Government of India
Ministry of Agriculture & Farmers Welfare
Department of Agriculture & Farmers Welfare

Agriculture Census 2021-22

Manual of Instructions For Data collection Schedule (Phase-III) Input Survey 2022-23

MANUAL OF INSTRUCTIONS

FOR
DATA COLLECTION SCHEDULE
(PHASE-III)

TENTH INPUT SURVEY
2022-23

Government of India
Ministry of Agriculture & Farmers Welfare
Department of Agriculture & Farmers Welfare
(Agriculture Census Division)

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Section – A: General Guidelines

1. Introduction:

1.1 Starting with the second Agriculture Census 1976-77, Input Survey is also conducted as a follow-up survey of the Agriculture Census to derive quantitative information on the structure of Indian agriculture using the concept of 'Operational Holding' as the statistical unit for data collection. In Input Survey, as evident by its name, data is collected on pattern of use of various inputs, like, fertilizers, seeds, manures, pesticides, agricultural implements, agricultural credit etc. by operational holders in the country. Nine Input Surveys with reference years 1976-77, 1981-82, 1986-87, 1991-92, 1996-97, 2001-02, 2006-07, 2011-12 and 2016-17 have been completed so far. The next survey will be the tenth in the series with reference year 2022-2023 (1st July, 2022 to 30th June, 2023). The scope and coverage of the survey have been expanding over the years keeping in view the requirements of data for planning and execution of various Agricultural Programmes for welfare of farmers in the country.

2. Objectives:

The main objective of the survey is to generate data on consumption of various agricultural inputs, according to major size-groups of operational holdings, viz., marginal (below 1 ha.), small (1- 1.99 ha.), semi-medium (2- 3.99ha.), medium (4-9.99ha.) and large (10ha. And above), for getting an insight into the consumption pattern of inputs by various categories of farmers. The inputs covered in the survey include chemical fertilizers, HYV/Hybrid seeds, chemical pesticides, bio-pesticides, farm yard manures/compost, bio-fertilizers, agricultural implements & machineries and agricultural credit besides information on educational qualification, age and size of household of operational holders.

3. New Initiatives in Input Survey 2022-23:

3.1 New initiatives introduced during Input Survey 2022-23 are as under:

3.1.1 Collection of data through App/Software using hand-held devices like Smartphone/Tablet/Laptop/Personal computer.

3.1.2 Real time monitoring of progress and uploading/downloading of data/software through web portal.

3.2 These measures will enable data collection in Phase-III with increased speed and accuracy. Accuracy of data is expected to substantially improve due to reduced transcription and aggregation errors. Monitoring of primary data collection will also expedite, so also data dissemination, by the use of various ICT technologies.

4. Reference Year:

4.1 The reference period for collection of Phase-III data is from 1st July 2022 to 30th June 2023.

5. Time Schedule

5.1 The tentative schedule for implementing the phase-III of Agriculture Census 2021-22 is given as under:

S.No.	Item of Work	Timeline
i)	Organization of Master Trainers training for Phase-III	Feb 2024
ii)	Training of Master Trainers of all States/UTs on software/technical issues by Technology Partner and DAC&FW.	

S.No.	Item of Work	Timeline
iii)	Training to all field functionaries of States/UTs on software/technical issues by the Master Trainers	March-June 2024
iv)	Fieldwork for collection of Phase-III data	July-September 2024
v)	Cleaning/validation and processing Phase-III data.	by October 2024
vi)	Finalization & Dissemination of Phase-III output tables of the Census.	By December 2024

5.2 The State Level Coordination Committees (SLCCs) constituted for Agriculture Census 2021-22 shall oversee and coordinate all the activities related to Phase-III (Input Survey) for timely completion of each activities.

6. Scope of the Survey

6.1 The Input Survey covers the whole country. All types of agricultural holdings, ***except institutional holdings and holdings operated by persons not residing in the sample village, are enumerated.*** Thus, only selected individuals and joint holdings operated by resident cultivators in the sample village will constitute the universe (population) for this Survey**.**

6.2 The basic statistical unit (target group) for the survey is the operational holding. Even though an insignificant amount of agriculture takes place in urban areas also, the survey is primarily intended to cover the rural area where agriculture is practiced as a profession. In some States/UTs like Kerala, Goa and Puducherry, a significant portion of the operated area lies in areas declared as urban. Keeping in view the recommendations of concerned State Governments and the concepts followed in Agriculture Census, such areas would be covered in Phase-III also. **As a thumb rule, it is therefore, recommended that Input Survey be carried out in those areas where previous phases of Agriculture Census have been conducted**.

6.3 ***Like earlier surveys, the Input Survey 2022-23 would also be restricted only to the resident Operational Holders of the selected villages***. Operational Holders who are residing outside the Tehsil of the sample village but operating some land in the sample village will not be included in the sample as it would not be convenient to approach them for collecting information. Information about the residential status (village or outside the village) will be collected at the time of updation of sampling frame or listing. The data will be collected for All Social Groups and not separately for SC, ST and Others. Institutional Holdings will not be covered in this Survey.

7. Coverage

7.1 Under the Input Survey 2022-23, information will be collected according to five size-groups of operational holdings for the following items:

7.1.1 Age, size of household, educational qualification of holders.
7.1.2 Membership/Users of Agricultural Services.
7.1.3 Agricultural credit availed.
7.1.4 Types of Seeds used (certified/Hybrids) and quality problems.
7.1.5 Integrated Pest Management (IPM) practices.
7.1.6 Practices of Organic Farming.
7.1.7 Soil health/Soil testing.
7.1.8 Use of agricultural equipment and machines (owned/hired/both).

7.1.9 Number of parcels.
7.1.10 Multiple cropping, separately for irrigated and unirrigated areas under crops;
7.1.11 Use of chemical fertilizers, seeds, organic manures, chemical pesticides and bio-pesticides, separately for irrigated and unirrigated areas under crops.

8. Unit of Enumeration

8.1 The data is to be collected in respect of each sampled Operational Holding of selected villages, which has been defined as "**all land which is used wholly or partly for agricultural production and is operated as one technical unit by one person alone or with others, without regard to the title, legal form, size or location".** The technical unit has been defined as **"a unit which is under the same management and has the same means of production such as labour force, animals and machinery**". It would be seen from this definition that the actual cultivator and not the owner constitutes the statistical unit for the survey. Effort is thus required to be made to contact the cultivator who operates the holding and who takes the decisions in the farm business enterprise.

8.2 For purpose of Input Survey, District will be the boundary for pooling of parcels of an operational holder, as estimates are to be generated at District level in Input Survey.

9. Methodology

9.1 A two-stage stratified sampling will be adopted for the Input Survey 2022-23. Tehsils/CD Blocks would constitute the strata, villages within a stratum form first-stage units and 'Operational Holdings' in the selected villages would be second-stage units. The sample size of first stage units will be 7 percent of the total number of villages from each stratum. These 7 percent villages are to be selected randomly out of the villages already selected for Phase-II of Agriculture Census 2021-22.

9.2 It is important to note that the estimates of Input Survey are to be prepared for all tehsils/blocks in the country. For this, it is necessary that the Survey be conducted in at least one village in each tehsil/block. However, if there were only one or two villages found in a tehsil/block where Agriculture Census was conducted, Input Survey is recommended to be conducted in all these villages, to make the sample representative.

9.3 **A simple random sample of four operational holdings will be selected from each of the above five size-groups of holdings. If in a selected village, total number of operational holdings are four or less in a particular size group, then all the holdings of that size-group are to be selected and surveyed through household inquiries from selected operational holders of selected villages**.

10. Selection of Sample Villages

10.1 The selection of sample villages for the Input Survey is to be done at the State Headquarters by the technical officers as per sampling procedures mentioned in para 9 above. For making selection of villages, it is recommended that a list of villages where Agriculture Census (Phase-II) was conducted, should be prepared for each Tehsil/Block. Using random number tables, 35 per cent villages (rounded off to nearest integer and subject to a minimum of one) be selected independently in each Tehsil/Block for further sampling of holdings for enquiry if 20% of the villages were selected in phase-II, otherwise, the above mentioned proportion will vary depending upon the percentage of villages selected in phase-II of Agriculture Census 2021-22. **It may be noted that the sample size should not be less than 7% of total number of villages in a Tehsil/Block**.

10.2 The estimation procedure recommended for Input Survey utilizes the number of holdings in the sample villages and number of villages in the tehsil as multiplier. Normally, it is expected that in making random selection of villages, all types of villages, i.e., having small or large number of holdings, will be represented in the sample. However, it was observed that this procedure led to selection of villages having very few holdings, leading to an unrepresentative sample and consequentially generation of unreliable estimates. **It is, therefore, recommended that at the stage of selection of sample villages itself the representative-ness of the sample be ensured.**

11. Training

11.1 It is necessary to impart thorough training, both to Primary workers as well as Supervisory officers before the conduct of actual fieldwork. The training for primary and supervisory staff could be arranged at 2/3 levels depending upon the conditions in each State. District/Block/Tehsil (sub-district) level Officers, in-charge of the Agriculture Census operations as Supervisors could be initially trained either at State Headquarter or at Divisional Headquarters. They in turn, should impart training to Primary workers. The Training programmes must be intimated in advance to the Government of India so that an officer of the Agriculture Census Division, DA&FW could be deputed to clarify any doubts raised during the training regarding concepts, definitions or procedures to be followed during fieldwork.

11.2 DA&FW would organize an All India Conference and training programmes for Master Trainers of all the State Agriculture Census Officers directly involved in implementing the Census and also provide user friendly training videos for use by primary as well as supervisory staffs during data collection.

11.3 Copies of Instructions manual in local language may be provided to the trainees in advance. The trainee may be instructed to go through the manual and schedules before coming for the training. This would facilitate easy absorption of concepts, definitions and procedures of data collection by trainees. The trainees could also come prepared to the training session to seek clarifications for any doubts that might have arisen while going through the manual.

11.4 Training of supervisory and field level officials is the most important activity for successful conduct of a survey. For Input Survey, the supervisory level training should concentrate on the following:

- 11.4.1 Objective and methodology of the survey.
- 11.4.2 Concepts and definitions followed during conduct of Survey.
- 11.4.3 Understanding the schedule.
- 11.4.4 Coverage of crops, Inputs like fertilizers and pesticides etc.
- 11.4.5 Inspection of the progress of work, supervision and quality of data collected.
- 11.4.6 Importance of adherence to the timeline.
- 11.4.7 Unit to be used and decimal conventions.

11.5 ***Objective of the Survey and Legal Immunity***

- 11.5.1 Respondents are likely to be reluctant to furnish information to enumerators due to the apprehension that such information may disturb tenancy arrangements, land rights, rent liability, etc. It is, therefore, necessary that all Government functionaries, particularly those who come in direct contact with the cultivators, clearly explain the objectives of the present sample survey highlighting the following:

(a) that the information furnished by the cultivators will be used only for statistical purposes,
(b) that it will have nothing to do with matters like consolidation, ceiling, tenancy arrangements, rent liability, etc.
(c) that the entire information furnished by the respondents will be treated as confidential, and
(d) that it has no validity in court of law as a piece of record and/or evidences.

12. Preparatory Steps for Input Survey

12.1 Before actual commencement of fieldwork for the Survey, following steps are to be followed:

12.1.1 Identification of Agency to conduct the Survey.
12.1.2 Selection and identification of villages in each Tehsil/Block.
12.1.3 Communication of the number and names of villages selected for Input Survey to the District Census Officers.
12.1.4 Allotment of villages to Primary Workers/Enumerators.
12.1.5 Updating of listing Schedules.
12.1.6 Selection of Holdings.
12.1.7 Training of District level staff at the State or Regional Headquarters.
12.1.8 Training of field enumerators.
12.1.9 Publicity in the selected villages.

13. Visit to Villages

13.1 It is necessary that the programmes of enumerator's visit to the village is intimated to concerned operational holders in advance through revenue officials. In absence of such intimation, operators may not be available when enumerator visits the village. It is suggested that operational holders to be interviewed as also the programme of visit should be finalized in the joint training meeting itself so that patwaris can inform holders to be available in the village. Village Level Workers (VLWs) should also be asked to remain in the village to assist the enumerator in interpreting information furnished about high yielding varieties/hybrid and other inputs, like, certified seeds, foundation programmes of seeds etc.

14. Fieldwork:

14.1 As data is to be collected using android or web application, the concerned nodal State/UT Department should assign/allot villages to all primary workers/supervisors depending upon the availability of manpower keeping in view the timeline for completion of work with quality. All primary workers should download the developed Apps/Software as well as extracted data (from Phase-I) in their own hand-held devices for starting the data collection work through household enquiry approach.

15. Channel of submission & finalization of data.

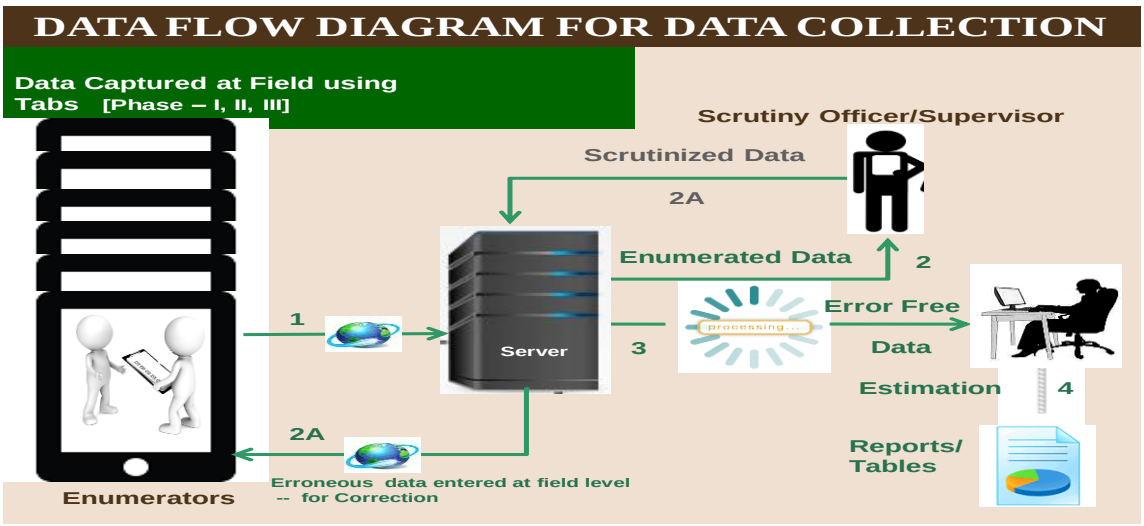
15.1 An end to end software has been developed to cover all the constituent activities of the Census operations staring from field level data collection to dissemination of final data. This will not only reduce the time lag in publication of results but will greatly improve the quality of data.

15.2 The primary workers will collect the data using hand-held devices through apps/software by visiting each and every selected household of the operational holders and submit the collected

data to supervisors for scrutiny through online portal. The supervisors will then thoroughly scrutinize the collected data at village level and if satisfied, will accept the data for processing/estimation. However, if any erroneous schedules are observed at scrutiny or processing level, then the same will be forwarded back to the concerned primary worker for correction. This same cycle of data correction will be followed until all the submitted data are made error free for processing/estimation.

15.3 Thereafter, the software will enable generation of tables atDistrict/State/All India Level. For timely finalization of results, regional meetings of States / UTs are to be organized for discussion of the results. After finalization, the data will be disseminated through portal and also used for All India Report on Input Survey.

15.4 Data flow from collection to submission is depicted as under:



16 **Monitoring &Supervision**

16.1 The progress of Input Survey of the Agriculture Census operations would be monitored on real time basis through web portal. A dedicated team at the Centre as well as State/UT Headquarter should proactively monitor the progress of work and resolve issues, if any, on priority basis. In order to strengthen the monitoring system, multi-layer monitoring system would be adopted at Centre/ State/ District, Tehsil (sub-district)/Block/Taluka level. Physical progress of primary workers as well as supervisory officers of the States/UTs would be automatically updated on the portal on regular basis. To improve the quality of data and complete the work in time, State officials at Tehsil (sub-district)/block/District/State Headquarter as well as officers at the Centre should undertake regular field visits/inspections during data collection period and interact with field functionaries.

