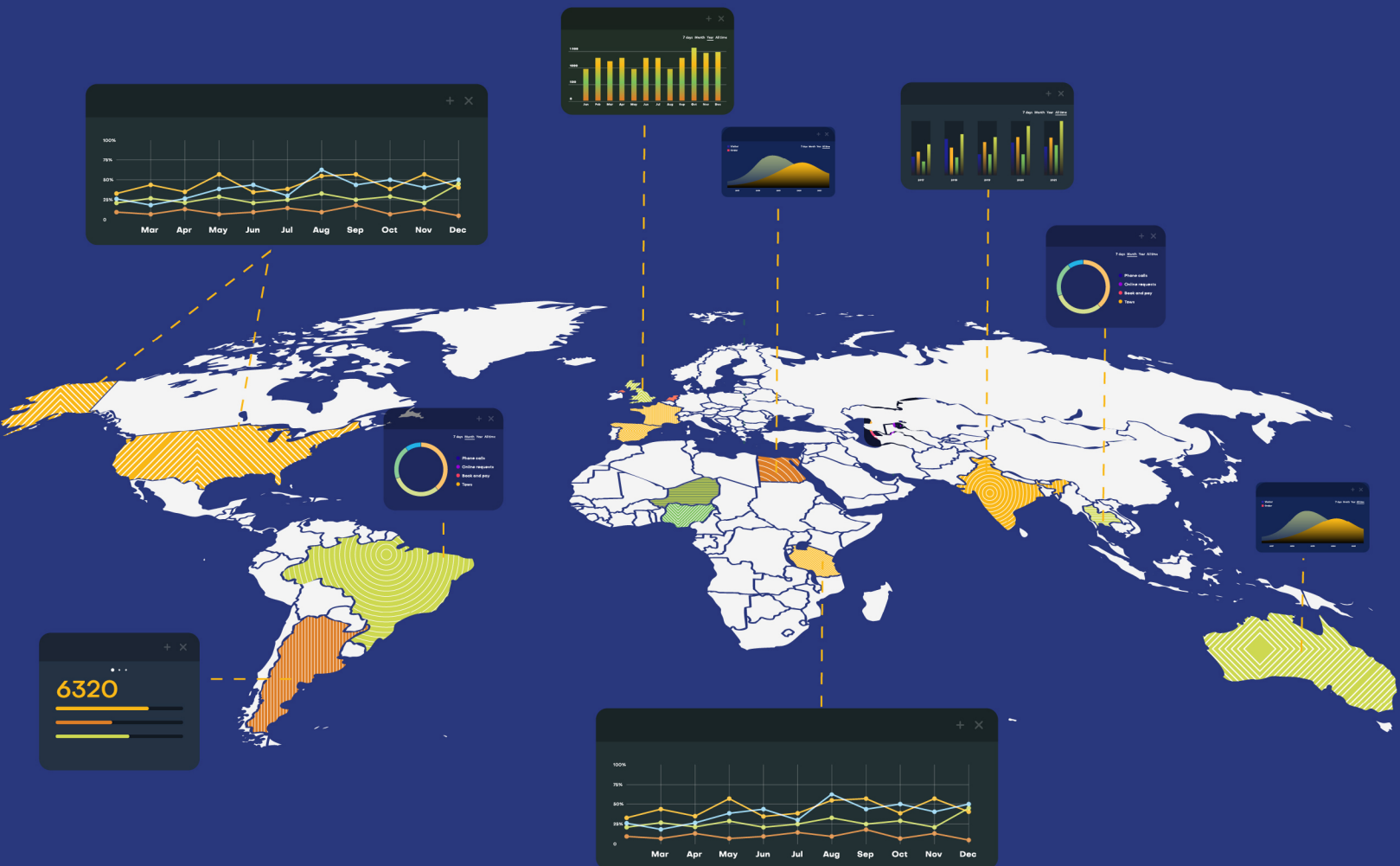


Cropin Regional Intelligence: Fortifying Global Food Security in a Climate-Impacted World



| The Challenge

The global food system faces unprecedented pressures. Climate change is disrupting traditional agricultural patterns, with



Erratic Rainfall
Patterns



Rising
Temperatures



Sea Level
Rise



Rising Pest
& Disease
Outbreaks






Poor Soil
Health

This instability is driving food insecurity, with hundreds of millions projected to face hunger in the coming decades.

