



Timely information and relevant advice to farmers through SMS.....



Ministry Of Agriculture Government of India

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#### 1. Introduction

ICT is an important tool to reach out to the farmers in a timely, holistic and extensive manner. There are large number of web-based Portals and Applications but, due to severely limited penetration of internet in the villages, most farmers cannot benefit from web access as the outreach through Government Offices, Common Service Centres and Internet Kiosks is also limited as far as web enabled services are However, mobile telephone density in the rural areas is concerned. increasing everyday with more than 35 crore mobile connections being used and therefore, the National e-Governance Plan (NeGP-A) and 12th Plan Document for the National Mission on Agricultural Extension & Technology lay great emphasis to provide extension services through mobile phones which gives a potential outreach to nearly 13 crore farm families. SMS, USSD, IVRS, Voice Recognition etc. are technological tools which can be successfully implemented through mobile telephony. SMS Portal for Farmers is first such step in this direction and it aims to have an integrated portal for the entire nation for Departments/ Organizations of the Central Government and State Governments. Currently officers and scientists of Agriculture, Horticulture, Animal Husbandry & Fisheries Dairying sectors in all three departments under the Ministry of Agriculture (DAC, DARE and DAHDF), ICAR, India Meteorological Department, Agriculture Universities & Storage Organizations have been included. The steps involved for using this web based interface are described in the following paragraphs.

#### GIST OF REGISTRATION PROCESS

- An end user can register himself/herself at http://farmer.gov.in/advs/signup.aspx
- A specific designation and location can be tied to only one user.
- The combo boxes have been tailor made as per structure of various Departments/Organizations. It is believed that most of the relevant

designations in different departments and organizations of Central and State Governments have already been covered. However, if a particular user is not on the registration page the same can be added by sending the same to kissansms-negpa@gov.in.

• All users are expected to adhere to the terms & conditions of this SMS portal and ensure that no commercial, political or personal message is sent through this portal.

**Two level verification**. Once the user accepts the terms & conditions and submits the registration form, an e-mail containing 4digit numeral code will be sent to his/her e-mail ID. After this 4 digit code entered in the space provided and verified the user will be prompted to login again. Immediately on login, the user will have to get the mobile number verified by pressing the button provided for this purpose. This will result in transmission of SMS to the registered mobile containing 6 digit alphanumeric code. Such double verification has been provided to eliminate chances of frivolous or illegitimate use.

#### 1.1 How System Works.

Initial phase consists of creating a farmer-database and grouping them according to their geographic locations. Farmers can register for the service by filling a physical form with the State/District Agriculture departments or through internet/mobile interfaces. In addition to collecting basic information about geographical location and land holding etc., farmers also specify up to eight crops/agriculture related activities for obtaining information or advice. They are also asked about their preference on receiving these as SMS or Voice messages and their language preference. The system supports sending SMS in regional languages. In case the farmer's mobile does not support regional languages he can give option to receive the SMS in regional languages written in roman script.

Officials and scientists who are registered as users can send SMS through various options by selecting mobile numbers from the database, or from an excel  $\blacktriangle$  sheet OR they can add one or more mobile numbers manually. They also have option to select a part of his area down to the block level. Thus, a State level officer can send SMS to the entire State or one or more zones/divisions districts or some of the blocks—in the State. Content of SMSs and number of farmers benefitted are saved for any further evaluation or review at a later date. The SMSs are also sent automatically to other users of the same State, so that they can also view the same for applicability in their jurisdiction. In order to have a holistic view of the system, a comprehensive dashboard has also been developed. It is possible to drill down to the block level and analyze as to what all SMSs have been sent by different departments and how many farmers have been benefitted so far.

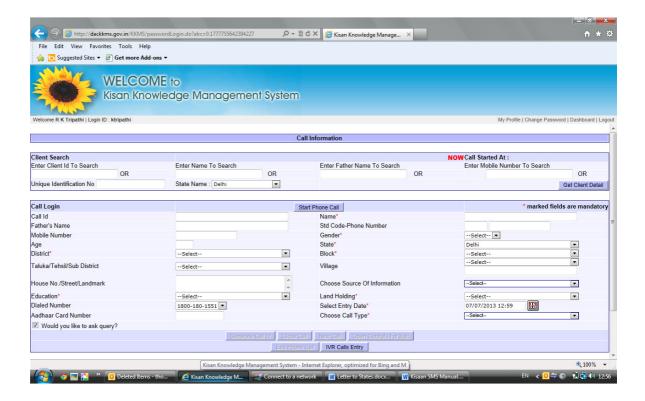
## 2. Registration/Inclusion of Farmers

Farmers can register through Kisan Call Centers, Web portal or by sending SMS at 51969 or 9212357123. In addition, existing data-bases available with government departments, organizations can also be merged with the database of the Kisaan SMS.

