

Award Scheme for exemplary implementation of e-Governance initiatives

Proforma of Main Application Form (for applying through e-mail) for NATIONAL AWARDS FOR e-GOVERNANCE

- 1. Name of the Organization** - State Government
- 2. Name of the Department** - Department of Agriculture
- 3. Name of the State/UT/Central Government/Others** - Tamilnadu
- 4. Name of the Project** - AGRISNET - Farm Crop Management System
- 5. Nature of the Project** - A Holistic Web based application to provide Farm Level Intervention
- 6. Category of the Award Applying for** - Incremental Innovations in Existing Project
- 7. Objective of the Project**

Shifting focus from area based to farm based. Asset Base, soil health individual farms resource availability mapping. Mapping the factors of production viz., Land, water and Rainfall. Assessing the yield gap, providing bouquet of cropping options, identification of constraints, suggesting interventions, input requirement assessment and linking with suppliers, continuous crop health monitoring, providing text and voice advisory through mobile. Establishing effective market linkage.

- 8. Date of Launch of the Project** - *For incremental innovation (Period during which substantial incremental innovation has been made in the project) - Year of National e-Governance Award: 2010-11*

The Project AGRISNET was awarded the National Gold Award for e-Governance initiatives under the category Sectoral Award - Focus Sector - Agriculture during 2010-11

9. Beneficiary of the Project

81.18 Lakh farm families in the state, Stakeholders viz., Seed Agencies, Fertilizer and Pesticide agencies besides various wings of the Department of Agriculture and sister departments for taking appropriate decisions as well as a Decision Support System to maintain effectiveness in the input supply chain.

Details of the nominated project

Name of the Project Head of the project

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Details of team for the nominated project

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|----|-----------------------------|---|
| 1. | Dr. Sandeep Saxena, I.A.S., | Agricultural Production Commissioner
and Principal Secretary to Govt.
Agriculture Department, Chennai 9 |
| 2. | Dr. M. Rajendran, I.A.S., | Director of Agriculture, Chennai 5 |
| 3. | R.Raghuraman | Assistant Director of Agriculture |
| 4. | P. Venkatachalapathy | Assistant Director of Agriculture |
| 5. | S. Sankarasubramanian | Assistant Director of Agriculture |
| 6. | Prof. R. Venkatachalam | ICT Coordinator, TNAU |

IV. NAME OF CATEGORY - INCREMENTAL INNOVATIONS IN EXISTING PROJECT

1. Year of National Award for e-Governance given to the project

The Gold Award was conferred in 2010-11 for the e-governance initiatives taken by the Department of Agriculture, Tamilnadu

2. Coverage - Geographical and Demographic:

i. Comprehensiveness of the reach of delivery centers

About 385 Block level offices, 31 District headquarters, 1 state level office, Soil Testing Laboratories, Seed Certification offices in the state have been provided with the Computer and Accessories. They are connected through TNSWAN and BSNL broad band.

In the 385 blocks all the 880 Agricultural Extension Centers where the quality inputs are being distributed to the farmers are also provided with computer and accessories with network connectivity. Where the delivery centers are very much located in the remote areas and network connectivity could not be provided also lack of continuous power back up Hand Held Billing Machines with SIM enabled connectivity is provided under CISMS as part of e-governance initiatives.

Besides this about 2319 field level functionaries are provided with Tablet PCs for continuous crop health monitoring during the entire cropping period. Both Hand Held Billing Machine and Tablet PCs work offline and data can be uploaded as and when connectivity is established.

All the information required by the farmers are delivered through Common Service Centers through the CSC gateway of the state government.

ii. Number of Delivery Centers

❖ 3119 Nos of Field level functionaries of Agriculture, Horticulture and Marketing departments are using 3G enabled, GPS, GPRS enabled Tablet PCs at the village level

❖ 385 Block level Assistant Directors of Agriculture Offices

❖ 880 Agricultural Extension Centers for sale of quality inputs.

