover (CLC) crops and cropping systems, most parts of the value chain are in development at the same time. Everything must advance to achieve a viable supply chain, not necessarily in lockstep, but in time to justify ongoing work. For example, breeding work on Kernza® perennial grain had been underway for decades before serious marketing efforts began. Now that an agronomically viable Kernza crop is available, marketing is essential to encourage sales, on-farm production, and ongoing breeding and agronomic research.

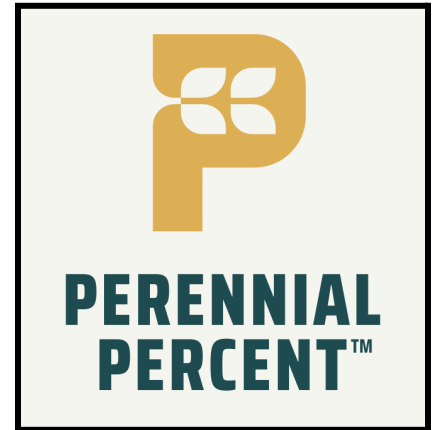
A key goal of CLC crops and cropping systems is to provide social and environmental benefits that most annual row crop systems fail to deliver. Kernza offers soil and water protection services, but is still in development and has low yields compared to other small grains. As a result, it is much more expensive than other grains. In time, breeding and management advancements are expected to increase yields and potentially mediate prices. At the moment, however, prices are higher in order to provide fair returns to farmers. Similarly, well-managed grass-fed beef and bison are unlikely to compete with feedlot-raised beef on a pound-to-pound price basis, but can offer ecosystem services that other livestock production systems do not. In our current food system, producing food that prioritizes environmental values and fair wages incurs additional costs to the producer, typically passed along to the consumer. The prices of these products can help account for good environmental practices and fair wages, but they are out of reach to many consumers. Larger changes are needed in our society - some through markets and others through policy programs - to ensure that everyone has access to a variety of nutritious foods produced by fairly paid workers and without widespread environmental damage. In the meantime, those who can pay more for food have a key role in creating markets for

perennial crops by choosing to buy these products. Thus, an important component of marketing products produced in continuous living cover systems, particularly perennials, is effectively communicating to consumers why these products are worth more. In the case of Kernza, we are optimistic that yield increases and management improvements will reduce prices. However, the overarching goal of these systems is not to cut every cost possible, but to deliver as much value as possible to farmers, partners across the value chain, consumers, rural communities, and the environment.

Perennial Percent™

Perennial Percent is a perennial grain labeling initiative that encourages food and beverage companies to incorporate small percentages of perennial grains, such as [Kernza®](#), into their existing product lines. The name “Perennial Percent” was originally coined by Sandy and Jay Boss Febbo of [Bang Brewing](#) in Saint Paul, Minnesota. Bang has been committed to brewing with all organic and regenerative ingredients since they first opened in 2013, and began brewing with Kernza in 2017 in a research partnership with the University of Minnesota and The Land Institute. Bang has developed many recipes with Kernza, ranging from 6-17% of the grain bill. They wanted to find a way to continue to incorporate the grain while keeping their beers reasonably priced. “Keeping organics within reach is core to our mission,”

Sandy explained. The idea began as a series in which each batch would feature 1% Kernza and expand to include more of their beers over time. While 1% may not amount to much Kernza for small brewers, “1% for a macro brewer, for a large regional brewer, for a collective of small brewers, would have a huge impact on demand for this promising grain,” Sandy notes. And, at every level, it creates an opportunity for conversation with consumers, generating a wider interest in, and awareness of, Kernza and perennial crops—and that’s what it’s really about for the businesses using the concept. The team brewed their first Perennial Percent batch in February 2020 and expanded it from there. While a number of their



beers continue to feature a higher percentage of Kernza, as of 2023 all other beers in their line up are now part of the series and include 1% Kernza.

In 2022, co-founder of Sustain-A-Grain, Peter Miller, was interviewed for an [article](#) that also highlighted Bang’s work with Kernza and their Perennial Percent series. When he read the

Perennial Percent™ Categories: Ingredients & Products

There are two types of Perennial Percent certifications: “Ingredient” and “Product.” Perennial Ingredients comprise an aggregate of ≥95% perennial input by weight and can include a mixture of different perennial grain inputs as long as the total is at least 95%. Perennial Grain Products must contain 1% or more perennial grain input by weight. Products could include food, restaurant menu items, beverages, dietary supplements, pet food, and personal care products. The 1% can comprise one or a combination of perennial grain ingredients. Only Kernza® perennial grain is currently available for Perennial Percent™, but more grains will be released soon.

published piece, he reached out to Sandy. He and others had been thinking about a similar concept and loved the catchy name. “We specifically did not trademark this,” Sandy explains. “It was an idea to share,” so they were thrilled to expand the use of the Perennial Percent name and concept.