#### 2.1 Registration through Kisan Call Center

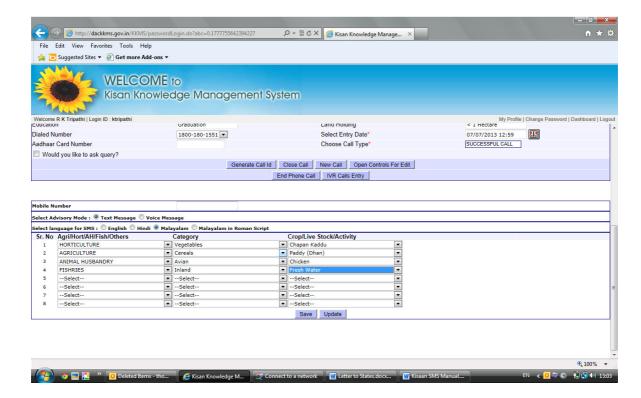
Farmers can call up Kisan Call Center (KCC) through a toll free number 1800-180-1551. Registration of the farmers is done by Kisan Call Centre Agent at the Kisan Call Centre who records personal details of the farmer in the Kisan Knowledge Management System (KKMS) in the following screen:

#### Farmer's Personal Details Entries in KKMS



- Farmer is then asked to opt for his mode of receiving information/advice i.e. Text message (SMS) or Voice message (Voice messaging will be implemented shortly).
- Preferred language options are then entered. Hindi and English option
  are given all over India while Regional Language in and Regional
  Language in Roman Script is State specific. Regional Language
  written in Roman Script is given for handsets not supporting Regional
  Language fonts (e.g. Kisan Ko salah di jati hai).
- Up to 8 options of Crop/Activity can be given by the farmer so that he/she does not receive unnecessary messages for crops/practices he is not interested in.

#### Mode of Advisory& Preferences - KKMS



Immediately on registration, farmer will receive a welcome SMS message.

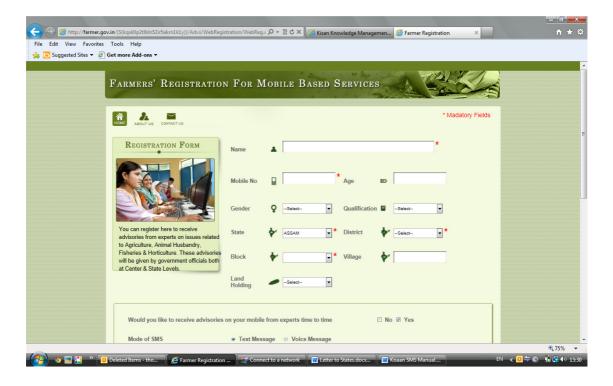
#### 2.2 Registration through Web Portal

A farmer having internet access can register through the portal or go to the nearest Common Service Center (CSC) to register with the help of a Village Level Entrepreneur (VLE). A onetime fee of Rs. 3 per registration will be charged by the VLE. Link for web registration is [www.farmer.gov.in]>Kisaan SMS >Web registration.

Following fields are mandatory in personal details:

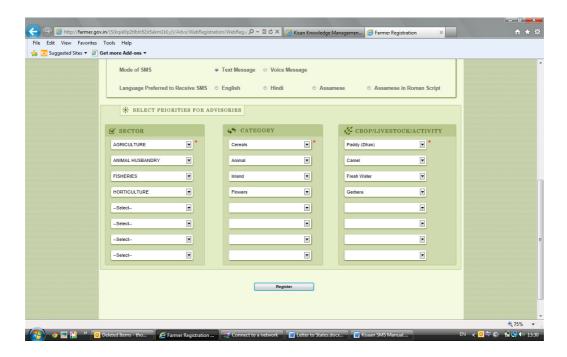
- 1. Name
- 2. Mobile Number
- 3. State
- 4. District
- 5. Block

## Web Registration for Mobile Based Services (Farmer's Details)



The farmer is also expected to enter preference for mode of communication and also preference for Language, crop/activities (same as in para2.1).

# Web Registration (Mode & Language of SMS and Crop/Practice Preference)



After pressing 'Register' button, a verification code will be sent to farmer's mobile which needs to be entered on the web-page to complete the registration process.

#### 2.3 Bulk Registration:

State users also can enter farmers' details (collected from the farmers in handwritten or soft form) directly in database to register such farmers for this Portal. Link for Bulk registration by state is [www.farmer.gov.in]>Login >Kisan SMS =>Bulk Registration. Passwords have already been conveyed separately.

This form is same as the form described in para 2.2 except that no verification code will be generated and only a welcome message will go to the farmer.

#### 2.4 Registration through SMS.

Farmers can also register by sending an SMS on 51969 or 9212357123. Procedure and format for registration are as under:-

Format for typing in the message text box is "KISAAN GOV REG<NAME>, <STATE NAME>, <DISTRICT NAME>, <BLOCK NAME>" (only first 3 letters of State, District & Block Names are needed)

After typing the message send it to 51969 or 9212357123. Farmer will be charged for this SMS as per details in **Annexure.** There will however be no charge for subsequent SMSs received from experts & officers. Please note that commas(,) are necessary.

In case of any problem the farmer can send an SMS for help as **"KISAAN" GOV HELP ".**He/she will be called back by the Kisan Call centre to help in registration. A text message with all details will be sent back to the farmer.

#### 2.5 Stopping of SMS Service by Farmers.

A registered farmer can stop his SMS service by simply sending a SMS on 51969 or at 9212357123. Format for this is **"KISAAN GOV STOP"** 

A confirmation message to the effect would be sent to the farmer.

# 3. Registration and Activation of Users for Sending SMS

The officers who are authorized to use (i.e. send SMS) Kisaan SMS Portal have to apply due diligence while sending the messages. Since the system can reach out to crores of farmers, access to the system is to be provided only to authorized persons to prevent any kind of misuse.