This has resulted in a stark demand-supply gap across many nations. More countries are relying on existing food stocks and reserves to fill the gap. And rising energy and fertilizer prices threaten production, especially for net fertilizer-importing countries and regions like East Africa.

The world is in the midst of a global food crisis, with an estimated 670 Million predicted to face hunger by 2030. Food availability is declining, and prices are predicted to increase by 20% by 2050.

Crop	Without Climate Change	With Climate Change
 Wheat	up by almost 40%.	up by almost 170 – 194%.
 Rice	to increase by 60%.	to increase by 113 – 121%.
 Maize (Corn)	to climb more than 60%.	will rise by 148 – 153%.

This scenario creates a vicious cycle of declining food availability, rising prices, and food insecurity due to climate change's impact on agricultural productivity and the widening demand-supply gap.

Traditional approaches to agricultural analysis struggle to keep pace with these rapidly evolving challenges.

| The Solution: Data-Driven Resilience

To safeguard our food supply, we need a proactive, data-driven approach. Cropin Regional Intelligence empowers decision-makers with the insights needed to de-risk supply chains and enhance agricultural resilience.

| Securing Your Food Supply in an Unpredictable World

Relying solely on established production regions leaves your food supply chain vulnerable to the unpredictable impacts of climate change. Shifting weather patterns, droughts, floods, and other climate-related disruptions can lead to sudden shortages and price volatility. To safeguard your supply chain and unlock new growth opportunities, you need a data-driven approach to diversification. Cropin Regional Intelligence empowers you with a forward-looking strategy, leveraging cutting-edge technology to identify and assess new, resilient agricultural zones.

| Revealing Hidden Opportunities: Cropin's Regional Intelligence Engine

Our powerful engine harnesses a wealth of information from diverse sources, including satellite imagery, weather data, soil analysis, and historical yield data. Advanced AI and machine learning algorithms weave this vast dataset into a tapestry of understanding, revealing hidden patterns and untapped agricultural potential. With Cropin Regional Intelligence, you can:

- **Identify Climate-Resilient Regions:** Pinpoint areas with stable weather patterns, optimal soil health, and reliable water access.
- **Assess Crop Suitability:** Determine which crops thrive in each region, ensuring a diverse and sustainable supply.
- **Predict Future Risks:** Model potential impacts of climate change on various regions, allowing for proactive planning.
- **Spot Emerging Trends:** Identify promising regions before they gain widespread recognition.
- **Assess Risk Factors:** Identify and mitigate potential threats to your supply chain.
- **Optimize Resource Allocation:** Target your investments for maximum impact and efficiency.



Accelerate Your Expansion with Actionable Insights

Cropin Regional Intelligence doesn't just provide data – it accelerates your decision-making. Our AI-powered platform processes vast amounts of information with remarkable efficiency, allowing you to identify ideal growth markets in days, not months.

By relying on satellite imagery, we eliminate the need for time-consuming and costly on-site visits, minimizing disruptions. Our technology provides accurate results across diverse regions and crops, ensuring your insights are reliable and actionable.

With Cropin Regional Intelligence, you gain the data-driven confidence to:

- **Prioritize Expansion Opportunities:** Focus resources on regions with the highest potential for success.
- **Optimize Resource Allocation:** Make informed decisions about crop selection, irrigation, and other key factors.
- **Navigate Uncertainty:** Anticipate and adapt to changing conditions with greater agility.

Cropin Regional Intelligence isn't just a tool – it's a strategic partner in your journey to build a more resilient and profitable future for your organization.

