Solution:

Yield Estimation using Technology (YES-TECH)

Submitter: (Deptt of Agriculture & Farmers Welfare (DA&FW)

Solution Overview

What is it, and what problem does it solve? Brief 2–3 sentence description.

Answer:

YES-TECH is a technology-driven yield-estimation system that fuses remote-sensing models with targeted Crop-Cutting Experiments (CCE) to generate rapid, plot-level production forecasts for insurers and planners. Drawing verified farmer, land-parcel and crop data from Agri Stack, it aggregates geo-tagged crop-health images, and delivers a composite yield figure that slashes manual fieldwork while raising the accuracy of loss assessment.

Key Features & Benefits

Main components and why it is useful? Bullet points summarizing methods, tools, and value added.

Answer:

- Geo-tagged crop-health photo hub: A cloud database ingests farmer- or scout-captured images at set growth stages; plot IDs pulled from Agri Stack ensure every photo is automatically linked to the correct land parcel.
- End-to-end data pipeline via Agri Stack APIs: Verified farmer, land and crop records flow in seamlessly, while composite yield values flow back to insurers, planners and procurement portals, eliminating duplicate data entry.
- Faster claims & planning decisions: Accurate pre-harvest yield estimates help insurers settle claims sooner and allow agencies to fine-tune procurement, storage and logistics weeks in advance.

Where It Works and Where It Can Work

Existing and potential target regions, agroecologies, or farming systems. Include examples if available.

Answer:

YES-TECH has already been piloted, where satellite-based forecasts is aligned with manual crop-cutting results, demonstrating reliability in both irrigated wheat belts and rain-fed mustard zones. Since Agri Stack now provides verified crop details of land-parcel across 17 states (over 4 lakh villages), the same workflow can be switched to places where Agri Stack data exist, from paddy terraces in Assam to soybean fields in Madhya Pradesh.

Evidence & Impact

What results has it shown? Stats, pilot outcomes, or testimonials.

- Earlier, more reliable forecasts for planners: District agriculture offices using the pilot outputs reported receiving block-level yield numbers three weeks before traditional crop-cutting results, allowing them to fine-tune procurement targets and input logistics ahead of harvest.
- Positive stakeholder feedback: Procurement agencies cited greater confidence in allocating storage and transport, while insurers noted that earlier, plot-level yield signals help refine premium and loss-ratio assumptions evidence that Agri Stack's verified registries are translating remote-sensing analytics into practical, revenue-saving decisions for both government and the private sector.

Scalability & Adoption Support

Why it can be scaled and what's needed to adopt it?

Low-cost, adaptable, partner-ready, etc.

Answer:

- Nation-scale pilot underway. After two years of testing, the YES-TECH workflow is now live in 100 districts across nine States (Assam, Haryana, Rajasthan, Madhya Pradesh, Maharashtra, Andhra Pradesh, Tamil Nadu, Karnataka and Odisha) beginning Kharif 2023.(India Budget)

- Faster decisions for insurers and buyers. Because plot-level farmer, land and crop details flow in directly from Agri Stack, district agriculture offices are now receiving block-wise yield forecasts three weeks earlier than with traditional methods, enabling quicker claim processing and better procurement planning.

Partners & Contact Info

Who's involved and how to connect? List of key contact and partners + email / phone.

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