

# Sustainability Report

Creating a more resilient and agile food system

2023



# SENTENCE

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# From Our Leaders



I joined Sound Agriculture because I believe there is a better path to fertilize our crops with nature-based solutions. With over a billion microbes in a teaspoon of soil that already fix nitrogen from the atmosphere and solubilize phosphorus, the solution is right beneath our feet. We just need to take full advantage of it.

It's early days for Sound and the nutrient efficiency space as a whole, but we are rapidly gaining traction and seeing growers replace their traditional forms of fertilizer with SOURCE®. Our groundbreaking Fertilizer Replacement Guarantee protects growers replacing fertilizer with SOURCE from any yield loss up to \$100/acre; by far the most aggressive underwriting program for nutrient efficiency in all of agriculture.

As an industry, we can either support growers to make the shift away from carbon intensive growing practices or continue to pollute our watersheds, waste our resources, and contribute to a warming climate. Yield efficiency has always been a strong suit for agriculture, with productivity tripling since the '50s. Nutrient use efficiency is the next frontier, with the potential to reduce 2-5% of greenhouse gas emissions through alternatives to synthetic fertilizer, while strengthening growers' businesses and soil health.

We hope you enjoy learning about our sustainability activities and climate impact. I am proud of our small, but mighty, team who conducted countless months of analysis, program building and writing to bring this report to fruition. It will be the first of many as we scale even further!

*Adam Little* CEO

"Sound is leaning into the fundamentals of agriculture to solve key problems facing growers. SOURCE is backed by science and field trials, providing environmental benefit, and economic viability to the grower. I believe Sound is well positioned given the current drivers in the market."

**Cheryl Martin, Chair of the Board**



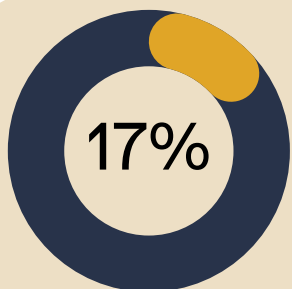
# Estimating 2023 Impact

## Nutrient Efficient Farms: Less Waste, More Profit

In sales year 2023, we built out our internal systems to track how our product is being used—to reduce fertilizer or increase yield. From a sustainability perspective, it is critical to understand how many of our customers are replacing fertilizer because when our product, SOURCE, is used to replace 25 lbs of nitrogen it has an implied 4x greater emissions impact as compared to boosting yield. The key metrics we are tracking:

- total pounds of nutrients avoided
- the average rate reduction of nitrogen (N) and phosphorus (P)
- the ratio of customers reducing fertilizer compared to boosting yield by acre

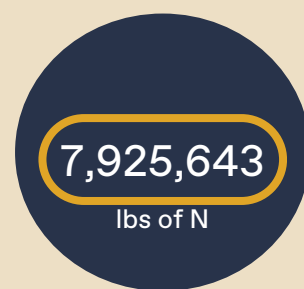
### SOURCE Replaces Synthetic Fertilizer



Customers Replacing  
Fertilizer



Average Reduction Rate



Total lbs of N  
Avoided

We started tracking how our customers intend to use SOURCE to gain visibility on % reducing by channel

Our recommendation is to replace 25 lbs of synthetic N and P with SOURCE. On average our customers are reducing less than recommended

16,820 mt CO<sub>2</sub>e Avoided

### We have come a long way

In 2022, we estimated that SOURCE supported a fertilizer reduction on 20% of 585k corn acres. This estimate was based fully on assumptions and pre-dated the data tracking started in 2023.

Corn, 2022

585,000

SOURCE-Applied Acres

1,911

mt of N Avoided

8,939

mt CO<sub>2</sub>e Avoided



# Co-Benefits & the Big Picture

## Modeling our Potential Impact

Picture this! We use the EPA calculator to translate the large impact farm decisions have into common analogies. The 16,820 mt of CO<sub>2</sub>e avoided by SOURCE is equivalent to...

### Emissions from:

**4,003**

gas-powered vehicles driven  
for 1 year

### Carbon sequestered by:

**278,120**

tree seedlings grown for 10  
years

**19,638**

acres of U.S. forests in  
1 year

Source: EPA GHG emissions equivalencies calculator

## Water Quality

SOURCE-treated fields demonstrated 19% lower levels of nitrates in a 3rd party, 2 year water quality study. Nitrate levels were measured throughout the season and tile line samples were taken from fields with differing rates of nitrogen and irrigation.