- Care needs to be taken not to share as well as to periodically change the password.
- Users should adhere to the policy guidelines of the Government of India, State Government and parent Department / Office for issuing of Technical Advisories, disseminating information and providing services related to Agriculture and allied sectors.

- Users should not transmit any material that may infringe upon the intellectual property rights or other rights of third parties, including trademark, copyright or right of publicity.
- Registered users should not transmit through the SMS service, political, unlawful, harassing, libelous, abusive, threatening, harmful, vulgar, obscene or otherwise objectionable material of any kind or nature to anyone.

Following are some other points that need to be kept in mind while sending messages:

- i. In order not to disturb the farmers during night, SMS Gateway will be made in-operational from 9.30 PM to 7.00 AM every day.
- ii. Designation and location should be added in the same language in which SMS is being sent. Detailed address including PIN code etc. is not needed. Keep the designation etc. as short as possible but sender's name need not be put.
- iii. In case of advisories for specific entities, please select the same.
- iv. Avoid sending redundant messages such as 'Welcome to SMS Portal' or 'Drain out extra water,' 'Carry out de-weeding' etc. which are obviously known agricultural practices to the farmers.
- v. For Hindi speaking States, simple and spoken Hindi should be used.
- vi. Avoid using urban SMS lingo like 2mrow, w8 etc.
- vii. Reference to ministers' and politicians' name should be avoided.
- viii. Unnecessarily long messages should not be sent as every 160 characters in English and about 70 characters in Indian languages is equal to one message, each of which costs money. Redundant phrases such 'According to the weather forecast received from IMD' etc. should be avoided.
  - ix. Broadcast messages like market prices should be made cropspecific as per 8 priorities of the farmer till the time a Pull SMS service is introduced for this purpose.

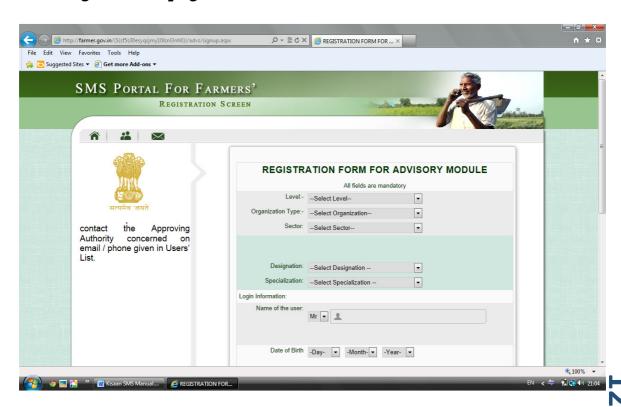
x. Search facility must be used to see previous advisories to avoid duplication and contradiction.

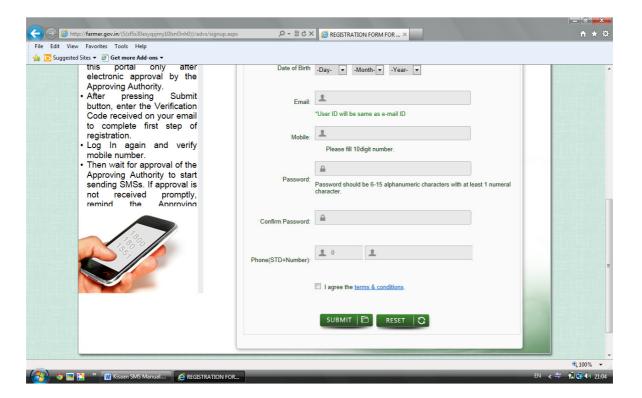
As there are various organizations using the system, a hierarchical structure for activating the users has been implemented. While DAC will activate Admin users of each Organization/Department, the Admin users concerned will, in turn, activate their users.

#### 3.1 Registration of the User

The officers who are designated to use this portal can register themselves at the website [http://farmer.gov.in]login >Kisaan SMS >User login >Register here or by directly going to http://farmer.gov.in/advs/signup.aspx In order to ensure that only genuine users can register, a three tier security level (email, SMS and activation) has been implemented. A simple Form to fill in the details will appear as below:-

#### User Registration page

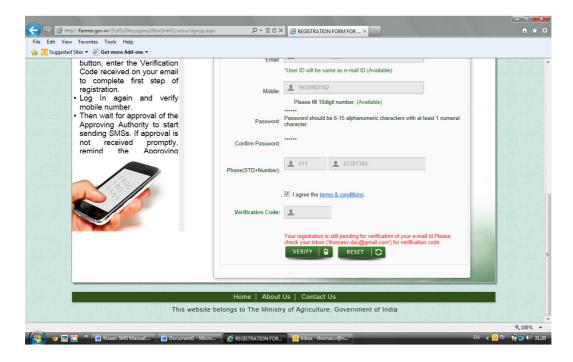




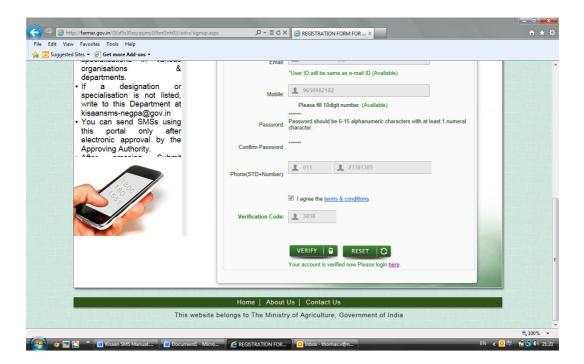
- Special care needs to be taken while filling in the email or mobile number as subsequent authentication is linked to the same.
- Email id provided here will be the user-id to login to the system.
- Password should be a combination of 6-15 alphanumeric characters with at least one numeral.
- If already used in any other registration, the Email id and Mobile number will not be allowed to be used for another registration. This is to avoid duplicate registration. If any error creeps in data entry, Reset button may be used to clear the wrongly submitted data. Terms & conditions should be read before agreeing to the same.

