Cropin Harnesses AWS & Intel Solutions to Accelerate the Transition to Sustainable Agriculture

Agriculture remains one of the least digitized industry segments globally. Farmers, regardless of the farm size or location, face the same challenges – pest, yield quality and quantity, and tackling climate change. They need unique digital solutions to address these issues and manage any risks to their farms and produce. According to a McKinsey report, if connectivity is implemented successfully in agriculture, the industry could generate $500 billion in additional value to the global GDP by 2030.

So, how can organizations tap into this potential? In emerging markets like India, the priority should be to equip farmers with affordable digital solutions that address day-to-day requirements, such as keeping crops healthy, increasing yield and profitability, while enabling them to proactively manage risks. Apart from the lack of awareness on tech among the farming community, the lack of a reliable nationwide connectivity infrastructure remained a big concern.

Cropin - Driving the New-age Agriculture Revolution Globally

Cropin is a global agri-ecosystem intelligence provider. Their suite of products enables various stakeholders in the agri-ecosystem, including financial services providers, to adopt and drive digital strategy across agricultural operations. Using cutting-edge technology like AI, machine learning, and remote sensing, Cropin helps agriculture-focused organizations digitize their operations from farm to fork and leverage near real-time farm data and actionable insights to make effective decisions.

Cropin has already computed and provided predictive intelligence for over 0.2 billion acres of farmlands across the globe, solving ecosystem challenges such as:

Improving yield at a per acre level	Helping farmers respond better to growing climate change	Reducing crop loss to disease and pest infestations at scale	Helping farmers build sustainable livelihoods
Deploying climate smart agriculture practices	Helping trace food quality from farm to fork	Enabling banks & financial institutions to assess the lending/crop-insurance opportunity	Monitoring & managing deforestation

Cropin found that a unified data center will help the farming sector to leverage data more efficiently. Technology and data analytics are helping to build services on top of the agri-stack, allied industries (fintech, insurance), crop predictions, farm assets, etc.

With the vision to 'maximize per acre value' for every stakeholder in the agri-value chain, Cropin partnered with Amazon Web Services (AWS) and Intel to build the first scalable and secure Cropin Cloud – an Intelligent Agriculture Cloud. The platform runs on AWS as a native cloud solution, enabling Cropin customers to leverage the latest in technology to stay ahead of the curve. With AWS, Cropin can manage peak demands as their clients scale their usage of our solutions and spin up infrastructure to support this demand almost real-time.

Features

Early mover advantage

Pioneer in agri-tech space, creating the global agri-tech category

Globally scalable

Implement solutions in any country in the shortest possible time

World's largest Crop Knowledge Graph

488 crops & 10,000 crop varieties in 56 countries

Sector agnostic platform

Built to address problem statements of the entire agri-food ecosystem

State-of-the-art AI labs

Industry best AI/ML team with a target to build intelligence for 1/3rd of the planet's cultivable lands by 2025

In AWS, we see a partner who is as passionate as us in enabling digital transformation across industries. We see great synergies between Cropin and AWS's Agriculture Business Unit in how we collaborate to 'maximize per acre value' for every player in the agri-value chain globally

Mohit Pande, Chief Business Officer, Cropin

Leveraging AWS & Intel for a Flexible & Secure Platform

AWS's cloud capabilities have enabled Cropin to scale services rapidly to onboard thousands of farmers to the platform to support the scaled programs. Cropin is leveraging multiple AWS Managed Services to run SaaS-based applications and daily workloads. They also benefit from auditability across services like Amazon Elastic Container Service (Amazon ECS), AWS Lambda, Amazon SageMaker, Amazon Kinesis, and Amazon Athena.

Cropin Cloud is further safeguarded with AWS's enterprise-grade security features for threat detection and infrastructure protection. By building a data lake on AWS, Cropin has been able to establish a scalable serverless framework of APIs that can be securely accessed by our clients to support their solution requirements.

The Cropin solution was deployed on the Amazon EC2 compute infrastructure, based on the Intel® Xeon® Scalable processors. The 3rd Generation Intel Xeon Scalable processors - powering EC2 C6i and C6id Instances - offer better price performance, built-in AI acceleration with Intel® Deep Learning Boost (Intel® DL Boost), and built-in crypto acceleration.

AWS Batch and Amazon EC2 Spot Instances were used to speed up computing and reduce the cost of batch processing jobs when rendering satellite images. AWS Batch automatically provisions the right quantity and type of compute resources needed to run the jobs, while Spot Instances provide acceleration, scale, and deep cost savings to fault-tolerant workloads.

Using Intel on AWS, Cropin successfully brought 7 million farmers into the digital fold and digitized a total of 16 million acres of farmland globally. Cropin also works closely with 250+ public and private sector organizations and enterprises in 56 countries, creating a rich pool of crop signatures for over 400 crops and 10,000+ crop varieties.

Learn More

To learn more about Cropin, visit https://www.cropin.com/

To learn more about AWS and Intel, visit www.intel.com/content/www/us/en/partner/showcase/aws/overview.html and https://aws.amazon.com/intel/

About Cropin

Founded in 2010, Cropin is a global agri-tech pioneer that built the world's first purpose-built industry cloud for agriculture - Cropin Cloud. Cropin has been instrumental in creating the global agri-tech category and bringing advanced technologies together to transform farmers' lives worldwide through partnerships with agri-businesses, governments, and development agencies across 92 countries.

Benefits

- Successfully brought 7 million farmers into the digital fold.
- Digitized a total of 16 million acres of farmland globally.
- Helped transform business operations of 250 B2B customers across the agri-food value chain.
- Solutions deployed in 92 countries.
- Spearheaded a global ag-intelligence movement with a crop knowledge graph of 500+ crops and 10000 crop varieties.
- Cropin's intelligence platform provided predictive intelligence for over 0.2 billion acres of farmlands across the globe.