Perennial Percent™ has now become an official food and beverage labeling initiative administered by The Land Institute, a Salina, Kansas-based non-profit research organization working to develop perennial grain agriculture, including Kernza® and many other perennial grain candidates. Perennial Percent™ is a unique program for marketing perennial grain food and beverage products and ingredients. It provides a way for food and beverage makers to differentiate their products by offering a recognizable trademark and certification backed by a respected institution. There are two categories of



certification: Perennial Ingredients - essentially, just the perennial grain itself - and Perennial Grain Products, items made with perennial grain and other ingredients. Currently, Kernza perennial grain is the only ingredient being incorporated into consumer products, but more are expected to be added as they are developed. To be used under the Perennial Percent program heading, the ingredients must meet identity-preserved program standards and comply with program criteria developed by The Land Institute.

"We aim to make perennial grains more accessible to businesses and consumers. Our hope is that the label will empower businesses to effectively market and introduce the story of perennial grains. The Perennial Percent program enables businesses to showcase the benefits of incorporating even a small percentage of perennial grain into their products, fostering broader adoption of perennial grains across a diverse range of food products."

Hana Fancher, The Land Institute Market Stewardship Specialist

How Does it Work?

The program has been designed to be easy to access for food and beverage businesses. Businesses can [reach out to The Land Institute's Crop Stewardship Team](#) to apply for use of the trademark and label. They'll be asked to submit an ingredient list, which is then reviewed by The Land Institute team to confirm that the ingredients meet the program standards. The business owner signs

an agreement with The Land Institute for use of the label, supplies a preview of the packaging design to ensure that the label use complies with the design standard, and pays applicable fees. Overall, the process is relatively quick and easy. The program is being initially funded, in part, as a project component of a University of Minnesota USDA KernzaCAP grant, on which The Land Institute is a collaborator.

Why Just 1%?

The idea behind the low percentage of perennial grain is to make the program accessible to food producers who are interested in perennial grains but, for technical, ingredient formulation, or economic reasons, may not be able to use them in high percentages. On a large scale, 1% perennial grain across many products and companies would translate to a sizable increase in demand for Kernza. The idea, in part, is that "you don't have to convince a customer that Kernza is the answer. You just have to convince them that these companies have invested in improvement, and it's happening," says Missi Blue, co-owner of Red Wing-based baking mix company Sturdiwheat. Individual consumers don't have to spend a lot or change their palate, they just need to connect to the "feel good" aspect of perennial ingredients. The low percentage allows manufacturers to add Kernza without significantly changing the flavor profile, enabling a large-scale landscape change.

Brand Spotlight: Sturdiwheat

Sturdiwheat, based in Red Wing, Minnesota, is a family-owned company founded in 1939, owned by mother and daughter Suzanne and Missi Blue. Sturdiwheat produces a wide variety of baking mixes, including breads, muffins, pancakes, waffles, cookies, and more. Missi Blue first heard of Kernza sometime around 2021 through her work with the Lake Pepin Legacy Alliance. A longtime advocate for water quality, she was intrigued by Kernza's potential to reduce nutrient leaching and sediment loss and saw her business as an



avenue to reach more consumers with this new crop. “The more that we got involved,” she says, “the more it was like, this needs to be bigger than us. This needs to be somehow mainstreamed.” She knew it would involve figuring out a way to introduce it to other companies, keep it affordable, and secure commitments for long-term use.

The Perennial Percent program represents a concrete action that a company has already taken - not an intention or a donation that might have an impact, but a business-based, measurable, meaningful change on the landscape.

A challenge Missi observed at Sturdiwheat was communicating to consumers about what Kernza is, and convincing them to try Sturdiwheat’s two new 50% Kernza mixes. While some customers came to Sturdiwheat specifically looking for Kernza products, it was becoming apparent that this path alone wasn’t going to create significant demand for Kernza flour. Missi contacted Colin Cureton at the University of Minnesota’s Forever Green Initiative to ask if any programs existed to help businesses communicate to consumers about perennials by highlighting their use of a smaller percent of perennial ingredients. As luck

would have it, Forever Green and The Land Institute were just beginning to work on Perennial Percent™. She was thrilled with the name and the distinctive label. One of her favorite parts about the Perennial Percent program is that it represents a concrete action that a company has already taken - not an intention or a donation that might have an impact, but a business-based, measurable, meaningful change on the landscape. Sturdiwheat is currently enrolling all of their baking mixes in the Perennial Percent program and hopes this will help pave the way for many more companies to sign up.