16.2 Effective supervision is to be organized so that the various phases of survey work are carried out according to the prescribed time schedule and also according to the instructions. Supervision plays an important role in ensuring quality of data collected. The extent of supervision would vary from State to State depending upon the administrative set up. No uniform guidelines can be laid down in this regard. However, the following minimum amount of supervision can be ensured in each State.

16.3 The District Census Officers should inspect the fieldwork relating to listing of households, collection of data on inputs etc., in respect of **at least five villages selected for the**

Input Survey in the district. Similarly, the Taluk Census Officer should also **inspect 25 per cent of the villages selected for the Input Survey in the Tehsil.**

16.4 The inspection should include following aspects.

16.4.1 Whether the frame of operational holdings has been correctly prepared?
16.4.2 Whether the selection of holdings in Input Survey has been correctly done?
16.4.3 Whether enumerator has correctly collected the information relating to inputs like fertilizers, pesticides, seeds, soil health card, IPM?
16.4.4 Whether enumerator has correctly collected the information relating to Agricultural Credit/Insurance/Services availed by operational holder?
16.4.5 Whether information relating to agricultural implements used has been recorded correctly?
16.4.6 Any other points, which the Inspecting Officer wants to give on the quality of data collected and any other problem faced.

16.5 It is, however, to be noted that the main purpose behind inspection is to ensure proper compliance of instructions rather than mere fault finding. It is recommended that once a round of inspection is completed, the supervisory officer should take a meeting of all the enumerators and explain their mistakes to them so that these are avoided in allfuture work. Explaining this in a meeting will facilitate learning from each other's mistakes. If necessary, the supervisory officer may explain various check-points applicable in each schedules to enumerators for improving quality of data to be collected in the Survey, particularly of manure, pesticides and credit data, the quality of which was not satisfactory in the last Input Survey 2016-17.

17. Identification of Agency

17.1 As household enquiry approach is to be followed for the Input Survey, it is requisite that the information is collected by trained and skilled staff who have experience of similar work. As the availability of Statistical staff for the purpose of Input Survey differs from State to State, the technical staff available with the offices like District Statistical Office, Taluk Statistical Office and Directorate of Agriculture may be utilized for the purpose. Depending on the administrative set up in each State, the agency for carrying out the survey and number and names of villages to be covered by individual officials needs to be notified.

18. Manual

18.1 This Instruction Manual will serve as broad guidelines for filing the schedules of Phase-III of Agriculture Census 2021-22. It will also serve as a guide on the concepts, definitions and procedures to be uniformly followed, outlines for training to staff associated with Census work and nature of supervision. These guidelines should be elaborated by State Governments keeping in view the local conditions, before translating into regional languages for dissemination to field functionaries when they actually proceed for data collection. This Instruction Manual should be distributed to all field functionaries before starting the fieldwork.

19. Publicity

19.1 It is necessary to explain the objectives of Input Survey to the respondents, clearly pointing out the purpose for which the data are being collected. All the doubts and misgivings of respondents need to be clarified. It may be clarified that the data would be kept confidential and it will not be used for any other purpose like settling of tax, tenancy rights, liabilities, etc. Due publicity in this regard before the actual commencement of the survey will help in

collection of reliable data. The State/UT Governments may use print and electronic media (radio and television), posters and boards in local languages for this purpose. The village officials should be involved in this process. The fieldwork should be started only after giving the necessary guidance to the village officials whose relations with the respondents would come handy in getting the requisite cooperation from them.

20. Seeking Clarifications

Any issue regarding Concepts, Definitions and Procedures for Input Survey 2022-23, which could not be clarified at the State level should be referred to the Government of India at the following address:

Mrs. C.H. Honey
Deputy Director General-cum-Agriculture Census Commissioner,
Department of Agriculture and Farmers Welfare,
Ministry of Agriculture and Farmers Welfare,
Government of India, Krishi Bhawan, New Delhi-110001.
Tele No.: 011-23383708.
E-mail: agcensus.krishi@nic.in

Section – B: Roles and Responsibilities

21. Role & Responsibilities of stakeholders in data collection:

The role and responsibilities of Officials involved in data collection are enumerated below:

21.1 ***State Agriculture Census Unit:*** The responsibility for execution of the Agriculture Census Operations has been entrusted to the States / UTs with financial and technical support by the Centre. This gigantic task of data collection for Agriculture Census is coordinated by the Agriculture Census Unit established in each State/UT and carried out with the help of field functionaries (like Patwaris / Talathis / Block Level Workers / Karnams / Investigators etc.) of different Departments of the State/UT Government. Major responsibilities of the Officers in State Agriculture Census Unit include: (i) preparatory activities for conducting Input Survey, (ii) Selection of 7% Villages from each Tehsils/Blocks, (iii) Prepare and provide list of selected 7% villages to DA&FW, (iv) Identification and assigning role of System Administrator, (v) identification of primary workers /supervisors and creation of login credentials, (vi) allotment of villages to primary workers as well as supervisors, (vii) coordination with NIC, Land Revenue Departments and other stakeholders, (viii) organizes awareness/publicity campaigns, (ix) organizes training programmes for primary workers/supervisors, (x) monitor progress of data collection through the monitoring portal using the login credentials provided by System Administrator, (xi) Undertake regular field inspections, (xii) scrutiny & finalization of data etc. Besides technical aspects, Unit also maintains records on all aspects of fund release, utilization and unspent balance, issue of UCs and monitors financial progress through monthly expenditure statements as per requirements of the Department.

21.2 ***System Administrator:*** The role of System Administrator would be crucial as use of technology in data collection is introduced for the first time. The major responsibilities of the System Administrator of the State include: (i) Assigning/providing login credentials (user_id and password) to all field functionaries at different levels in the State, (ii) Allotment of villages to field functionaries (primary as well as supervisors) for undertaking data collection and scrutiny, (iii) Regular technical guidance to field functionaries and personnel involve in Census operation, (iv) Configuration of IT systems and resolving all technical issues related to Apps/web based application for all field functionaries of the State etc.

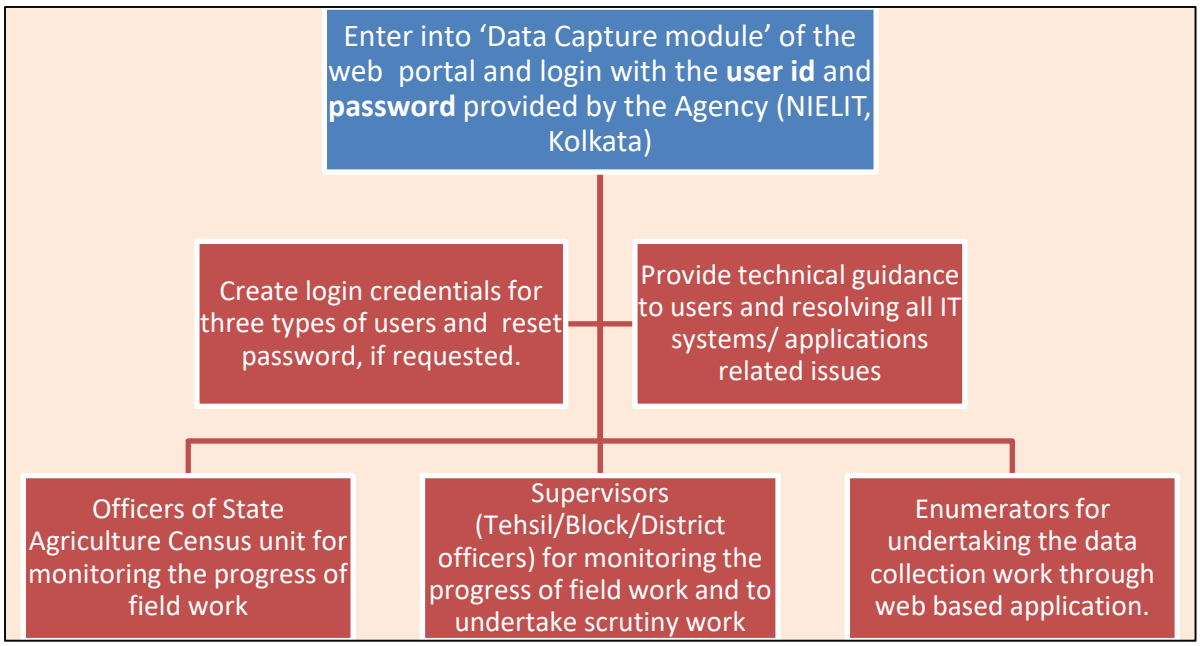
21.3 ***Supervisor:*** The role of Supervisor is very critical as effective supervision of field functionaries ensures flow of quality data from the field and completion of work according to prescribed time schedule and instructions. At times, Supervisor may also be assigned the responsibility of creation of login credentials (user_id& password) to all field functionaries who are working under him or her depending on the prevailing administrative set up in respective State. The Officers who are appointed as Supervisors (Tehsil (sub-district)/Block/District level officers) for Agriculture Census work should proactively monitor the progress of Primary workers through the online portal. The main responsibility of Supervisor is to scrutinize and approve all the data collected by primary workers before submission for processing/estimation.

21.4 ***Enumerator:*** The task of data collection for Agriculture Census is carried out by the enumerators or primary workers or field functionaries (like Patwaris /Talathis/ Block Level Workers / Karnams/ Investigators etc.) of different Departments of the State/UT Government. The primary worker is expected to first undertake complete **updation of frame of the allotted village** and **selection of sample operational holdings.** Thereafter, Primary worker shall undertake detailed data collection work **by visiting each and every selected holdings of the selected/allotted villages as per the instructions manual and ensure collection of quality data**. He / She will be using hand-held devices/laptop for data collection through prescribed apps / software which come with basic identification from Phase-I database as prefilled.

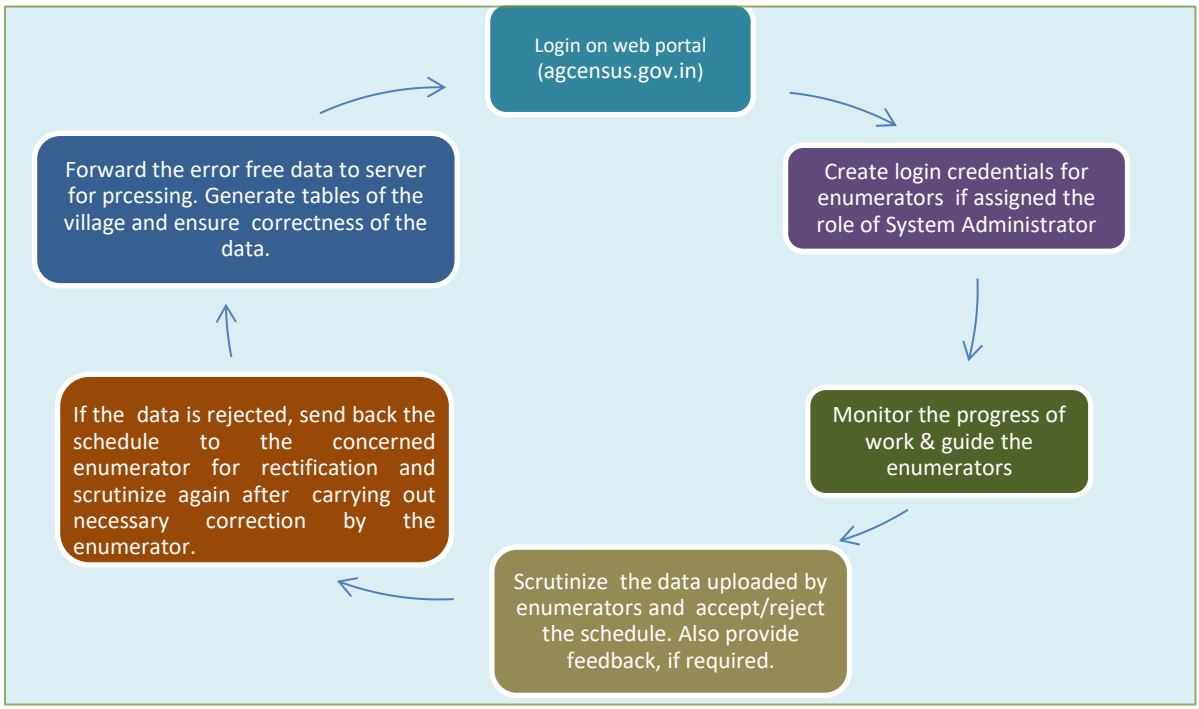
Section – C: Instructions for Data Collection

22 Flow Diagram of activities for different users:

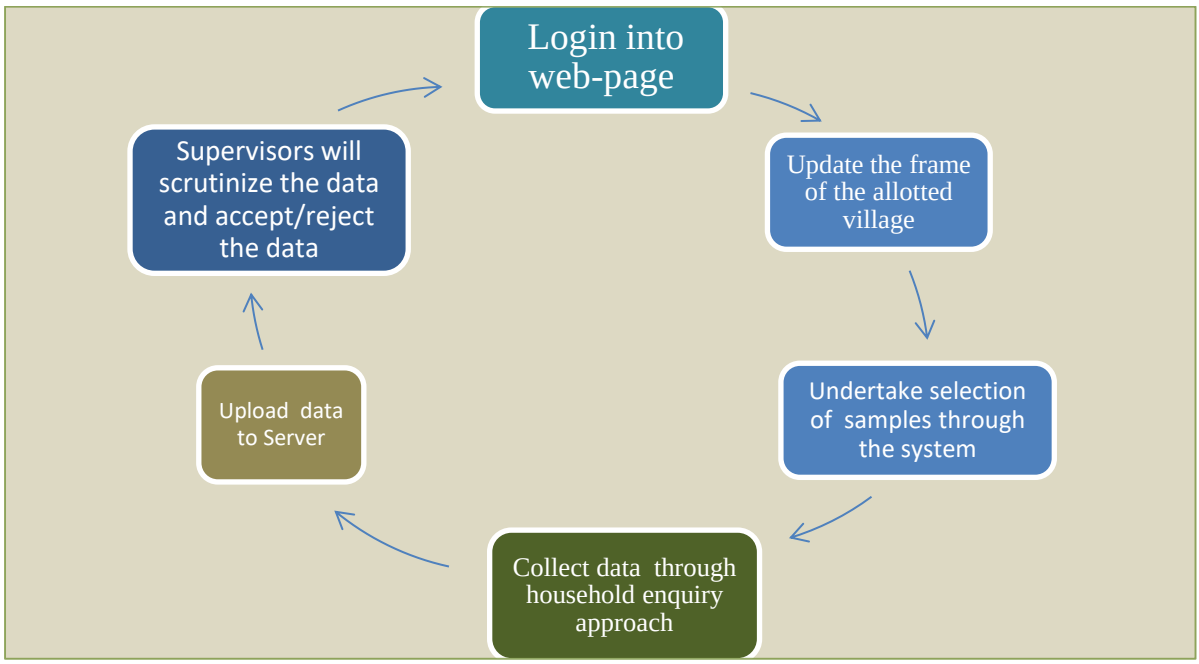
22.1 For System Administrator



22.2 For Supervisor



22.3 ForEnumerator



23 Instructions for accessing the Agriculture Census portal:

23.1 To access the Agriculture Census 2021-22 web portal, type 'http: //agcensus.gov.in' in the address bar of the web browser or alternatively search for 'agcensus.gov.in' from the search engine, like Google, and click on the link. *Link to Agriculture Census 2021-22 web portal is also available on 'http: //agcensus.nic.in'.* The following Home page of Agriculture Census will be opened:

23.2 The homepage will have options for Dashboard, Data Capture, and Report & Useful Documents. The process for undertaking field work would be started only after login into the Data Capture option. Under Dashboard, one can view and monitor the progress of work at different levels. Important documents like Manual of Instructions, Training Videos, and Operational guidelines are available under 'Useful Documents'.

