Our Committment to Supporting Sustainable and Regenerative Practices

Consumers are savvy: they go to product nutrition labels not only for their own health and well-being, but for that of the planet. They demand solid sustainability practices and expect the companies they choose to be accountable for those practices. This means that corporate social responsibility has never been more relevant, as brands seek to engage consumers and align with their values. At Tribeca Oven, we've been supporting agriculture that advances sustainable practices since 2018, focusing on our core ingredient — ***wheat***. The results of this partnership show that it is possible to reduce agriculture's environmental impact while crafting artisan bread on a commercial scale.

BACKGROUND & OBJECTIVE

Tribeca Oven supports farmers who are on the cutting edge of regenerative and sustainability practices through the North Dakota Wheat Program. This commitment includes evaluating the project's performance against benchmarks to continue to improve their metrics:

- Land use
- Soil conservation
- Productivity
- Nitrogen use efficiency
- Water quality
- Biodiversity
- Greenhouse gas emissions

METHODOLOGY & RESULTS

Regenerative agriculture describes farming and grazing practices that, among other benefits, reverse climate change by rebuilding soil organic matter and restoring degraded soil biodiversity – resulting in both carbon drawdown and improving the water cycle.[1]

Farmers in the program have implemented two regenerative agriculture principles. The first is conservation tillage, and the second is soil cover and managed natural flora. These farming techniques go directly to the North Dakota Wheat Project's targeted metrics and desired end goals.

Principle 1: Conservation Tillage

Conservation tillage means any minimal tillage system that leaves sufficient crop residue to cover the soil surface by at least 30%.[2] No-till farming, where soil is left undisturbed by tillage and the residue is left on the soil surface, is the most effective soil conservation system. Reducing or stopping tilling results in a fuel savings of approximately 3.9 gallons per acre.[3]

GOAL: Improve the soil's health and water quality.

Practice: No and reduced tillage, in which more than 100% of the program's acres are now engaged.

Principle 2: Soil Cover and Managed Natural Flora

Managing for soil health allows producers to work with the land – not against it – to reduce erosion, maximize water infiltration, improve nutrient cycling, save money on inputs, and ultimately improve the resiliency of their working land.[4]

GOAL: Improve soil's health, water quality and biodiversity.

Practice: Grassed waterways, which are vegetated channels to carry runoff and help prevent underlying soil erosion. Unchecked soil erosion negatively impacts the quality of the land in addition to clogging waterways.

Practice: Riparian cover/buffers to ensure there are vegetated areas near a stream to help shade and partially protect the stream from the impact of adjacent land uses. These practices assist in increasing the water quality in nearby bodies of water.

Practice: Water and Sediment Control Basin (WASCOB), which is a series of small embankments across concentrated flow paths on cropland that store, then slowly release, runoff through an underground outlet, reducing erosion.

[1] Regeneration International, regenerationinternational.org/why-regenerative-agriculture
[2] Agricultural and Related Biotechnologies. K. Gellatly, D.T. Dennis, in Comprehensive Biotechnology (Second Edition), 2011
[3] Agricultural and Related Biotechnologies. K. Gellatly, D.T. Dennis, in Comprehensive Biotechnology (Second Edition), 2011
[4] USDA Farmers.gov, Conservation and Soil Health

RESULTS FOR THE 2022 CROP

The results gained against the regenerative agriculture principles' benchmarks — conservation tillage, and soil cover and managed natural flora — were considered as performing to standard, with two areas for improvement.

State and national benchmarks were met or exceeded for the following principles:

- Productivity (bu/acre): Yield was higher, at 53, among growers in the program than the state average of 49.
- Tillage (%/acre): Growers use no-till on all acres, three times more than the state average.
- Land Usage Change (acres): There were zero acres of land converted from non cultivated land into production agriculture.
- Cover Crops (% of operation's acres): Growers planted 1,293 acres of cover crops (10% of the program acres). This is compared to a 1.5% USDA state benchmark. These cover crops have shown to protect against erosion and nutrient runoff, increase soil water-holding capacity and improve microbial activity.
- Soil Conservation (ton/acre/year): A soil erosion Footprint score of 0 indicates that no soil was lost that year. With a score of 0.1, cover crop and non—cover crop acres achieved similar, relatively small, losses of soil.
- Green gas Emissions (GHG): The total emissions from energy use, nitrous oxide emissions from soils, methane emissions (rice only) and emissions from burning make up GHG emissions. A low score is desirable for this metric, and with GHG emissions were 30 lbs-CO2e/bushel, the program is performing well.
- Biodiversity: A score above 80% demonstrates that a farm has maximized opportunities for biodiversity. At 73%, program farmers have almost maximized the opportunity for biodiversity.

Farmer's underperformed these two benchmarks:

- Nitrogen Use Efficiency (NUE): Growers in the program used higher than optimal nitrogen rates and harvested average yields, resulting in worse nitrogen use efficiency.
- Corrective Actions:
  - The progress towards better NUE depends heavily on the short term farm economics of the season as well as long term adoption of efficient practices and technology.
- Water quality: The maximum water quality score is 4, with a program score of 2.3, there is room for improvement.
- Corrective Actions:
  - Practices that improve the water quality include: Increasing conservation enhancements; Reducing tillage; Implementing integrated pest management (IPM) strategies without the use of chemicals; Reducing fertilizer application; Using fertilizer application methods that deliver nutrients to the right place.

CONCLUSION

The North Dakota Wheat Project farmers have successfully incorporated key regenerative agriculture principles culled from solid sustainability practices — and the metrics show it. They're reducing their impact on the environment through conservation tillage, and soil cover and managed natural flora, with systems in place to measure and track their results. We've continued to see improved metrics as the project has evolved.

Tribeca Oven will continue to support these farmers as they grow and improve their sustainable farming practices. It's our corporate social responsibility to do so, and to seek production methods to achieve our environmental stewardship goals. We believe that the food industry is a key vehicle in addressing environmental sustainability, and we intend to be an influencer through programs like the North Dakota Wheat Project.

Tribeca Oven's Carbon Impact

Currently, the amount of wheat produced in this program is equivalent to 50% of the wheat used to produce Tribeca Oven's bread, up from 33%. This carbon insetting — implementing nature-based programs — directly impacts our supply chain as we craft artisan breads that reach the discerning consumer through retail, distributor and operator partners.

In collaboration with our vendor, the flour Tribeca Oven uses comes from flour mills that are net carbon neutral, making a direct impact in the supply chain by supporting sustainable practices.

*This corresponds to the 2022 crop year.

ABOUT TRIBECA OVEN: Tribeca Oven is the premium supplier of artisan bread that captures the essence of small-batch artisan craftsmanship with high-volume efficiency. Renowned for our superior flavor and industry-leading clean label standards, we are committed to delivering a higher degree of quality and consistency for all of our baked goods. Tribeca Oven is owned by C.H. Guenther & Son, a leader in the manufacturing of grain-based and seasoning products, including biscuits, gravy mixes, frozen appetizers, spices, and desserts.