❖ 31 District Headquarters offices

❖ 154 Other offices like Seed Certification, Soil Testing Laboratories, etc.,

iii. Geographical

a) National Level - Number of State Covered - Does not Arise

- b) State/UT Level - Number of Districts covered - 32 Nos
 - c) District Level - Number of Blocks Covered 385 Nos
 - iv. All the block level offices which are the cutting edge access point to the farmers headed by Assistant Director of Agriculture named Agricultural Extension Centers are provided with Computer, Printer, UPS and network connectivity. The Assistant Agricultural Officers working under the control of this office are provided with 3G SIM enabled Tablet PCs for continuous crop health monitoring.
 - v. Demographic spread (percentage of population covered)
- Total Population of Tamilnadu state is 678.6 lakhs and the total number of farm families covered are 81.18 lakhs which is about 12%

3. Situation before the initiate (Bottlenecks, Challenges, constraints, etc., with specific details as to what triggered the Organization to conceptualize this project)

The client base in Agriculture is about 81.18 lakhs and the needs and expectations during the entire period of cropping is multi-directional viz., quality inputs, best practices, latest technologies, weather advisories, pest and disease management, welfare schemes, markets and market information.

Tamilnadu agriculture is specialized by its seven Agro climatic zones. The Agriculture is an age old enterprise and about two thirds of the population either directly or indirectly depend on the agriculture sector for their sustenance.

Tamilnadu is a state having varied rainfall pattern and diverse cropping pattern. Area facing irrigation water challenge is almost half of the total area under cultivation which is posing a very big challenge in agricultural extension and production of crops.

Hitherto, the extension system was of traditional one starting from Community Approach, Group Approach, Broadening the scope of Agricultural Extension by diversifying the agriculture and its allied activities. The focus of extension was shifted from Community based to area based approach at the beginning of 21st Century.

As an incremental innovation activity under AGRISNET project a newly evolved - Farm Crop Management System, came in existence and resulted in Paradigm shift from area based approach to farm based approach. Under this initiative the Individual farm asset mapping done, soil health mapping done, Villages are further classified into micro agro climatic zone and zonation done with groups of homogeneous Micro Agro Climatic Zones based on Rainfall including the factors of production land and water. Crop Matrix defined to each zone and the farmers are provided with bouquet of cropping options to take up cultivation productively and profitably. Crop Plans are developed online to the individual farms in consultation with the individual farmers. The crop plans are developed taking into consideration the factors of production, rainfall of that micro climatic zone, individual farmers resource base, yield gap of the particular farm.

By suitably analyzing the potential yield of a particular crop in that area and the actual yield obtained by the individual farmer in that particular farm the yield gap is ascertained. The constraints experienced in the farm holding and the interventions required to overcome the constraints are being identified by the extension worker farm-wise. While developing the crop plan the requirement of seeds variety-wise, the fertilizer, Biofertilizer and weedicides are being calculated at the back-end so that the dealers and

agencies dealing with the quality agricultural inputs are intimated of the requirements well in advance. By this way the glut of the stock and the derth of the stock at peak seasons is averted.

Individual farm level intervention is the only viable alternative to reduce yield gap, increase the yield and income of the farm. With this objective only the Farm Crop Management System is launched. By implementing this innovative IT tool the state is Marching towards **Second Green Revolution**.

4. **Scope of services covered** (Number, extent and list of services made ICT enabled - extent to which a service is e-enabled may be one of the four criteria's (a) Service is requested through electronic means including mobile devices - Front -end is electronic (b) work flow/approval process is electronic, (c) database is electronic/digitized (d) service delivery is electronic

- i. Online Registration of Individual Farm Assets
- ii. Online Soil Test results
- iii. Online crop plans for individual farms
- iv. Crop Health Monitoring reports of individual farms
- v. Online Input availability - specifically of Government Sale points
- vi. Advisories - both Text and Voice on Pest & Disease incidence, remedial measures, weather forecast, market information, price trends, welfare scheme benefits availed
- vii. Services can be availed through Common Service Centers of the State Government.
- viii. Work flow process is electronic
- ix. Total database is electronic
- x. Certain services are now made available on Mobile
- xi. Other services made available online

5. **Over View of the Original Project** which has been horizontally transferred/replicated

The Original Project AGRISNET was developed with the sole intention of creating a network thereby delivering effective information service to the farming community. The project was aimed at to integrate the workflow process of the entire Department of Agriculture so that the information flow is networked and made available at one stop to the farming community.

The availability of technologies like Mobile telephony, Android based applications, use of Tablet PCs for field level monitoring, text and voice advisory using mobile telephone as a last mile connectivity could not be used at the time of launch of the original project.

The Local language usage in mobile telephony service though a device compatibility issue till now, could be achieved to some extent like use of google transliteration and other tools that are emerging.

Owing to the intensification of the networking capabilities and the wide spread availability of communication infrastructure at the village level paved the way for incremental innovations.