Assuming every 1 lb of nitrogen reduced, 4.42 lbs of nitrates are avoided. Our potential impact in 2023:

**15,907**

mt nitrates avoided  
from total lbs N reduced

## Fertilizer Production

In a 2022 Life Cycle Analysis (LCA), the production of SOURCE Corn emits 23.8kg CO<sub>2</sub>e per functional unit.

SOURCE replaced 7.9M lbs of N in the 2023 sales year. Based on our LCA, it took 41 mt CO<sub>2</sub>e to produce SOURCE. We estimate that it would have taken 16,537 mt CO<sub>2</sub>e to produce an equivalent amount of synthetic fertilizer. SOURCE is a much cleaner option for nutrients from a production standpoint.

## This or That?

**41**

mt CO<sub>2</sub>e  
to produce  
**SOURCE**

**16,537**

mt CO<sub>2</sub>e  
to produce  
**synthetic fertilizer**

Disclaimer: we believe that SOURCE is a powerful tool for addressing large issues like carbon intensity of fertilizer production and water quality. All of these numbers are modeled assumptions to demonstrate the potential co-benefits when adopting nutrient efficiency products. See footnotes section for notes on our assumptions and sources.

# 2023 Program Highlights

In 2023 we built on our market leading performance guarantees to mitigate the risk of pulling back on fertilizer. Our yield and fertilizer replacement guarantees work together to support all growers along the nutrient use efficiency (NUE) spectrum.



## Yield Performance Guarantee



- Launched in 2020 on corn, this is our third year offering cash back if the grower doesn't achieve 1x ROI



- We have expanded the guarantee to 4 crops



## Fertilizer Replacement Guarantee

- Launched for the 2024 Growing Season as an industry leading guarantee to underwrite yield drag up to \$100/ac when replacing 25 lbs of N and/or P with SOURCE
- Expands on the 2022 N Reduction pilot

4x



Replacing fertilizer with SOURCE has an implied 4x greater impact on emissions reductions than boosting yield. However, we offer the yield guarantee to support our nutrient efficient farmers.

## Impact Data Program

300k  
Intent Acres

7000  
Actual Acres

### Changes for 2024

- Increase rebate for Actual Data to \$3/ac to enroll 25,000 acres for audit
- Automate tracking intent to reduce through the dealer portal

Intent acres are self-reported and used to estimate impact across our customer base. The actual acres were an audit to see if intent is a good indicator of what actually happens on farm.

## Market Incentives

# ForGround

*by Bayer*

- Sound launched a sweepstakes through the Bayer ForGround platform
- Bayer co-promoted SOURCE to their grower network

# Reduction Data

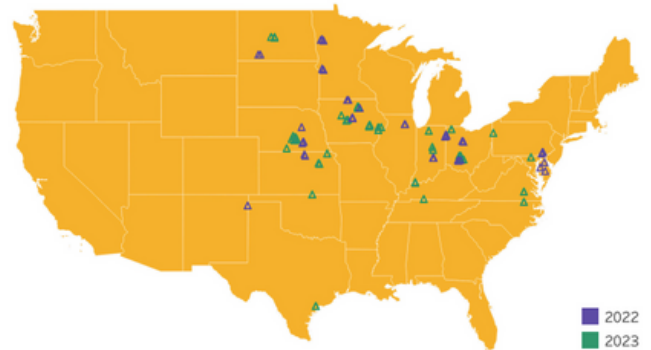
## SOURCE Replaces 25 lbs N and/or P

The Agronomy team has surpassed 1000 data points on SOURCE performance and has honed in on placement guidance. We recommend replacing 25 lbs of N and/or P on fields with 0.95 and above NUE score and boosting yield play for more efficient growers.

### Corn N Reduction Is the Strongest Value Proposition for SOURCE

- Nutrient replacement generated significant value in 2023 trials. On average, trials showed +3 bu and +\$20/ac ROI improvement on N reduction vs 2022
- Product placement is likely the main driver for performance improvement
- Simple placement rules increase the ROI win rate by 3 points, from 47% to 50% (acres with typical nutrient application - NUE score greater than or equal to 0.95)

Trial Summary		
Corn: \$6 Fert: \$0.83 SOURCE: \$15	2022	2023
ROI potential		+\$18.84
Avg ROI	-\$13.89	+\$5.44
ROI Win Rate	36%	54%
Avg Yield Lift	-3.2	-0.2
n=	38	55



### P Reduction Shows Strong ROI, N&P Reduction Promising Results

Trial Summary	
Corn: \$6 Fert: \$0.83 SOURCE: \$15	2023
ROI potential	\$19.21
Avg ROI	\$11.41
ROI Win Rate	86%
Avg Yield Lift	0.6
n=	7

- Positive trend replacing 20-25 lbs of phosphorus, although small trial number we are seeing an average of \$18.21 ROI
- More limited data on P reduction alone also showed strong performance, with an 86% win rate and \$18.21/ac ROI across 7 sites
- Across 20 sites, we are seeing an ROI ~\$40/acre when you reduce N & P together
- We are expanding N&P Reduction trials in 2024, aiming for 25-50 sites



# Customer Testimonials & Paradigm Shift



## Outlook: Nutrient Management & Climate Smart Funding

In 2023 Climate Smart Grant administrators wrangled with the hard questions of implementation and scale-up. Having \$3 billion dollars distributed across the value chain underscores the imperative that CPGs, MRVs, input companies, universities and growers work together.