24 Instructions for System Administrator to create login credentials of users:

24.1 The login credentials for various types of users will be generated only through web based application/ software which would require internet connection**.** To enter into Data Capture module of the web portal, you need to be a registered user. At first, the agency (NIELIT, Kolkata) would

authorize the **System Administrator** of the State to have the privilege of creating login credentials of all the personnel who would be involving in conducting the Input Survey work in the State. In general, System Administrator would be required to create login credentials for three types of users:

24.1.1 Officers of State Agriculture Census unit for monitoring the progress of field work.

24.1.2 Supervisors (Tehsil (sub-district)/Block/District officers) for monitoring the progress of field work and to undertake scrutiny work. At times, they may also be assigned the role of system administrator for creation of login credentials of the primary workers who would be working under their jurisdiction.

24.1.3 Enumerators for undertaking the data collection work through android based or web based application.

24.2 To start with, the System Administrator will first enter into 'Data Capture Module' of the web portal and login with the **user id** and **password** provided by the Agency (NIELIT, Kolkata) whereby the main menu page for different types of users to undertake their assigned responsibilities will be displayed. Here, only the System Administrator will have the right to reset the login credentials of users and at the request of any users the same will be reset or created again. However, depending on the prevailing administrative system in the State, the System Administrator may also delegate the responsibility of creating the login credentials of the enumerators (primary workers) to **Supervisors** (Tehsil (sub-district)/Block/District level officers).

24.3 **Step by step guide for creation of user credentials for different users are as under:**

Before initiating this activity, information such as Name, Designation, Mobile Number etc. of the users are required and therefore needs to be collected. Step by step guide for creation of user credentials for different users are as under:

- **By System Administrator:**

24.3.1 **State Officers:** Go to User Creation option and create the login credentials of State Officers for Phase-III by filling all the required fields like name, mobile number, email-id etc.

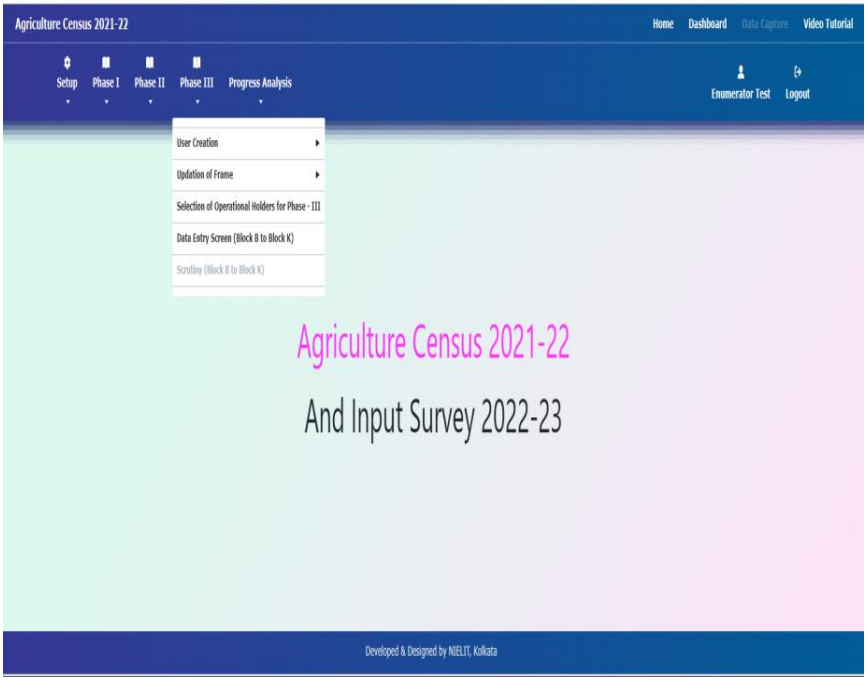
24.3.2 **Supervisors (Tehsil (sub-district)/Block/District Officers):** Go to User Creation under Setup option and create the login credentials of **Supervisors** for Phase-III by assigning the Jurisdiction area such as District, Tehsil (sub-district) and Village and filling all the required fields like name, mobile number, email-id etc. of the Supervisors.

- **By Supervisor/System Administrator:**

24.3.3 **Enumerators**: If Supervisors are also assigned the role of creating login credentials for enumerators by the System Administrator, he/she also has to login with user_id and password provided by System Administrator and follow the same following steps:

Go to Enumerator Creation option and create the login credentials of enumerators for Phase-III by choosing the option of the mode of undertaking data collection either through web based application and allot the jurisdiction area such as District, Tehsil (sub-district) and Villages for undertaking data collection and finally fill the enumerator credentials such as name, mobile number, email-id etc.

25 Instructions to Supervisors for undertaking scrutiny work:



25.1 Login using user_id and password provided by the System Administrator. Through this main menu page, the Supervisor will first go to 'Phase-III' menu and then choose '**Scrutiny of data'** option whereby a page will be displayed for undertaking the scrutiny work of Phase-III Schedule. Select the village for which the scrutiny work is to be undertaken and view the collected data as well as the schedule.

25.2 After scrutiny, the Supervisor will either accept or reject the schedule depending on the quality of data collected. The rejected schedule will then be sent back to the concerned primary worker for rectification and resubmitted for scrutiny after necessary corrections by the enumerator. On rejected schedules, the Supervisor should give reasons for rejection so as to enable the concerned primary worker to easily rectify the erroneous data. Only accepted and verified data will be made available at central server for further processing. The following points are to be carefully checked during scrutiny whether:

(i) All sampled survey numbers/area in the selected village has been accounted for.
(ii) Area figures given in respect of each survey numbersforming part of the Operational Holding have been correctly fetched from the Phase-I database.
(iii) All the fields in the schedules have been properly filled up.
(iv) The data given in the schedules are consistent.
(v) Correct codes have been used / filled / chosen.

26 Step by Step Instructions to Primary Worker for updation of frame & selection of samples:

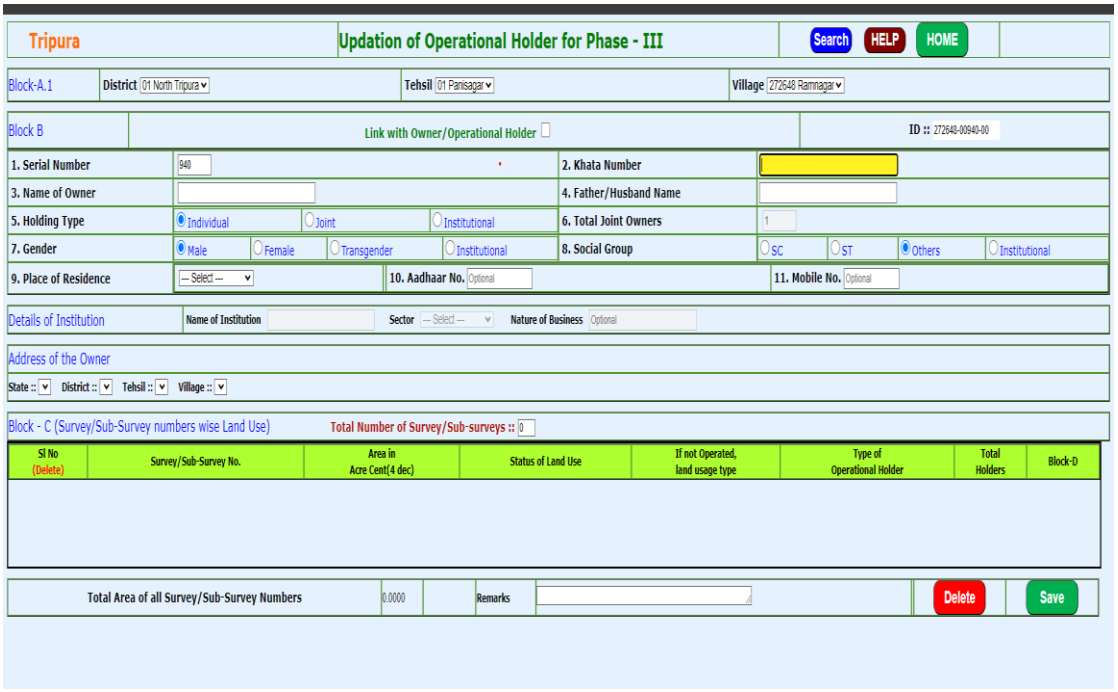
26.1 Log in the web-page using *user_id* and *password* provided by System Administrator. After Login, Primary worker should follow the following steps for updation of frame (complete & exhaustive), which is the foremost pre-requisite for successful conduct of the Input Survey and generation of reliable estimates:

26.1.1 **Step-1 Ledger of Operational Holder from Phase-I**: The first and foremost step is to update the frame of operational holders of the allotted village by visiting each and every household. First go to the option "**Ledger of Operational Holders** "under "**Updation of Frame**" and select the allotted village; and then download the Ledger of Resident Operational Holders (excluding Institutional Holdings) containing basic details of all resident operational holders of the allotted village which has been fetched from Phase-I database.

26.1.2 The Ledger, which requires updation, comes with additional fields on type of tenancy and its corresponding area of the leased-in operated area (**Schedule-L**:

Annexure-II). It is important that the list (or frame) is complete, exhaustive and up-to-date for the reference year of the Survey by **visiting each and every household of the allotted village.** The primary worker should keep in mind the following while undertaking updation exercise of the frame (Phase-I database):

26.1.3 Step-2 Update Operational Holder:



- To delete non-resident operational holders, deemed operational holders and Institutional holdings from the list, if found, as these are out of the scope of the survey.
- To include division or augmentation or change of status of operated area of the holdings and consequential changes in size;
- To edit/add/delete the basic details of the holdings if any changes have taken place during the intervening period.
- To delete or add operational holders if any changes have taken place during the intervening period.
- To collect or record type of tenancy (1-fixed money, 2-fixed produce, 3-share of produce, 4- no specific terms from relatives, 5-others) if the operational holder is operating on the leased area, and its corresponding area of the leased area, in addition to the data collected in Phase-I.

The enquiry during updation exercise should specially relate to:

- Whether any addition/deletion in operated area has taken place by way of purchase/taking on lease of additional land or sale/leasing out of some land?
- Whether any additional land has been allotted by government for cultivation?
- Whether any partition of holding has taken place?
- Whether any person migrated to the village and has done cultivation during the reference period?
- Whether the entire household of an old operational holder has migrated out of the village?
- Any other relevant points which primary worker or enumerator thinks necessary for Input Survey.

26.1.4 Go to search option and fetch all the Operational Holders from Phase-I and then select the operation holders for which the enumerator wants to fill the details and Most of the fields such as Name, Fathers/Husband's Name, Survey Number, Khata Number etc. will be prefilled.

26.1.5 If splitting of a particular holding has taken place, then the name of original holder may be placed at the same place with modified data but the name of the new holder arising as a result of partition may be entered at the end with the remark that it is a new holder. Also, any new household which might have come up during the intervening period is to be listed at the end of the list and data should be collected from this new household.

26.1.6 **Step-3**: After the frame of operational holders is updated by Primary Worker using hard copy (pen & paper) of the Ledger of Operational Holders, the same should be updated into the system by going to "**Update Ledger of Operational Holders**" under "**Updation of Frame**". The provision made available for addition/deletion/edition may be used for updating the Ledger. If any issue arises at the time of updation, System Administrator may be contacted for early resolution and save the updated data by clicking on the Save button.

26.1.7 **Step-4**: Go to "**Updated Ledger of Operational Holders**" through the system under "**Updation of Frame**" and GENERATE the updated list (size class-wise) for verification / confirmation. If any erroneous data is observed, then the same may be rectified by modifying the updated frame before undertaking actual sample selection of operational holders in the village.

Sample Selection of Operational Holders:

26.1.8 **Step-5**: Go to "**Sample Selection for Data Collection**" and GENERATE sample of six (6) operational holders from each of the five (5) size classes with SRSWOR (two more samples are selected as reserve for casualty sample in addition to four) by clicking "**Sample Selection of Operational Holders" (size class-wise)** and "**Table of Sample Selection**". These selection of random samples will be done automatically generated through the system and sample tables for the same may be seen at **Annexure-I.**

27. Instructions to Primary Workers for filling the Schedules of the Selected Holdings:

27.1 The Primary worker can enter into this module "**Data Entry Screen**" only after the completion of exercise of frame updation and selection of samples. Under this Module, there are 13 Blocks which are common to all villages which would be recorded or filled-in for all the selected holdings in the selected villages. These Blocks are as under:

S.N.	Name of Block	Details
1.	Block A	Identification Particulars
2.	Block B	Demographic Profile
3.	Block C	Economic Profile
4.	Block D	Education and Technical Profile
5.	Block E	Membership/Uses of Agricultural Services
6.	Block F	Information on Organic Farming
7.	Block G	Agricultural Credit availed by operational holder during 2022-23

S.N.	Name of Block	Details
8.	Block H	Information on use of Seeds, IPM and Soil testing during 2022-23
9.	Block I	Use of Agricultural implements/machines/equipments
10.	Block J	Parcel-wise cropping pattern
11.	Block K1	Area under irrigated crops and usage of chemical fertilizers, seeds, manures and pesticides during Agricultural Year 2022-23 (July 2022 – June 2023)
12.	Block K2	Area under unirrigated crops and usage of chemical fertilizers, seeds, manures and pesticides during Agricultural Year 2022-23 (July 2022 – June 2023)
13.	Block K	Validation status of all Blocks

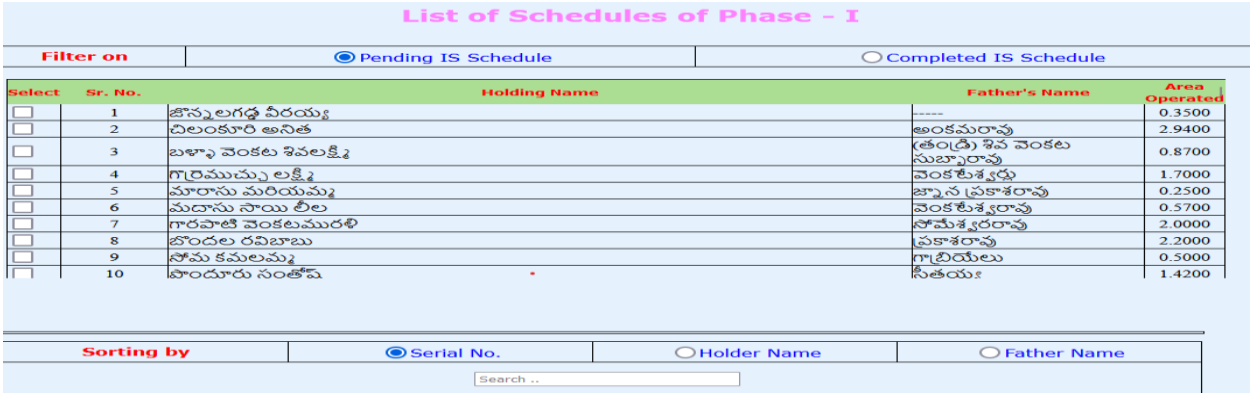
The Primary workers, after clicking on the option "**Data Entry Screen**" under **Phase-III** menu page, will enter into the data collection screen. The data is to be collected for all khata/survey numbers of all the selected holdings which are made available in Block-A by fetching from the database of the listing schedules.

27.1.1 **Block-A: Identification Details:** All the **updated khata/survey numbers** of all the selected holdings in the selected villages will be made available in this Block as pre-filled for conducting the house-house survey.

27.1.1.1 **Item 1 &2: District & Tehsil:** These two items will come as prefilled for filling the schedules of the allotted villages.

27.1.1.2 **Item 3: Village:** Select the village from the drop-down list for filling the schedules of the allotted villages. If the allotted village does not appear in the drop down list, please consult the Supervisor /System Administrator.

27.1.1.3 **Item 4 & 5: Serial Number & Operated Area:** Since the basic details of all the selected holdings are fetched from updated listing database, click the available button "**Schedules (Phase-I)"** which will display a screen showing all selected list of updated holdings comprising operational holder and father's name along with operated area for conducting the Input Survey. Then select any record for which the data is to be filled in the remaining Blocks. After selection, these two items in Block-A, and item-2 (Name of Operational Holder) and item-3 (Fathers/Husband's Name) of Block-B will come as prefilled.