Healthy Products & Sustainable Ingredients: Tapping into Consumer Needs

One of the reasons that Perennial Percent could offer increased product value is that many consumers do not buy exclusively or even largely organic but are interested in sustainability and health. For Sturdiwheat, which produces several Kernza products, Perennial Percent fits well for products that aren’t necessarily organic certified but still tap into consumer interest in clean labels and sustainable farming practices.

Missi is also excited about how Perennial Percent will allow her company to build on the Buy Local conversation - their ingredients are sourced as much as possible from local farmers, with all grains coming from within 100 miles - to tell consumers about the benefits to land and water and how they can eat locally grown food and support perennial farming practices. Another benefit: some certifications are expensive and entail extensive reporting requirements, potentially limiting the interest and ability of small businesses and farmers to participate. In contrast, Perennial Percent is designed to be easily accessible. To learn more, visit the program’s webpage at <https://kernza.org/perennial-percent/>



The Perennial Percent™ initiative’s initial collaborators include: [The Land Institute](#), [Sturdiwheat](#), [Bang Brewing](#), [University of Minnesota’s Forever Green Initiative](#), [Sustain-A-Grain](#), [Mad Agriculture](#), [Perennial Promise Growers Cooperative](#), [Merge Impact](#), and [USDA Kernza®CAP](#).



Audubon Conservation Ranching Program

Grassland bird populations have declined over 50% over the past five decades as a result of habitat loss to cropland and development (read more [here](#)). The majority of remaining grassland is privately owned, with much of it used for cattle grazing. Audubon launched the Audubon Conservation Ranching (ACR) program as a way to work with landowners and ranchers to implement bird-friendly conservation practices on grazing lands while also providing them with a marketing tool to highlight the environmental benefits of their production practices. Funding for the program comes from a variety of sources. One of the biggest is the [National Fish and Wildlife Foundation](#) (NFWF),



Photo: Ackerman + Gruber

the nation's largest private conservation organization. NFWF was created by Congress in 1984 and functions essentially as a public-private partnership, funding thousands of conservation projects in the United States and internationally. The ACR program is also supported by USDA NRCS Conservation and Innovation Grants (CIG), the USDA Regional Conservation Partnership Program (RCPP), philanthropic sources, and state-based funds (see a listing in the [Impact Report](#)). The program is free to landowners.

How Does the Program Work?

In order to use the Bird Friendly seal, landowners work with Audubon to meet a set of criteria tailored to the ecotypes and bird species of the region. It begins with a Habitat Management Plan (HMP) developed through a collaborative process by

Audubon biologists and the rancher. The plan identifies site-specific goals and management activities to benefit target grassland bird species. Each plan is different, tailored to the ecological needs and features of the grazed land and the local bird populations. Once the HMP is complete, the ranch can undergo a certification audit by third-party verifier Food Alliance. Then, Audubon assists with implementing the outlined habitat management activities. Specified activities might include invasive plant removal and replanting of native species, and rotational grazing schedules timed to benefit native plant and bird species. Within the first year of certification, ranchers must follow a certain set of protocols. By years 3

Key ACR Stats

- 114 Certified Ranches in 15 states
- 3 million acres
- Products available at over 250 retailers

and 10, additional protocols are added, with ranchers eventually required to follow at least 75% of the recommended practices. Landowners are responsible for the costs of management and any conservation measures implemented, but Audubon staff connect them with any state and federal programs that may offer cost sharing. Audubon is also expanding their own available cost-share that can be offered directly to ACR certified farms.



Once certified, farmers and ranchers can use the seal, which reads “Grazed on Audubon Certified Bird Friendly Land,” to market their products. Currently, products are available at over 250 retail outlets: regional and national online retailers, butcher shops, grocery stores, and direct-to-consumer sales. The first



"With the Bird-Friendliness Index (BFI), Audubon is comparing how Audubon Conservation Ranching (ACR) certified lands and surrounding uncertified properties are supporting grassland bird populations. With this approach, we have seen a marked increase of BFI scores on Audubon Certified bird-friendly land, indicating that the directed habitat management on ACR ranches has had very real positive impacts on our target grassland birds."

Sarah Hewitt, Audubon Upper Mississippi River Senior Conservation Manager

ranch was certified in 2017, and over 100 have followed, covering a total of nearly 3 million acres in 15 states. Most certified ranches raise cattle, but several bison ranches have recently been certified, and Audubon created a special bison version of the bird-friendly seal to highlight those products.

