SatYield
AI for Climate-Dependent Crops

SatYield AI for Climate-Dependent Crop Yield Prediction

Climate change, extreme weather, economic policies, and conflicts undermining food security worldwide.

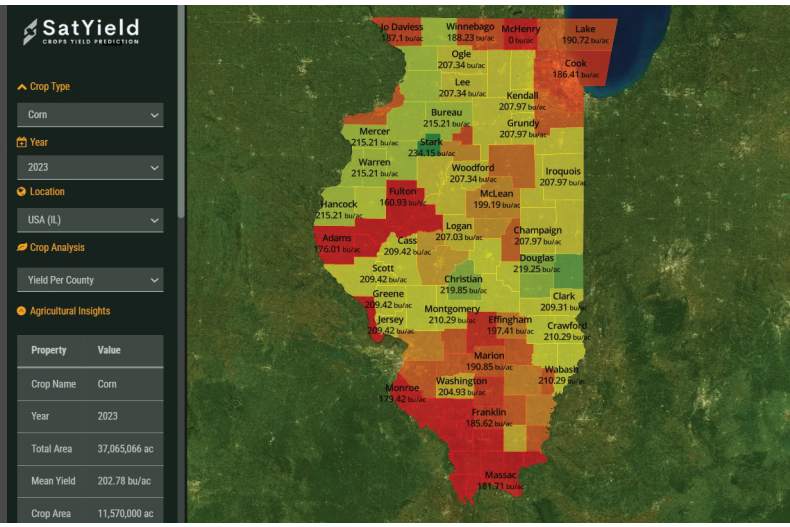
For years, scientists have endeavored to forecast yields of essential crops, such as wheat, soybeans, and corn through remote sensing. This data aids farmers, policymakers, and researchers in food security, by providing estimates on food production for upcoming seasons, considering various environmental and climatic factors.

Such insights enable proactive planning, efficient use of resources, and risk reduction against potential food deficits or excesses. However, traditional forecasting methods of learning have been largely dependent on many years of historical ground data, often requiring region-specific calibrations.

"Crop yield forecasting is the holy grail of smart agriculture. I'm approached regularly by firms stating they can offer better forecasting accuracy, SatYield is the only one that I am impressed by"

- Chief Commodities Economis

Over 98% accuracy 4 months prior to harvest.
State of Illinois, USA. Corn 2023 Season. Satyield predicted in Sep 2023, a 202.78 bu/acre, USDA reported in Feb 2024 the ground truth results of 206 bu/acre.



SatYield introduces an innovative and novel method to yield prediction, using satellite imagery, Computer Vision and Deep Learning, achieving a remarkable 94%-98% prediction accuracy at a large-scale months before the harvest.

Harnessing the power of satellites imagery and AI

SatYield is a data-fusion AI platform that generates real-time data to observe, identify and Predict crop yield production. Our novel approach to yield forecasting delivers high accuracy even in extreme weather conditions. We've developed a highly scalable and reliable system that removes the need for historical ground data and calibration. We fuse data from multiple satellites orbiting Earth, collect information at different wavelengths, Integrate with weather and soil data, and augment it with AI crop model simulator.

Versatile Crop Yield Estimator

Our solution calculates distinct vegetation metrics for various crop types, enabling yield prediction for a specific area of focus up to three months before harvest. We are crop type, environment, and climate agnostic and can identify yield gaps, diagnose yield variability, and identify new ways of optimizing agricultural-related outcomes.

A new era of crop monetization from space

With the proliferation of satellites launched over the last decade and SatYield's crop yield prediction engine being accurate at the pixel level for field, county and state scales, a new era of crop monetization from space has dawned; we're prepared to unleash the commercial opportunities while helping to create a world free of hunger.

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SatYield for Finance and Insurance Agriculture

According to USDA In 2022 US farmers purchased over 1.2 million crop insurance policies, protecting 493 million acres.

SatYield helps insurance companies design better products and policies that lower the risk of crop loss while helping farmers increase their production. Its crop yield prediction provides high accuracy estimation of the quantity and quality of crops that will be harvested in any given season.

By using data-driven models and deep learning techniques, insurance companies can tailor their premiums and payouts to the specific conditions and needs of each farmer, based on real-time data, reducing uncertainties of crops futures while increasing the trust and satisfaction of the farmers.

High accuracy crop yield prediction can also help farmers optimize their inputs and practices, such as plant date, fertilizers, irrigation, pest control, and harvesting time, to achieve higher yields and quality. This can improve their income and food security, as well as reduce their environmental impact.

Key applications for Crop Insurance:

Risk assessment and mitigation

- Plan insurance premiums based on predicted yield.
- Cash reserves management - determine potential comps 2–3-month pre-harvest.
- Plan pricing strategy for the anticipated amount of produce to when and for how much to sell it.

Land use planning and real-time crops observation

- From Sowing, Planting to Harvesting.
- Maximize land-use by applying appropriate ag practices.
- Plan Crop & Geo diversity for shortage in a supply chain.

Crop Yield modeling and growth estimating

- Crops Type Mapping - Classify and map crops at field, county, and state level.
- Monitor the health of the crops, soil and potential yield.

NO HUNGER Sustainability

SatYield mission is to empower millions of farmers in developing countries to create scalable and sustainable solutions by having access to reliable and relevant information on how to improve their agricultural practices and productivity.

Securing the world's crops supply chain

Providing high accuracy data at a micro and macro scale months ahead that leads to the optimization of the entire agricultural supply chain to minimize risks, uncertainties and increase the value to all stakeholders.

The Founding Team

Founders, Entrepreneurs, Scientists and Tech Innovators. On a mission to build a powerful AI platform to maximize crop yield production harnessing the power of satellite imagery and AI.

For more info: www.satyield.com | info@satyield.com