27.1.2 **Block B-Demographic Profile:**

27.1.2.1 **Item 2 & 3: Name of Operational Holder & Father/Husband's Name:** These two items will be fetched from the updated listing database and display as prefilled for the selected serial number in Block-A.

27.1.2.2 **Item 4: House Number:** The same House Number of the Operational Holder which is recorded at the time of house-listing should be entered or fetched from the updated listing database.

27.1.2.3 **Item 5, 6 & 7: Household Size:** All persons, irrespective of sex and age, who are normal members of the household of the Operational Holder, who may or may not be present at the time of data collection, would be taken into account for recording the number of Male and Female under these items.

Number of family members engaged in agriculture including allied activities (18years & above)

27.1.2.4 **Item 8-10: Fully (Male/Female/Transgender):** Record the number of family members of the operational holder who are fully engaged in agriculture including allied activities whose age is 18 years & above.

27.1.2.5 **Item 11-13:Partly (Male/Female/Transgender):**Record the number of family members of the operational holder who are partly engaged in agriculture including allied activities whose age is 18 years & above.

27.1.2.6 **Item 14: Operational holder engaged in farming activities other than crop production:** The enumerator will have to choose one option from the drop-down list of activities if the Operational Holder is also engaging in

farming activities other than crop production. Select option 1 for Livestock, 2 for Poultry, 3 for Fisheries, 4 for Others and 5 for None.

27.1.2.7 **Item 15: Age of Operational holder (completed year as on 01.07.2023):** The Enumerator will record the Age of Operational Holder in completed years as on 01.07.2023.

27.1.3 **Block C: Economic Profile:** Information on the economic profile of the operational holder will be filled-in this Block as follows:

27.1.3.1 **Item 2:Main source of income of operational holder**: For this purpose, only the operational holder's income earned from economic activities is to be considered. An operational holder will be first categorized as 'self-employed', 'regular wage/salaried earning', 'casual labour' or 'others' depending on the **major source of income of the operational holder**. The codes are:1 for Self-employment, 2 for Regular wage/salaried earning, 3 for Casual Labour and 4 for Others. For an operational holder, which do not have any income from economic activities, shall be classified under "others".

Depending on the major source of income of the operational holder, the operational holder is further classified into different categories as under:

Self –employment in:

crop production…….. 1

livestock…….. 2

other agricultural activities…….. 3

non-agricultural enterprise…….. 4

Regular wage/salaried earning in:

agriculture……..5

non- agriculture……..6

Casual labour in:

agriculture……..7

non- agriculture……..8

Others (pensioners, remittance recipients, student, engaged in domestic activities etc.)

The operational holder broadly classified as 'self-employment' will be further classified into one of the four categories: 'crop production', 'livestock', 'other agricultural activities' or 'non-agricultural enterprise'.

(a) If the major income of the operational holder is from growing of field crops (including fodder crops), fruits, grapes, nuts, seeds, seedlings in the nurseries, bulbs, vegetables and flowers both in open and under glass, production of fodder crops etc., or production of plantation crops like tea, coffee, cocoa, rubber, etc., or from forest production in parcels of land which form part of enumeration holding –household classification will be 'crop production'

(b) If the major income of the operational holder is from production of livestock and livestock products, poultry and poultry products, fish, honey, rabbits, furbearing animals and silk-worm cocoons- household classification will be 'farming of animals'.

(c) For the operational holder having major income from agricultural activities other than crop production or livestock farming will be classified into 'other agricultural activities'.

(d) Operational Holder having major income from self-employment in non-agricultural enterprises will be classified into 'non-agricultural enterprise'.

Within each of the broad category of regular wage/salaries earning and casual labour, two specific operational holder types, viz., **'in agriculture'** and '**in non-agriculture'** will be distinguished, depending on their major income from agricultural activities and non-agricultural activities during the reference year.

27.1.3.2 **Item-3:Main purpose of agriculture production:** An operational holder may be engaging in agricultural activities for self-consumption of the produce or making profit. Thus, the main purpose will be recorded in terms of the following codes:1 – Self Consumption, 2 – For Sale, 3 – Both (self-consumption & sale).

27.1.3.3 **Item-4: If Code 2 or 3 in Col.3 then to whom the agricultural products are sold:** For disposal of the agricultural products, the agency to which the product was sold will be recorded in terms of the following codes:

1 – Local Market (including localtraders), 2 – APMC Market, 3 – Input Traders, 4 – Cooperative, 5 – Government Agencies, 6 – FarmersProducer Organizations (FPO), 7 – Private Processors, 8 – Contract Farming Sponsors/Companies, 9 – Others.

When the product was sold to local market or mandi (markets in small towns and cities to which farmers from nearby villages would bring the agricultural produce at harvest time and where traders would buy this produce from them) or local private traders or to other households' code '01' may be recorded. Code '02' may be recorded when product was sold to AMPC market (regulated by Agricultural Produce Market Committee, a statutory market committee constituted by State Govt.).

Input dealers are those who are engaged in activities of providing agricultural inputs such as seeds, fertilizers, insecticides, cattle /poultry feed, fishing net, sprinkler/drip irrigation machinery, spare parts of oil engine/tractor/fishing boats, tools required for poultry/horticulture etc. Agency code may be recorded as '03' when product was sold to input dealers.

When the product was sold to co-operatives code '04' is to be given. In cases where the major disposal was made to Government agencies (e.g., Food Corporation of India (FCI), Jute Corporation of India (JCI), Cotton Corporation of India (CCI), National Agricultural Co- Operative Marketing Federation of India Ltd. (NAFED), State Food Corporation, State Civil Supplies etc.) code '05' may be recorded.

When the product was sold to Farmer producer organisations (FPO) code '06' is to be recorded against the major disposal. Private processors are those private agencies/persons engaged in activities carried out for conservation and handling of agricultural produce and to make it usable as food, feed, fibre, fuel or industrial raw material. Code '07' may be recorded for disposals made to private processors.

If the product is sold to 'contract farming sponsors/ companies' code '08' may be given. For all other type of disposals, code '09' will be recorded.

27.1.3.4 **Item-5**:**Are you satisfied with the sale outcome?**For major disposal of each of the harvested crop, the level of satisfaction of the operational holder with the sale outcome will be recorded in terms of the following codes: 1 for Satisfactory and 2 for Not Satisfactory. If the sale outcome is not satisfactory (i.e. code-2 is selected), then record its reason by selecting the following code:1 for Lower than Market Price, 2 for Delayed Payments, 3 for Deductions for Loans Borrowed, 4 for Faulty Weighing and Grading, 5 for Other Cause of Dissatisfaction.

27.1.4 ***Block D-Education and Technical Profile:*** In this Block, primary worker should fill the details of education and technical profile of the operational holder in the following items:

27.1.4.1 **Item 2: Education Qualification of the holder*:*** The highest level of education completed by the operational holder considering all the general/ technical/vocational educational level successfully completed by him/her, will be recorded here in terms of the following codes. Illiterate–0; Upto Primary (Standard-V)-1; Middle–2; High School / Secondary–3; Senior Secondary / Pre-degree–4; Technical diploma below degree level–5; Graduate and above–6.

27.1.4.2 **Item-3: Whether attended any formal training in Agriculture?:** If the operational holder has attended any formal training in agriculture, record "Yes" else "No". Any training in agriculture generally conducted by an institution and may be issuing certificate on successful completion is considered as formal training in agriculture for the purpose of this item. Those who have completed the full duration of the training or attending the training at the time of the survey will be reported "Yes".

Information on access to technical advice, main source of technical advice, type of information accessed, adoption of the recommended advice by the operational holder will be recorded in items 4-7.

27.1.4.3 **Item-4: Whether had access to Technical advice related to agricultural activity:** Select "Yes" if the operational holder had access to Technical

advice related to agricultural activity, else select "No". If "Yes" is selected then move to next item, else go to next Block-E.

27.1.4.4 **Item-5: Main source of technical advice:** If "Yes" is selected in item 4, then select one option of the main source of technical advice accessed by operational holder from the drop-down list under this item. Select code1 for Progressive farmer, 2 for Input Dealers, 3 for Government Extension Agent/ATMA, 4 for KrishiVigyan Kendra, 5 for Agriculture University / College, 6 for Private Commercial Agents, 7 for Farmer Producer Organizations (FPO), 8 for Private Processors, 9 for Agriculture Clinics & Agriculture Business Centers (ACABC), 10 for NGO, Kisan Call Centre, 11 for Print Media / Radio / TV / Smartphone Apps based information / Other Electronic Device.

Progressive farmer: Progressive farmers would also include the farmers' organizations, which may be commodity-specific – whether registered or unregistered. Many associations of growers of a particular commodity, e.g., grape, mango, onion, litchi, guava, exist in various parts of the country and these often serve as important sources of information for the farmers.

Input dealers: Input dealers are those who are engaged in activities of providing agricultural inputs such as seeds, fertilizers, insecticides, cattle / poultry feed, fishing net, sprinkler/drip irrigation machinery, spare parts of oil engine / tractor / fishing boats, tools required for poultry/horticulture, etc.

Government extension agent/ Agricultural Technology Managing Agency (ATMA): Extension agent/worker would mean an employee of the government in the Department of Agriculture/Horticulture/Animal Husbandry/Forestry/Soil Conservation or Agricultural Universities or ICAR Institutes, Agricultural Technology Management Agency (ATMA). Para-technicians/ para-veterinarians visiting from Government departments will also be classified under this category.

Agricultural Technology Managing Agency (ATMA) is a society of key stakeholders involved in agricultural activities for sustainable agricultural development in the district. It is a focal point for integrating Research and Extension activities and decentralizing day to day management of the public Agricultural Technology System (ATS). It is a registered society responsible for technology dissemination at the district level. As a society, it would be able to receive and expend project funds, entering into contracts & agreements and maintaining revolving accounts that can be used to collect fees and thereby recovering operating cost. ATMA is supported by Governing Board (GB) and Management Committee (MC). The Governing Board is a policy making body and provide guidance as well as review the progress and functioning of the ATMA. The Management Committee would be responsible for planning and executing the day-to-day activities of ATMA. They were set up as new institutional arrangements for technology dissemination under the Agricultural Technology Management Agency (ATMA) Scheme.

Krishi Vigyan Kendra (KVK): These are the centres set up by the State Agricultural Universities, Indian Council of Agricultural Research Stations, and Agricultural Research Stations of State Governments. These sometimes have Farmers' Training Centres also. The KVKs organize training,

demonstration and on-farm trials on modern technological packages and on various aspects of modern agriculture. These institutions work as information-cum-service centers which make available information on new technologies in the form of booklets to the farmers. It also supplies certain inputs to the farmers which are not easily available in the market so as to make the farmer adopt the technology without any difficulty. Besides these, various agro- clinical services like soil, water, leaf and petiole analysis for effective nutrient utilization and disease and pest analysis are also provided by the KVKs.

Agricultural university /college: Agricultural Universities / colleges are mostly public institutions that are engaged in teaching, research and extension in agriculture and related disciplines.

Private commercial agents (including contract farming sponsors/ companies, drilling contractors, etc.): Private commercial agents are mostly representative of private research organization, contract farming sponsors/ companies, drilling contractor etc.

Farmer Producer Organisations (FPOs): A Producer Organisation (PO) is a legal entity formed by primary producers, viz. farmers, milk producers, fishermen, weavers, rural artisans, craftsmen. A PO can be a producer company, a cooperative society or any other legal form which provides for sharing of profits/benefits among the members. In some forms like producer companies, institutions of primary producers can also become member of PO.

The main aim of PO is to ensure better income for the producers through an organization of their own. Small producers do not have the volume individually (both inputs and produce) to get the benefit of economies of scale. Besides, in agricultural marketing, there is a long chain of intermediaries who very often work non-transparently leading to the situation where the producer receives only a small part of the value that the ultimate consumer pays. Through aggregation, the primary producers can avail the benefit of economies of scale. They will also have better bargaining power vis-à-vis the bulk buyers of produce and bulk suppliers of inputs.

Farmers Producer Organisation (FPO) is one type of PO where the members are farmers. Small Farmers' Agribusiness Consortium (SFAC) is providing support for promotion of FPOs. Farmer Producer companies are FPOs registered under Indian Companies Act.

Private processors: Private agencies/ individuals engaged in agro processing are termed as private processors. Agro processing could be defined as set of techno-economic activities carried out for conservation and handling of agricultural produce and to make it usable as food, feed, fibre, fuel or industrial raw material.

Agriculture Clinics and Agriculture Business Centres (ACABC): The ACABC scheme was launched in 2002 and was targeted at young rural agriculture graduates who wanted to turn entrepreneurs seeking to provide fee-based agriculture services to farmers. The scheme involves mandatory training and subsidy to set up a rural service center, often supported by a

bank loan. ACABCs were to provide a range of services, including sale of inputs, agriculture advice, marketing support etc. A mandatory two-month training at the National Institute of Agricultural Extension Management (MANAGE), at Hyderabad was designed to instill the basis of business management among aspiring agriculture entrepreneurs.

NGO: These will include private sources of information only. The government para-technician would be classed as 'extension agent'.

Kisan Call Centre: In order to harness the potential of ICT in Agriculture, Ministry of Agriculture launched the scheme "Kisan Call Centres (KCCs)" on January 21, 2004. Main aim of the project is to answer farmers' queries on a telephone call in their own dialect. These call Centres are working in 14 different locations covering all the States and UTs. A countrywide common eleven-digit Toll Free number 1800-180-1551 has been allotted for Kisan Call Centre. This number is accessible through mobile phones and landlines of all telecom networks including private service providers. Replies to the farmers' queries are given in 22 local languages.

Print media: Different print media also supply information on different aspects of farming through specific columns regularly. For the purpose of this item, print media include all types of print media including newspapers, pages devoted to discussion and articles on agriculture of daily newspaper, agricultural magazines, bulletins and leaflets published periodically.

Radio/TV/ other electronic media: Sources like radio and television also supply information to the farmers regarding weather, farming practices to be followed in different seasons, methods of farming of different crops, technological developments on farming etc., through different programmes on a regular basis. In this regard, it may be mentioned that both radio and television will include private as well as government channels and no distinction will be made between the two. Internet is a major source nowadays where information on different aspects of farming can be accessed. The growth of internet and mobile technology has reached even remote areas of the country. Accessing Internet through PCs, laptops, mobile, etc., all will be considered for this item.