Regenerative practices have become the rallying point for the industry. If growers plant cover crops, reduce tillage and manage their nutrients, there are significant environmental outcomes and incentives. The risk is that there are so many incentive programs across the industry being introduced at once. Growers are in a tough position as they try to cut through the noise and identify programs that work best for their operation. To ride the momentum of nutrient management and regenerative programs, Sound will need to serve as a connector to get growers paid for reducing synthetic fertilizer and improving water quality.

Going into the 2024 growing season, we are experiencing a paradigm shift in agriculture. This shift is driven by significant funds available for regenerative practices and looming 2025 and 2030 ESG and net zero commitments. Grower profitability is taking on an extra dimension—maximizing income streams for each on-farm decision.



"SOURCE has allowed us to reduce Nitrogen rates by 15 lbs in many fields... It aligns with our sustainability goals of giving every acre specifically what that acre needs while continuing to push yields."

**Kasey Bamberger, Sound Advisory Council**

# Silage

## Advancing the Silage Story



### Meet Janette Veazey-Post, Member of NY Dairy Council and Sound Advisory Council

Located in Oakfield, NY, Lamb Farms shows commitment to continuous improvement and environmental stewardship. Janette Veazey-Post is a part of a small group of progressive growers in upstate NY trialing SOURCE on silage and giving us input on programs that best work for their operations.

## Key Sustainability Value Propositions

There is a lot of commitment in the Dairy Industry to produce more sustainable products given that fertilizer on feed represents 20-30% of livestock emissions. In 2023 trials, SOURCE showed strong performance on corn silage.

- Improve efficiency and nutrition: With the use of SOURCE, growers see a significant increase in tonnage, as well as improved digestibility and protein.
- Limit run-off and leaching: SOURCE supports nutrient uptake ensuring that fertilizer applied stays in the field and is available to the crops.
- Climate resiliency: SOURCE improves both soil and plant health, resulting in larger root systems and thicker stalk diameters. Healthier soils and plants are more resilient to volatile weather.

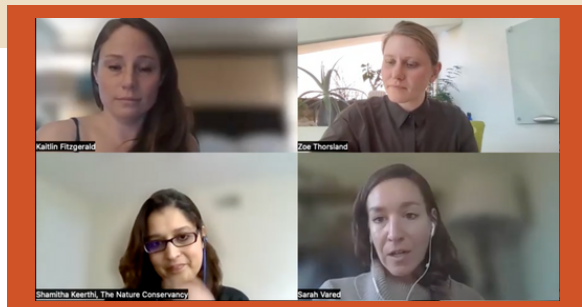
## SOURCE on Corn Silage Demonstrating Strong ROI, Win Rate and Yield Lift



Corn Silage shows very strong performance over 2 years with 1.0-2.0 ton/ac biomass increase with 80+% win rates. In 2023 we added a performance guarantee for silage to demonstrate our confidence and support growers interested in more sustainable silage.

# Climate Conversations

Throughout 2023, we have had the opportunity to both lead and contribute to a nuanced conversation on sustainability. We spoke with internal and external stakeholders on the factors that drive better water quality, soil health, and regenerative farming systems.



## Women & Water

Featuring Sarah Vared of Chan Zuckerberg, Shamitha Keerthi, Science Director of The Nature Conservancy, and our very own Kaitlin Fitzgerald, Jessica Schultz and Katie Patterson. The discussion connected soil health with water quality and efficiency, as well as interrogated the policies that have hindered progress and will be needed to address the burgeoning water crisis.

## Sustainable Livestock Production

An internal discussion of different practices used on employee farms. Agronomists and our sales team reacted to common misconceptions of raising livestock. They also connected SOURCE to higher quality and yield in feed.

## Don't Run Off with My Nutrients: Discussion with Bryan Biegler on Water Quality

Collaboration with the MN Ag Water Quality Certification Program to promote a webinar on soil health practices and the water quality impacts. Bryan Biegler is one of the 1300 producers who are water quality certified. Bryan talks about his experience using SOURCE to reduce nitrates.