The ACR program recently began expanding in the Midwest. Funding from the National Fish and Wildlife Foundation in 2022 played a key role in facilitating the program's expansion into Minnesota, Iowa, and Wisconsin by allowing Audubon to hire two grassland

ecologists. In 2024, a USDA NRCS Conservation and Innovation Grant (CIG) supported hiring two more ecologists to increase the technical assistance capacity and enabled Audubon to provide financial support for the type of grassland habitat management practices stipulated by the program, such as grassland plantings, invasive species control, prescribed burns, and fencing. It will also allow Audubon to test incentive payments for grass seeding, prescribed burns, and higher bird occupancy. In Wisconsin, one ranch is certified already, with 10 more in the process. In Minnesota, five ranches will be certified by fall 2024, with several more in progress. In addition, the Clearwater, Minnesota-based Thousand Hills Lifetime Grazed network of over 20 ranches - including several in Minnesota and Wisconsin - has nearly completed the certification process, and is poised to distribute bird-friendly beef in all 50 states. Partnerships with the Minnesota Department of Natural Resources, Iowa Department of Natural Resources, and the Wisconsin Department of Natural Resources help increase the reach and effectiveness of grassland bird conservation measures.

Program Standards

Standards of the Audubon Conservation Ranching program address wildlife habitat, soil health, and animal welfare. They were developed by producers, cattle industry experts, and wildlife biologists, and aim to balance conservation, animal husbandry, consumer demand, and ranch economics. Standards focus on three areas: habitat quality, animal welfare,



Photo: Ackerman + Gruber

and environmental sustainability. **Habitat quality** aspects are defined by the HMP and vary from location to location. They draw on Audubon's wealth of scientific expertise to outline a plan based on current research, and ongoing monitoring ensures that the plans are effective: Audubon scientists developed a Bird-Friendliness Index, a way to quantify the abundance, resilience, and diversity of a bird community. **Animal welfare** standards are based on best practices for animal health and welfare, including no growth hormones. The program ensures that animals are properly handled and not stressed throughout their lives on the ranch and the harvesting process. **Environmental sustainability** standards include restricting pesticides, minimizing

fertilizers, and protecting stream banks, leading to cleaner water, healthier soil, and higher plant and pollinator diversity, as well as greater climate resilience.



Documented, Multi-Dimensional Benefits

The [benefits of rotational grazing](#) are already well-documented. Intensively managing cattle with frequent moves to fresh pasture and long rest periods for vegetation to recover mimics historic bison movement on the prairie, optimizes grassland productivity, and creates a patchwork of different grass heights that attracts a greater variety of bird species. On certified ranches, impacts are measured by boots-on-the-ground researchers in collaboration with Audubon's national science team. Grassland ecologists monitor bird populations on the ranch and the data is used by the science team to calculate the Bird Friendliness Index. For the first 35 certified ranches, grassland bird abundance increased by an average of 36% from 2016 to 2019, with some ranches observing much higher increases in abundance of vulnerable species like Burrowing Owls and Grasshopper Sparrows. Certified lands also have, on average, a higher index score than nearby non-certified lands. Though the program is relatively new, small but statistically significant gains have already been observed. Ecosystem recovery takes time, but based on these encouraging early results, scientists expect to see bird diversity continue to increase. While the program focused on bird habitat, benefits are broad: by definition, restoring bird habitat also improves biodiversity for native plants and pollinators and a variety of other animals. With improved vegetation health, ranches start seeing healthier soil, cleaner water, and more resilient pasture. The Conservation Ranching program includes other environmental assessments as well. With funding support from the USDA Natural Resources Conservation Service's Regional Conservation Partnership Program, they will measure soil health and soil carbon levels on 100 ranches to assess potential carbon sequestration in these systems.



Photo: Ackerman + Gruber

Producer Benefits

The ACR program provides an obvious benefit to ranchers with the use of the bird-friendly seal, which is available to participating farmers as a marketing and communication tool that helps tell the story of the operation behind the products. Audubon is a widely recognized organization with a large network of members who feel strongly about bird conservation. This program builds on that existing recognition by using a seal that prominently includes the Audubon name, and communicating to members about certified ranches. In this way, Audubon helps ranchers sell their products, ensuring that they can maintain the beneficial practices they've implemented. Since the program is relatively new, Audubon does not have data on increased sales from participating ranches, but hopes to report on it in the future.

The ACR program also provides tangible benefits to farmers, less visible to the consumer, by providing technical assistance to implement practices that increase pasture productivity and resilience and reduce chemical use, which translate into real on-farm economic benefits. Audubon also actively connects ranchers and private landowners to



existing state and federal cost share programs, which take time to locate, access, and make sense of. Thus, the program supports producers in achieving and maintaining the benefits that they can then highlight to consumers.