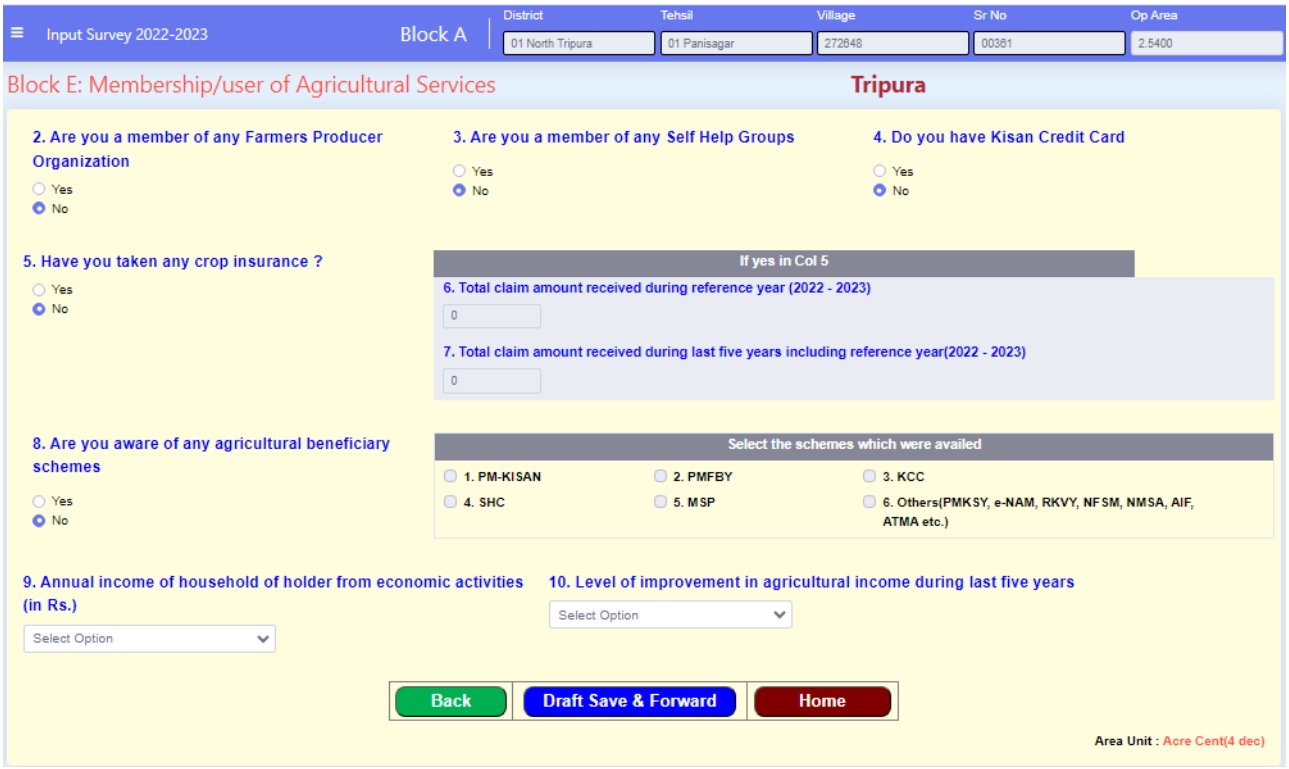
Smartphone app based information: With increasing penetration of smart phones in India with their affordable prices, it has been considered necessary to create mobile Apps for agricultural extension activities. These smartphone apps are available to farmers and all other stakeholders for extracting information related to agriculture from the web. They are also useful for remote location data entry where desktop PCs are not available. Such apps are developed through government agencies (like C-DAC, NIC, etc.) and independent Android enthusiasts/ private firms.

27.1.4.5 **Item 6:Type of information/advice received:** The type of information received from the main source accessed will be recorded in this column in terms of codes which are given below: 1 for Improved seed/variety, 2 for Fertilizer application, 3 for Plant protection (pesticide etc.), 4 for Farm machinery, 5 for Harvesting/ Marketing, 6 for Others.

27.1.4.6 **Item 7: Whether recommended advice adopted:** Adoption of recommended practice means that recommended practice is followed by the operational holder for the agricultural activity on a large scale after having

been convinced about the gains of technology. This might happen with or without trial. Thus, record "Yes" if the operational holder adopted the recommended advice, otherwise "No" should be recorded.

27.1.5 ***Block E –Membership/user of Agricultural Services:*** In this Block, primary worker should fill the details of membership/user of agriculture services such as FPOs, beneficiary schemes, KCC etc for the following items:



27.1.5.1 ***Item 2: Are you a member of any Farmers Producer Organization:*** Record "Yes" if the operational holder is a member of any Farmers Producer Organization (FPO), otherwise "No" should be recorded.

27.1.5.2 ***Item3:Are you a member of any Self Help Groups:*** Record "Yes" if the operational holder is a member of any Self Help Groups (SHGs), otherwise "No" should be recorded.

27.1.5.3 ***Item 4: Do you have Kisan Credit Card:*** Record "Yes" if the operational holder is having Kisan Credit Card (KCC), otherwise "No" should be recorded.

27.1.5.4 ***Item 5: Have you taken any crop insurance?*** Record "Yes" if the operational holder has insured any of the crops grown to get protection from natural calamities, otherwise "No" should be recorded. If "Yes" is recorded, then go to items 6 & 7 regarding the insured amount, else go to item 8.

27.1.5.5 ***Item 6: Total claim amount received during reference year (2022 - 2023): Record*** *the claim amount received by the operational holder during the reference year against the availed crop insurance.*

27.1.5.6 ***Item 7: Total claim amount received during last five years including reference year (2022 - 2023****): Record the claim amount received during last five years including reference year against the availed crop insurance.*

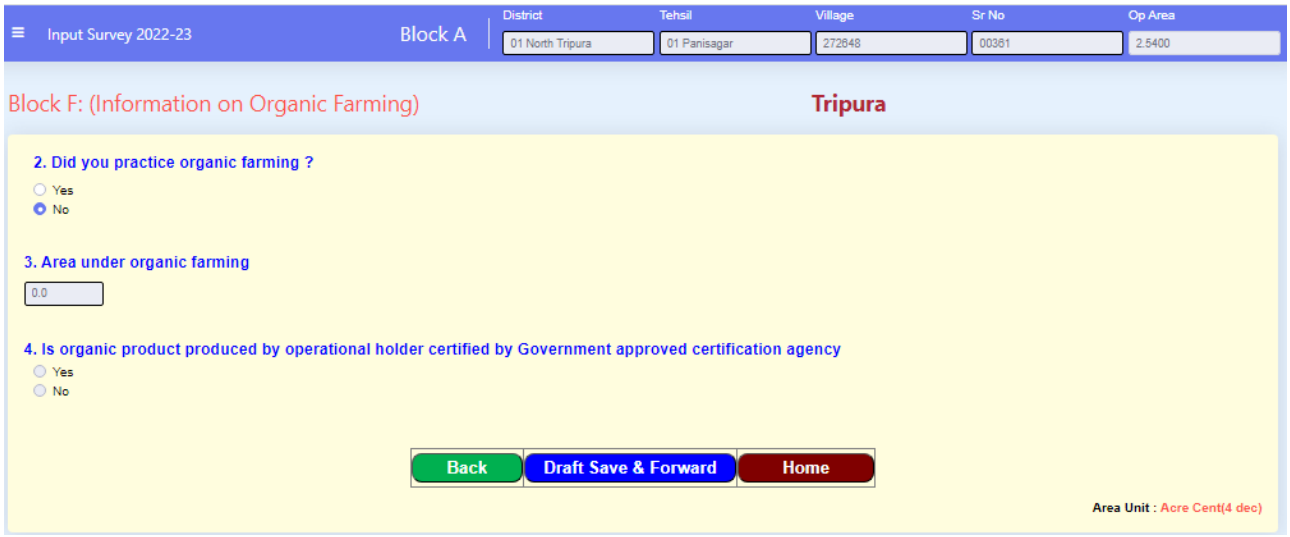
27.1.5.7 ***Item 8: Are you aware of any agricultural beneficiary schemes:*** Record "Yes" if the operational holder is aware of any agricultural beneficiary schemes launched by the Government of India, otherwise "No" should be recorded. If "No" is selected, then go to next item 9. If "Yes" is recorded, then select the schemes (one or more) for which the operational holder

availed during the reference year. For easy of selection, the agricultural beneficiary schemes are broadly classified into 6 as under: 1:PM-KISAN, 2:PMFBY, 3:KCC, 4:SHC, 5:MSP, 6:Others (PMKSY, e-NAM, RKVY, NFSM, NMSA, AIF, ATMA etc.).

27.1.5.8 ***Item 9: Annual income of household of holder from economic activities (in Rs.):*** Here, annual income generated by household of the operational holder through different economic activities during the reference year should be recorded. Select 1 if annual income is less than 50000, 2 if annual income is 50000 to 1.25 lakh, 3 if annual income is 1.25 lakh to 2.5 lakh and 4 if annual income is 2.5 lakh & above.

27.1.5.9 ***Item 10: Level of improvement in agricultural income during last five years:*** To improve the conditions of farmers, Government of India has taken up several measures and hasgiven priority to agricultural sector. Therefore, to measure the outcome or improvement in agricultural income during the last five years, record the level of improvement in terms of ***p***ercentage from the drop-down list by selecting appropriate code as per the response of the operational holder as under: 1 for upto 25%, 2 for 25% to less than 50%, 3 for 50% to less than 75%, 4 for 75% to less 100% and 5for above 100%.

27.1.6 ***Block F: Information on Organic Farming:*** This Block will be filled to collect information about organic farming practices as under:



27.1.6.1 ***Item 2: Did you practice organic farming?*** Record "Yes" if the operational holder is practicing organic farming during the reference year, otherwise "No" should be recorded. If "No" is recorded, then go to next Block-G. If "Yes" is recorded, then go to items 3&4.

27.1.6.2 ***Item 3: Area under organic farming: If*** the operational holder has practiced organic farming (Yes in item 2) during the reference year, then record the area under organic farming.

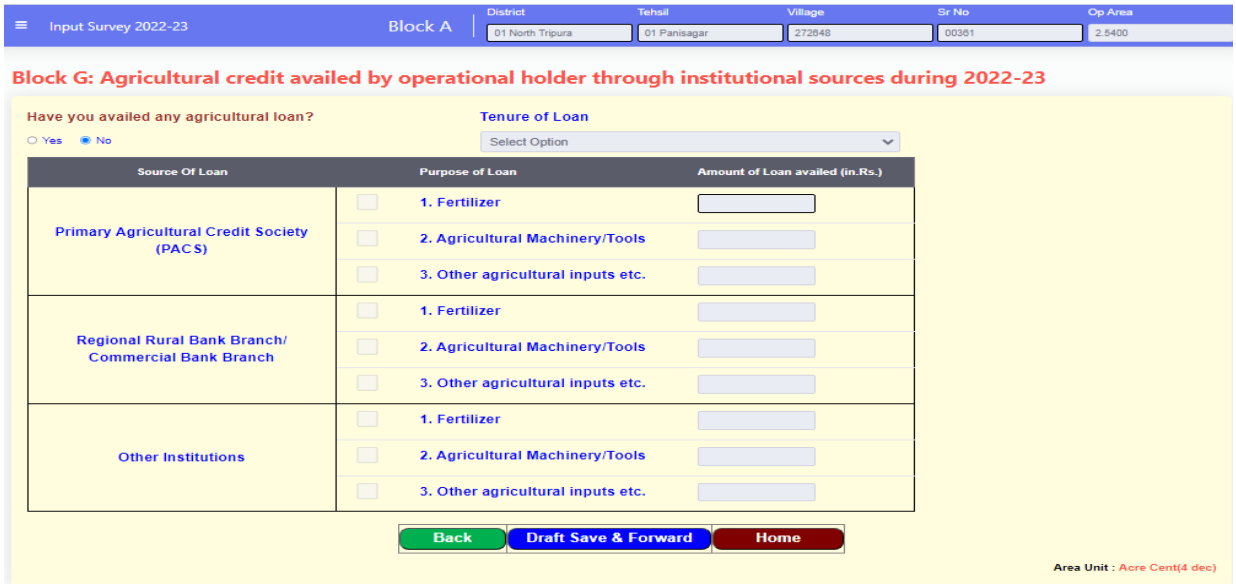
27.1.6.3 ***Item 4: Is organic product produced by operational holder certified by Government approved Certification agency:***Record "Yes" if the organic product produced by operational holder is certified by Government approved agency, otherwise "No" should be recorded.

27.1.7 ***Block G: Agricultural credit availed by operational holder through institutional sources during 2022-23:***In this Block, record the details of agricultural loans availed by operational holders through institutional sources

during the reference year. Agricultural loansare availed by operational holder to fund seasonal agricultural operations or related activities like purchase of agricultural land or agricultural tools/implements, for which its tenure may also vary (short term, medium term and long term) depending on the purpose of the availed loan. There are 3 institutional sources from where he/she can avail the agricultural loans, viz.,

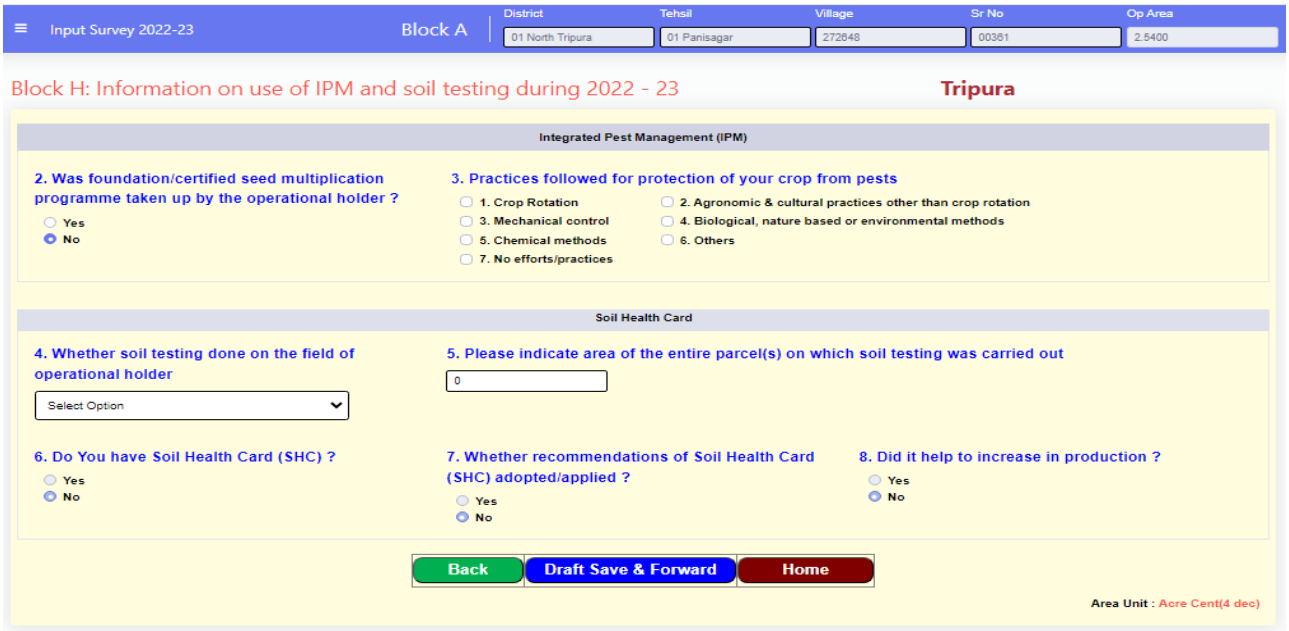
(i) Primary Agricultural Credit Society (PACS),
(ii) Regional Rural Banks/Commercial Banks, and
(iii) Other Institution

27.1.7.1 First, record "Yes" under the item "Have you availed any agricultural loan" if the operational holder has taken any agricultural loan during the reference year, otherwise "No" should be recorded. If "No" is recorded, then the tab will automatically move to next Block-H. If "Yes" is recorded, then select one after another the tenure of loan from the drop-down list, viz., (a) Short Term (Repayment period upto 18 months), (b) Medium Term (Repayment period more than 18 months but less than 5 years) &(c) Long Term (Repayment period more than or equal to 5 years) for filling the details of the loan amount availed against the source and its purpose.



27.1.7.2 Within each of the tenure of loan, the amount availed is to be recorded by ticking /selecting the appropriate purpose of loan, viz., 1. Fertilizer, 2. Agricultural Machinery/Tools & 3. Other Agricultural inputs etc. against different sources. It may be also being possible that an operational holder may have availed only one agricultural loan. In this case, first select the tenure of loan and record the loan amount by selecting the appropriate list from the purpose of loan against the source.

27.1.8 ***Block H– Information on use of IPM and soil testing during 2022 - 23:*** The purpose of this block is to gather information on usage of Integrated Pest Management (IPM) and Soil testing done on the area operated by operational holder.



27.1.8.1 ***Item 2: Was foundation/certified seed multiplication programme taken up by the operational holder?:*** Record "Yes" if the operational holder has taken up the foundation/certified seed multiplication programme during the reference year, otherwise "No" should be recorded.

27.1.8.2 ***Item 3: Practices followed for protection of your crop from pests****:* This item relates to information on package of practices followed by farmer for Pest Management. This question is designed to know whether the farmer is relying on package of practices recommended under Integrated Pest Management (IPM) approach or is solely depending upon use of pesticides. The various components of IPM programmes are discussed in **Annexure-VII**. The investigator is required to ask open-ended question to the farmer regarding his usual (normal, customary, most of the time) practice for pest control. The farmer (respondent) should be allowed to reply at length explaining all, what he does. After listening to the response, the investigator would tick one or more of the 7 given options. Efforts should be made to cover all the approaches adopted by the farmer in marking the response. It is to be noted that the question allows for more than one response from the farmer or operational holder.

