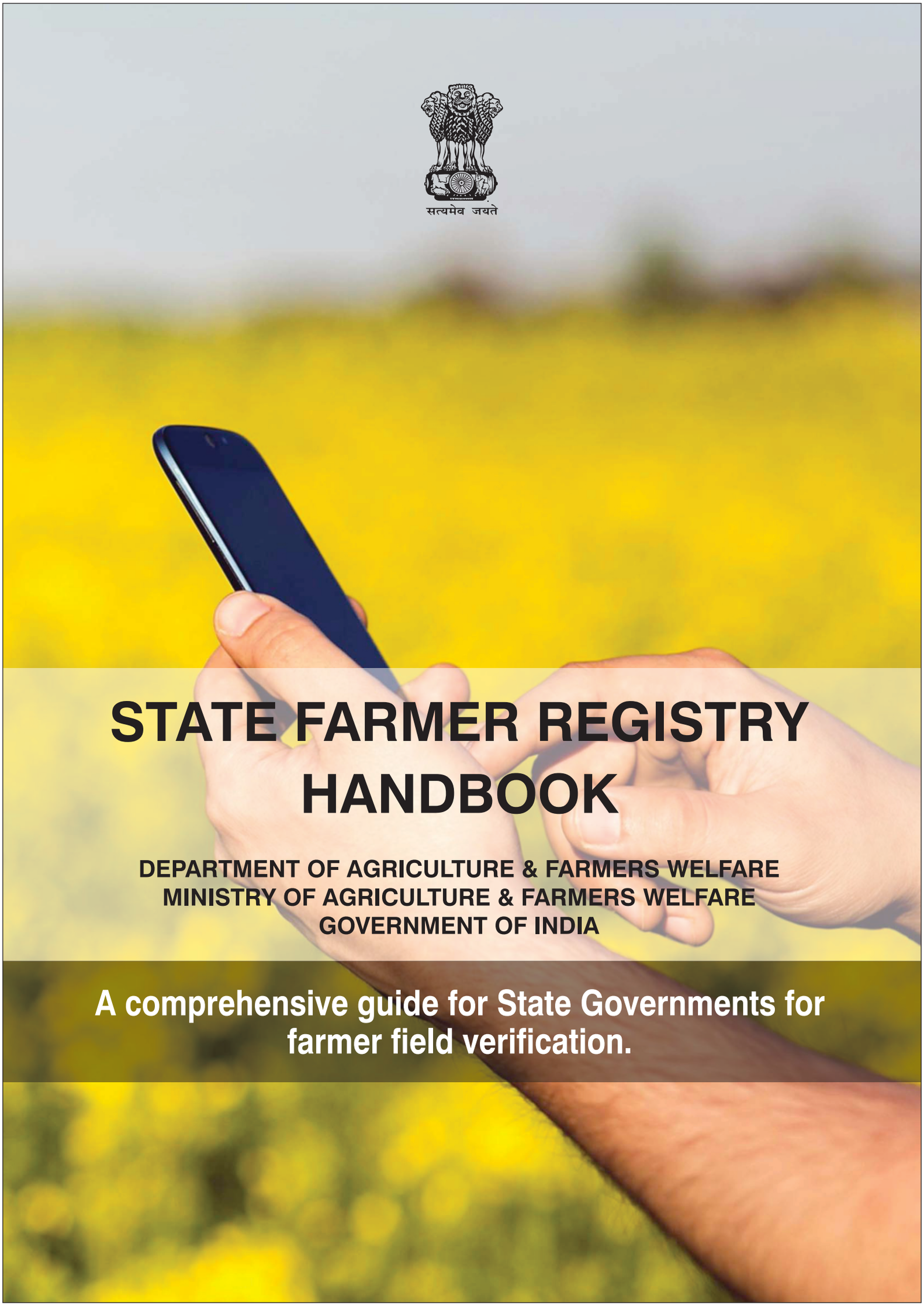

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STATE FARMER REGISTRY HANDBOOK

DEPARTMENT OF AGRICULTURE & FARMERS WELFARE
MINISTRY OF AGRICULTURE & FARMERS WELFARE
GOVERNMENT OF INDIA

A comprehensive guide for State Governments for farmer field verification.

Contents

The Farmer Registry is a pivotal initiative under Digital Public Infrastructure for Agriculture (Agri Stack) aimed at creating a comprehensive and unified Registry of farmers across the country. This registry plays a crucial role in ensuring that government schemes and benefits reach the right beneficiaries efficiently. The registry not only enhances transparency but also streamlines the distribution of agricultural subsidies, insurance, and other support systems. The Farmer Registry is integral to the digital transformation of the agricultural sector, enabling better planning, policymaking, and resource allocation to improve the livelihoods of farmers.

Farmer Registry establishes verifiability of a farmer by linking the farmer ID with the land ownership.

Pre-requisites in Detail

State should **establish a designated authority** for decisions on Farmer registry, grievance management and more.

State to **decide on the acceptable name match score level** for **automatic approval** of farmers during registration.

State needs to establish **linkage of State RoR system with the Mutation system** which results in instantaneous update of RoR after approval of mutation

State to permit **linkage of state Farmer Registry to State Records of Rights** (for flagging/marking land ownership change, and subsequent updates in the RoR)

State Government to undertake **incentivisation of intermediaries** for enrolment or update of Farmer registry

State Government to **identify operational staff** for identification and verification of land claims

State Government to select the **modes of Farmer registrations**

Stages in creating State Farmer Registry

State Readiness #01

- **Form Joint Committee (Revenue and Agriculture)**: Establish a joint committee comprising representatives from the Revenue and Agriculture departments to oversee the implementation of the Farmer Registry.
- **Appoint Nodal Officer and Technical Coordinator**: Appoint a State-Level Nodal Officer and Technical Coordinator to facilitate seamless operations and address technical issues.
- **Set Up Project Management Unit (PMU)**: Establish a Project Management Unit (PMU) to manage day-to-day operations, monitor progress, and ensure adherence to timelines.

Post Go-Live #06

- **Regular Updates of RoR:** Keep the Record of Rights data current for the latest information on land ownership and farmer details.

System Oversight and Enhancement: Consistently monitor the system for issues and carry out enhancements to uphold data precision and system effectiveness.

State RoR Data Provisioning #02

- **Generate Farmland Plot IDs**: Assign unique identifiers to each farmland plot to facilitate accurate data mapping and tracking.
- **Unified Land API:** Develop and integrate a Unified Land API to seamlessly transfer Record of Rights (RoR), ensuring data consistency across the Farmer Registry and other platforms

Bucketing #03

- **Grouping of Lands:** Consolidate land records with same farmer and identifier name in a village to ease the processes of identification and verification.
- **Link with Aadhaar-Seeded Scheme Data**: Integrate Aadhaar-linked data from existing schemes (e.g., PM-KISAN) to ensure accurate farmer identification and eligibility verification.

Preparation for Field Activity #04

- **Pilot District Selection**: Choose districts to conduct pilot activities to establish a model for wider implementation.
- **Train Master Trainers**: Conduct training programs for master trainers who will lead the on-ground implementation and capacity-building efforts.
- **Conduct Awareness Campaigns (IEC)**: Launch awareness campaigns to inform farmers about the registry, its benefits, and the registration process.

Land Claim Processing & Farmer ID Creation #05

- **Select and choose from Modes of Registration :** Farmers can claim their land buckets by registering through self-mode, seeking help in assisted mode, or attending a Government camp.
- **Assignment of Farmer ID:** Upon successful verification of their application, farmers are assigned a unique Farmer ID.