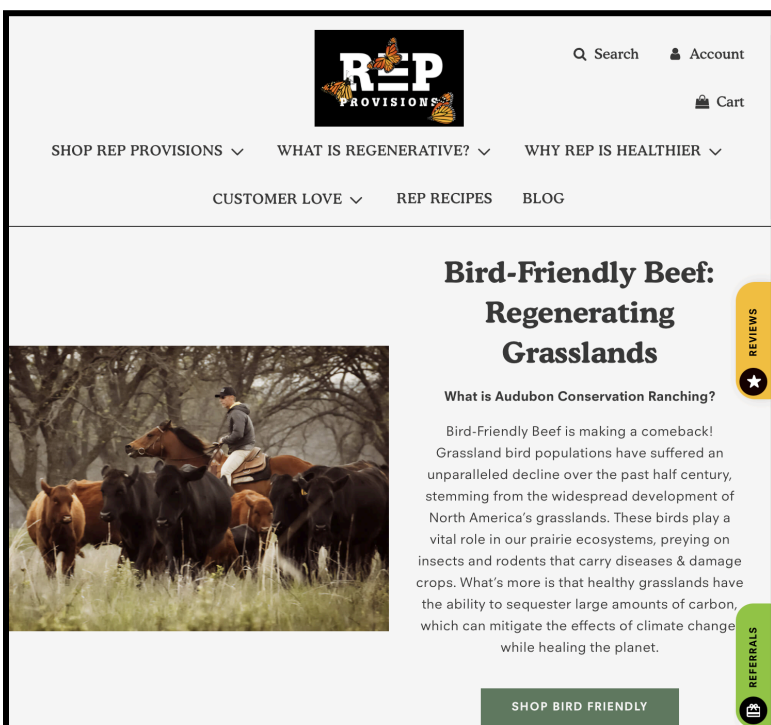
The ACR program has also facilitated access to additional revenue opportunities, bonus benefits that have evolved since the program was launched. Audubon [partnered](#) with [Grassroots Carbon](#), a company focused on regeneratively-grazed rangeland carbon credits, which pays an annual premium to ranchers who have Audubon Certified land (at a rate per metric ton of CO₂) for a period of 5 years. Ranchers need to meet those program guidelines as well, but being Audubon Certified puts them a couple steps closer. In the Rockies region, Audubon has an ecotourism partnership with tourism company Reefs to Rockies, which includes some Audubon Certified Bird-Friendly ranches on their [American Serengeti](#) tours. The tour series highlights the stunning landscapes and wildlife of the Great Plains, and the fact that Audubon Certified lands are prime habitat is an indicator of the program's effectiveness. ACR Communications Manager Anthony Hauck points to these opportunities as examples of how the certification program has beef and bison at the center, but generates multiple other associated benefits.

Connecting to Consumers

Sarah Hewitt, Senior Conservation Manager, Audubon Upper Mississippi River, notes that many people have a negative perception of cattle in terms of climate impact. Managing cattle correctly, however, can [reduce their climate impact](#) by helping maintain healthy grass-based ecosystems. This program aims to connect with consumers concerned with various aspects of food production, including climate. The certification essentially communicates that if you are going to buy beef, you can do it in a better way. Hewitt explains that the goal is for consumers to see the seal and think, "I know that this has come from a place that has been managed well for wildlife, and the cattle or the bison are being treated well, and so I can feel good about purchasing this product."

"We're a certification program housed within a national conservation organization - one with a century-long history of being a bird conservation advocate. Audubon also has a well-respected, top-notch science team, which our program leans into. We believe the monitoring we're conducting - for birds, habitat, and soil - will become the standard bearer in the space we're working in."