With the potential of 81.18 Lakh clients directly accessing the department, repetitiveness of the information requirement in a given geography and demography lead to the innovation in the original project with the help of the emerging Information Communication Technology.

6. **Innovations in the Original Project** (Give details about the new processes/new activities, new steps, ICT Interventions, functionalities introduced into the system, identification & removal of any bottlenecks/irrelevant steps, administrative process reforms, any use of new & emerging technology.

- i. *First of its kind in the entire Nation the **Asset mapping*** is done extensively for 81 lakh farm holdings covering Agriculture, Horticulture, Agricultural Engineering, Animal Husbandry, Sericulture, Fisheries and other allied activities that a farmer can take up
- ii. The Mobile Number of the farmer and the survey number in which the farmer is taking up cultivation are made mandatory in the new system
- iii. **Soil Health monitoring** is mandatory in the present system. This was originally part of the system. But in this system unless the soil nutritional status is not known further processing like crop plan development, farm-wise input requirement/supply assessment cannot be done precisely.
- iv. **Micro Agro Climatic zonation** is a prime concept where in the factors of production viz., land and water besides Rainfall are taken into account. Earlier Tamil Nadu was divided into seven broader Agro Climatic Zonation which is felt inadequate to provide a location and farm specific advisory
- v. In the present system each group of villages/each group of blocks within the block/within the district are further divided into smaller groups based on the Land type, Source of Irrigation and Rainfall. Only based on the Crop Matrix developed by the extension workers in consultation with the farmers further recommendations and advisories emerge.
- vi. Once when the asset mapping and soil health mapping is done to individual farm, based on the crop matrix and zonation of the particular village **Crop Plans** are developed by the Extension worker in **Participatory approach**.
- vii. This crop plan will suggest the farmer on what is the crop that the farmer will raise in that particular farm, the variety, method of cultivation, etc., Based on the type of cultivation suggested the quality seed requirement is being calculated. By taking the soil nutrient status and the actual nutrient requirement already available in the database the physical fertilizer requirement is calculated and given in the crop plan itself. The input supply agencies viz., seed, fertilizer both private and Co-operative agencies, Credit institutions, Scale of finance, National Agricultural Insurance Scheme, Constraints identified as reason for yield gap and the interventions suggested to overcome the constraints, etc., are all given in the form of hard copy to the individual farmers.
- viii. Once the input requirement is assessed the same will be intimated to the agencies in that Block so that the required inputs are positioned well ahead of the season.
- ix. While visiting the villages on fixed schedule the extension workers will take up **Continuous Crop Health Monitoring**. While doing so the pre-requisite is that crop plan should have been developed for that particular farm. Crop health will be monitored using electronic gadgets in four ways viz., Schedule visit, Pest & Disease monitoring, Bio-metric assessment, Harvest and Yield.
- x. Villagewise information on yield projections at various stages of crop generated through FCMS are automatically forwarded to **Agricultural Market Intelligence and Business Promotion Cell (AMI&BPC)** for sending market related advisories to the farmers.
- xi. As a way forward the ultimate objective of deriving the benefit of entire cropping is to reap the financial benefit. This is being aimed at clusterisation of growers at block and village levels, federate them at the District level as FPOs. They will be extended the facility through Post Harvest Management System (PHMS) where the farmer will be linked to the traders on

real time basis to have a fair market play under the guidance of Department of Agriculture, Horticulture & Plantation Crops and Agricultural Marketing and Agri Business.

xii. The information at every stage is flowing to the farmers in the form of text advisory from the field level functionaries.

xiii. Comprehensive Input Supply Management System is launched in the state in all the 880 Agricultural Extension Centers by which the benefit accrued by the farmers are tracked and thereby the transparency is maintained.

xiv. To make extension more vibrant and sensible Touch Screen Kiosks and PICO Mini projectors are deployed at the block level so that the extension delivery is precise to the farm level.

7. **Comparative with Original Project** (Provide a comparative analysis about how is this project similar/different in services provided, design, functionality, technology, platform etc., from the original project)

The Original Project AGRISNET was not addressing the individual farm level details. But the farmers were provided the information on the soil status, availability of inputs viz., seeds, fertilizers, pesticides, technologies and other information like reservoir position for irrigation related decisions, rainfall position etc., It was more of a planning oriented approach.