Once registration is submitted, a verification code is sent to the email specified. The code is to be entered in the space provided for the purpose.

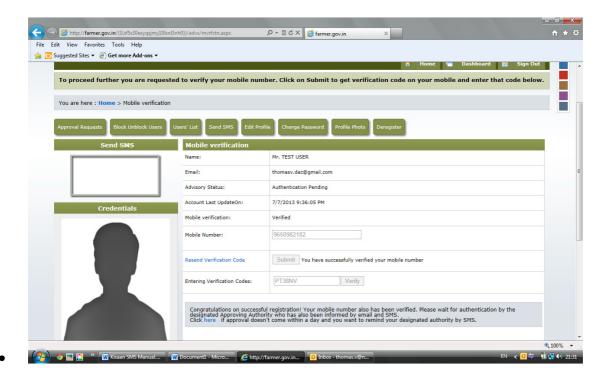
#### User Registration



After verification code is entered and verify button is pressed, verification process through email is completed and program requests to login with the registered user name and password.



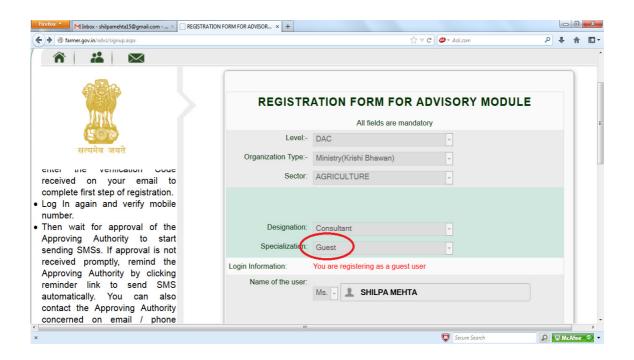
• Login once again into the system with the correct credentials and press submit button. Another verification code (six digit alpha-numeric i.e. letters & numbers) is sent on the registered mobile. This code is to be entered into the space provided. Verify button is to be pressed then.



This completes the process from the user side and user profile is to be activated by the Admin User concerned now.

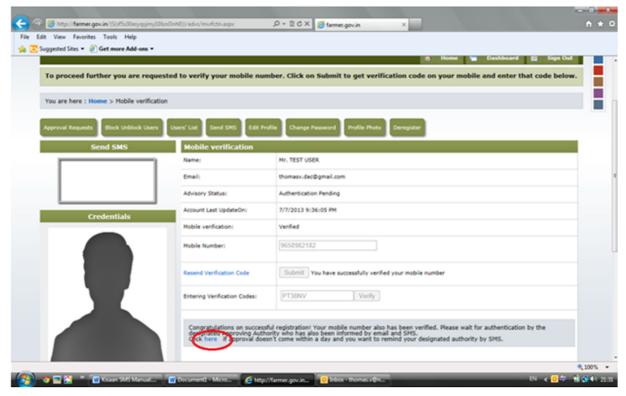
There is a provision of **Guest User** also, who can explore the system completely but can send trial messages only to registered users. A guest user can be created by selecting specialization as Guest during registration, as shown below:

#### **Guest User Registration**



Even though an automatic email and SMS is generated after a user gets registered, user can again remind the designated authority (Admin User) for his/her approval by clicking on **here** as shown in screenshot below:

## Reminding Activation Authority by SMS for approval



After activation by the Admin user, and login, the user is presented with following screen:-



Following options are available for the activated user:-

- **Approval Requests**: This is related to the functions of Admin User at any level.
- Block Unblock Users: This is also related to the functions of Admin User.
- **Edit Profile**: User can edit his/her details here.
- Change Password: This option is for changing the existing password.
- **Send SMS**: This is the module through which SMSs are sent to the farmers. The details are explained later in the manual.
- **Profile Photo**: Profile photo can be uploaded using this link.
- Users List: The list of activated users can be viewed from this module.
- **Deregister:** While demitting the office/position or retiring, officer has to deregister himself / herself from the portal. Deregistration request also needs to be approved by the concerned Admin user. During transfer also, officer needs to deregister initially from the post he / she is holding and once joined in the new post, he she may register himself again with new credentials.