Anthony Hauck, ACR Communications Manager

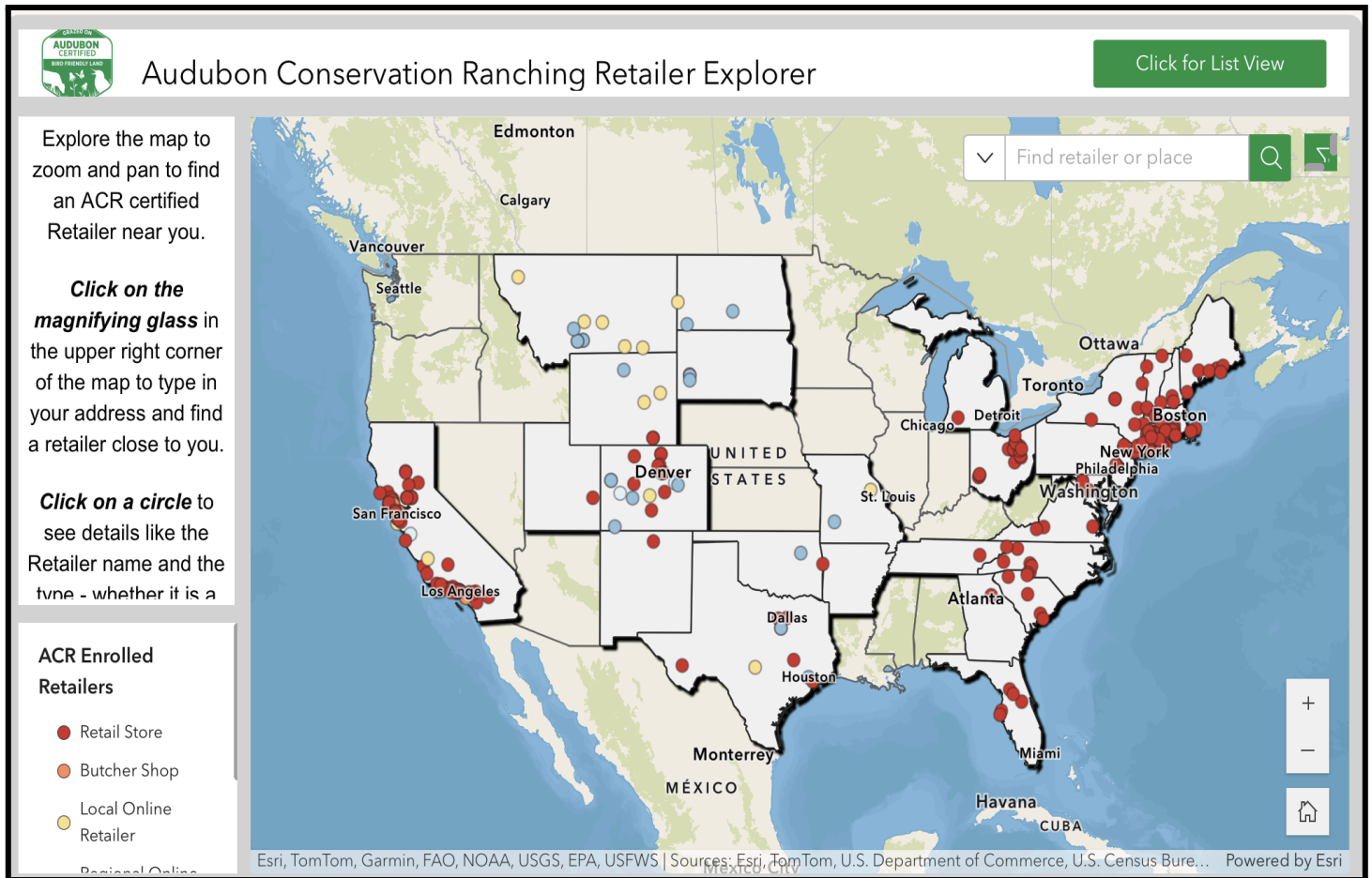


The screenshot shows the REP Provisions website. At the top, there is a navigation bar with the REP Provisions logo, a search bar, an account icon, and a cart icon. Below the navigation bar are several menu items: SHOP REP PROVISIONS, WHAT IS REGENERATIVE?, WHY REP IS HEALTHIER, CUSTOMER LOVE, REP RECIPES, and BLOG. The main content area features a large image of a person riding a horse through a field of tall grass. To the right of the image is a text block with the title "Bird-Friendly Beef: Regenerating Grasslands" and a sub-heading "What is Audubon Conservation Ranching?". The text discusses the decline of grassland bird populations and the role of healthy grasslands in sequestering carbon. At the bottom of the text block is a green button that says "SHOP BIRD FRIENDLY". On the right side of the page, there are vertical labels for "REVIEWS" and "REFERRALS".

Some certified ranches are putting their certification front and center, such as Oklahoma-based REP Provisions. Their website leads with information about their Audubon certification, including program details, pictures of their products bearing the bird-friendly seal, and a beautifully produced video that features rancher Eric Perner as well as conservation experts from Audubon and Pheasants Forever. REP Provisions explicitly presents the purchase of these products as a way to support bird populations and healthy grasslands. In the video, REP Provisions Co-Founder and Marketing Manager Justin Johnson notes that it can be challenging to communicate to consumers about what regenerative means, but love of birds is something that many people can connect to.