The present incremental aspects of the AGRISNET - FCMS addresses the individual farm level requirements for effective capitalization of resources viz., Asset Mapping, Soil Health Mapping, Micro Agro Climatic delineation, Crop Matrix to provide bouquet of options, development of individual crop plans to each farm in consultation with farmers on participatory approach, providing advisories both text and voice, Synergy with stake holders, linking with the market, etc.,

8. **Strategy adopted**

- i. The details of base line study done - Initially to collect the Asset Mapping and soil health mapping, workflow processing of input availability viz., seeds, fertilizers a model has been arrived at and test data collected. For arriving at the Crop Matrix a detailed exercise was done district wise so that micro agro climatic zones are identified based on three parameters - Soil, Irrigation type and Rainfall pattern.
- ii. Problems Identified - Since the factors of production ie., land and water is heterogeneous and the combination of Rainfall pattern caused an innumerable number of combinations it was initially very difficult to identify the cropping sequence. But subsequently it was streamlined and now based on the crop matrix and the bouquet of options provided the field level functionaries are developing crop plans to individual farms in consultation with the farmers.
- iii. Roll out/implementation model - the AGRISNET - Farm Crop Management System (FCMS) is rolled out to the entire state. Now under implementation in all the villages in the state.
- iv. Communication and dissemination strategy and approach used - Through Inter personal contact, Organizing e-team at state and district level. Training of Master trainers on all the developments and frequent interactions among the team members. At the district level officials hold frequent interactions among each other and seek solutions for the problems that they come across. One software support person is housed at headquarters to provide online software related support.

9. **Technology Platform used**

- i. Description - Web based application using open source. PHP is used for the software development. The data base is MySQL
- ii. Interoperability - Since open source the interoperability is very much there. This project is not vendor dependent.

- iii. Any Issue with the technology used - So far not encountered.
- iv. Service level agreements (SLAs) (Give details about presence of SLA, whether documented, whether referred, etc.,) - Service level agreement is made. ELCOT (Electronic Corporation of Tamilnadu is appointed as Nodal agency. For all the software development and Hardware requirement needs ELCOT will identify the agency. The entire process followed is User Involved Software Development Life Cycle Model.

10. Adaptability and Scalability

The project is an workflow automation of the existing workflow only and hence need no additional efforts for adaptation. The project was originally developed and tested on pilot basis in the six districts of the state and based on the experience necessary improvements were made and scaled up to the entire state.

More over the software is developed on open source and hence it can be easily customized and upscaled at any point of time.

11. Adaptability Analysis

- 1. The entire AGRISNET-FCMS process is a work flow automation and hence the existing system could adapt to the process automation smoothly.
- 2. The services delivered are all the existing system which were originally done manually have been automated and there is no change in the process flow.

12. Efficiency Enhancement (Give Specific details about the following)

- i. Volume of transactions processed
1000 transactions per second.
- ii. Coping with transaction volume growth
Volume growth is around 14157 MB and around 12 crores records. Per day 30000 to 40000 records are being updated.
206 tables are maintained and about 45 masters are provided.
- iii. Time taken to process transactions
On an average 0.02 seconds to process a transaction.
- iv. Accuracy of output
95% accuracy is assured
- v. Number of delays in service delivery
Not encountered since the service delivery is dynamic at all levels of transactions.

13. Accessibility (Give details about how following has been

enhanced: user accessibility, transparency in system, single-window resolution, ease of navigation; impact on service response time, number of visits required for accomplishing the task before and after automation, communication e-mail, SMS,

web

tracking, etc.,)

User Accessibility

- ❖ All the departmental officials who are actually involved in the adding/modifying the records in the server are provided with specific user credentials.
- ❖ All the reports provided are accessible at the appropriate user levels.
- ❖ Those information that are required by the public are provided in the open page.

Transparency in system

- ❖ Each and every transaction done either in the static record or any record modified are dynamically displayed either in the report page/open page.

Single Window Resolution

- ❖ All the information are linked directly in the dash board of the respective user to monitor/decision taking.
- ❖ The Common Service Center is linked for providing information to end user ie. farmers through the Tamil Nadu Government official portal.

Visits required before and after automation

- ❖ Before automation every individual accessing the information need to visit the grass root level offices /workers for atleast two to three times.
- ❖ Now the farmers need not come to the Agricultural Extension centers except after finalizing the purchase decision for taking delivery of the input desirous of purchasing is fully identified.