## Deep Dive on Regenerative Cotton

Featuring Todd Straley, Quarterway Cotton Growers, Pablo Hernandez, Sierra Raw Materials, and our very own Zoe Thorsland. The conversation spans across the supply chain about regenerative practice adoption in the cotton industry.



## Featured Dealer

Quarterway Cotton Growers was the first Regenerative Certified cotton gin in the United States. Todd Straley, located in the Texas Panhandle, believes that farming practices and growers' ability to adopt them are tied to location. He is a deep believer in soil health and nutrient efficiency and is a new SOURCE dealer as of 2023.





# Looking Ahead

## Advancing the Silage Story

In 2024, the Sound team is focused on increasing the percent of acres reducing nutrients and the average reduction rate. Ultimately, we plan to use NUE scores to ensure that growers that should reduce N & P do so by cutting the recommended 25 lbs and protecting the downside risk with a fertilizer replacement guarantee. Using this data-driven approach, we aim to improve the win rate and grower profitability. Follow along as we:

01

### Execute on Strategic Partnerships to Scale

Sound is partnering with key stakeholders to connect growers with programs that monetize the environmental benefits of regenerative practice adoption.

02

### Leverage New Fertilizer Replacement Guarantee

The 2024 season will be the first growing season for our industry leading guarantee. This program will be a key lever to get more of our customer base to replace fertilizer.

03

### Tracking Impact and Driving Reduction Placement

We continue to work across our organization to uplevel our systems and training to ensure we have the data we need to drive progress on fertilizer reduction and make credible impact estimates.

04

### Engage in Biologicals Coalition & Policy

We are partnering with those in the biological space to advocate for incentives for nutrient management and coordinate efforts for synthetic fertilizer alternatives to be included in federally funded programs.

# ACKNOWLEDGEMENTS

A huge thanks to the individuals and partners that contributed to the programs scoped and executed, acres farmed, data collected and stories told.



We thank you for your continued support in our efforts to monitor and report on key outcomes and successes.

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## CONTACT

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<https://www.sound.ag/sustainability>

# Footnotes

Our systems and data collection are a work in progress and so we think of this impact number as an initial estimate that we will refine with improvements in systems, training and resources. As we are in the early innings of our analysis as a start-up, we are not yet looking at scope 1, 2 and 3 emissions or contextualizing our impact against SDG goals.

## Page 2: Estimating 2023 Impact

- Self-reported intent data on ~300,000 acres to estimate the ratio of growers reducing nitrogen compared to boosting yield.
- When a grower who intends to reduce doesn't explicitly have a reduction plan, we assume they are reducing at the average reduction rate.
- For every 1 lb of fertilizer reduced, we assume 4.7 lbs of CO<sub>2</sub>e avoided. This is a calculation based on IPCC 2007 emission factors (EF). Baseline EF 0.01 x 1.57 N to N<sub>2</sub>O x 298 to CO<sub>2</sub>e. (Source: Thorman, Rachel E., et al. "Towards country-specific nitrous oxide emission factors for manures applied to arable and grassland soils in the UK." *Frontiers in Sustainable Food Systems*, vol. 4, 12 May 2020).
- For every acre boosting yield, we assume a 5 bushel uplift.
- A major assumption in this analysis is how we dealt with growers that indicated that they were 'both' interested in reducing N and boosting yield. We assumed that 25% planned to reduce, while 75% planned to boost yield.

## Page 3: Co-Benefits & Big Picture

- Emissions and carbon sequestration figures (Source: EPA GHG emissions equivalencies calculator)
- 4.43 lbs of nitrate reduced per lb of N reduced, calculated from nitrogen concentration in nitrate 1/0.226 (Source: UNL Forage Specialist, Bruce Anderson).
- 4.6 mt CO<sub>2</sub>e / mt N fertilizer (Source: City of Winnipeg Canada Emissions Factors) to calculate the greenhouse gas impact of fertilizer production per acre.
- A Life Cycle Analysis was conducted by Intertek in 2022 on the SOURCE Corn product. In 2023 we transitioned to SOURCE DC. The active ingredient is the same with a slightly different formulation. The major difference is a change in the use rate resulting in a reduction of acres covered by one gallon of the product.

## Page 4: 2023 Program Highlights

- Intent acres are self-reported and used to estimate impact across our customer base. The Actual acres were an audit to see if intent is a good indicator of what actually happens on the farm.

## Page 7: Silage

- Fertilizer on feed represents 20-30% of livestock emissions (Source: FAO, Tackling Climate Change Through Livestock 2013 Report).