Consumers can visit the [Audubon Conservation Ranching Retailer Explorer](#) to find beef and bison sold directly by ranches, as well as from butchers and grocery stores. The interactive map shows retail outlets by state, with a color-coded key indicating whether they are retail stores, butcher shops, or local, regional, or national online retailers. Clicking on a location pulls up the basic info and a link directly to the website, where consumers can then purchase beef and bison grazed on Audubon Certified bird-friendly land. Audubon staff are also working with Thousand Hills Lifetime Grazed and Organic Valley to develop market opportunities for certified producers. Working with large partners like Thousand Hills will help expand the program into the Midwest and into Green Lands Blue Waters' geographic focus area.



This case study is part of a series of three case studies on developments in Continuous Living Cover value chains in the Midwest. For more context on the development of these case studies, please see the following context and key takeaways section. Many thanks to Missi Blue, Sandy Boss Febbo, Hana Fancher, Anthony Hauck, Sarah Hewitt, Tammy Kimbler, and REP Provisions for their invaluable contributions to this project. All Sturdiwheat product images courtesy of Missi Blue.



Continuous Living Cover Value Chain Case Studies: Context and Key Takeaways

Why Continuous Living Cover Value Chains?

Continuous Living Cover (CLC) cropping systems maintain living roots in the ground year-round while keeping the soil covered. Green Lands Blue Waters identifies five strategies to implement CLC on the landscape: agroforestry (integrating trees and shrubs into farming systems), CLC with annuals (cover crops, winter oil seeds, and small grains), perennial grains (e.g. Kernza), perennial biomass (e.g. switchgrass, *Miscanthus*, and other bioenergy crops), and perennial forage and grazing (well-managed rotational grazing, silvopasture, and perennial forage crops such as alfalfa and grasses). CLC systems offer a range of environmental benefits - improved soil structure and organic matter content, reduced erosion and nutrient losses to ground and surface water, and habitat for birds and pollinators. They also offer economic, social, and nutritional benefits to farmers, rural communities, and consumers. CLC value chain coordination is critical to actualizing these benefits on working lands by bringing CLC products to market.

The term 'value chain' was coined in 1985 by Michael Porter to describe how businesses add consumer value to a product along the supply chain. Some agriculture and food system practitioners in the Midwest also use it as shorthand for *values-based supply chain*: one that delivers food, feed, fiber, and fuel in ways that align with the values of and bring value to producers, processors, consumers, and other stakeholders. For example, they may prioritize cropping systems that deliver soil and water quality benefits, humane treatment of livestock, and fair pay for farm and food system workers.

One of the most important levers for increasing CLC crop acreage across the Upper Midwest landscape is markets, but between farm field and consumer sits a complex web of processing, storage, aggregation, distribution, wholesale purchasing, marketing, and other value chain coordination activities. A network of organizations and individuals is working to create functional values-based supply chains for CLC crops by centering farmer economic viability, community wealth building, and business opportunities, while elevating the importance of relationships, integrity, transparency, and social and environmental impacts.

CLC Value Chain Case Study Project Rationale

These case studies are informed by years of collaborative work across the Upper Midwest. As a recent example, the Artisan Grain Collaborative hosted a retreat in 2022 to connect CLC value chain practitioners, build awareness of each others' work, and develop shared language and messaging around the definition of 'value chains' and the *values* we are working towards (see infographic below). In 2023, Green Lands Blue Waters hosted a multi-day CLC value chain workshop in Madison, Wisconsin. In 2024, the Wallace Center led discussions on value chains through a Regional Food System Planning grant. In addition, these organizations, partners, and supporters across the Midwest continue to do daily work on value chain coordination.

Innovation in supportive policy, market development, and financing is ongoing. These case studies are a snapshot in time, which we hope can inform, inspire, and help build next steps. In creating these case studies we looked for successes, particularly with diverse capital stacks and private equity or impact investment. However, we heard a recurring story of how private investment is not yet accessible in this space, while public grants, philanthropy, and dedicated individuals are driving technology advancement and business growth. Midwest CLC value chain practitioners have been smart and resourceful with the assets they do have, and as a result, there are now opportunities for early



private investment. We hope to highlight those opportunities in these case studies and drive further investment in the sector in ways that benefit businesses, consumers, rural communities, and the environment.