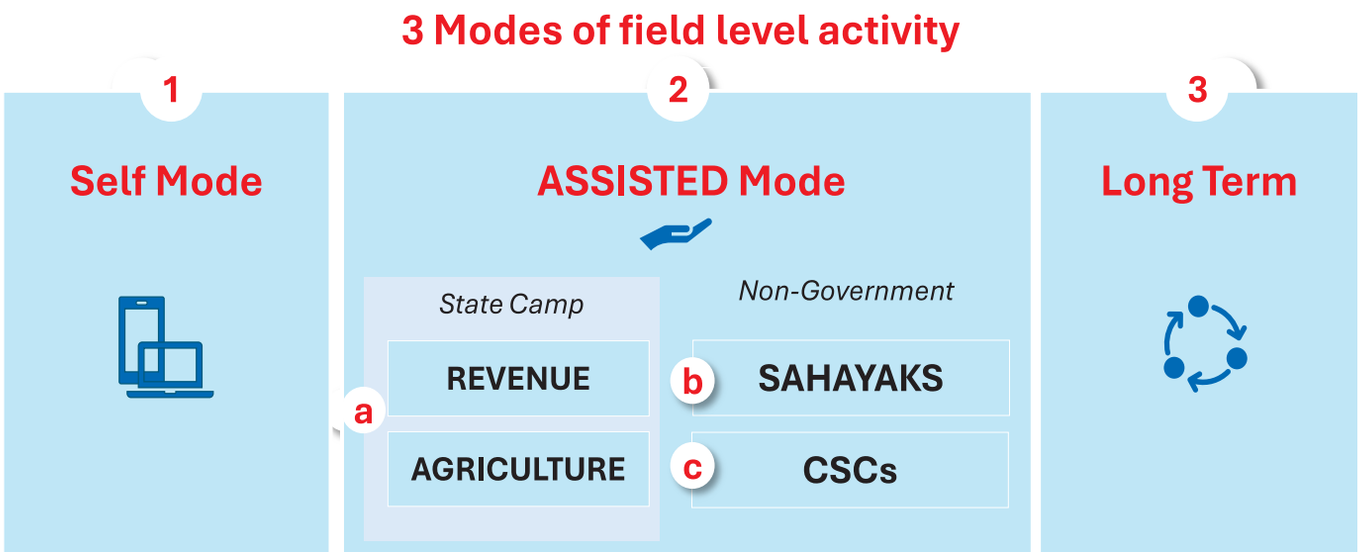
Stage #05 is explained in detail in this handbook

- For conducting field verification of farmers in any mode, the state should have already undertaken technical readiness by way of provisioning land records and ensuring creation of farmland plot ID
- Additionally, states may prefer to undertake an awareness campaign to encourage farmers to visit camps for enrolment, for creating Farmer ID.

BUCKETING CRITICALITY AND RELEVANCE

Land bucketing is a crucial process that consolidates a farmer's land holdings within a village by leveraging state Records of Rights (RoR) data. This procedure carefully checks the farmer's and their father's names against a sophisticated name matching algorithm. When a farmer's name achieves a match score beyond a predetermined threshold, their land records are grouped and given Bucket IDs. Then using various government schemes Aadhaar is seeded with the Bucket IDs. Due to the significance and intricacy of this task, it requires meticulous attention from the state. The bucketing process simplifies land management, allowing collective view of a farmer's landholdings, reducing the need for manual checks of each land record, and helping the government to efficiently display all of a farmer's lands at once.

Land Claim Processing & Farmer ID Creation



To establish a comprehensive State Farmer Registry, state governments can adopt a tiered approach to farmer registration, ensuring accessibility for all farmers regardless of their technical proficiency or location.

1. The **Farmer Self-Registration** is a part of the Digital India movement. It lets farmers sign up on their own using an easy app, giving them the power to use technology by themselves. This online platform facilitates a straightforward sign-up process, allowing farmers to create their profiles with ease followed by log in, eKYC, mobile verification, claiming their land buckets, giving consent and doing eSignature.

2. For those needing assistance, the **Assisted Mode** presents three distinct options:

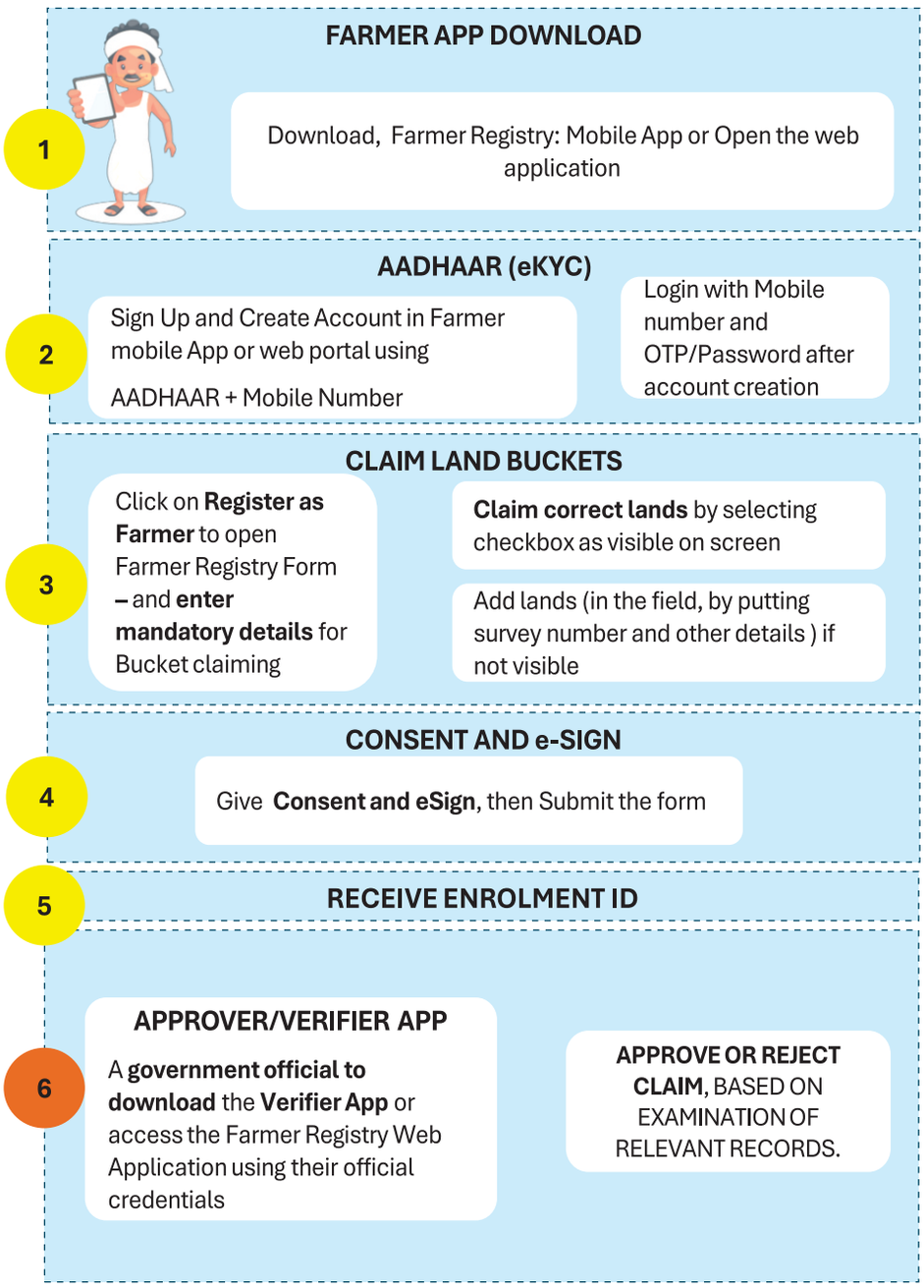
    a. **State Camp** Mode, where state officials set up temporary registration camps in villages. This approach targets farmers in remote areas, offering on-the-spot registration services including eKYC, claiming of land buckets and Consent collection with e-sign by different or same Government officials and often waiving certain verification requirements like the name match score due to the direct supervision of government officials who may already be familiar with the local farmers.
    b. **Sahayak Assistance**: Local Sahayaks, individuals well-versed in the application process, provide personalized support to farmers, assisting with document collection, form filling, and ensuring all registration requirements are met. .
    c. **CSC Operator Assistance**: At Common Service Centers, CSC operators use their expertise to guide farmers through the registration, leveraging the CSC's infrastructure for a smooth experience, including eKYC, claiming of land buckets and Consent collection with e-sign on behalf of farmers and payment processing through CSC bridge payment gateway and form submission.