#### 4. **Activation of the Users**

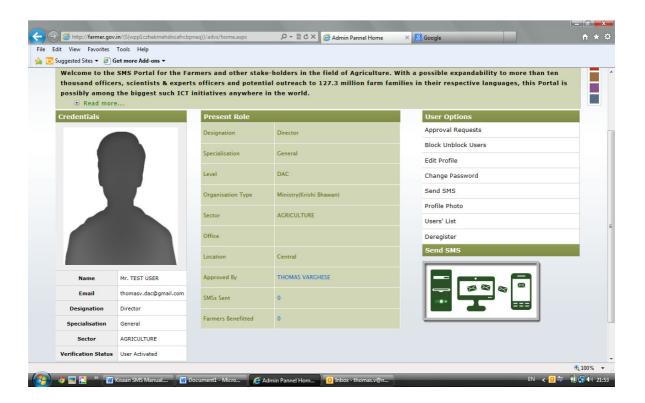
Activation of the authorized user will be carried out by the Admin user, designated for each organization /departments. Following are the Admin users for:-

- Department of Agriculture and Cooperation (DAC): The users of DAC HQ, attached institutions, autonomous organizations etc will be activated by Admin user of DAC. In addition Admin User of DAC will activate State admin Users of Agriculture and Horticulture departments.
- Department of Animal Husbandry, Dairying and Fisheries (DAHD&F): The users of the department including its attached, O

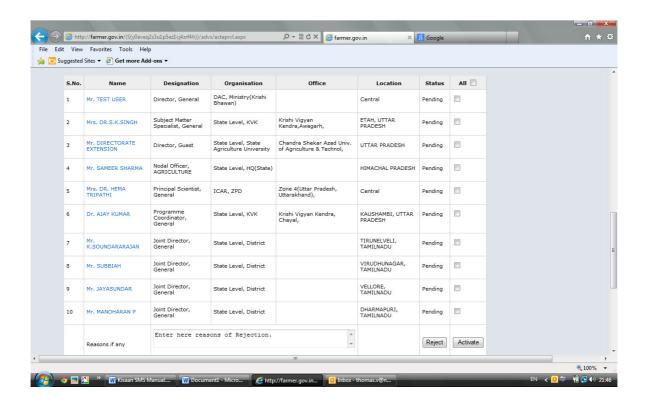
- subordinate, autonomous organization will be activated by the Admin User of DAHD&F. The Admin User of DAHD&F will also activate State admin users of Animal Husbandry and Fisheries departments.
- ICAR: The Admin User of ICAR will activate the users in ICAR Head Quarters, Zonal Project Directorates, Research Institutes and AICRPs. Zonal Project Directorates will in turn approve KVKs within their respective jurisdictions. If ZPDs have not approved KVKs and approval requests are pending then ICAR admin can also approve KVKs.
- **IMD**: The Admin User of IMD will activate all the users of IMD
- **CWC**: The Admin User of CWC will activate all the users of CWC.
- State Governments: One Admin User for each department will be activated by DAC or DAHD&F as the case may be. The Admin user of state department will in turn activate users of State HQ, SAMETI, Universities, Zone /Divisions, ATMAs, testing labs and district Admin users. District Admin user can in turn activate subdivision and block level users in their districts.

Utmost care needs to be taken while activating a user as unscrupulous elements may try to enter the system for misusing it. Admin user may make such telephonic and other verifications as may felt necessary to ensure that no fraudulent user gets activated.

**4.1 Process of Activation** Once an activated Admin User has login to the system he / she is presented with various options at the right side of the screen. For viewing any pending cases for activation, admin user has to select the Approval requests.



Once selected, the list of registration pending for activation for that Admin User will appear. The details of a particular user can be viewed by clicking the name of the user. The user to be activated is to be selected and activated by pressing activate. Admin User can reject the activation request by clicking 'Reject' after entering reasons for such rejections. In order to ensure that only genuine users get registered, the Admin User / Activation Authority should make all such telephonic or record based cross checks as may be deemed necessary. Every verified user pending for activation will appear in two next higher level of admin users. This facility is given so that due to any reason which is not justified, if activations are pending in lower Admin levels, the higher level Admin user can step in and activate the user.



#### 4.2 Deregistering a user

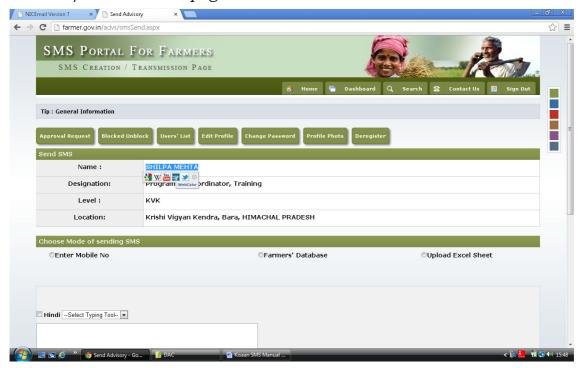
When a user relinquishes the charge, he has to deregister from the system. Such deregistration request will also be pending for approval and viewable below the pending activation requests. These can be examined by the Admin User and Deregistration can be completed.

#### 4.3 Block/Unblock Users

The users can be prevented from sending SMSs by blocking them using the Block/Unblock option available. The blocked user can be later unblocked if required. Admin user needs to mention a brief reason for Blocking or Unblocking a user.