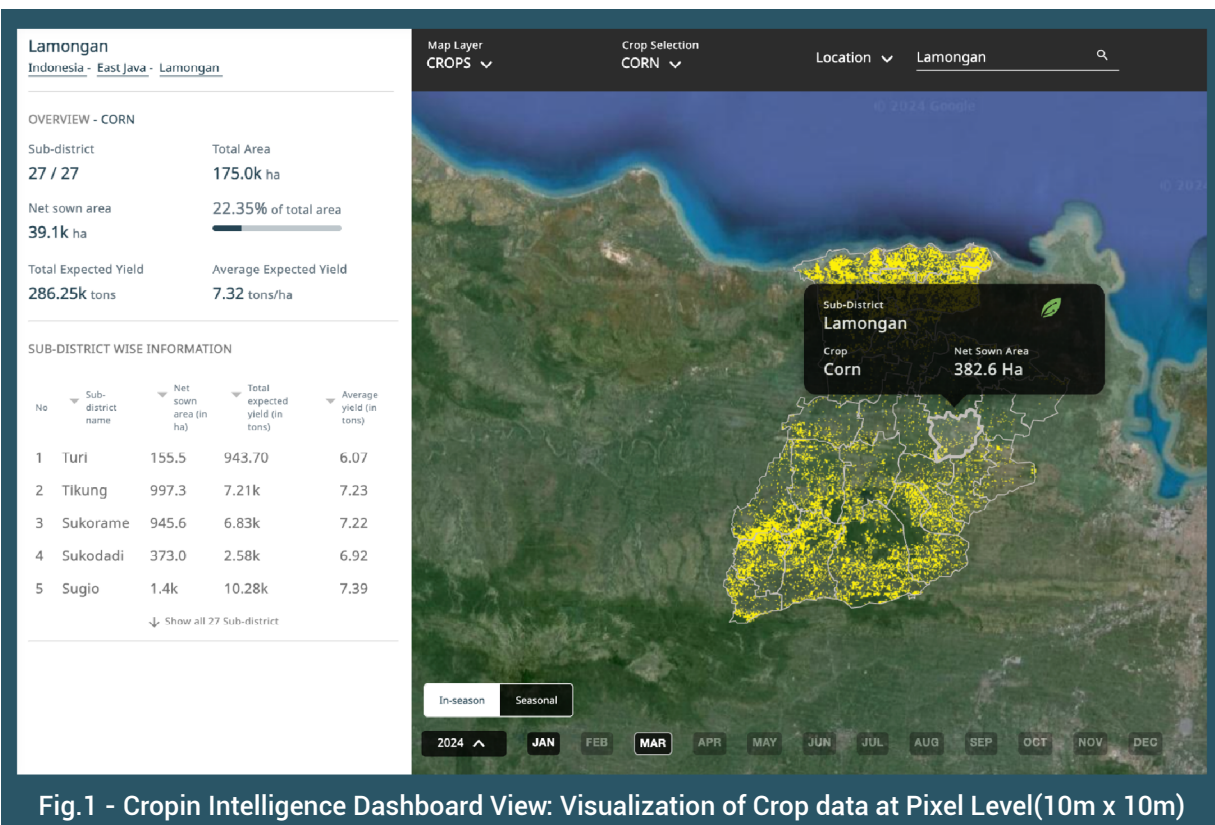


Fig.1 - Cropin Intelligence Dashboard View: Visualization of Crop data at Pixel Level(10m x 10m)

Multi-Horizon Insights: Cropin delivers agri-intelligence across three strategic timelines:

A Near Real-Time Monitoring & In-Season Forecasting (Actionable Insights):

- Gain real-time crop health and stage monitoring.
- Optimize resource planning with irrigation and soil moisture insights.
- Discover agricultural productivity with current & past acreage trend analysis, sowing progression, and yield estimates.
- Mitigate risks with in-season weather forecasting and disease early warning system.

