

e-Seed - The One Stop, Non-Stop Aadhaar- Enabled Seed Distribution System Of Andhra Pradesh

e-Seed fetches land holdings information of each farmer from webland database, based on his/her Aadhaar number to decide seed eligibility. Ration card number and associated units are sourced from e-PDS database pertaining to farmer's Aadhaar to enable any family member to collect the seed.



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Groundnut is the primary crop sown in the district of Ananthapuramu due to the nature of its soil and weather conditions.

Farmers face extreme challenges in cultivation due to continuous drought in the past 15 years. Government, as a relief, supplies seeds to farmers on subsidized rates. The groundnut seed being costlier comparatively, the subsidy portion is high. Thus, the distribution of groundnut seed has never been easy for the administration in the manual system.

As a general condition, a farmer can draw seed only one time as per his/her eligibility. However, the farmers can have lands in various villages and hence can have more than one patta-dar passbook. Farmers face difficulty for drawing seed and at times, seed may even get exhausted even before reaching their hands. Due to lack of proper controlling systems, middlemen divert the seed in large quantities, causing non-availability of seeds to eligible farmers. These also result in disturbed situations, causing law and order problems. Further, the stock position is never made readily available for any reconciliation. Thus the supplying of seed on subsidy posed several challenges costing government's exchequer to a considerable extent.

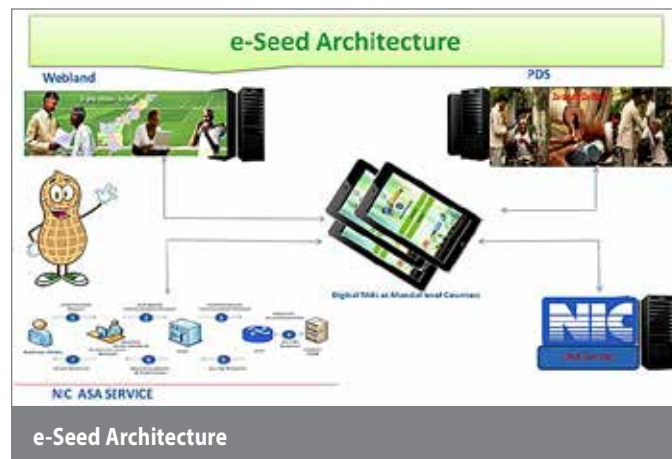
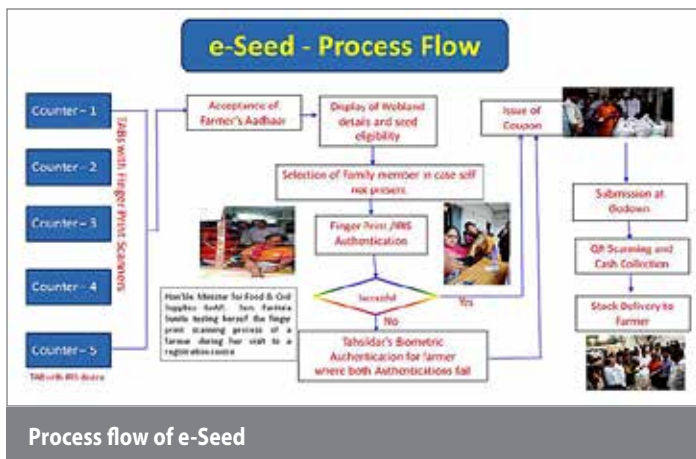


“ The most complicated issue of seed distribution was handled very efficiently to the utmost satisfaction of the farmers with an in house developed app and NIC services ”

KONA SASIDHAR, IAS
Collector & District Magistrate
Ananthapuramu District

INTRODUCTION

To overcome the difficulties faced in the manual system, the Collector & District Magistrate of Ananthapuramu desired to use a state-of-art technology to ensure proper stock maintenance and distribution of seed to genuine farmers. Accordingly, DIO (NIC) was asked to design a suitable system that shall ensure distribution of seed to all eligible farmers using Aadhaar enabled biometric authentication.