3. **State Government Office**: Farmers can visit designated state government offices where officials help them navigate the registration process, ensuring accurate entry of information, claiming of land buckets and completion of necessary steps and verifications.

Through the implementation of these delineated registration frameworks (modes/methods), state governments can cater to the diverse needs of their farming communities, ensuring every farmer could be included in the State Farmer Registry.

Mode 1 : Self Mode (Farmer Self Registration)

Farmers can self-register using the Farmer Registry mobile app or web portal. This requires initial sign-up to create login credentials, followed by an eKYC verification using Aadhaar, completion of form with basic details. The claiming of land buckets is done on the system using the land survey numbers and consent of farmer is taken along with eSignature. After submission, Farmer gets an enrolment ID to track application status. State FR may auto-approve based on 'name match score threshold' as set at State level or forward for verification by government officer before final approval.

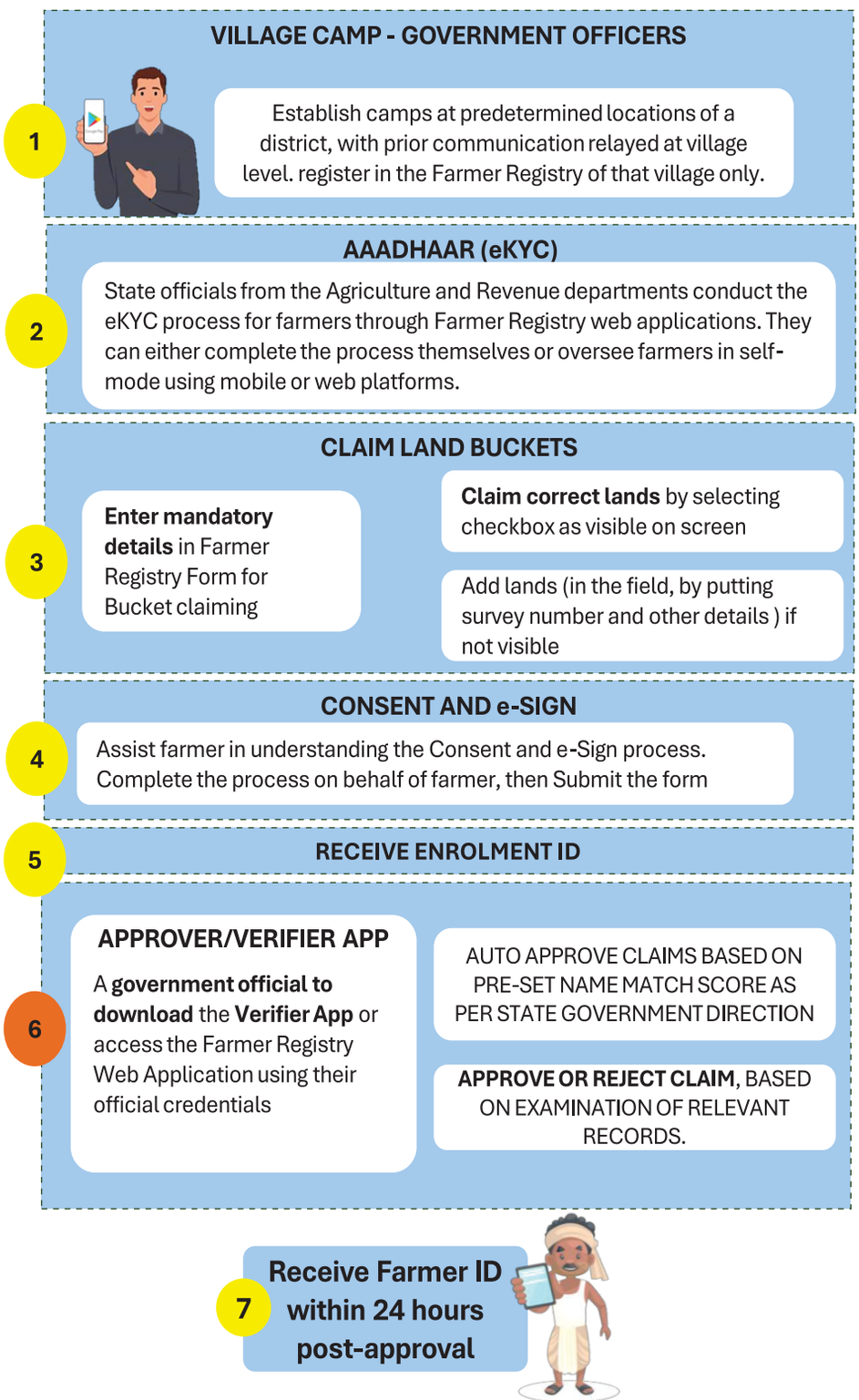


KEY CONSIDERATIONS IN FARMER SELF MODE:

1) Farmers should be able to understand and follow the instructions to finish the Registration.
2) Farmers should download the app only from the Play Store.
3) Farmers need access to an Android phone or a computer to use the Farmer Registry mobile application or website.
4) For identity verification and digital signing, farmers need a device with a working camera, if chose Face authentication.
5) Farmers must have their Aadhaar card number and a phone number that can receive texts.
6) Farmers should know the survey numbers of their land to claim their land records.
7) Farmers must use a unique phone number to set up their account.
8) Farmers should not share personal information like bank details or OTPs with anyone over the phone.

Mode 2(a) : Farmer Registration through State Government CAMP

In State Government camp mode, farmers register at identified locations within their village as decided by State and District administrations. This mode is exclusive to landowners in the designated village. The state delegates responsibilities among department/s to handle handles eKYC, form completion, and managing land claims, consent, and eSignature—all assisting the farmer's coming to the camp. Advantage of these camps is the familiarity of local officials with farmers and their direct supervision. The state may choose to waive off name match score requirement.



KEY CONSIDERATIONS IN ASSISTED MODE – GOVERNMENT CAMP:

1) Officers need access to Android phone or a computer to assist farmers registered on the Farmer Registry app or website.
2) Officers should be trained to know the system well and handle any problems.
3) Officers should have their login credentials from the state to use the Farmer Registry application.
4) A reliable internet connection and proper computer setup are essential for a smooth process.
5) Officers should clearly explain to farmers what they're agreeing to and why, in consent.
6) Officers should be equipped to describe the purpose of the Farmer Registry and its advantages.
7) Officers will need the farmer's Aadhaar number and phone number to verify OTPs and to check land records accurately, which includes comparing physical land documents with the records shown on the device.
8) Officers should keep the helpdesk contact information close by for assistance.

Mode 2 (b): Farmer registration by Sahayak

In assisted mode, farmers can register in the Farmer Registry through a Sahayak, an individual skilled in application use and form filling. The Sahayak signs up on the mobile app using their Aadhaar and mobile number, then logs in to assist the farmer directly. They collect the farmer's Aadhaar, mobile number, and land documents, conduct eKYC, complete the registration form, claim land, obtain consent, and execute eSignature on behalf of the farmer. Submission generates an enrolment number for tracking and sets up a farmer account, similar to self-registration. Applications are auto-approved or sent for manual approval by a verifier officer, based on the state's name match score criteria. Approved farmers receive a unique farmer ID.