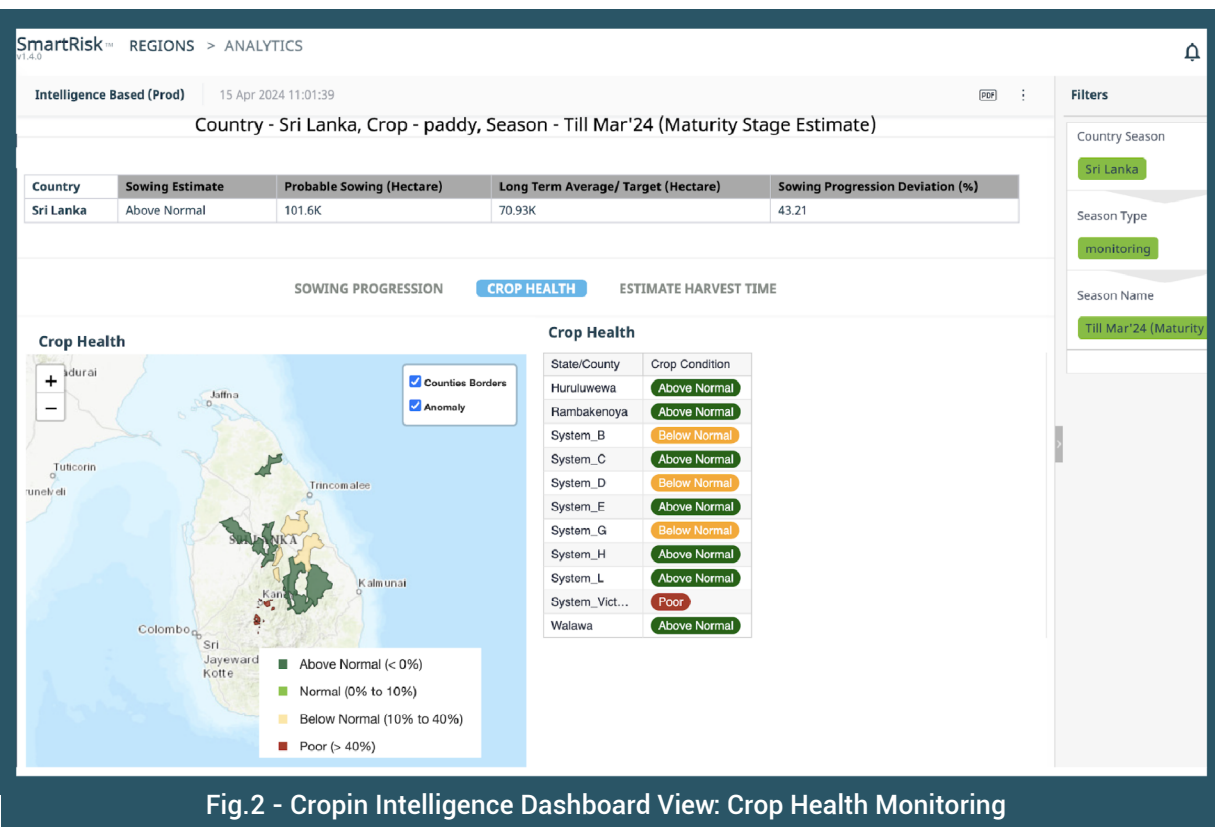