THE PRESENT SYSTEM

As per the requirements, the web-enabled application has been designed to capture the details of stock movement from supplying agencies along with vehicle numbers, delivery challan details and quantity of stock contained in the truck. On receiving the stock, Mandal Agricultural Officer (MAO) takes the photograph of the vehicle to enable authorities tracking the proper movement of vehicles. The MAO simply accepts the stock supplied and authorized to detain or reject certain stock as per quality of the stock. MAO is responsible for maintenance of the stock on day to basis. The system ensures real time maintenance of stock receipts and

Ananthapuramu is the first district in the Country to design, develop and implement such a seed distribution system

balances till the lowest level of mandal godowns.

To ensure proper distribution of groundnut seed, it was decided to use digital tablets at mandal level for implementing Aadhaar enabled biometric authentication. An android-based App was developed for issuing coupons and delivering at godowns.

e-Seed system fetches land holdings information of each farmer from webland database based on his/ her Aadhaar number to decide seed receiving eligibility. Ration card number and associated units are fetched from e-PDS database pertaining to farmer's Aadhaar to enable any family member to take the seed. The Aadhaar authentication is ensured through NIC ASA (Authentication System Agency) service, which is being used for the first time in the state. On giving fingerprint or iris for the Aadhaar, the service checks with UIDAI server and verifies the biometric information. Once the authentication is successful, the coupon is issued to the farmer containing the eligible quantity, subsidy portion, total price and price payable by the farmer. Coupon also contains

unique number encrypted in QR image. Farmer presents the coupon at godown point to lift the seed. At godown, the QR image on the coupon is scanned and the number is automatically populated. The operator verifies the number, accepts cash payment and delivers the stock to the farmer. On confirming the delivery, stock details are automatically updated at server.

FEATURES OF THE SYSTEM

- The system is designed to work with available 2G/3G connectivity at mandal level.
- BSNL Broad band facility with local modem has been provided at mandals where no 2G/3G connectivity is available, so that the digital Tablets can be connected through Wi-Fi to Internet.
- High security coupons with hologram, QR image are printed with unique coupon numbers for distributing the seed.
- About 5 to 8 counters have been established in each of 63 mandals where one counter is identified to authenticate farmers using iris in case of Biometric Authentication failure.



Hon'ble Minister for FCS, Smt. Paritala Sunita examining the seeds during the inauguration of the system along with District Collector, Shri Kona Sasidhar, IAS and Shri PV Srirama Murthy, Joint Director of Agriculture



Hon'ble Minister for IT & Cinematography, Shri Palle Raghunadha Reddy during the inauguration of eSeed system at Puttaparthi on May 19th 2016. Joint Collector- II and Revenue Divisional Officer were present on the occasion.

- Tahsildar authentication of farmers facilitated where both biometric and iris authentication fails.
- At godown point, existing 2G/3G connectivity is used to upload the delivery details.
- Real time availability of stock position enabling proper planning of stock positioning.
- Reduction of subsidy cost to government over a period of time.

ADVANTAGES

- Only genuine farmers can draw the seed.
- Total land held by the farmer in the district fetched into the system enabling him/her availing the seed at a single instance as per eligibility.
- Alert messages are displayed in case of farmers not having land in the district or drew the seed already at any other mandal.
- Real time monitoring of stock movement
- Misappropriation or unauthorized lifting of stock completely avoided
- Peaceful conduct of seed distribution using the technology
- As district is taken as a unit, farmer can take the seed at any centre.

IMPACT

- 3,10,318.20 lakh quintals of groundnut seed distributed across the district within a period of 25 days to 3,53,114 lakh farmers.
- Bogus Pattadar pass books and Double benefit eliminated.
- Middlemen and Recycling of stocks avoided.
- Hassle free and user friendly system.
- No long queues at any point of time

- All eligible farmers covered
- Very positive response from Media/ Farmers/ Public Representatives

HIGHLIGHTS:

- e-Seed was quickly scaled up for Aadhaar enabled DBT of all agriculture inputs for the welfare of farmer (D-Krishi).
- The successful implementation of the system prompted the Director, Agriculture, GoAP to plan the roll-out of e-Seed project to the entire State for all the seeds from Rabi Season 2016 onwards.
- The details of the seeds to be supplied, subsidy portions and other procedures are being obtained for customizing product if required.

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