Communication e-Mail, SMS, web based tracking, etc.,

- ❖ Farmers are being intimated the availability of quality seeds through the web portal. The quality input sale is made online and the stocks sales and receipt are tracked dynamically and displayed online. The farmers can hence take their purchase decisions accordingly.
- ❖ The SMS portal of Government of India is integrated with the AGRISNET-FCMS portal so that advisories to the farmers can be sent at all levels starting from Field level functionaries to the apex level.
- ❖ Information can be disseminated in regional language.
- ❖ The availability of the quality inputs are tracked on the web dynamically and like wise the benefits accrued by the farmers are also tracked on the web.

14. User Convenience (Give specific details about the following)

i. Service Delivery Channels

All the services are delivered to the end user primarily through web portal. There is no email services provided as on date. But the services are mostly given through Text and Voice advisories besides touch screen Kiosks installed at critical crop production points. The services include Pest and Disease incidence and the action to be taken by the farmers during the cropping period. The crop health is continuously monitored using the tablet PCs given to the field level functionaries.

ii. Completeness of the information provided to the users.

The details on the factors of production Soil and water as well as climatic conditions are gathered using the web enabled platform. The processed data in the form of Crop plan is being delivered to the farmers individually followed with continuous/closer monitoring till the produce reaches the market for better income.

iii. Accessibility (Time Window)

There is no time restriction to access the portal. It can be accessed 24x7. But the services like Touch screen kiosk are in time window between 10 AM and 5.45 PM during the office hours only

iv. Distance required to travel to Access Points

The farmer need to travel around 10 km maximum from the point of his living. Wherever the Common service Centers are functioning the farmer may have to travel only 3 to 4 KM to the access point.

v. Facility for online/offline download and online submission of forms

At present the farmers can download the information required. Efforts are being taken to make available the information readily online. But for submission they have to depend on the field staff only initially and the facilities are being provided when all the Common Service Centers are made functional.

vi. Status tracking

Sufficient provision for status tracking is given in the software so that each transaction is tracked by the software.

15. **Sustainability** (Give details about sustainability wrt technology (technology used, user privacy, security of information shared - digital encryption,etc.,) Organization (hiring, trained staff, training etc.,) Financial (Scope for revenue generation, etc.,)

- ❖ Open Source Technology is used.
- ❖ The entire application is developed using **php** platform, framework code-ignator and the data base is mySQL.
- ❖ All the users at each level is provided separate credentials so that the privacy is maintained.
- ❖ Digital encryption is not done as of now since the payment gateway is not used in the entire transaction.
- ❖ Consultants are appointed to extend software support as well as server side support all the 24x7.
- ❖ The users of the application are periodically trained and updated time to time on the enhancements made.
- ❖ A standing e-team is constituted at state level
- ❖ At the district level four to five Master trainers are identified and they are well equipped with the latest developments in the application software.

16. **Ease of transaction** (Give details about method deployed to educate user on how to avail service, security of data shared by user (if applicable) completeness of information provided, linkages for financial process.

- ❖ Due publicity is given during the month long Mass Village level Campaigns organized named “Uzhavar Peruvizha”. During these campaigns the farmers are educated on how to access the information and how to interpret the information on the web.
- ❖ They are given exposure to access the Touch Screen Kiosks so that they can themselves retrieve the information required by them without approaching the field level staff.
- ❖ End to end solution is given to the farmers in the system.
- ❖ At present there is no financial transaction procedure provided in the module. Hence extra security features will be provided as and when the need arises.

17. **Appropriateness of context and degree of localization** (Give details about degree of localization ie. local language interface, database support,etc., relevance of the content, etc.,)

Tamil Language compatibility is provided in the software. All the fields that are static are now made available in the regional language. However due to user could not type the regional language at the front end the details at that stage are being collected in English. However the database is supporting the local language interface.

The contents provided in the system are fully relevant to the end user ie. the farmers.

18. **Cost effectiveness** (Give details about impact on cost incurred wrt overhead cost, direct and indirect cost, man days/man hour required to do the job etc.,)

Since the Software Development Life Cycle (SDLC) is end user involved one and the development and support is done directly under the supervision of the user of the software and the system it is very much cost effective.

The software support is done in house. The enhancements and the improvements required are attended then and there so that the efficiency of the system is maintained.