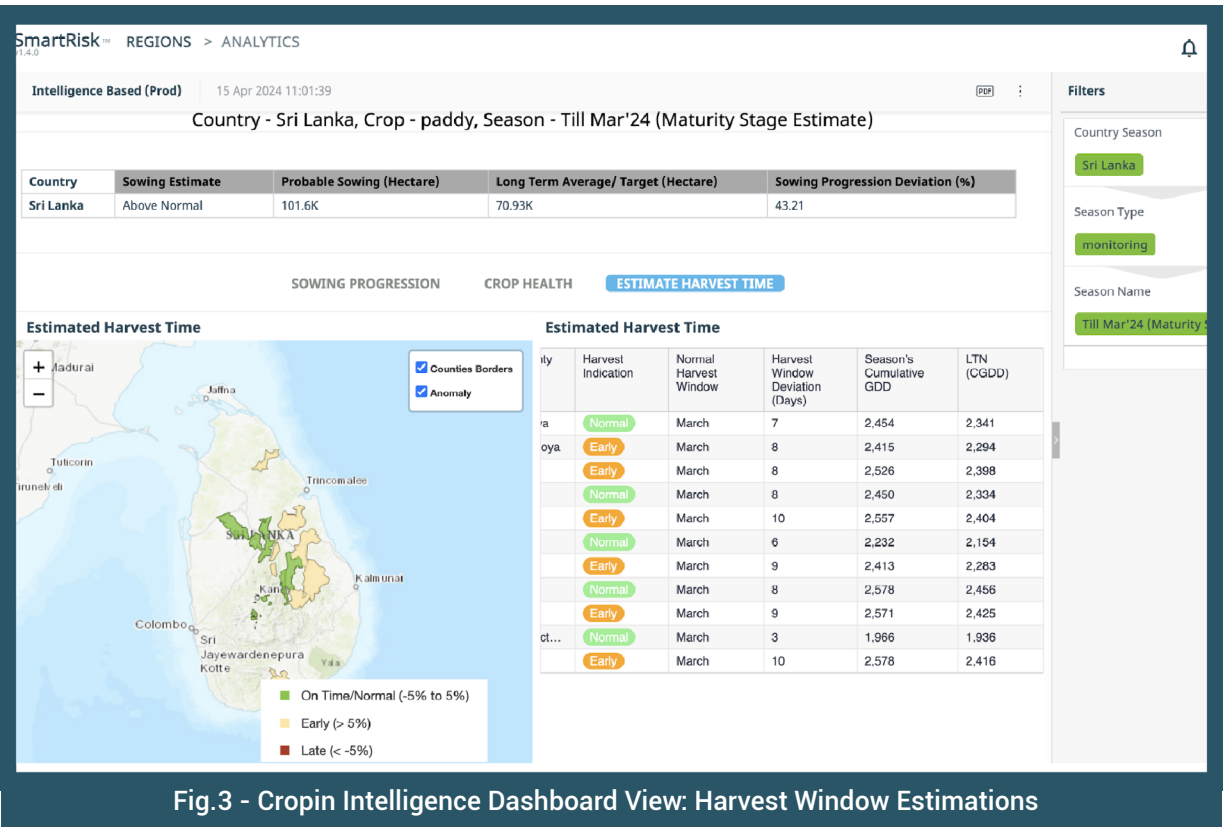