## 5.0 Sending SMS using the system

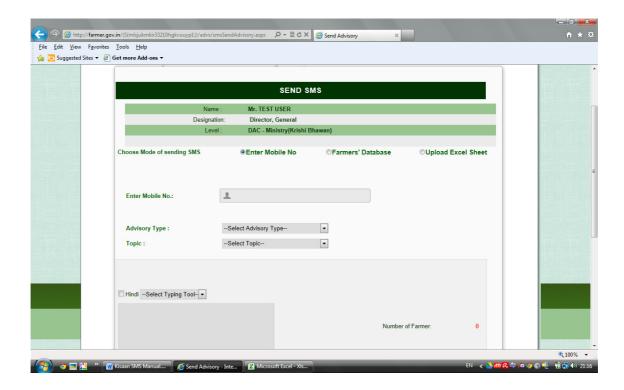
On selecting the menu 'Send SMS' the user will be navigated to SMS Creation/Transmission page.



#### 5.1 Choose Mode of Sending SMS:

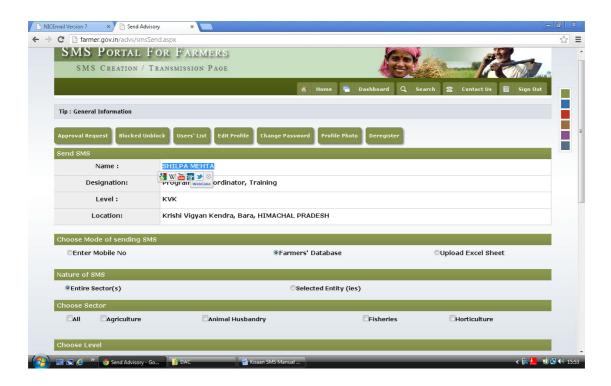
Three options are given for sending the SMS

- Enter Mobile Number
- Farmers Data Base
- Upload Excel Sheet
- **5.1.1Enter Mobile Number**: Mobile numbers are entered in the space provided against the Enter Mobile number label. The mobile numbers need to be separated by 'comma'.



#### 5.1.2 Farmers' Database

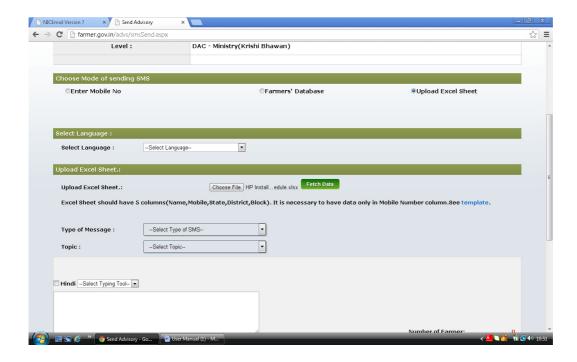
In this option, mobile numbers from the database of the system are used. Along with this, some other options also need to be selected as explained herein under.



**5.1.3 Upload Excel Sheet:** Option to upload mobile numbers from excel sheet is also provided. Excel sheet should contain 5 columns viz. Name, Mobile, State, District & Block. It is necessary to have data only in Mobile Number column. Availability of data in other columns is optional. The template is as under:-

NAME	MOBILE	STATE	DISTRICT	BLOCK
Ram Singh	xxxxxxxxxx	Haryana	Kurukshetra	Shahabad
	XXXXXXXXXX			

The file format should be 97-2003 \*.xls or 2007 \*.xlsx. User can select the file using browse button and the data will be linked to the system using the fetch button.



#### 5.2 Nature of SMS.

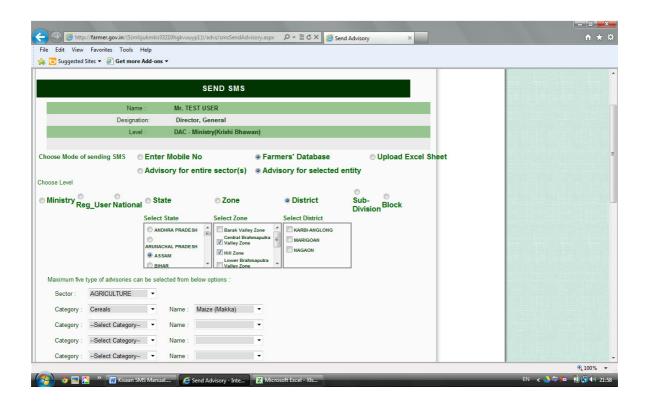
Short messages can be sent to either Entire Sector or Selected Entities by choosing one of the options as under:-

- 5.2.1 **Entire Sector (s).** User can select one or more sectors by clicking on this. Option of selecting one or more sectors (Agriculture, Animal Husbandry, Fisheries and Horticulture) or all four sectors by selecting **All** radio button is also provided. SMS will go to the farmers who have opted to receive messages for these sectors.
- 5.2.2 Advisory for Selected Sector- On selecting option for Selected Entity (ies), a drop down menu for selecting the Sector category will appear. Five different Crops/Activities in a particular sector can be selected. Farmers who have opted for any of these 5 Crops/ Activities will receive the SMS being sent.

#### Level Selection in Farmers' Database Option 5.3

This defines the area or jurisdiction in which the farmers will receive SMS. User can select his jurisdiction level or sub levels. The State level user will not be provided with a National level choice. The State level User can select his/her state, one or more districts or one or more blocks. Other levels if

any like Zone, Sub-Division etc are also available for selection as existing in different states. When a sub level is selected, selection boxes will appear to select particular locations. Multiple selections are also allowed. It may be noted that multiple Zones/Districts/Sub Divisions/Blocks can be selected at the same time by ticking appropriate names in the combo boxes.