Key takeaway: Continuous Living Cover agriculture and value chains need ongoing public and philanthropic investment as a bridge to private investment

Continuous Living Cover cropping systems require public and philanthropic investment to reach the point of attracting private investment. These case studies describe how value chain actors used creative combinations of federal and state grants and philanthropic sources to finance values-based CLC supply chains, with additional support from ag lenders, private equity, local economic development funds, and individual in-kind donations of time, resources, and expertise. So as not to portray CLC crops as inherently economically risky compared to conventional crops, it is important to emphasize the broader contextual reasons for why public and philanthropic support is critical as a bridge to private investment in CLC value chains:

- Conventional row crop agriculture is highly incentivized and subsidized through publicly-funded research, supportive policy, and risk mitigation via cost-share programs and crop insurance, as well as established infrastructure and readily available markets that are intentionally designed to absorb crop surpluses. Conventional crops did not come to dominate the landscape solely through market forces and private investment; CLC crops and systems are also unlikely to overcome initial barriers and expand significantly solely through market forces and private investment.
- Public and philanthropic funding is often designed to incentivize, support, or reward the provision of public goods such as improved human and ecosystem health, which accrue broadly to many people over time, rather than rapidly to individual investors. Many of the key benefits of CLC systems are either public goods or avoided negative externalities for which the market does not, by definition, take responsibility. Thus, these systems may be excellent investments from a public standpoint, even before they can offer short-term capturable returns.
- Public investment can help develop CLC enterprises to the point that traditional investment can step in, at which point they can provide both profits and broader benefits. For example, a key factor for many crops is production scale-up to achieve the volumes necessary for efficiencies of scale, which facilitates increased profitability. However, it takes time to reach this point, during which crops need other forms of support.
- Investment that tolerates long-term return on investment is essential for the development of novel CLC systems. For example, research on new crop species, production scale-up, and market development efforts can take decades, but can ultimately benefit millions of people. This work is valuable, but not necessarily attractive to private investors due to the long time frame.
- Public and philanthropic funding can complement private investment. For example, an [explicitly stated goal](#) of the \$60 million [Expanding Agroforestry Project](#) (EAP) is to catalyze private investment in agroforestry and “further develop and leverage new private financing options developed for agroforestry operations.” The EAP is funded by the USDA [Partnership for Climate-Smart Commodities](#) program and is led by the Nature Conservancy in partnership with regional lead organizations (including the Savanna Institute for the Upper Midwest). Goals include greater adoption of agroforestry systems by providing incentive payments to farmers, increasing agroforestry staff capacity, and expanding markets for climate-smart agroforestry products.



MIDWEST VALUE CHAIN COORDINATION: STRENGTHENING FOOD SYSTEMS THROUGH SHARED VALUES

and some examples of those values in action

COMMUNICATING CLEARLY AND HONESTLY ABOUT OPPORTUNITIES AND BARRIERS

To illustrate this, **Savanna Institute's** work includes communicating honestly with stakeholders about the benefits & challenges of agroforestry. Their resources include info on cost, yield, and profits of twelve key tree crops.



FINDING PRACTICAL PATHS TO ECONOMIC VIABILITY, OWNERSHIP, & WEALTH CREATION



Putting this value into practice, the **Forever Green Initiative** is developing and improving winter-hardy annual and perennial crops and cropping systems that protect soil and water while driving new opportunities for growers, industry and Minnesota communities.

FOCUSING ON REGIONAL COMMUNITY-LED NETWORKS THAT ARE MAKING GOODS THAT SUPPORT HEALTH, STEWARD NATURAL RESOURCES, AND HAVE OTHER POSITIVE IMPACTS

As one example, the **Wallace Center** supports diverse value chain actors and professionals to connect, learn, and pursue common goals. This includes providing curriculum-based trainings, conducting value chain analyses, facilitating collaborations, and offering evaluation frameworks



DECENTRALIZING POWER AND DEMOCRATIZING DECISIONS

An example of this value in action: **Grassland 2.0** is engaging communities through Learning Hubs to assess the current landscape of livestock farming and decide together about strategies to move towards a better future.



Demonstrating these values, **Green Lands Blue Waters** connects, collaborates, convenes, and communicates so partners can work jointly on continuous living cover projects they can't tackle alone.

BUILDING JUST, FUNCTIONAL, AND MUTUALLY BENEFICIAL RELATIONSHIPS THAT ADAPT TO CHANGE



Case in point, the **Artisan Grain Collaborative** is built on deep connections across the grain chain. As the pandemic began, this network was immediately able to launch an effort to distribute thousands of locally grown, milled, and baked loaves to neighbors in need.

This list of shared values was developed jointly by a group of peer organizations building value chains for small grains, perennials and other crops that provide continuous living cover on the farm landscape: Artisan Grain Collaborative, University of Minnesota Forever Green Initiative, Grassland 2.0, Green Lands Blue Waters, Savanna Institute, and Wallace Center at Winrock International. It shows the shared vision of what we are collectively working toward with an aim for greater connectivity across and impact in value chain coordination work at the landscape-scale in the Upper Midwest.