SAHAYAK APP DOWNLOAD

1

Download
Sahayak: Mobile App

AADHAAR (eKYC)

2

Sign Up and Create Account in **Sahayak mobile App** using AADHAAR + Mobile Number and Login to start registrations

Enter AADHAAR of Farmer for eKYC

CLAIM LAND BUCKETS

3

Enter mandatory details in Farmer Registry Form for Bucket claiming

Claim correct lands by selecting checkbox as visible on screen

Add lands (in the field, by putting survey number and other details) if not visible

CONSENT AND e-SIGN

4

Assist farmer in understanding the Consent and e-Sign process. Complete the process on behalf of farmer, then Submit the form

5 **RECEIVE ENROLMENT ID**

6

APPROVER/VERIFIER APP

A **government official to download** the **Verifier App** or access the Farmer Registry Web Application using their official credentials

AUTO APPROVE CLAIMS BASED ON PRE-SET NAME MATCH SCORE AS PER STATE GOVERNMENT DIRECTION

APPROVE OR REJECT CLAIM, BASED ON EXAMINATION OF RELEVANT RECORDS.

7 **Receive Farmer ID within 24 hours post-approval**

KEY CONSIDERATIONS IN ASSISTED MODE – SAHAYAK

1) The Sahayak must have an Android smartphone to assist farmers via the Sahayak mobile application.
2) The app should be downloaded exclusively from the Play Store.
3) Sahayaks should be incentivized to motivate farmers to complete their registrations.
4) Before assisting farmers, the Sahayak must sign up as a Sahayak on the mobile app.
5) The Sahayak should only collect personal and bank details or OTPs strictly for Farmer Registry sign-ups.
6) The Sahayak should not charge farmers any fees for the registration process.
7) A tool may be required by the Sahayak to translate information into the local language when filling out forms.
8) A stable internet connection is necessary for the Sahayak to complete the registration.
9) The Sahayak will need the farmer's Aadhaar number and phone number for OTP verification and to accurately verify land records, including cross-checking physical land documents with digital records.
10) The Sahayak should have the helpdesk contact details readily available for any needed support.

Mode 2 (c): Farmer registration by CSC Operator

States may consider engaging CSCs for assisting enrolment of Farmers. The CSC operator uses CSC credentials as would be pre-enabled for registration. The operator then assists the farmer by collecting their Aadhaar, mobile number, and land documents, conducting eKYC, completing the registration form, claiming land, obtaining consent, and facilitating eSignature. Payment is processed through the CSC bridge payment gateway. Successful transactions generate an enrolment number for the farmer to track their application. Based on the state's name match score criteria, applications are auto-approved or reviewed by a verifier officer. Approved farmers are then granted a unique farmer ID.

CSC ASSISTED

1. Open Web Portal on PC / Laptop / Tablet and click Login with CSC

AADHAAR (eKYC)

2. Enter credentials for SSO login
   Enter AADHAAR of Farmer for eKYC

CLAIM LAND BUCKETS

3. **Enter mandatory details** in Farmer Registry Form for Bucket claiming
   Claim correct lands by selecting checkbox as visible on screen
   Add lands (in the field, by putting survey number and other details) if not visible

CONSENT AND e-SIGN

4. Assist farmer in understanding the Consent and e-Sign process. Complete the process on behalf of farmer, then Submit the form

CSC PAYMENT GATEWAY

5. The CSC bridge payment gateway opens on successful payment by the operator the application gets submitted.

RECEIVE ENROLMENT ID

6. **APPROVER/VERIFIER APP**

7. A **government official to download** the **Verifier App** or access the Farmer Registry Web Application using their official credentials
   AUTO APPROVE CLAIMS BASED ON PRE-SET NAME MATCH SCORE AS PER STATE GOVERNMENT DIRECTION
   APPROVE OR REJECT CLAIM, BASED ON EXAMINATION OF RELEVANT RECORDS.

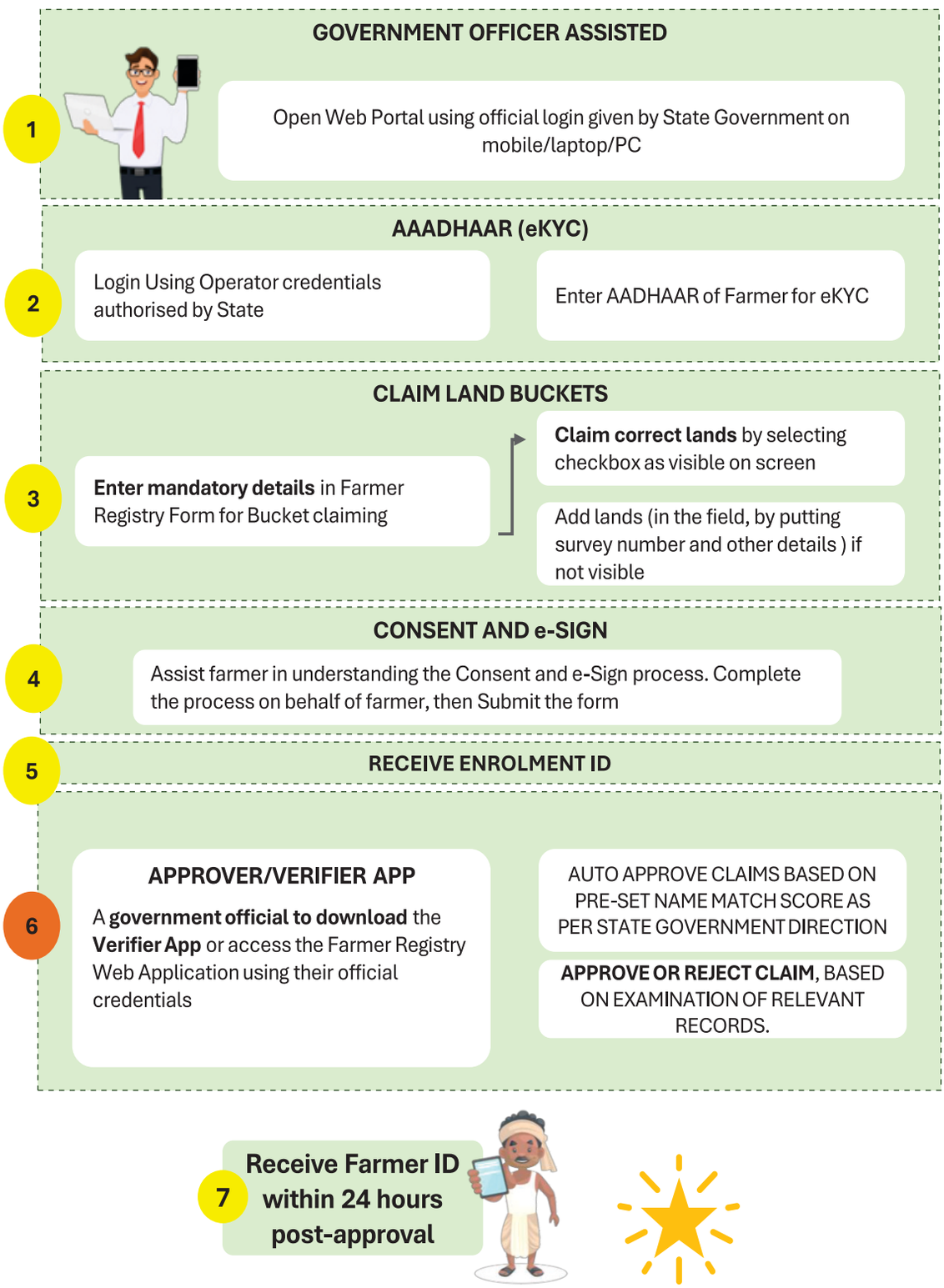
8. **Receive Farmer ID within 24 hours post-approval**

KEY CONSIDERATIONS IN ASSISTED MODE – CSC

1) CSC Operators should be well-trained to understand the system thoroughly and efficiently manage farmer registrations.
2) CSC Operators should use their CSC login credentials for Single Sign-On (SSO) access to the Farmer Registry.
3) A transliteration tool may be needed by CSC Operators to enter information in the local language in the form.
4) CSC Operators should clearly explain the necessity and importance of obtaining farmers' consent.
5) CSC Operators should be prepared to articulate and describe the purpose of the Farmer Registry and its benefits to farmers.
6) CSC Operators will need the farmer's Aadhaar number and phone number to verify OTPs and accurately check land records, including comparing physical land documents with the digital records displayed on the device.
7) CSC Operators should keep helpdesk contact information readily accessible for immediate assistance if needed.