- 5.3.1 **Ministry.** This is a list of officers at Ministry of Agriculture, who receive messages depending upon the language mapped against their names. This radio button is available only to Central Users
- 5.3.2 **Reg\_Users.** This includes users who have registered so far for sending SMSs.
- 5.3.3 **National.** National level includes farmers of whole nation. On selecting national level, user can send message to all farmers of nation who have opted for this service. This option will be available to only those users who have

registered at Central level. National level option selects only those farmers who have opted for Hindi, English and Hindi in Roman Script. If farmers of non-Hindi speaking States have to be sent SMSs from Central level, one State after another will need to be selected from State radio button.

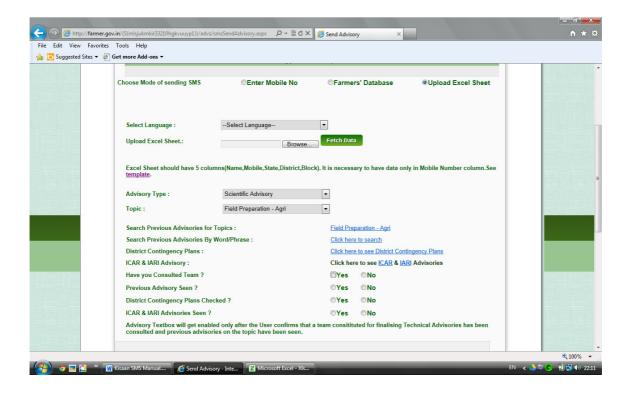
5.3.4 **State/Zone/District/Sub Division and Block.** Users registered at these levels can send messages to respective and all levels below them depending upon existing organizational set up in a particular state.

5.3.5 SMSs sent by an officer at the national level are automatically sent to other officers in the same sector throughout the country. Similarly for the officers at State level, SMSs will go to every registered user in the State within the same sector. Since a large number of messages are being sent by activated users in various departments and organizations, an interface is going to be provided shortly to let an activated user to choose topics and languages as per his expertise or posting profile.

#### 5.4 Type of Message & Topics

The next two drop down menus are for the Advisory type and Topics selection. As mentioned earlier, SMSs to be sent to the farmers can be broadly classified into three categories, viz. Information, Services and Scientific Advisories. First two are basically factual in nature and therefore the messages of these types can be sent by simply checking the official records.

However, in case of Scientific Advisories, it has to be ensured that there is no contradiction among the advisories being sent by different people on the same issue in a given area and the advice being given to the farmers is technically correct. Therefore, database of previous advisories issued on various topics through the SMS Gateways is also being populated in the same SMS Portal. This database is searchable by words/phrases, by topics across various levels and also for a period. (Please see the screen shot below)

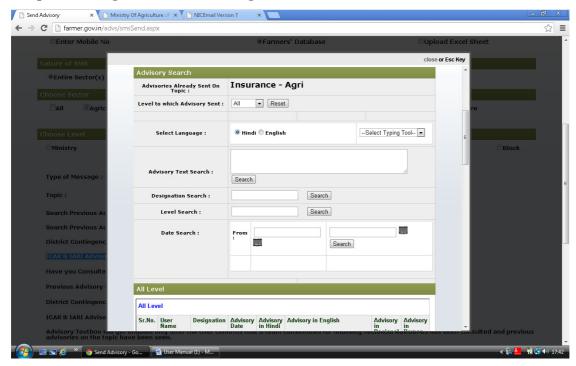


#### 5.5. Mutual Consultation

It is also necessary that advisories sent at the district level and lower levels are approved by District Level Team comprising Programme Coordinator, KVK; District Head of Agriculture or allied Department; Project Director, ATMA and Scientist In charge of the State Agricultural University for the District. All four of them should mutually consult by email, phone, SMS or in writing before the exact text of an advisory is finalized. Agro Met Forecast Units can also be consulted wherever necessary and feasible. Links to District-wise Contingency Plans and Advisory Page of ICAR and IARI have also been provided in the Portal for reference before writing a scientific advisory.

**5.5.1 Previous Advisories Search.** All advisories sent so far by various users are available for reference and analysis and can be searched with the help of links provided. A light box appears which enables search, based on Text (in Hindi or English), by Designation of the sender, Level at which SMSs were sent, and Date Search for a particular period.

**5.5.2 District Contingency Plans and ICAR & IARI Advisory.** Links to these have also been provided so that Users can refer to these before proceeding for actual writing of the SMS in the Text Box.

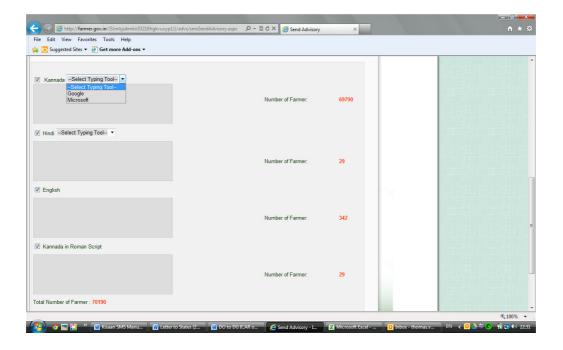


#### 5.6. Writing the SMS

The SMS or the advisories are to be typed into the Advisory Text box provided.