Soil Health Card (SHC) is a Government of India flagship scheme launched in February 2015 and promoted by the Department of Agriculture & Farmers Welfare. Under the scheme, the State/UT government issues soil cards to farmers across the country at an interval of 2 years. These cards will carry crop-wise recommendations of balanced doses of fertilizers to help farmers to improve productivity through judicious use of fertilizers and ameliorants. All soil samples are being tested in various soil testing labs across the country to check soil health i.e. the strength and weaknesses (micro-nutrients deficiency) of the soil and suggest measures to deal with it. The result and suggestion are being mentioned in the soil health cards.

27.1.8.3 ***Item 4: Whether soil testing done on the field of operational holder:***Select the appropriate option from thedrop-down list against the item depending on the status of soil testing conducted on the field of operational holder as under: 1. During reference year 2022-23, 2. During last five years including reference year 2022-23, 3. No. If the selected option is "No" against this

item, then other items 5-8 will be disabled and move to next Block-I; otherwise go to next item 5.

27.1.8.4 ***Item 5: Please indicate area of the entire parcel(s) on which soil testing was carried out:***If the selected option in item 4 is either 1 or 2, then record the area of the entire parcel on which soil testing was carried out.

27.1.8.5 **Item 6: Do you have Soil Health Card:** Select "Yes" if the operational holder is having Soil Health Card (SHC), otherwise "No" should be selected. If the selected option is "No" against this item, then next items 7 & 8 will be disabled and move to next **Block-I**; otherwise go to next item 7.

27.1.8.6 **Item 7: Whether Recommendations of Soil Health Card (SHC) adopted/applied?** Select "Yes" if the recommendations of SHC is adopted/applied by the operational holder, otherwise "No" should be selected. If the selected option is "Yes" against this item, then go to next item 8, otherwise item 8 will be disabled and move to next Block-I.

27.1.8.7 **Item 8: Did it help to increase in production?** Select "Yes" if the adoption/application of the recommendations of SHC helped in increasing the production, otherwise select "No" and move to next **Block-I**.

27.1.9 ***Block-I: Use of Agricultural Implements/Machines/Equipments:***

This block has been designed to record the usage of various Agricultural Machinery and Implements by the operational holder during 2022-23. The list of 64 Agricultural Implements/Machinery is given in three Blocks:

A-Manual Machines/Equipments, B-Animal Drawn Implements, C-Powered Equipments/Machines

Against each item, the enumerator would select whether the operational holder has used the particular machine/equipment during the reference year 2022-23 or not. If used, then it will further be probed whether the operational holder owns the Agricultural implements/machinery/equipment or it has been hired or both owned & hired. For definition of various items of machinery and equipment, **Annexure-VI** may be referred.

Input Survey 2022-23 | Block A

District	Tehsil	Village	Sr No	Op Area
01 North Tripura	01 Panisagar	272648	00361	2.5400

Block I: Use of Agricultural Implements/Machines/Equipments — Tripura

A. Manual Machines/Equipments

S.No	Item	Owned	Hired	Both
1	Chaff cutter	◉	○	○
2	Hand maize sheller	○	○	○
3	Hand Seed fertilizer drill	○	○	○
4	Hand-operated knapsack sprayer/duster	○	○	○
5	Sugarcane crusher	○	○	○
6	Winnowing fan	○	○	○
7	Others	○	○	○

B. Animal-Drawn Implements

S.No	Item	Owned	Hired	Both
8	Animal drawn puddler	○	○	○
9	Cultivator (Triphali)	○	○	○
10	Levelling karah	○	○	○
11	Seed planter	○	○	○
12	Seed-cum-fertilizer drill/seed drill	○	○	○
13	Wooden plough	○	○	○
14	Others	○	○	○

C.Powered Equipments/Machines

S.No	Item	Owned	Hired	Both
15	Aero-blast sprayer	○	○	○
16	Agricultural tractors	○	○	○
17	Brush cutter	○	○	○
18	Cage wheels used for pudding	○	○	○
19	Chain Saw	○	○	○
20	Combine harvester (self-propelled)	○	○	○
21	Combine harvester (tractor powered)	○	○	○
22	Cultivator (tractor-drawn)	○	○	○
23	Disel engine pumpset	○	○	○
24	Drip irrigation set	○	○	○
25	Drone Technology	○	○	○

C.Powered Equipments/Machines

S.No	Item	Owned	Hired	Both
26	Electric pump sets	○	○	○
27	Groundnut decorticator	○	○	○
28	Happy seeder	○	○	○
29	Hedge trimmers	○	○	○
30	Pneumatic plantertract(tractor drawn)	◉	○	○
31	Portable augur digger	○	○	○
32	Power cane crusher	○	○	○
33	Power chaff cutter	○	○	○
34	Power maize sheller	○	○	○
35	Power sprayer	○	○	○
36	Power threshers (wheat, paddy, multicrop)	○	○	○

C.Powered Equipments/Machines

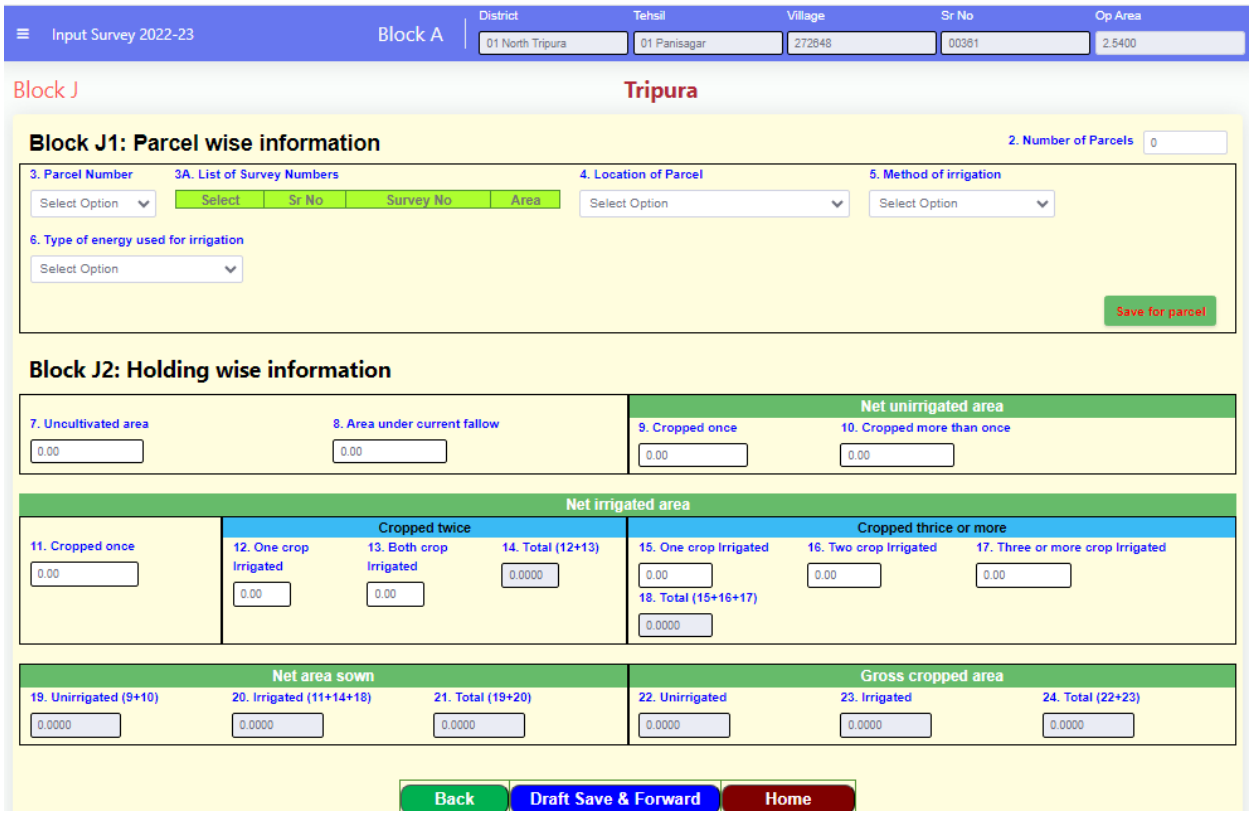
S.No	Item	Owned	Hired	Both
37	Power tillers	○	○	○
38	Power weeder (self propelled)	○	○	○
39	Raised-bed planter/BBF planter(tractor drawn)	○	○	○
40	Reaper binder	○	○	○

C.Powered Equipments/Machines

S.No	Item	Owned	Hired	Both
61	Tractor mounted spray pump	○	○	○
62	Vegetable transplanter (tractor driven)	○	○	○
63	Zero-Till Seed-cum-Fertilizer Drill(tractor drawn)	○	○	○
64	Tractor operated Check Basin Former	○	○	○

27.1.10 : ***Block J – Block J1: Parcel wise information & Block J2: Holding wise information:*** In this block, the information is to be filled-in separately for each parcel (one row for each parcel) constituting the total operational holding.

27.1.10.1 ***Item 2: Number of Parcels:*** The District would be outer limit for pooling of all the parcels of the operational holder as estimates are to be generated at District level in Input Survey. Here, record the total number of parcels operated by operational holders against the operated holding. However, it to be noted that the total parcel number should not be more than the total surveys against the holdings. For instance, if the operated holding consists of 2 parcels, then enter 2 against this item 2 and fill the data for each of the parcels from items 3 to 6before moving to next **Block J2**.



27.1.10.2 **Item 3: Parcel Number:** Running serial number starting from 1 upto the total number of parcels mentioned in item 2 will be automatically displayed by the system. Here, selects the parcel number one after another for filling the details in items 3A to 6.

27.1.10.3 ***Item 3A: List of survey numbers:*** Identification details of all survey numbers for the selected parcel in item 3 will be displayed. Generally, this data will be available as prefilled from updated Phase-I listing database. Here, select all the displayed survey numbers before moving to next item 4.

27.1.10.4 ***Item4: Location of Parcel:*** This item relates to the location in which the corresponding parcel is located. Here, selects the appropriate option from the drop-down list depending on the location of the parcel as under: 1 for parcel is within the village, 2 for outside the village but within tehsil and 3 for outside the tehsil but within same district/state.

27.1.10.5 ***Item 5: Method of irrigation: S***elect the option from the drop-down list of method of irrigation through which the corresponding parcel is

irrigated. Select 1 for surface/open channel, 2 for sprinkle, 3 for drip, 4 for others, 5 for Not irrigated. If option 5 for "Not Irrigated" is selected, then the next item 6 will be disabled and move to next **Block J-2**.

27.1.10.6 ***Item 6: Type of energy used for irrigation:*** Please record the type of energy used by operational holder to irrigate the corresponding parcel. Select 1 for petrol, 2 for diesel, 3 for electricity, 4 for solar and5 for Others.

27.1.10.7 ***Block J2: Holding wise information:*** In this block, the information is to be filled-in separately for each holding. This block mainly relates to intensity of cultivation. It is necessary that the enumerator is fully aware of concepts, like, multiple cropping (Kharif, Rabi and Jaid), net and gross area under irrigated and unirrigated crops, uncultivated area, etc. before canvassing this schedule. Each form will contain data for one operational holding only.

27.1.10.8 **Item 7 to 24*: Intensity of cultivation and irrigation:*** These columns aim at gathering information about intensity of cultivation under irrigated and unirrigated conditions. A particular parcel is classified as irrigated if it receives at least one irrigation during a year. If it receives no irrigation, it is classed as unirrigated. Under both irrigated and unirrigated conditions, multiple cropping is, nevertheless, possible. But on irrigated land, it is quite possible that only some of the crops taken on the land received irrigation. ***A crop will be considered as irrigated if it receives at least one irrigation. For the purpose of this schedule, number of times a particular crop receives irrigation is of no consequence***. Thus, on an irrigated land there are six possibilities, if we were to classify the cropping intensity in 3 broad categories. These categories under irrigated conditions are: (i) One crop sown with irrigation, (ii) two crops sown but only one crop received irrigation, (iii) two crops sown and both crops received irrigation (iv) three or more crops sown but only one received irrigation (v) three or more crops sown but only two crops received irrigation (vi) three or more crops sown and all the crops received irrigation.

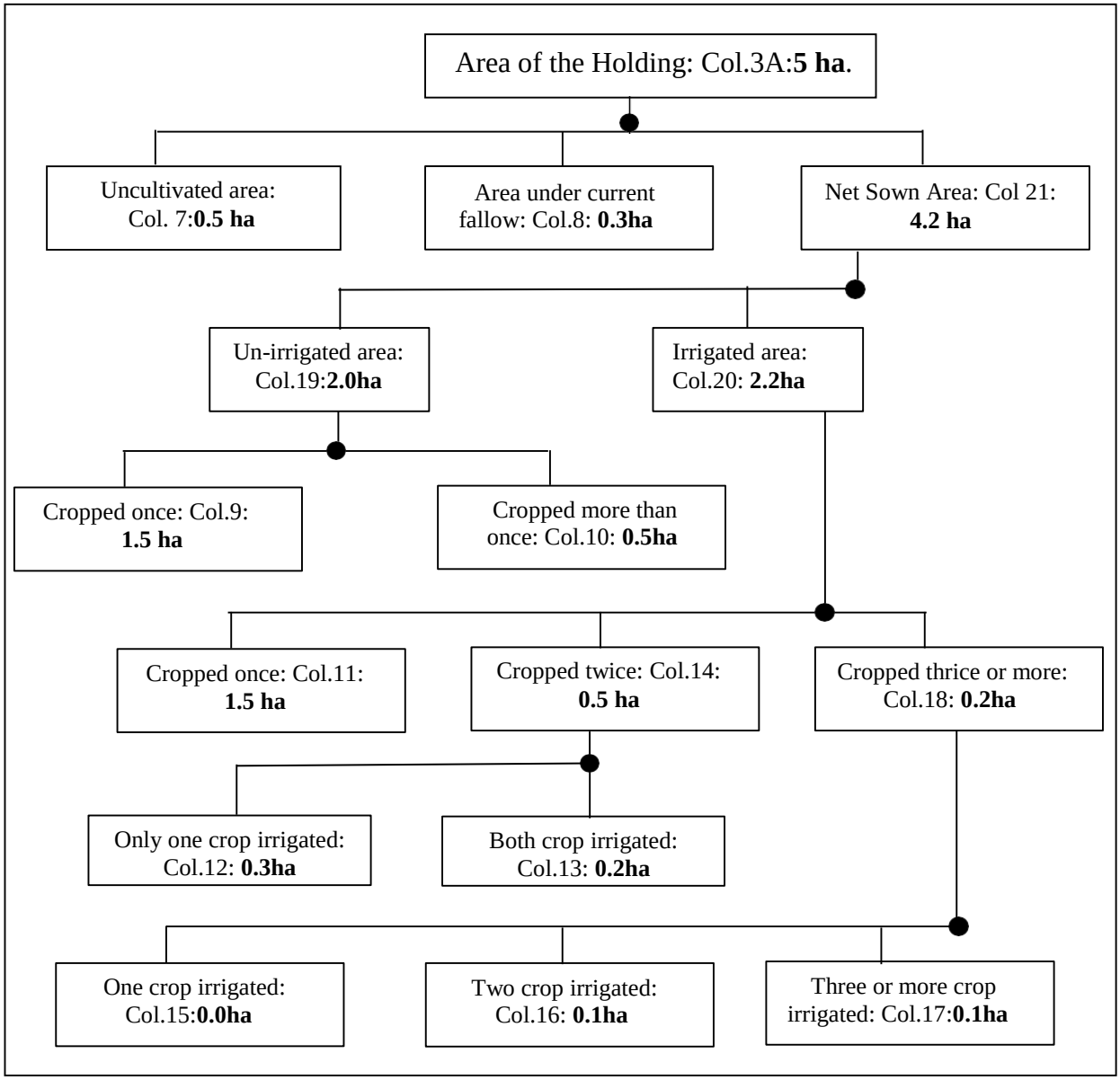
The sequential logic to be followed for filling **Cols. 7 to 17** of this block is clarified in the tree diagram given in **Box-1 below**. The tree diagram indicates successive divisions of area of parcel, which has been assumed to be 5.00 ha. as an example for explanation.