Fig.2 - Cropin Intelligence Dashboard View: Crop Health Monitoring

B. Foreseeable Forecasting for Next Season (Planning & Risk Management):

- Analyze historical land cover trends and cropping intensity.
- Estimate accurate yield forecasts for informed planning.
- Leverage data to optimize input resource management.
- Leverage weather and climate forecasts and disease early warning systems for proactive risk mitigation.



C. Long-Term Forecasting for Next 5- 10 Years (Expansion Strategy):

- Cropin analyzes soil quality, weather patterns, and historical crop performance and feeds it to its weather-yield correlation simulation models to identify regions with high potential for specific commodities.
- Satellite imagery provides valuable insights into land use practices, water availability, and potential infrastructure needs in a particular region. Cropin uses dynamic LULC maps and its proprietary crop knowledge graph to identify the most suitable region, and farms to contract and estimate yield for informed expansion decisions.
- Utilize open-source datasets to gain a comprehensive market view.

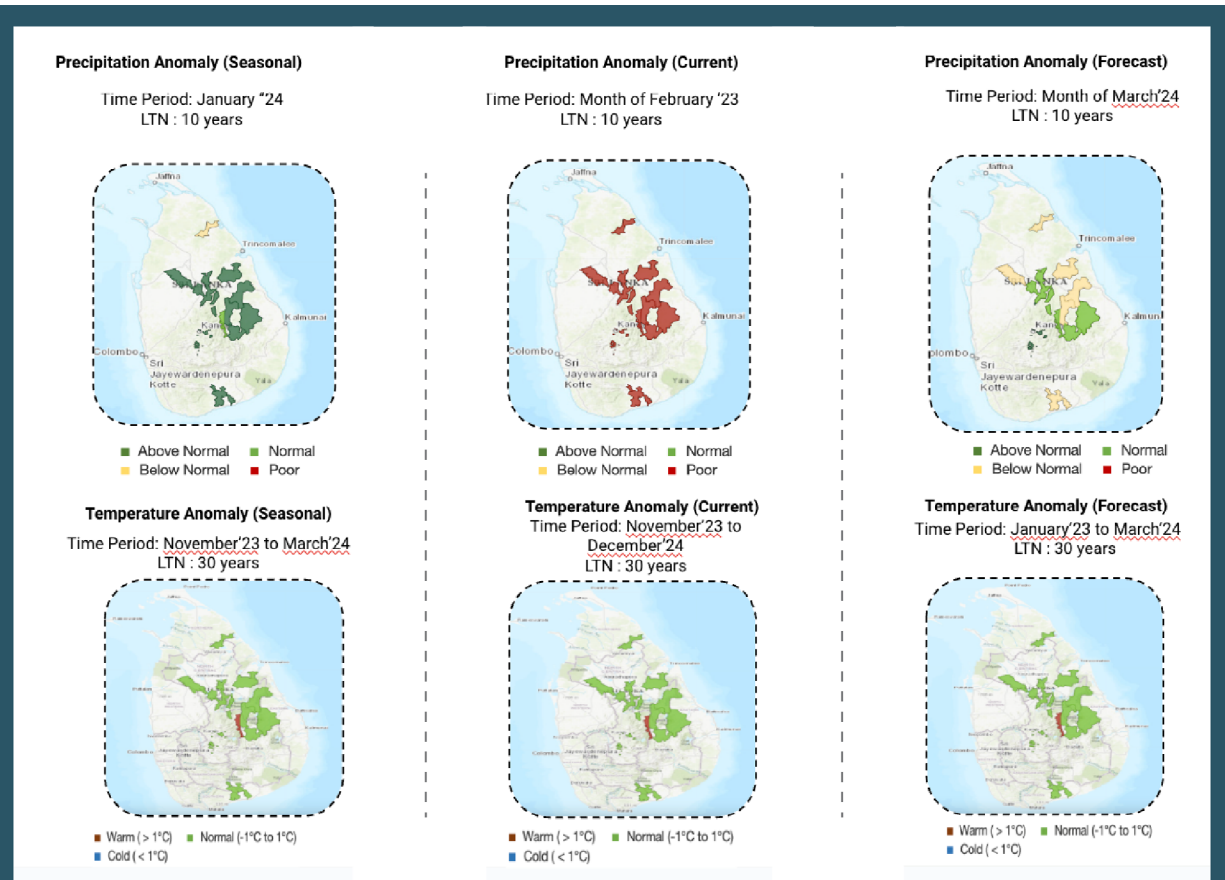


Fig.4 - Temperature and Precipitation Anomalies Across Timelines

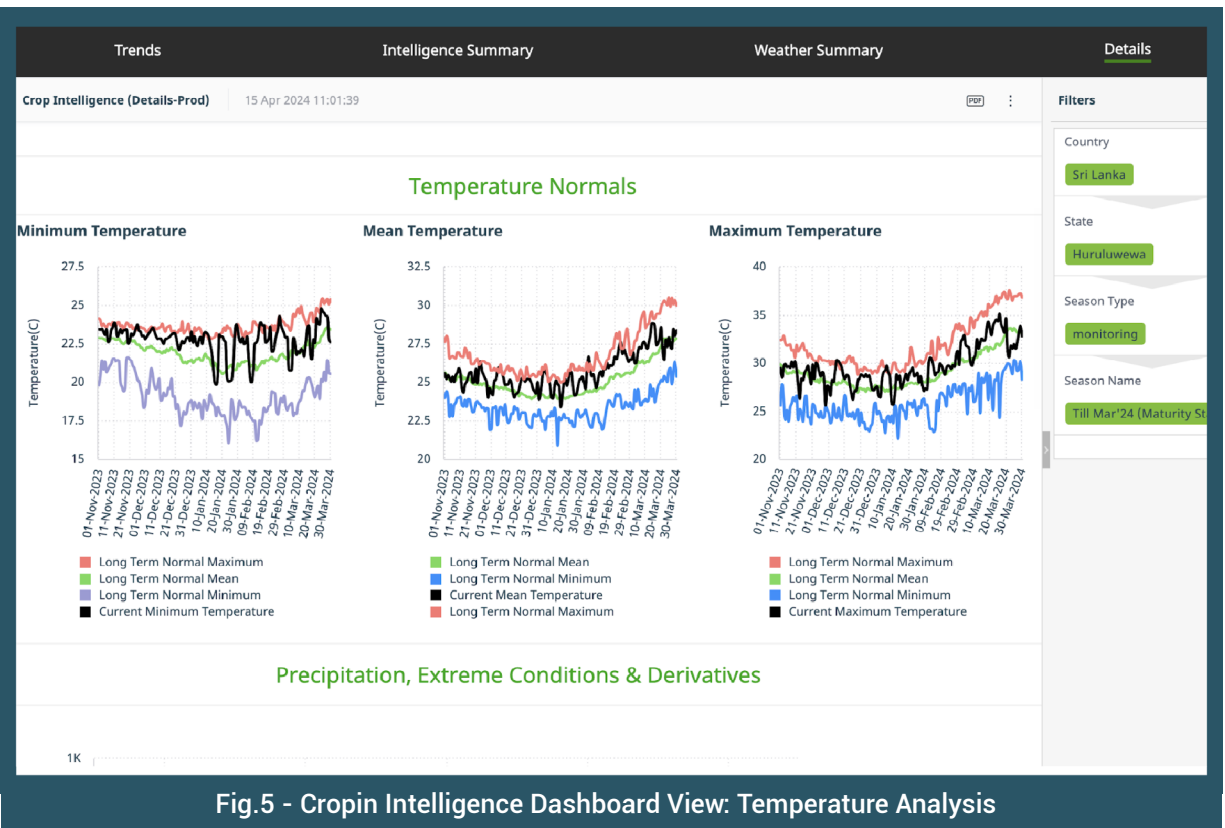


Fig.5 - Cropin Intelligence Dashboard View: Temperature Analysis

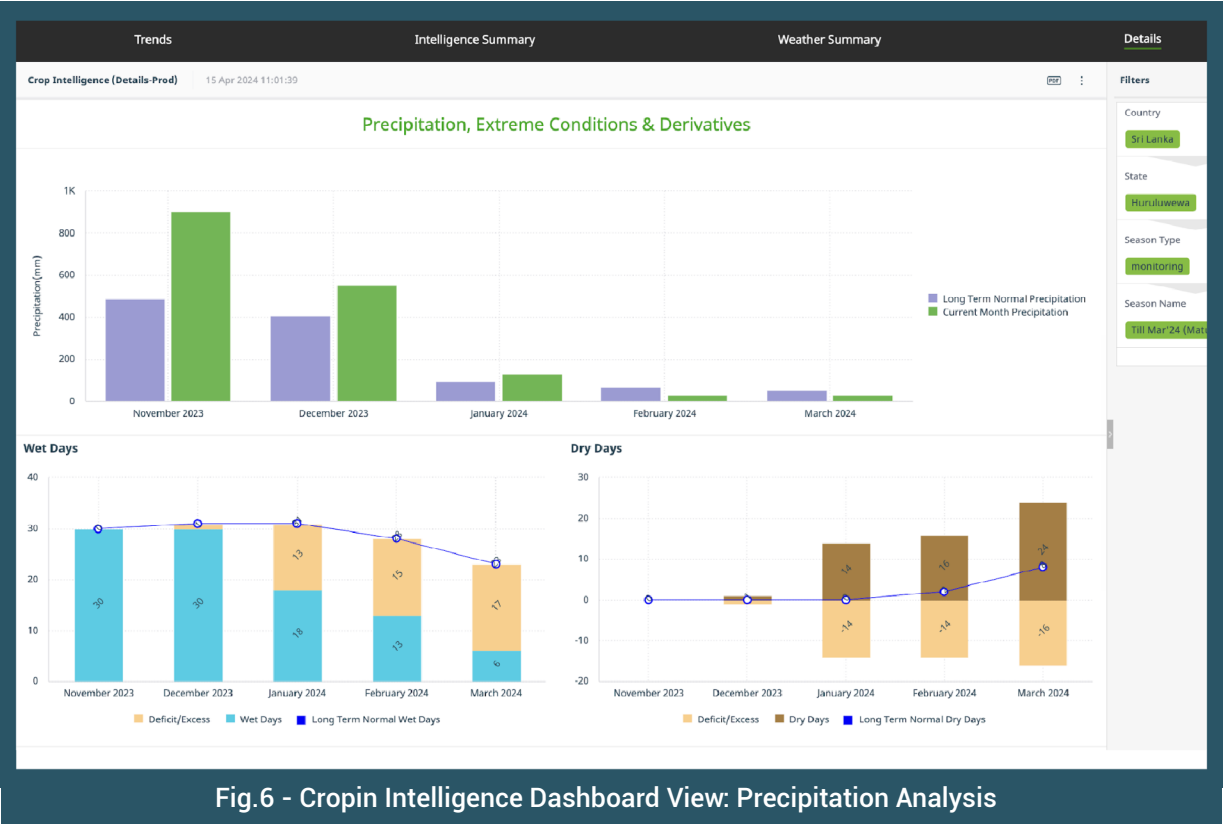


Fig.6 - Cropin Intelligence Dashboard View: Precipitation Analysis

The Cropin Advantage: Your Path to a Resilient and Sustainable Food Future

Cropin Regional Intelligence isn't just a platform—it's a catalyst for transformation. By harnessing our data-driven insights, you can:

- **Empower Decision-Making:** Make informed, strategic choices with unparalleled speed and accuracy.
- **Unlock Growth:** Identify hidden opportunities in new markets and confidently expand your supply chain.