Mode 3: Farmer Registration at Government Office

Farmers can sign up for the Farmer Registry in person at a designated state government office. A state-authorized official accesses the system using state-provided credentials and assists the farmer in person. The official gathers the farmer's Aadhaar, mobile number, and land documents, then performs eKYC, fills out the registration form, claims land, obtains consent, and completes eSignature for the farmer. Upon form submission, an enrolment number is issued for tracking. Applications are then auto-approved or sent to a verifier officer for manual approval, depending on the state's name match score criteria. Once approved, farmers are assigned a unique farmer ID.



Farmer Registry Application Verification and Approval Process

Farmer Registry Application Verification Process

- After registering through one of the three modes, farmers are immediately assigned an enrolment number, which they can use to monitor the status of their application in the Farmer Registry. The verification process begins based on the state's specific policies, particularly focusing on criteria like the Name Match Score (NMS) and approval guidelines. If the application meets the state's auto-approval criteria, such as a high NMS, it is automatically approved, and a Farmer ID is promptly issued in next 24 hours of approval. This process ensures that eligible farmers are quickly registered, facilitating their access to government services.

- For applications that do not qualify for auto-approval, a manual review process is initiated. Government officers at various levels are responsible for thoroughly checking the application details against official records to ensure accuracy. This multi-level review adds layers of verification, reducing the likelihood of errors and ensuring that only eligible farmers receive a Farmer ID. While this process may take longer, it is crucial for maintaining the integrity of the Farmer Registry.

- Once the application passes all necessary checks, a Farmer ID is generated and assigned to the farmer's enrolment. This ID is essential for accessing various agricultural benefits and schemes. The entire process balances the need for thorough verification with the goal of minimizing delays, ensuring that farmers can swiftly access the support they need from the government.

Name Match Score (NMS) and Application Approval

- The Name Match Score (NMS) is a key factor in determining whether a farmer's application will be auto-approved or require manual verification. States may categorize NMS into various levels

- This system streamlines the registration process for applications with a high degree of accuracy, reducing the workload on government officials and speeding up the issuance of Farmer IDs.

- For applications with an average NMS, typically between 31 and 79, manual verification is required. Government officers must carefully review these applications to ensure that the information matches official records. This step is crucial for preventing errors and ensuring that only those who meet all the necessary criteria receive a Farmer ID. In contrast, applications with a poor NMS score, below 31, require the farmer to correct discrepancies in their official records, such as Aadhaar or land documents, before they can proceed with registration.

- The use of NMS in the verification process allows for a more efficient and accurate registration system. It ensures that applications with high accuracy are fast-tracked, while those with potential discrepancies are given the attention needed to maintain the integrity of the Farmer Registry. This approach helps balance the need for quick processing with the importance of accurate and fair verification.

- **Excellent (80-100):** Auto-approved for Farmer ID.
- **Average (31-79):** Requires manual verification by government officers.
- **Poor (0-30):** Farmer must correct discrepancies in official records (Aadhaar, land documents, etc.) before proceeding.

Handling legal heir in Farmer Registry *(1/2)*

Updating of a land record is required because of two primary reasons-

a) Sale transaction of the land
b) Succession due to death of the owner farmer

For a) Sale Transaction,

the state registration system is (typically) integrated with State Land Record System (in most major states). Therefore, after any registered transaction of land, the data is updated in the State land record system and mutation is triggered. And as per state norms, after a statutory period the updating of land record happens against the current owner of the land.

For b) Succession due to death of owner farmer,

the Mutation gets initiated only after the inheritance/succession information is given by the legal heirs to the revenue department.

- There are various reasons in our society, where many families DO NOT come forward seeking succession-based mutations.

Secondly, for the purposes of Farmer Registry, it is important to have current share of land i.e., extent of land of an owner to give benefit. The record of rights system may have joint owner, but the Farmer registry provides facility to assign land parcel extent based on 'imputed full' or 'imputed equal share' basis. Imputed equal share can be distributed as declared with the consent of all the joint owners.

Therefore, while sharing data with use cases, all the joint owners' details will be shared whenever any of joint owner details are sought.

As and when joint owners become individual owners through registered transaction, a new FARM ID will be generated for each of the owner and previous FARM ID will be deactivated.

Some update in Farmer Registry are made possible to RoR entries to handle dead owners and allotment of share to joint owners. This is possible as:

a. Farmer Registry is not designed for and cannot be, considered as replica of State Land records systems, because - one, it will not contain deceased farmers and two, mutations on registered transactions can get delayed. In both these cases since the benefits should be given to the current land holding farmer, the Farmer Registry will have his/her name only (not the previous owner or seller's name).
b. Farmer Registry, system will allow farmers to get their land data updated to handle the time delay due to mutation in State RoR system. To do this Farmer will require to submit relevant documents to STATE designated authority (for the purpose of Farmer registry maintenance) for updating land in their name because of death or sale transaction. It is again emphasised that Farmer Registry is only for benefits purposes, an entry in it does not bestow legal right
c. The current Farmer Registry system has capabilities to allow farmers to get their land data updated to handle above two limitations of State RoR systems.

EVERY TIME A LEGAL HEIR IS REGISTERED AND ASSIGNED LAND PARCEL ON FARMER REGISTRY (especially for succession due to death of owner farmer) DATA PERTAINING TO LAND WOULD BE SHARED WITH STATE RoR SYSTEM. THE STATE RoR SYSTEM, if permitted by State Government, CAN PROACTIVELY START INHERITANCE MUTATION after receiving such information from Farmer Registry. THIS WILL HELP UPDATING STATE RoR.

NOTABLY, as and when State RoR system is updated, the Farmer Registry system will consume the same information of ownership in a synchronous manner. Therefore, for any conflict between Farmer Registry and State RoR system, the State RoR will have overruling power on Farmer Registry data with respect to ownership of land and the extent assigned to a given Farmer ID.

Example: In State of Uttar Pradesh, the owner of Land parcel with farm id "**UP**34521213873" has passed away (is deceased) and there are 4 legal heirs A, B, C, and D. The legal heirs may approach Farmer Registry for assigning the said land parcel to their Farmer ID.

Handling legal heir in Farmer Registry *(2/2)*

Since, no inheritance/partition mutation has happened so far, Farmer Registry will consider A, B, C and D as joint owners. The extent will be assigned based on State Policy for Farmer Registry which ca be 'imputed full' or 'imputed equal'. Farmer Registry will electronically inform RoR system, that system has assigned said land parcel to legal heirs and the Revenue department may consider initiating inheritance mutation, for the deceased land owner. While performing inheritance mutation, if State Revenue authorities have identified DIFFERENT legal heirs or deleted legal heirs in comparison to those available State Farmer Registry, during synchronisation, updating of Farmer Registry will adhere to what has been done in Land Records System. This may even involve de-assigning land parcel for farmer or assigning land parcel to different farmer (which is as per State RoR). It may also mean adding joint owner to the list of new joint owners, if joint owners don't have farmer id.