The entire information required in this schedule could be obtained by posing a series of six nodal questions. An illustrative list of questions to be asked by the enumerator with reference to example adopted in **Box-1** is given as modal interview schedule in **Box-2**. The expected answers and the figures to be filled in different columns are also given under the heading of Action.

It would be seen that the above logic works through successive elimination of area and focusing on smaller and smaller segments of the area of the survey number. The sequence of questions given in **Box-2** is to be followed for all survey numbers.

It is to be noted that this schedule has been designed to cover all possible situations that could be encountered in the field. The example adopted for **Boxes 1 & 2**, is such that figures are obtained in most of the columns of the **Block-J2**. However, in practice it may be possible that there is no figure in some of the columns.

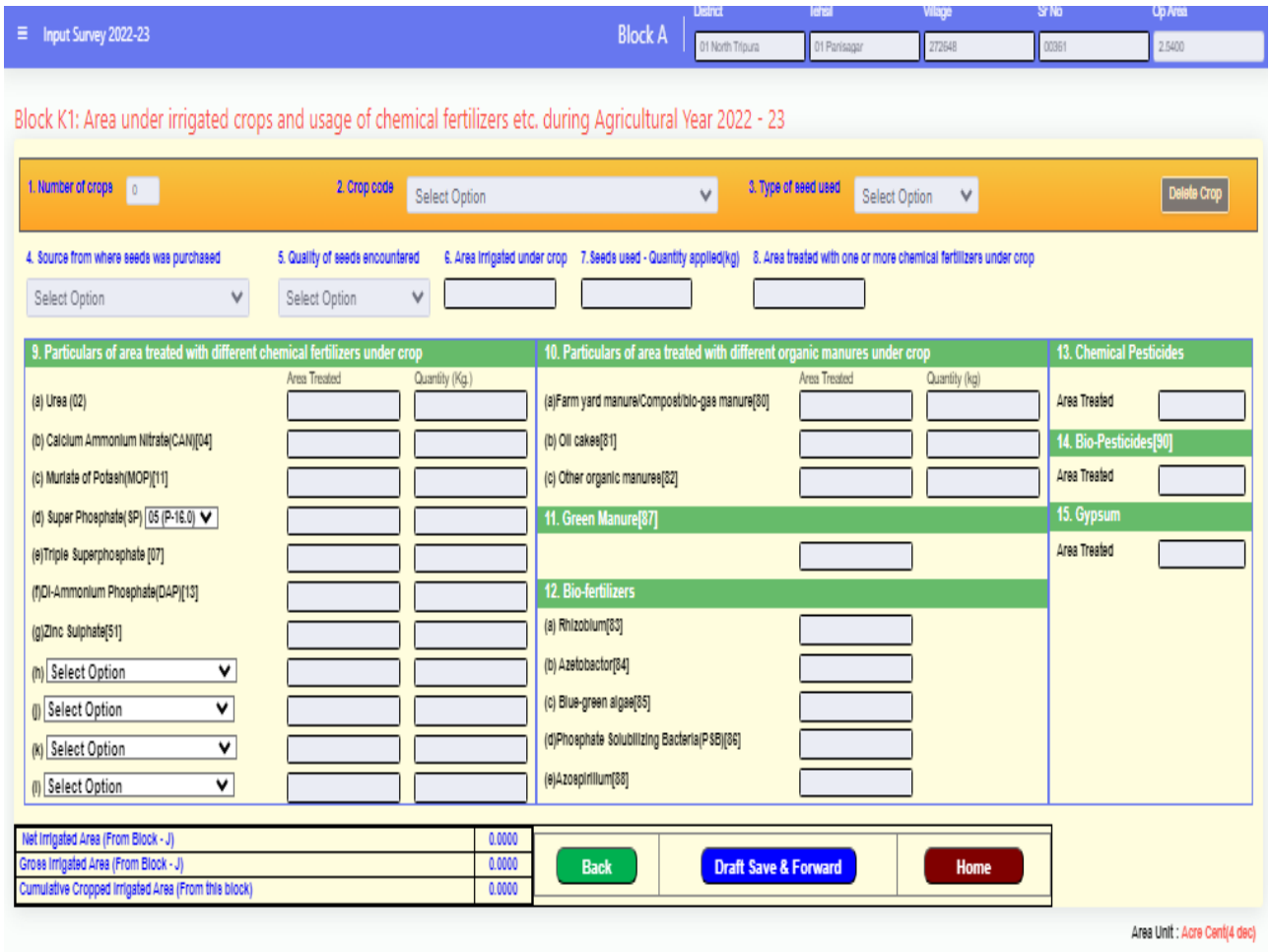
Box-1: Sequential Division of Area under various Categories in Block-J2



Box-2:Model Interview Sequence for Block J2

Nodal Question /Answer/Action	Description
QuestionNo.1	How much of total 5ha. area of the Holding did you cultivate in the Reference year?
Answer No.1	4.2 ha.
Auxiliary Question No.1(a)	How much of 0.8ha. of uncultivated land was current fallow and how much was under other uncultivated area?
AnswerNo.1(a)	Only 0.3 ha. was current fallow and remaining 0.5 ha. Was old fallow or culturable waste or not available for cultivation etc.
Action	Fill-up figures in Col. 7, 8 and 21, ensuring that these figures total to the figure in Col.3A.
Question No.2	How much of your Net Sown Area of 4.2 ha. receives no irrigation?
Answer No.2	2ha. Was totally unirrigated and 2.2ha. was irrigated.
Action	Fill Cols. 19 and 2 0 , ensuring the figures in these columns total to Col.21.
Question No.3	On how much your 2.0 ha. Un-irrigated land took only one crop and on how much more than one crop?
Answer No.3	On 1.5 ha. Only one crop and on remaining more than one crop.
Action	Fill column 9 and 10, ensuring they total to column 19.
Question No.4	On how much of your 2.2 ha. portion of the parcel which received irrigation, you took one crop, two crop or more than two crops? (This question may be put in two steps also by making auxiliary question, as in question 1).
Answer No.4	Only one crop on 1.5 ha., two crops on 0.5ha. and three crops on 0.2 ha.
Action	Fill columns 11, 14 and 18, ensuring that they total to col.20.
Question No.5	In how much of your 0.5ha. area which was irrigated and was cropped twice only one crop was irrigated and in how much two crops were irrigated.
Answer No.5	In 0.3ha. only one crop was irrigated, and in remaining both crop was irrigated.
Action	Fill Column 12 and13, ensuring that figures in these columns total to column14.
Question No.6	In how much of your 0.2ha. area which was irrigated and was cropped thrice or more only one crop was irrigated, two crops were irrigated and three or more crops were irrigated? (This question may be split in Auxiliary question as in question 1).
Answer No.6	In 0.1ha. two crops were irrigated and in remaining 0.1 ha. three or more crops were irrigated. Thus there was no area under one crop irrigated.
Action	Fill Columns 15, 16 and17 ensuring that figures in these columns total to Col.18.

27.1.11 ***Block K1 – Area under irrigated crops and usage of chemical fertilizers, seeds, manures and pesticides during Agriculture year 2022-23(July 2022 to June 2023) (Kharif 2022, Rabi 2022-23 and Jaid 2022-23):*** This Block is meant for collection of information pertaining to area under irrigated crops, use of chemical fertilizers, organic manures, bio-fertilizers and pesticides in respect of irrigated crops.



Macro Nutrient [Code]-drop-down and can select more than one: [Area] [Kgs]
Micro Nutrient [Code]-drop-down and can select more than one: [Area] [Kgs]
Complex Mixture[Code-NPK]-Drop-down and can select more than one: [Area] [Kgs] – option for adding extra code

27.1.11.1 ***Item 1: Number of Crops:*** Record the total number of irrigated crops grown by the operational holder under irrigated area during the reference year.

27.1.11.2 ***Item 2: Crop Code:*** Select Crop code along crop name from the drop-down list.

27.1.11.3 ***Item 3 to 5:*** Select appropriate code from the drop-down list of type of seed used, source from where seeds was purchased and quality of seeds encountered respectively against each of the corresponding crop code selected under item 2.

27.1.11.4 **Item 6 to 8:** Record the area irrigated, quantity of seeds (in kg)used and area treated with one or more of chemical fertilizers respectively against each of the corresponding crop code selected under item 2. The area under the crop against item 8 is not the total of the areas indicated against various fertilizers but the area treated with some chemical fertilizers. It may be noted that area treated with one or more chemical fertilizers under item8 should be either greater or equal to area treated with any specific fertilizer under the crop. Similarly, area treated with one or more chemical fertilizers at item8 would be either less or equal to area under irrigated crop of item 6.

27.1.11.5 ***Item 9: Particulars of area treated with different chemical fertilizers under crop:*** Particulars listed in item 9 refer to the use of chemical fertilizers. The information required is to be collected for each of the fertilizers used by the operational holder against the corresponding crop code selected at item 2. For each of the crop selected at item 2, the ***area fertilized*** *and* ***the quantity of specific fertilizer used (in kg***) for that crop is to be recorded in rows corresponding to those specific fertilizers. A comprehensive list of fertilizers and their codes is given in **Annexure-V**. For convenience of investigators/enumerators, the names of **seven major fertilizers** and their codes have been provided in the data entry screen. For other popular brand of Macro Nutrients, Micro Nutrients fertilizers and Complex Mixture, option for choosing particular fertilizers used by operational holder is provided as drop-down list and the corresponding Area Treated and Quantity used should be filled or recorded. As this block of information is to be used for estimation of nutrient wise consumption of fertilizers against each of the corresponding crop code selected under item 2, it is important to know the nutrient content of the fertilizers. However, in view of large number of complex / mixture popular in different parts of the country, the nutrient content of these fertilizers is to be provided under Complex Mixture. For example, if the farmer tells the name of popular brand, the same could be recorded at the time of interview. Suppose, it is known that this brand contains 12% Nitrogen (N), 32% Phosphate (P) and 16% Potash (K), the investigator will choose the fertilizer code for 12-32-16 and fill the corresponding fields. The unit recommended for recording area is hectare and that for quantity of fertilizer in kgs only. If farmer tells information in number of bags, it should be converted to equivalent Kgs to fill this block.

27.1.11.6 ***Item 10 to 15:*** Item No.10 to 15 relate to the use of organic manures, green manures, bio-fertilizers and Pesticides. The concepts of organic manure, green manure and bio-fertilizers are discussed in **Annexure-VII**. For the purpose of the survey, "Pesticide" would mean all types of chemicals used for killing pests on plants and would thus include insecticide, weedicide and fungicides.

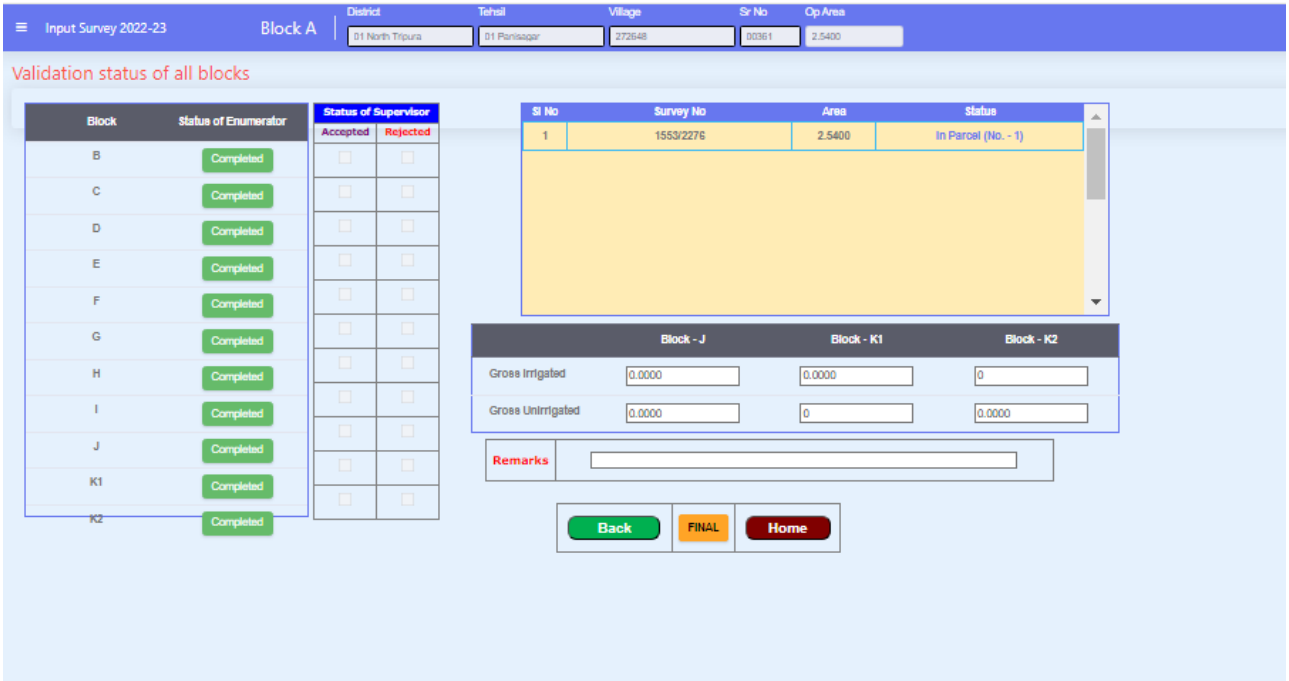
In case of long duration crops which cover both Kharif and Rabi/Jaid seasons, it should be ensured that the area is taken into account only once during the year and the quantity of various fertilizers, etc. used for the entire duration of the crop may be indicated.

27.1.12 ***Block K2– Area under un-irrigated crops and usage of chemical fertilizers, seeds, manures and pesticides during Agriculture year 2022-23 (July 2022 to June 2023) (Kharif 2022, Rabi 2022-23 and Jaid 2022-23):*** This block is meant for collection of information pertaining to area under unirrigated crops, use of chemical fertilizers, seeds, organic manures, bio-fertilizers and pesticides etc in respect of unirrigated crops.

The instructions for canvassing this block is the same as adopted for **Block K1**above.

27.1.13 ***Block- K: Validation status of all blocks:*** This block has been added to check/verify the status of progress or completion of each Block to ensure that

no information is left out during data collection work for the corresponding selected serial number or operational holder in Block-A. In this Block, the status of progress is displayed for each Block in terms of Completed or Pending. Also, the enumerator can go directly to any completed or pending Block by clicking on the status and fill the incomplete information or edit any information.



After ensuring that all the Blocks for the corresponding selected serial number or operational holder are completely filled, click on the button “Final Save” available in this Block to save the collected information and then move to next selected serial number or operational holder for filling the information.

Section – D: Annexure

Annexure-I

Tabe-1: Information on Number of Villages and villages selected in Tehsils/ Blocks

1. State: _____ | | |
2. District: _____ | | |
3. Total Number of Tehsils/Blocks in the District: _____ | | |

Sl. No.	Tehsil/Block Name	Tehsil /Block Code	Number of Villages in Tehsil/Block in Phase-II	No. of Villages selected for Input Survey	Names of selected villages with their codes	
					Name of village	Codes
1	2	3	4	5	6	7

Note: 35% villages are to be randomly selected with SRSWOR from Phase-II villages.

Generation of Tables through the system after updation of frame (Schedule-L)

Table-2: Size-class wise list of operational holders in the sample Village (Generate after completion of L Schedule)

Sl. No.	Name of the operational holder	Father/Husband name	Operated Area (in Ha.)
1	2	3	4

Table-3: Size-class wise selected operational holders in sample Village

Sl. No.	Name of the operational holder	Father/Husband name	Operated Area (in Ha.)
1	2	3	4

Note: Sample of 4 are to be selected randomly with srswor from each size class and additional 2 sample each as reserve for casualty sample.