- **Build Resilience:** Proactively manage climate-related risks and ensure a sustainable food supply for the future.

| Real-World Impact: Cropin in Africa

Cropin's impact is already evident in projects across Africa. In Kenya and Nigeria, we leveraged remote sensing, proprietary crop knowledge graphs, and advanced AI/ML models to unlock insights into acreage trends and yield decline. The study unlocked valuable insights into acreage trends and the root causes of yield decline. By zooming in on 5x5 km grids, Cropin unearthed the causes of the production decline. Cropin's real-time, planet-scale intelligence on changing weather patterns and crop trends helped with policymaking to support the food security objectives of these African nations. This project exemplifies the transformative power of AI in empowering African farmers. - [Watch Video](#)

| Benefits of Cropin's Regional Intelligence:



Swift deployment: Cropin's Cloud's powerful models process massive datasets rapidly, driven by systemic efficiency. The platform can swiftly scale for new crops, seasons, and regions, including remote areas



Cost-effective option: Cropin Cloud bypasses the need for expensive in-house model development, delivering intelligence at a fraction of the cost.



Ensure brand readiness for the future of food: Cropin's regional intelligence helps food companies identify alternative regions with the potential to grow specific crops in the future. This enables diversified sourcing strategies and brand resilience.



Establish partnerships with local farmers: The Cropin cloud platform offers multilingual, multi-mode communication options to improve farmer engagement and loyalty.



Mitigate production risks: Cropin's solutions empowers you to identify ideal regions for diversification and partnerships. This helps build a resilient supply chain that efficiently mitigates production risks and manages demand.