In case of states where 'imputed equal share' has been opted as a policy, the extent of ownership (share) may also change after partition among family members in RoR System.

FOR CASES WHEN THERE IS CONFLICT DURING MUTATION, the RoR system shall electronically inform the Farmer Registry, so that lands assigned to legal heirs be changed as per RoR.

In case of Sales transaction, the State Farmer Registry would have assigned land parcel to the buyer based on the request and supporting documents. . In majority of sales transactions (>99%), the mutations are accepted, and the buyer is able to acquire the rights on the land parcel after mutation. In cases where mutation is rejected (based on eligibility of the buyer), the seller would lose the rights on the land in any case. In light of this it is safe to assign transacted land parcel to buyer and intimate RoR system electronically (through API call) about the said ownership change. This intimation will help revenue department to revert back to FR, in case if mutation is not approved. Based on such intimations from revenue department land parcel can be de-assigned from buyer / farmer in FR

At the time of field verification of Farmers and creation of Farmer ID, the local revenue officials or the operators, can point out all deceased farmers. Technologically, the face authentication element of registration (Aadhaar eKYC) will not allow deceased farmers to get included. The State revenue officials at the field level can inform legal heirs for getting included into Farmer Registry. The Standard Operating Procedure will guide the revenue officials to assign lands to new owners if mutations have not taken place after sales transactions.

For the case of joint ownership, the farmer registry may put whole extent of land against each joint owner. Subsequently, these joint owners may need to make a request for apportionment/distribution/partition of extent of a land with the State designated authority for updating the Farmer registry. This will be done for the purpose of use cases/benefits which require share of ownership of land.

IMPLICATIONS ON USE CASES IN STATE

- The use case should be designed to do Aadhaar authentication to ensure that unscrupulous elements do not fake deceased farmers and misuse the FR's existing entry in respect of deceased farmer (those who become deceased after the FR is created and in respect of whom the legal heirs are not updated in RoR and hence also not updated in FR.)
- The use case should not limit itself to demo authentication but deploy facial Aadhaar authentication for potential beneficiaries
- Unified land API would include flag indicating whether mutation is in progress against a particular owner and extent of the land in transaction. This will help in bringing buyers (new owner) as farmers to provide benefits in case mutation is taking time.
- In case registration and land records system have been electronically integrated, then all transaction of registration department will be available to land records either immediately or by end of the day. While regular mutation system takes few days to go through workflow including notice period for raising objections, Unified land API would capture information against the owner whether any transaction has happened and if yes what is the area involved. This will help in bringing the new owner/buyer into FR because authentic information about transaction is received from land Records system. Assigning the transacted land extent to buyers is safe, as in majority of the cases seller will lose right on the transacted extent and mutation system is only to check whether buyer has right to acquired it or not.

In Summary

Farmer Registry is only for benefits delivery not for legal rights

Technical aspects of Bucketing

Data Cleaning and Preparation	• **Standardize RoR Data**: Cleanse RoR data by removing inconsistencies like special characters, extra spaces, and unnecessary prefixes. Apply state-specific rules for name and identifier formatting. • **Extract Unique Identifiers**: Identify and categorize distinct owner and identifier names within the RoR dataset. • **Create Name Comparison Matrix**: Generate a comprehensive list of potential name combinations from the unique identifiers. • **Calculate Name Similarity Scores**: Assign numerical scores to assess the similarity between paired names. • **Identify Potential Matches**: Create a list of record pairs with significant name similarity scores. • **Group Similar Records**: Cluster records with high similarity scores into preliminary buckets. • **Clean PMKISAN Data**: Standardize PMKISAN data by removing inconsistencies and separating multiple land IDs. • **Prepare PMKISAN-RoR Comparison**: Create a dataset combining PMKISAN and RoR data for name matching based on village and land ID. • **Clean PMFBY Data**: Standardize PMFBY data by removing inconsistencies based on state-specific guidelines. • **Prepare PMFBY-RoR Comparison**: Create a dataset combining PMFBY and RoR data for name matching based on village and land ID. • **Clean SASDB LR Data**: Standardize SASDB LR data by removing inconsistencies based on state-specific guidelines. • **Prepare SASDB LR-RoR Comparison**: Create a dataset combining SASDB LR and RoR data for name matching based on village and land ID.
Data Matching and Consolidation	• **Calculate PMKISAN-RoR Similarity Scores**: Assess the similarity between PMKISAN and RoR records based on name and other relevant criteria. • **Calculate PMFBY-RoR Similarity Scores**: Assess the similarity between PMFBY and RoR records based on name and other relevant criteria. • **Calculate SASDB LR-RoR Similarity Scores**: Assess the similarity between SASDB LR and RoR records based on name and other relevant criteria. • **Create Draft Farmer List**: Combine cleaned and matched data from all sources to generate a preliminary farmer list at the village level. • **Deduplicate Farmer Records**: Eliminate duplicate records based on Aadhaar numbers to create a unique list of farmers at the state level.

Good practices at Field level

To streamline the land bucket claiming process for farmers, the state Governments are implementing following measures

District and State master trainers

Organize training sessions for Farmer Registry personnel by district and state master trainers. Target these sessions towards prominent farmers, Common Service Centers (CSCs), and panchayat officers.

Dedicated Helpdesk

To ensure ongoing user engagement, progress monitoring, and issue resolution, a dedicated helpdesk should be established. The state must determine the optimal operational level of this team (state, district, sub-district, or village) for effective problem-solving.

Information, Education, & Communication (IEC)

Conduct IEC activities through various channels, including radio, newspapers, door-to-door campaigns, loudspeakers, banners, etc., to educate farmers. Collaborate with village panchayats to ensure widespread outreach and awareness among farmers.

Local Youth

Involve educated local youth to assist farmers in claiming their land buckets using the Sahayak mobile application. Consider providing compensation for their services (subject to state decision).

DM-SDM Level Monitoring

It might be helpful for District Magistrates and Sub-Divisional Magistrates to meet weekly to review the performance of the Farmer Registry in their areas. This could involve checking the number of farmers who have registered and been approved and identifying any potential issues.

Farmer Registration Center

Establish Farmer Registration centers in village panchayat buildings or enable COMMON SERVICE CENTRES (CSCs) and other frequented community areas to streamline the eKYC, land bucket claiming, consent, and e-signature process. These centers, equipped with necessary IT infrastructure and staffed by state government officials, will provide convenient locations for farmers to complete required procedures.

Sahayak mode

Encourage Tech Savy youth and Crop Surveyors to utilize the Sahayak application for the land bucket claiming process. This will enable them to efficiently handle the process from their mobile devices, potentially earning compensation (subject to state decision).

Patwari Office Strengthening

Provide Patwari offices with computers, internet access, and user credentials to access the Farmer Registry Portal. This will improve their efficiency in approving farmers' land bucket claims.

