Solution:

Digital Public Infrastructure for Agriculture – AgriStack

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:

Agri Stack is a nationwide, farmer-centric Digital Public Infrastructure (DPI) that is being built by India's Ministry of Agriculture & Farmers Welfare. At its core are three federated and authenticated registries Farmer Registry, Geo-Referenced Village Map Registry and Crop Sown Registry, which collectively answer the questions "who is the farmer, where is the land and what crop is on it?".

It addresses key issues in Indian agriculture such as fragmented data systems, lack of interoperability, inefficient scheme delivery, and limited access to credit, advisory, and markets by creating a federated, farmer-centric, consent-driven digital ecosystem.

Key Features & Benefits

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

Answer:

Three Core Registries (Farmer, Geo-Referenced Land, Crop Sown): These provide a single, verified data of who farms, on which land parcel and which crop has he/she planted.

Unified Farmer Service Interface (UFSI): It is an open API gateway that lets authorised public- and private-sector apps plug in and exchange data seamlessly, cutting down integration time and cost.

Consent Manager gives each farmer control over personal data sharing, ensuring privacy-by-design and building trust.

Sandbox Environment: It is a production-like test bed where start-ups, banks and state departments can prototype, certify and launch new digital agri-services quickly and safely.

Where It Works and Where It Can Work

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

Answer:

Agri Stack's core registries already operate in 17 states, 492 districts and roughly 4.2 lakh villages, giving it plot-level coverage across every major agro-ecological zone—from irrigated rice-wheat belts in Punjab–Haryana to rain-fed cotton–soybean systems in the Deccan and tribal smallholdings in central India.

Evidence & Impact

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

Answer:

- Digital Crop Survey (DCS): Now active in 17 states, 492 districts and 421 thousand villages, during the 2024-25 Rabi season. A total of 253 million farm plots were mapped during the same season.
- Farmer Registry: 6 crore Farmer IDs have already been generated (28 May 2025) across 17 states, giving government and private schemes a authenticated data of farmers.
- Instant, paper-free credit for Farmers: Financial institutions pull verified farmer, land and crop details directly from Agri Stack, so loan applications arrive pre-populated and risk-scored, allowing working-capital credit to be approved in under 30 minutes instead of the multi-week, multiple-visit process smallholders faced earlier.

Scalability & Adoption Support

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

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

Answer:

- Modular, open-source "building-block" architecture: States or Partners can plug into standard APIs and add new use-cases without rewriting core code, making expansion fast and low-cost.
- Federated data model: Each state keeps its own farmer and land records; So each state can adopt this DPI at its own pace based on their technical readiness.
- Reference apps and central sandbox: Ready-made code, SOPs and a test environment let banks, start-ups and departments validate solutions quickly before going live.
- Clear governance and consent layer: Alignment with national data-privacy standards reassures regulators and lenders, smoothing nationwide roll-out through public-private partnerships.

Partners & Contact Info

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

Answer:

Name: Dr. Pramod Kumar Meherda

Designation: Additional Secretary, Ministry of Agriculture & Farmers Welfare

Email ID: pk.meherda@nic.in

Contact No.: 011-23381176