The Science Behind CIBO

CIBO TECHNOLOGIES

CIBO Technologies

CIBO Technologies has the breakthrough technology platform that accelerates regenerative agriculture. CIBO brings direct-from-the-farmer, verified carbon offsets and insets for enterprises focused on their carbon footprint, Scope 3 emissions reduction, and ESG goals. CIBO starts from the ground up and scales to county, state, and national levels without requiring expensive or complex data from farmers.

The Science Behind CIBO's Technology

We combine proprietary, science-based ecosystem simulation with artificial intelligence, machine learning, and computer vision in a scalable cloud platform to evaluate land in a new and powerful way.

Science-based Simulation

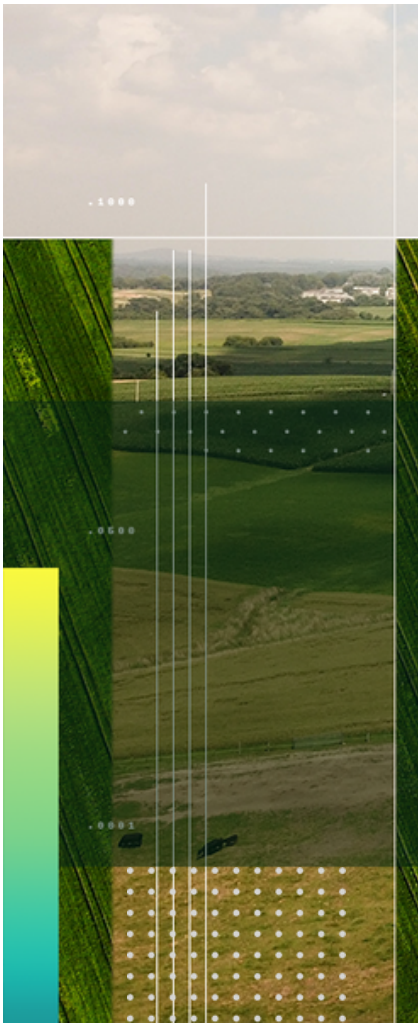
- Utilizes a systems-based approach to crop and environmental modeling to simulate real-world and theoretical scenarios at a parcel-level
- 20+ years of academic research and hundreds of person-years of development

Robust Data Infrastructure

- Features multiple layers of environmental and economic data at scale
- Enables easy access to publicly available—but generally hard-to-reach—data, such as satellite imagery, weather history & forecasts, soil maps, parcel records, and historic practices

Advanced Computer Vision

- Advanced algorithms, neural networks, and AI enable identification of on-the-ground practices
- Analyzes images to accurately determine field boundaries, planting history, and management practices



Deep Dive Into CIBO Science Team's Areas of Expertise

CIBO applies proprietary data science algorithms and AI modeling to remotely sensed data, and is backed by some of the best minds in the agricultural industry. It's powerful and high-performing—and also incredibly easy to use.

Regenerative Agriculture

CIBO helps stakeholders uncover the regenerative potential of land, creates clarity on how sustainable farming practices impact the environment, and incentivizes growers through the generation of carbon credits and other mechanisms.

Farmland Simulation

CIBO simulates billions of agricultural ecosystems for any crop, and at any point in time. The model scales from a micro-view of how a plant and soil interact to a macro-perspective of regional and global climate patterns to predict current and future scenarios.

In-Season Forecasting

Each month, CIBO provides a county-level forecast. When partnered with the USDA WASDE, CIBO provides a better, deeper and more complete understanding of crop yields in the US. The CIBO platform is updated continuously with the most accurate forecasts available.

The CIBO Model

CIBO combines remote sensing and computer vision with a globally-validated science framework and real-world variables like soil, weather, and plant physiology to develop sophisticated modelings of entire agricultural ecosystems.

Remote Sensing

CIBO uses remote sensing to provide analyses of agricultural ecosystem scenarios and draws conclusions about why—down to the specific variable—certain outcomes will occur. CIBO's scientists can do this even where there is limited or low-quality data.

> "I can unequivocally confirm that the scalable CIBO approach is proven as a valid scientific approach for quantifying soil carbon gains and losses and verifying reduction in greenhouse gas emissions in response to farmers' management decisions."

Joe T. Ritchie
Emeritus Distinguish Professor at Michigan State University

Meet CIBO's Science Team

Renowned scientists with technical expertise & a passion for transforming agriculture.

75%+	550+	14,500+
Has a Ph.D.	Articles Published	Article Citations