Coordination Requirements between State and Centre

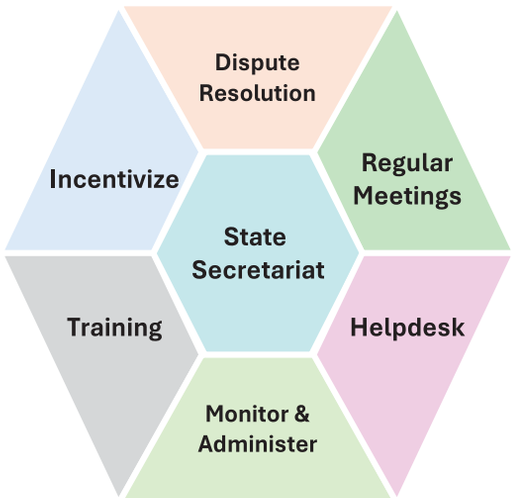
#	Activity	Explanation	State Tasks
1.	**Farmland plot ID generation**	A farmland plot ID is a unique ID associated with the land parcel (combination of survey + sub survey number) on which the survey is performed.	A session can be scheduled to explain the utility generated to the revenue department.
2.	**Provision of RoR data with Farmland plot ID for bucketing**	To enable bucketing and Aadhaar seeding, it is necessary to provide the RoR (Records of Rights) data.	The data can be provided either through APIs or CSV files. The data format will be shared with the states.
3.	**Survey number level API/unified land API**	This API will be used to verify farmers' land claims. It will be a simple GET API that provides the names of the owners along with the extent of land ownership for a given land ID. This is to check that after bucketing the Farmer has not transacted the land.	The state will need to develop this API, and the specific API format will be shared with the states.
4.	**Appointment of nodal officer and formation of PMU**	The nodal officer will oversee administration statewide, including deployment, coordination, and management of the registry. The PMU will support the nodal officer in implementing the Farmer Registry (FR) in the state.	The state needs to appoint a nodal officer and establish a PMU for this purpose.
5.	**State specific Configuration**	To onboard the states onto the Farmer registry, each state will need to perform specific configurations tailored to their requirements. For e.g., Setting up the approach for joint ownership, defining the land unit, customizing the homepage, and other state-specific adjustments.	The state must configure the system (FR portal) according to its requirements before rolling out the Farmer Registry (FR) in the state.
6.	**User Roles Creation and User IDs**	User roles represent the job roles assigned to officers appointed by the state at various levels (State, district, sub-district and village) for the verification and approval of the applications. Each user ID is associated with a unique user role.	The state must undertake the crucial task of creating user roles and user IDs. Additionally, the state needs to define the level of access that should be provided to each user role.
7.	**Preparing operators' organizations (CSC, RSK) and assistants (sahayaks).**	The state needs to onboard operators' organizations and assistants (sahayaks) to ensure the smooth implementation of the Farmer Registry which includes the doing registration for farmers.	States need to onboard operator organizations in advance to assist farmers with the Farmer Registry (FR) process.
8.	**Establishing the IT infrastructure.**	The service includes organizing data, securely hosting it, providing APIs, and creating a user interface. Depending on whether the state chooses to manage the system on its own infrastructure or prefers the central government to handle hosting and management, the approach will differ. If the state opts for independent management, they will need to procure and set up Hardware Security Modules (HSM) and obtain Authentication User Agency (AUA) / Know Your Customer (KUA) licenses. Alternatively, if the state prefers central government services, they can utilize services provided and procured by the central government.	The state needs to determine and select what is most convenient or suitable for their needs.
9.	**Development and Implementation of Additional APIs needed for Farmer Registry**	The state is responsible for creating and implementing APIs from various departments such as Social Welfare, Tenant/Lease, and Ration Card to integrate with the Farmer Registry. This integration aims to simplify access for farmers data but also helps ensure that the provided information is correct and reliable.	The state must develop and implement the necessary APIs.
10.	**Identification of departments**	The Farmer Registry will integrate departments such as Agriculture, Horticulture, Animal Husbandry, Fisheries, etc., allowing farmers to select the relevant department based on their occupation for verification and approval purposes.	The state needs to decide which departments will be added to the Farmer Registry based on their requirements and implement this decision accordingly.
11.	**Identification of Master Trainers**	The state needs to select Master Trainers from across the state who will be trained to conduct sessions on the Farmer Registry (FR), including its benefits, how state officials should use the application, and how to implement it efficiently across the state. These sessions will train Master Trainers to train others across the state at various levels of the hierarchy.	The state needs to appoint officers who can provide training to various state government-appointed officers within the state.
12.	**User ID assignment to identified users (officers, sahayaks, operators)**	User ID assignment is required to authorize a user to perform responsibilities such as registering, verifying, approving, and rejecting applications of the farmers within the Farmer Registry, making them responsible for these actions.	The state needs to appoint government personnel for specific tasks, and their contact details (name, mail, mobile number) will be linked with their user roles in the Farmer Registry (FR) system.
13.	**Information, Education, and Communication (IEC) Activities**	Farmers need to be made aware of the benefits of the Farmer Registry and informed about the ongoing registration process in their local area.	The states need to conduct IEC activities through various means to encourage farmers to participate in the registration drive.
14.	**Pilot**	The pilot phase will involve trialling the Farmer Registry in selected villages of a district before launching it statewide. This trial will help identify and address on-field challenges to better prepare for the full rollout.	The state needs to select a few villages to initiate a pilot program and prepare all the necessary setups, including ensuring that CSCs or PSKs are ready with the Farmer Registry (FR) system, assigning users with appropriate user roles, IDs and application credentials.
15.	**Launch**	The launch represents the final rollout to deploy the registration drive statewide and onboard farmers onto the Farmer Registry.	The state needs to ensure that the launch of the Farmer Registry (FR) proceeds smoothly without interruption by preparing all necessary setups. Additionally, any challenges and solutions identified during the pilot phase should be addressed and resolved before the statewide rollout of the FR.

Institutional structure at State level

To sustain and manage Digital Public Infrastructure for Agriculture at the state level the state Government would need to conceive an institutional structure which will be empowered for all technical and administrative decision making. A tiered structure where strategic decision-making is done at the State level and operational implementation is done at District and below levels, is suggested as below. *This may be customized as per the state's requirements*

State Level			
Entity	**State Digital Agriculture Committee (SDAC)**	**State Project Management Unit (SPMU)**	**Technical Support Group (TSG)**
Composition	- Chair: State Agriculture Minister - Vice-Chair: State Agriculture Secretary - Members: Relevant department secretaries, university reps, farmer reps, agri-tech industry reps	- Led by senior IAS officer as Project Director - Team: Agri experts, IT specialists, data analysts, project managers	- IT experts - Agricultural scientists - Data specialists
Role	• Policy decisions • Inter-departmental coordination • Overall guidance	• Day-to-day project management • Coordination with central PMU> • Oversight of district implementation	• Technical advice • Develop state-specific solutions • Support SPMU
	District level	**Block level**	**Village level**
Entity	**District Digital Agriculture Cells (DDACs)**	**Block-level Implementation Teams (BITs)**	**Farmer Advisory Groups (FAGs)**
Composition	- Led by District Collectors - Members: District Agriculture Officer, IT Officer, local agri experts	- Led by Block Development Officers - Members: Agriculture Extension Officers, local tech support staff	- Progressive farmers - Local leaders - Representatives from Farmer Producer Organizations (FPOs)
Role	• Local implementation • Farmer engagement • Data collection	• On-ground implementation • Farmer training and support	

Role of State Revenue and Agriculture Secretary



- **Establish a dispute resolution system** involving SDMs, Tehsildars, and the DM to assist with land claim issues.
- **Conduct review meetings with the Chief Secretary** to track Farmer Registry saturation progress.
- **Set up a helpdesk** to resolve technical issues faced by farmers and officers on the ground.
- **Administer and monitor** activities through the Farmer Registry Dashboard and web portal reports.
- **Organize offline training** for farmers and officers to improve registrations and verifications.
- **Arrange regular meetings** between District Magistrates, SDMs, and Tehsildars for smooth coordination.
- **Manage budget allocation** to incentivize task force members (e.g., Sahayaks)

