

Pivot Bio: New data shows potential of agriculture's most promising climate breakthrough

- *Synthetic fertilizer has, until now, been the primary way for farmers to feed the world but is one of agriculture's leading contributors to global greenhouse gas emissions and is a significant driver of poor water quality, biodiversity loss, and air pollution.*
- *Extreme price volatility for commodity synthetic fertilizer has placed additional pressure on growers already struggling under paper-thin margins.*
- *New data shows Pivot Bio's products:*
 - *In 2022, helped farmers avoid approximately 226,400 metric tons of carbon emissions, equivalent to powering 44,000 U.S. homes for a year*
 - *Replaced over 32,000 tons of synthetic fertilizer*
 - *Deliver greater ROI and higher margins for farmers*

BERKELEY, Calif., June 21, 2023 – Pivot Bio, a sustainable agriculture company, documents how their products are being used by farmers to improve their productivity and profitability without synthetic fertilizer polluting local rivers or contributing to climate change. New data in the company's inaugural Impact Report, alongside [newly published](#) university and third-party research, shows how the technology is enabling farmers to transform agriculture to the benefit of the planet.

"For the first time at scale – farmers have a tool they can use to confidently grow the food the world needs while avoiding the nitrogen pollution that is leading to large-scale environmental harm. This data shows farmers are using biological nitrogen to reliably increase their productivity, profitability, and sustainability," said Karsten Temme, CEO and co-founder of Pivot Bio. "Our team serves thousands of growers across millions of acres; we're developing products on four continents and our innovation pipeline is primed to supply most of the nitrogen for the world's cereal crops in the coming years, so excited for what the future will hold."

In 2022 alone, Pivot Bio helped its customers replace over 32,000 tons of synthetic nitrogen fertilizer, avoiding approximately 226,400 metric tons of CO₂e – equivalent to powering 44,000 U.S. homes for a year. The company's microbial nitrogen is manufactured with an emissions footprint that is just 2% that of synthetic fertilizer and uses 1,000 times less water. Pivot Bio's products are highly efficient in the field with little waste; whereas only 40-60% of synthetic fertilizer ever reaches the crop, and the rest can leach, volatilize, or runoff into the environment.

Recent [independent and university studies](#) further demonstrate the benefits Pivot Bio's products deliver to farmers, including maintaining or increasing crop yields and additional revenue per acre. Top findings include:

- Nitrate leaching can be reduced by an average of 10 kilos of nitrogen per hectare (~9 pounds per acre) with the use of PROVEN® 40.
- When combined with a Pivot Bio proprietary carbon additive, corn treated with PROVEN® 40 could increase its yield advantage by up to 11 bushels per acre.
- The use of PROVEN® 40 led to higher yields and about \$12.50 per acre in additional revenue.

The 2022 Impact Report also highlights the company's partnerships with:



- [AIM for Climate](#), a global effort to accelerate R&D in climate smart agriculture technology. As part of this effort, Pivot Bio committed to investing at least \$291 million in product development over the next four years.
- [Emitwise](#) to understand Pivot Bio's Scope 1, 2, 3 carbon footprint. Last year, Pivot Bio offset 100% of its Scope 1 and 2 emissions with nitrogen credits purchased through its N-OVATOR™ program. Pivot Bio N-OVATOR™ is a nitrogen credit program designed to incentivize growers to replace synthetic nitrogen fertilizer with Pivot Bio microbes and verifiably document their practice change.

Nitrogen is a critical component of the global food system, with synthetic fertilizer credited for supporting the food requirements for nearly half of the world's population – but it also accounts for 2.5% of the world's greenhouse gas emissions. With populations expected to grow over this decade, the implications of relying on synthetic fertilizer to fuel our food supply are clear: there will be more nitrate runoff, more nitrous oxide emissions, and more demand on natural gas to manufacture ammonia.

Pivot Bio's crop nutrition platform identifies rare microbes naturally capable of producing nitrogen and reprograms them to improve how much nitrogen they can produce. The company then rigorously tests their efficacy before making its nitrogen-fixing microbes available to customers for commercial use.

Pivot Bio's microbial nitrogen can replace approximately a quarter of a farmer's synthetic nitrogen. In 2022, it was used by farmers on over 3 million acres in the United States and the company reported revenue over \$60 million. Pivot Bio is working to scale its technology globally to provide farmers with a new, essential tool to improve their operational efficiency and build a more sustainable future for all.

To learn more and see the company's latest Impact Report, please visit pivotbio.co/our2022impact.

About Pivot Bio

Pivot Bio is the world's leading nitrogen innovator, developing sustainable technologies to deliver critical and better-performing crop nutrition to growers worldwide. Using cutting-edge science, the company has developed a microbial nitrogen that replaces traditional synthetic nitrogen fertilizers, reducing environmental impact while maintaining crop yields. Pivot Bio is transforming the agriculture industry with its innovative solutions that benefit farmers, consumers, and the planet. For more information, visit PivotBio.com and follow the company on social media.