Devise collaborative strategies: Cropin's regional intelligence fosters collaboration by providing stakeholders across the agricultural value chain with a unified view of regional trends and challenges. This enables them to work together towards data-driven solutions that empower farmers.

In conclusion, the looming food crisis demands a dramatic shift towards data-driven solutions. Cropin's Regional Intelligence empowers stakeholders across the agricultural value chain to break the vicious cycle of climate change and food insecurity. By harnessing the power of AI and a vast pool of data, Cropin empowers stakeholders with the tools to make informed decisions, build climate resilience, and navigate the complexities of a changing world.

Want to know more on Cropin's Regional Intelligence:

[Talk to our Experts](#)

About Cropin

Cropin is a global leader in agricultural technology, empowering farmers, agribusinesses, and governments with AI-driven intelligence to build a more resilient and sustainable food future. By mapping and meticulously analyzing over 10% of the world's agricultural land to date, providing insights into over 450 million hectares, we have built unprecedented insights to optimize yields, reduce costs, and mitigate the impacts of climate change. Our platform serves over 100 businesses, development agencies and governments, reaching 7 million farmers across 30 million acres of farmland. Powered by a vast crop knowledge graph encompassing 350 crops and 10,000 varieties in agro-climatic conditions from over 100 countries, our intelligent industry cloud platform for agriculture is revolutionizing how we feed the planet. Backed by Google, ABC Impact, Chiratae Ventures, BMGF, and other leading investors, we're not just predicting the future of agriculture, we're building it—one farm, one crop, one acre at a time.

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