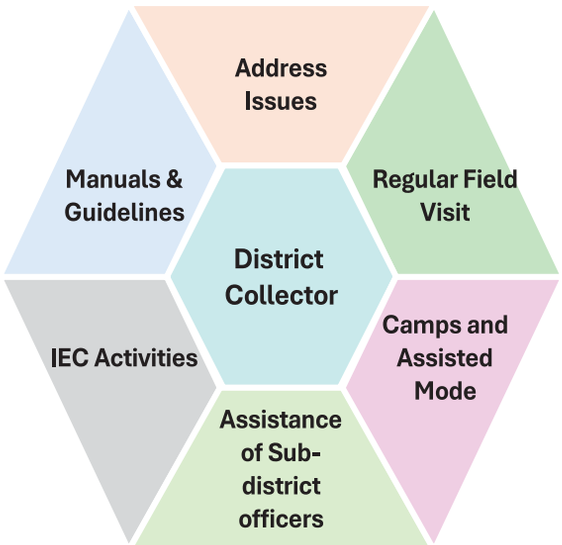
TECHNICAL COMPLIANCE AGAINST STANDARDS

- Adherence to the standards set by the Ministry of Agriculture, along with the provision for data sharing as desirable and mutually agreed
- Creation of Unified Land API as per specifications prescribed by Centre to facilitate dynamic linkage to the Records of Rights (RoR) data
- Generation of Farm IDs, as within the Records of Rights (RoR) to generate unique identifiers for each farmland plot. This is crucial for the subsequent integration of these identifiers into the Farmer Registry
- Decision on IT infrastructure requirements for the Farmer Registry, which may offer cost benefits and standardization, or to develop an independent system that allows for enhanced control and customization
- Ensure that all essential IT requirements are fulfilled for operations in both camp mode and assisted mode
- Identification and listing of officers for user management of State Farmer Registry. Oversee the creation of User IDs for Officers at the District level involved in farmer registration, land claims, and verification processes to facilitate access to the Farmer Registry system
- Establish grievance redressal mechanism for disputes in State Farmer Registry creation
- A decision must be made concerning the verification process for land claims. The Secretariat must determine whether claims should be automatically approved or if they necessitate manual approval at multiple levels following thorough examination. This determination should be based on name match score thresholds set in various modes available.

STAKEHOLDER COMMUNICATION

- To identify and assigning dedicated officers from the Agriculture, Revenue, and IT/National Informatics Centre (NIC) departments to supervise the state coordination for implementation of State Farmer Registry
- Plan and coordinate extensive Information, Education, and Communication (IEC) activities, for awareness and engagement of farmers
- Create easy-to-understand guides local literature/material for State Farmer Registry, for quick learnings

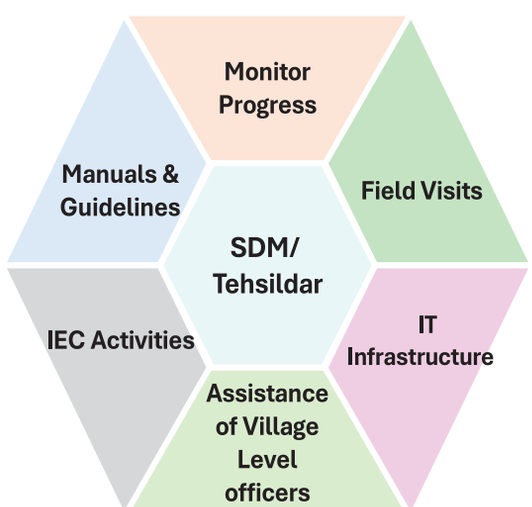
Role of District Collector/equivalent



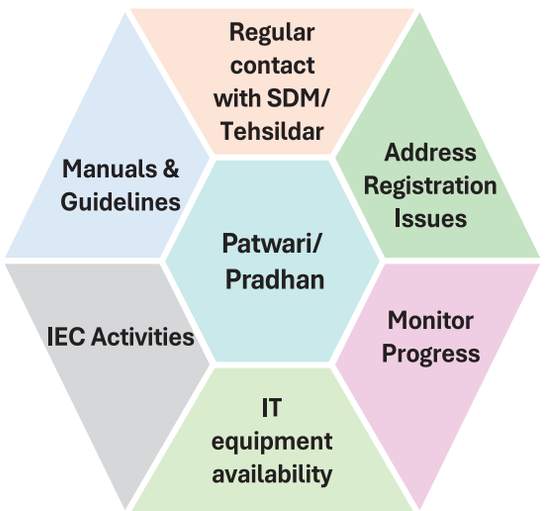
- **Maintain regular communication with SDMs and Tehsildars** to address issues faced by farmers and Farmer Registry officers.
- **Visit villages in various Tehsils regularly** to engage with farming communities, provide support, and understand their challenges.
- **Ensure the setup and functionality of tech equipment** for both camp and assisted modes in every Tehsil.
- **Set up User IDs for sub-district officers** assisting with farmer registration, land claims, and detail verification for access to the Farmer Registry system.
- **Run Information, Education, and Communication (IEC) programs** at the district level to enhance public understanding of the Farmer Registry.
- **Distribute manuals and guidelines** to district stakeholders to standardize the registration process.
- **Select and prepare a suitable location** for the Proof of Concept (POC) of the Farmer Registry, ensuring proper resource allocation and efficiency.

Role of SDM/Tehsildar/equivalent

- **Establish and maintain direct communication with village leaders (Pradhans)** to monitor the progress of the Farmer Registry initiative in their jurisdictions.
- **Visit villages frequently** to engage with farming communities, offer support, and evaluate the implementation of the Farmer Registry.
- **Ensure all necessary IT infrastructure is available and operational** for both camp mode and assisted mode activities in all villages, ensuring efficient operations.
- **Oversee the creation of User IDs for village-level officers** involved in farmer registration, land claims, and verification processes to enable access to the Farmer Registry system.
- **Set up a permanent office in the Tehsil** to support the Farmer Registry in assisted mode, providing a central location for assistance and resources.
- **Execute Information, Education, and Communication (IEC) activities at the tehsil level** and monitor the updates from the villages on the implementation and progress of these activities.
- **Facilitate the distribution of manuals and guidelines** throughout the sub-district network to ensure standard operating procedures and clear instructions for all stakeholders.
- **Identify and prepare a suitable location for the Proof of Concept (POC) of the Farmer Registry**, ensuring all necessary resources are in place for its successful implementation.



Role of Patwari/Pradhan/equivalent



- **Lead Information, Education, and Communication (IEC) efforts** in the village, using methods like door-to-door visits or announcements via loudspeakers to ensure everyone is informed about the Farmer Registry process.
- **Stay in regular contact with the SDM and Tehsildar**, working together to address any key issues or challenges that arise during the registration process.
- **Monitor the progress of Farmer Registry registrations**, ensuring that all farmers in the village complete their registrations on time.
- **Ensure all necessary IT equipment is operational**, such as internet access and computers, to facilitate smooth functioning of both camp mode and assisted mode in the village.
- **Distribute manuals and guidelines to stakeholders**, ensuring a standardized process for registration and verification across the village.

Grievance Redressal in Farmer Registry

A structured and transparent process for farmers grievance redressel related to land linkage in the Farmer Registry is put in place. This mechanism allows farmers to raise land claims in cases of incorrect/ absence of land ID or when their land has been claimed by another individual. The process ensures timely resolution through manual verification by authorized government officials (e.g., Patwari).

Process Flow:

1. **Farmer Login:**
    - The farmer logs into the Farmer Registry portal using their Aadhaar ID.
2. **Submission of Land Claim Request:**
    - The farmer enters the Land ID
    - If the land ID is already linked to a different individual, the system will flag it, and the farmer can proceed with raising a Land Claim Request.
    - The farmer provides relevant details, including land documents, ownership proof, or any supporting evidence to validate the claim.
3. **Claim Verification:**
    - After submission, the claim request is forwarded to the designated Patwari or land officer responsible for the land records in that area.
    - The Patwari receives the land claim request along with all supporting documents provided by the farmer.
    - If the claim is valid, the Patwari updates the land records, and the farmer's Aadhaar is linked to the Land ID.
    - If the claim is invalid, the application is rejected, and the farmer is notified with an explanation for the rejection.
4. **Notification to Farmer:**
    - The farmer is notified about the status of the claim via SMS or through the Farmer Registry portal.