- **5.6.1 Information and Services SMS.** As explained earlier, these could be simply typed by selecting the language. Number of farmers for that particular language will get displayed on the right side. Message can then be typed by selecting a typing tool.
- **5.6.2 Scientific Advisory**. Textbox will get enabled only after the User confirms that a team constituted for finalizing Technical Advisories has been consulted and previous advisories on the topic have been seen. SMS can be written in English, Hindi, Hindi in Roman script, Regional Language or Regional Language in Roman script. For sending an SMS in a particular language, user has to select check box near the language and select the typing tool. Hindi and Regional Languages are entered through transliteration (or Easy Phonetic Typing) method.

Commonly available CDAC, Google and Microsoft transliteration tools have been provided and the user can select between these. Transliteration is based on phonetic typing i.e for writing किसान one has to type Kisaan only. This method is easier as most of the users will be conversant with Roman Scripts and QWERTY keyboards. When a language is selected, the number in the right side indicates number of farmers selected for the SMS delivery considering the selections made on location, levels, sectors etc.



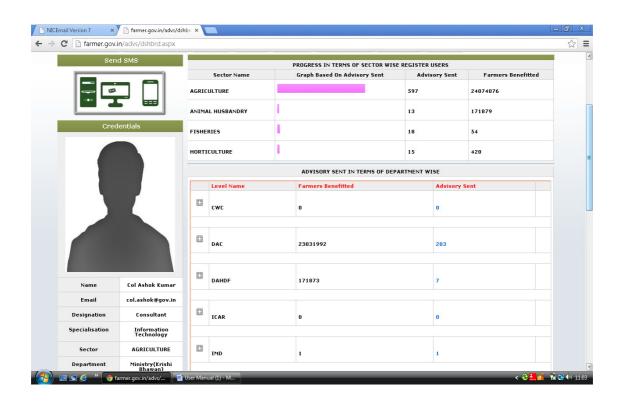
Once the SMS text is entered in the selected Text Box, User can send it by pressing 'Send SMS'

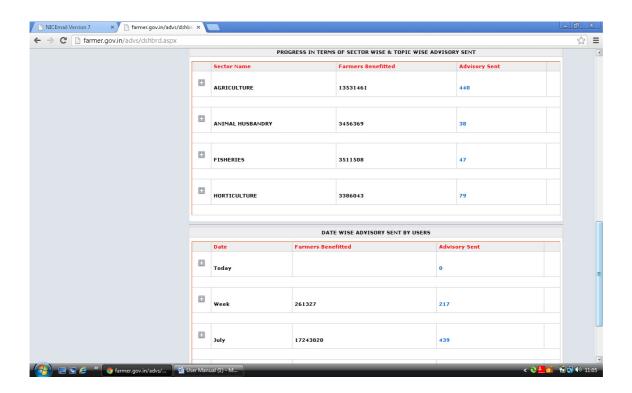
The process of sending the SMS will start and may take minutes or hours to complete depending on the number of farmers selected.

#### 6. Dashboard

The GUI based Dashboard not only provides statistical analysis of the objective utilization of the application for benefit of farmers, but also provides a view of the type & quality of SMS/advisories being sent by different departments and users.

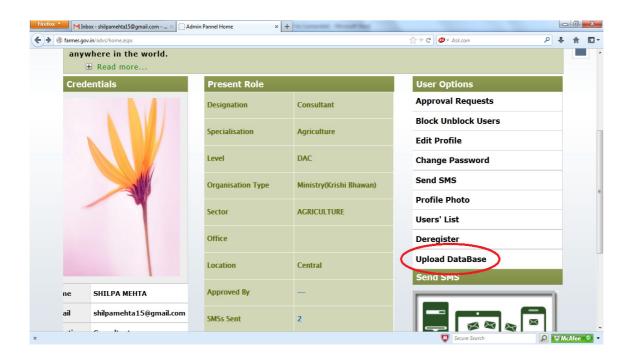
Top half of the page shows the progress in Sector wise farmers benefited or SMS sent so far. Graphs indicate the number of advisories sent by different sectors like Agriculture, Animal Husbandry, Fisheries and Horticulture. Other parts of the screen enable drilling down to the bottom of each organization and individual level. All SMSs sent so far by an individual user or a department along with the number of farmers benefited can be seen from here. Information of active departments/users, only gets displayed. Developed on departmental hierarchy, complete information can be gleaned intuitively. Additional features and functionalities will be added as the system matures.





# 7. Uploading Farmers' Database:

Farmers' database of a particular State can also be uploaded. Click on Upload Database in right navigation, as shown below:



State, District and Block needs to be selected and an excel sheet containing farmers' information – Name, Mobile Number and 8 Entity Preferences, is to be uploaded. This excel sheet should be in a proper format. Format has been sent separately.



## **Annexure**

# **Tariff Details for Farmers' Registration through SMS**

For operators available on 51969 SMS:

SL.	Operator	Tariff (In INR)
1	Vodafone	1.00
2	Uninor	0.60
3	MTS	3.00
4	Videocon	1.00
5	Loop	5.00
6	Idea	1.00
7	Tata Docomo	3.00
8	Tata Indicom	1.00
9	Aircel	1.00
10	Reliance	3.00
11	Airtel	1.00
12	BSNL	2.00

 $\textbf{For 9212357123:} \ \ \textbf{All operators as per Person to Person Rates as per Farmer's SMS Plan}$