19. **Number of Users and services**

Users

- ❖ 1500 Nos. of Departmental users
- ❖ About 17000 stake holders viz., seed, fertilizer, pesticides, credit institutions
- ❖ About 72 Lakhs registered farm holdings

Services

- ❖ Farm resources productivity enhancement
- ❖ Soil Health improvement
- ❖ Individual farm level intervention
- ❖ Crop Productivity improvement
- ❖ Crop Health Monitoring
- ❖ Comprehensive Input Supply Management System
- ❖ Online Machinery Hiring
- ❖ Technology dissemination
- ❖ Stake holders synergy
- ❖ Farm related advisory both text and voice
- ❖ Dissemination of technical information through Touch Screen Kiosks and by screening the technical short films using the PICO projector.
- ❖ A special tool called “**Crop Doctor**” is deployed in all the Touch Screen Kiosks for knowledge dissemination and imparting skill using “**Know it Yourself**” concept. Crop Doctors are developed as part of **Expert System** of major crops like Paddy, Ragi, Coconut, etc.,
- ❖ Market information
- ❖ Post Harvest Management

20. **Benefits accrued/Impact assessment**

1. All the farm activities in the 72 lakh farm holdings are technologically backed using the AGRISNET-FCMS platform
2. Farm Level intervention is achieved through farmers participation
3. Services of Extension functionaries systematized since the asset mapping is done.
4. Online database facilitates providing of advisories then and there.
5. Input use efficiency is achieved since the demand and supply are synchronized
6. Impact assessment done by piloting in six districts and the outcome of which is scaled up to the entire state after due modifications and enhancements

21. Result Achieved/Value Delivered

- i. To organization
 - 1. A very strong Decision support system is provided
 - 2. Online information available for quick delivery of services
 - 3. Making Administration vibrant and Agile
- ii. To Citizen
 - 1. Information made available to take up farming and farming related activities for definite profit oriented outcome.
 - 2. Approach to administration made simple and precise
- iii. Other Stake Holders
 - 1. Decision making is made comprehensive
 - 2. Timely delivery of goods and services achieved through advance planning
 - 3. Demand assessment streamlined to meet the requirement at the right time, right place and at right quantity

22. Extent to which the Objective of the Project is fulfilled

- 1. Scientific based farming is ensured
- 2. Asset mapping done in 72 lakh farm holdings for precise decision making
- 3. Soil health mapping done in all the farm holdings
- 4. Crop matrix developed to all the micro agro climatic zones based on the local practice as well as the objective of achieving Second Green Revolution
- 5. Farm level intervention through preparation of crop plan on participatory approach done.
- 6. 3G enabled Tablet PCs provided to all the field level extension functionaries to provide on farm support to farmers.
- 7. Location specific farm advisories given to about 18 crore farmers through Mobile phone
- 8. Location specific voice advisories given to 3 crore farmers
- 9. Input requirement assessment done farm wise and stake holders synergy being achieved to position the quality inputs in time before the cropping season.
- 10. Post Harvest Management System is the ultimate destiny to the farmers to achieve a fair market for their produce.
- 11. About 3 Lakh pages of technology related information provided through TNAU Agri-Tech portal

23. Comparative Analysis of earlier Vs New system with respect to the BPR, Change management, Outcome/benefit, change in legal system, rules and regulations.

- i. All transactions are captured online at the instance of its occurrence itself hence authenticity and accuracy is achieved
- ii. Dynamic flow of information is achieved
- iii. Networking of all stake holders and assuring of timely supply of quality inputs achieved.
- iv. Individual farm level intervention could be achieved due to transaction electronically made possible

24. Other distinctive features/accomplishments of the project

- i. Shifting focus of Agricultural Extension from area based to farm based
- ii. Asset mapping and soil health mapping to enhance the output from factors of production viz., land and water
- iii. Micro Climatic zone wise cropping options provided
- iv. The project provides individual farm level intervention to increase the productivity of crops as well as the income of the individual farm by suitably bringing down the yield gap
- v. Continuous crop health monitoring to provide timely and effective on farm advisories to farmers
- vi. Integration of services viz., Agriculture, Horticulture, Agricultural Engineering, Input Supply Chain, Individual based advisories, market, etc.,
- vii. Providing demand based service delivery rather than supply based service
- viii. Linking all stake holders in timely decision making
- ix. Focusing on elimination of production constraints and providing suitable intervention on participatory approach.
- x. Last Mile connectivity achieved through mobile communication both - text and voice based advisories.

Snapshots of AGRISNET - FCMS project implementation in Tamil Nadu

Field Level Extension worker using Tablet PC for crop Health Monitoring



Farmer Using All in One Touch and is accessing Crop Doctor