Table-4: Total number and selected holders in Sample Village (District/Tehsil/Village level)

Number and Area of total and selected holdings in sample village																			
Marginal (below 1.00 ha.)				Small (1.00 to 1.99 ha.)				Semi-medium (2.00 to 3.99 ha.)				Medium (4.00 to 9.99 ha.)				Large (10.00 ha. & above)			
Total		In Sample		Total		In Sample		Total		In Sample		Total		In Sample		Total		In Sample	
No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Note: to be updated as and when the data is collected depending on number of casualty.

Annexure-II

Schedule-L: List of Operational Holders and their record of selection in the selected village.

Block-A: Identification particulars:

1. State: | | | 2. District | | | 3. Block/Tehsil | | |

4. Village: | | | | | | | 5. Name of Enumerator:

6. Area Unit: Hectare/Acre/Others (Specify):

Block-B: List of Operational Holders for all households in the Village:

Sl. No.	Sl. No. of operational holder	House No.	Name of operational holder	Father / husband name	Survey No.	Area operated					Tenancy Status
						Owned & self operated	Leased-in	Other-wise operated	Total area operated (Col.7+8+9)	Total area operated (in ha.)	
1	2	3	4	5	6	7	8	9	10	11	12

Note: Code for Tenancy Status in Col.12: 1 - Wholly owned and self-operated, 2 – Partly owned and partly leased-in, 3 – Wholly leased-in, 4 – Wholly otherwise operated, 5 – Partly owned and partly otherwise operated, 6 – Partly leased-in and partly otherwise operated, 7 – Partly owned, partly leased-in and partly otherwise operated.

Block-C: Area operated by Tenancy Status (Fill this block if information in Col.8 of Block-B is filled)

Sl. No. of area leased-in	Type of tenancy on leased-in area (1-Fixed Money, 2-Fixed produce, 3-share of produce, 4 –no specific terms from relatives, 5-others)	Area of leased-in
1	2	3

Annexure-III

Block-A: Identification particulars

1. State: | | | 2. District | | | 3. Block/Tehsil | | |

4. Village: | | | | | | | 5. Name of Enumerator:

Block-B: Demographic Profile

Sl. No.	Name of operational holder	Father / husband name	House Number	Age (as on the last birthday of holder) (in completed year)	Household size			Number of family members (18 years & above) engaged in agriculture						Operational holder engaged in other farming activities like livestock rearing / fishery / poultry etc along with Agriculture (Code 0 - 4)
								Male		Female		Transgender		
					Male	Female	Transgender	Fully	Partially	Fully	Partially	Fully	Partially	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Note: C***ode for Col.15*** : 0 – No, 1 – Livestock, 2 – Poultry, 3 – Fisheries, 4 – Others.

Block-C: Economic Profile

Sl. No.	Main Source of income of Operational holder (Code 1 – 7)	Main purpose of agriculture production (Code 1 – 3)	If Code 2 or 3 in Col.3 then to whom the agricultural products are sold (Code 1 – 9)	Are you satisfied with the sale outcome? (Code 1 – 6)
1	2	3	4	5

Note:1. ***Codeformain source of incomein Col.2***: 1 – Crop Production, 2 – Livestock, 3 – Poultry, 4 – Fisheries, 5 – Non-farming business, 6 – Wages/regular salaried, 7 – Others.

2. ***Codeformain purpose of agriculture production in Col.3***: 1 – Self Consumption, 2 – For Sale, 3 – Both.
3. ***Code for Col.4***: 1 – Local Market (including localtraders), 2 – APMC Market, 3 – Input Traders, 4 – Cooperative, 5 – Government Agencies, 6 – FarmersProducer Organizations (FPO), 7 – Private Processors, 8 – Contract Farming Sponsors/Companies, 9 – Others.
4. ***Code for Col.5***: 1 – Satisfactory, 2 – Not Satisfactory: Lower than Market Price, 3 – Delayed Payments, 4 – Deductions for Loans Borrowed, 5 – Faulty Weighing and Grading,, 6 – Other Cause of Dissatisfaction.

Block-D: Education and Technical Profile

Sl. No.	Educational Qualification of holder (code 1-6)$$	Whether attended any formal training in Agriculture (Yes-1/No-2)	Whether access to technical advice related to agricultural activity? (Yes-1/No-2)	If Yes in col. 4, source of technical advice		Type of information/advice received (Code 1-15)	Whether recommended/ advice adopted (Yes-1/No-2)
				Sl. No.	Source of Technical advice (Code 1 – 11)		
1	2	3	4	5	6	7	8

Note: 1. ***Code for education in Col.2***: Illiterate – 0; Primary (Standard V) – 1; Middle–2; High School/Secondary – 3; Senior Secondary / Pre-degree – 4; Technical diploma below degree level – 5; Graduate and above – 6.

2. ***Code for Sources of Technical advice in Col.6***: 1 – Progressive farmer, 2 – Input Dealers, 3 – Government Extension Agent/ATMA, 4 – Krishi Vigyan Kendra, 5 – Agriculture University / College, 6 – Private Commercial Agents, 7 – Farmer Producer Organizations (FPO), 8 – Private Processors, 9 – Agriculture Clinics & Agriculture Business Centers (ACABC), 10 – NGO, Kisan Call Centre, 11 – Print Media / Radio / TV / Smartphone Apps based information / Other Electronic Device.
3. ***Code for Type of technical advice received in Col.7***: Cultivation: 1 – Improved seed/variety, 2 – Fertilizer application, 3- Plant protection (pesticide etc.),4- Farm machinery , 5 – Harvesting/ Marketing, 6 – Others, Animal husbandry : 7 – Breeding, 8 – Feeding, 9 – Health care, 10 – Management, 11- Others, Fishery: 12 – Seed production, 13 – Harvesting,, 14 – Management and marketing, 15 – Others.

Block-E: Membership/Uses of Agricultural Services

Sl. No.	Are you a member of any FPO(Yes-1/No-2)	Do you have KCC (Yes-1 /No-2)	Have you taken any crop insurance during 2022-23 (Yes-1/No-2)	Are you aware of any agricultural schemes (Yes-1/ No-2)	If yes in col. 5, then no. of Schemes availed	Name of the availed schemes (Code 0 – 14)		Are you satisfied with the schemes (1 – Fully satisfied, 2 – Partially satisfied, 3 – No satisfied)	Is there any improvement in income during the last 5 years after availing the govt. beneficiary schemes (Code 0 – 4)
						Sl. No.	Name		
1	2	3	4	5	6	7	8	9	10

Note: 1. ***Code for agricultural scheme in Col. 8***: 0-No, 1 –PM-KISAN, 2 – PMFBY, 3 – PMKSY, 5 – e-NAM, 6 – KCC, 7 – RKVY, 8 – NFSM, 9 – AIF, 10 – SHC, 11 – MSP, 12 – NMSA, 13-ATMA, 14-Others.

2. ***Code for Col. 10***: 0 – No, 1 – 0 to 25%, 2 – 25 to 50%, 3 – 50 to 75%, 4 – Above 75%.

Block-F: Information on Organic Farming

Sl. No.	Do you practiced organic farming (Yes – 1 / No- 2)	If Yes in Col.2, provide area under organic farming	Is organic product produced by operational holder certified by government approved certification agency (Yes – 1 / No – 2)
1	2	3	4

Note: ##Organic farming is a system of agriculture without the use of chemical fertilizer & pesticides with an environmentally and socially responsible approach;

Block-G: Agricultural Credit availed by operational holder during 2022-23

Sl. No.	Have you availed any agricultural loan (Yes-1/No-2)	Sl. No. of loan	Source of loan availed*	Tenure of loan (1- short term (less than 1 year), 2- long term (more than 1 year)	Purpose of loan (1- fertilizer, 2-seeds, 3-Agricultural Machinery/tools , 4- capital formation in agriculture, 5- other agricultural inputs)	Amount of loan availed (in Rs.)
1	2	3	4	5	6	7

Note: **Code for source of loan in col. 4:** 1 – Primary Agricultural Credit Society, 2 – Regional Rural Bank Branch / Commercial Bank Branch, 3 – Other Institutions, 4 - Non-Institutional sector (including money lender).
**Agricultural loan includes loan taken through Kisan Credit Card.*

Block-H: Information on use of Seeds, IPM and Soil testing during 2022-23

SEEDS					
Sl. No.	Whether HYV/Hybrid seeds was used (Yes-1/No-2)	If yes in col. 2, Sl. No. of crops	Crop name along with code	Source from where HYV/Hybrid seeds was purchased	Quality of seeds encountered
1	2	3	4	5	6

Note: **1. Codes for source of HYV/Hybrid in col 5**: State Department of Agriculture – 1, Seed Corporation – 2, State Agriculture University Farms – 3, Cooperatives / Federations – 4, Private Seed Companies – 5, Private Seed Dealers / Retailers – 6, local market-7,FPO-8, Others-9 .
2. Codes for quality of seeds in col. 6: 1 - good, 2 - Varietal impurity, 3 – Germination failure, 4 - Physical impurity, 5 – Insect damage, 6 - Others.

Integrated Pest Management (IPM)		
Sl. No.	Was foundation /certified seed multiplication programme taken up by the operational holder? (Yes-1/No-2)	Practices followed for protection of your crop from pests (multiple options)
1	2	3

Note: **Code for Practices in col. 3**: 1- crop rotation, 2-agronomic & cultural practices other than crop rotation, 3-mechanical control, 4- biological, nature based or environmental methods, 5- chemical methods, 6- others (specify), 7- no efforts/practices.

SOIL HEALTH CARD						
Sl. No.	Whether soil testing ever done on the field of holder up to 30 June, 2023? (Yes-1/No-2)	If yes in col 2, please indicate area of the entire parcel(s) on which soil testing was carried out.	If yes in col. 2, whether soil testing carried out during last five years (i.e. from 01.07.2018 to 30.06.2023) (yes-1/No-2)	Do you have Soil Health Card (SHC)? (Yes-1/No-2)	Whether recommendations of Soil Health Card (SHC) adopted / applied? (Yes-1/No-2)	If yes in Col.6, did it help to increase in production (Yes-1/No-2)
1	2	3	4	5	6	7

Block-I: Use of Agricultural implements/machines/equipments

S.No.	Item	Codes	Whether used		
			Yes		No
			Owned	Hired	
1	2	3	4	5	6
A.	***MANUALMACHINES/EQUIPMENTS***				
	1.Hand seed fertilizer drill	101			
	2.Winnowingf an	102			
	3.Hand maize sheller	103			
	4.Chaff cutter	104			
	5.Hand-operated knapsack sprayer/duster	105			
	6.Sugarcane crusher	106			
	7.Others	107			
B.	***ANIMAL-DRAWNIMPLEMENTS***				
	8.Wooden plough	201			
	9.Cultivator (Triphali)	202			
	10.Seed-cum-fertilizer drill /seed drill	203			
	11.Levelling karah	204			
	12.Seedplanter	205			
	13.Animal drawn puddler	206			
	14.Others	207			
C.	***POWEREDEQUIPMENTS/MACHINES***				
	15.Powersprayer	301			
	16. Power tillers	302			
	17. Agricultural tractors	303			
	18.Tractor drawn mould board plough	304			
	19.Tractordrawndischarrow	305			
	20. Tractor drawn seed drill/seed-cum-fertilizer drill	306			
	21. Tractor drawn planter	307			
	22. Tractor drawn leveler	308			
	23. Tractor drawn potato digger	309			
	24. Power threshers (wheat, paddy, multi crop)	310			
	25.Power chaff cutter	311			
	26.Power cane crusher	312			
	27.Combine harvester (tractor powered)	313			
	28.Combine harvester (self-propelled)	314			
	29.Cultivator (tractor-drawn)	315			
	30.Rotavator	316			
	31.Cage wheels used for puddling	317			
	32.Self-propelled reaper	318			
	33.Powermaizesheller	319			

S.No.	Item	Codes	Whether used		
			Yes		No
			Owned	Hired	
1	2	3	4	5	6
	34.Groundnutdecorticator	320			
	35.Tractormounted reaper	321			
	36.Raised–bed planter / BBF planter (tractor drawn)	322			
	37.Zero–Till Seed–cum–Fertilizer Drill (tractor drawn)	323			
	38.Strip–Till –Drill(tractor drawn)	324			
	39.Sugarcane cutter planter (tractor drawn)	325			
	40.Vegetable trans planter (tractor driven)	326			
	41.Aero-blast sprayer	327			
	42.Power weeder (self-propelled)	328			
	43.Pneumatic planter (tractor drawn)	329			
	44.Self propelled rice transplanter (both riding type and walk behind)	330			
	45.Straw combines (tractor drawn)	331			
	46.Tractor drawn disc plough	332			
	47.The laser land leveler	333			
	48.Straw baler	334			
	49.Reaper binder	335			
	50.Sugarcane harvester	336			
	51.Tractormountedpostholedigger	337			
	52. Happy seeder	338			
	53.Tractor mounted spray pump	339			
	54.Brush cutter	340			
	55.Chain saw	341			
	56.Portable augur digger	342			
	57.Hedge trimmers	343			
	58.Diesel engine pumpset	344			
	59.Electric pumpsets	345			
	60.Sprinkler irrigation sets / micro sprinkler /rain gun	346			
	61.Drip irrigation set	347			
	62.Solar pumping set	348			
	63.Drone Technology	349			
	64.Tractor operated Check Basin Former	350			
	65.Tractor operated Sugarcane Seedling Trans planter (Two rows)	351			
	66.ractor operated inter row-cum-intra row weeder for Orchards	352			
	67.Tractor operated Horizontal Two side Discharge Shredder for Orchards	353			
	68.Tractor operated Hydro-Mechanically controlled Offset Orchard Manager	354			
	69.Tractor operated Manure Spreader for Orchards	355			
	70.Tractor operated Two Row forward-reverse Rotavator for Sugarcane crop	356			
	71.Tractor operated Banana Stem Shredder	357			
	72.Tractor operated Sugarcane Leaf Shredder	358			
	73.Tractor drawn Super Seeder	359			

S.No.	Item	Codes	Whether used		
			Yes		No
			Owned	Hired	
1	2	3	4	5	6
	74.Tractor Operated Smart Seeder	360			
	75.Hey Rack	361			
	76.Super SMS	362			
	77.Tractor drawn crust breaker/weed Slasher	363			
	78.Tractor drawn Ridger/Furrow Opener	364			
	79.Tractor drawn Bund Former	365			
	80.Self- propelled Combine Maize Harvester	366			
	81.Others	367			

Note: **Codes for Col. 4, 5 & 6:** Agricultural implements/machines/equipment owned & used by operational holder **Code – 1** will be recorded in Col.4; Used on hire basis **Code – 2** will be recorded in Col.5; Not used any Agricultural implements etc. **Code – 3** will be recorded in Col.6.

Block-J: Parcel-wise cropping pattern

S. No. of Parcel	Identification particulars of parcel / survey number	Area of parcel	Location of Parcel			Method of irrigation (Code1-4)	Type of energy used for irrigation (code1-4)
			Within village	Outside village but within tehsil/block	Outside tehsil / block but within district / State		
1	2	3	4	5	6	7	8
1.							
2.							
Total:							

Note: (1) Code for method of irrigation in col.7: 1 - surface/open channel, 2 - sprinkle, 3 - drip, 4-others;
(2) Code for type of energy in col.8: 1 - petrol, 2 - diesel, 3 - electricity, 4 - solar.
(3) Col.3 (Total) = Col.9+Col.10+Col. 11

Uncultivated area	Area under current fallow	Net Area Sown			Net Unirrigated Area	
		Total	Unirrigated	Irrigated	Cropped once	Cropped more than once
9	10	11 (Col. 12+ 13)	12 (Col.14 +15)	13 (Col.16 + Col.17 + Col.20)	14	15
Total:						

Net Area Irrigated			
Cropped once	Cropped twice		
	Total	One crop irrigated	Both crop irrigated
16	17 (Col.18+Col.19)	18	19
Total:			

Net Area Irrigated			
Cropped thrice or more			
Total	One crop irrigated	Two crop irrigated	Three or more crop irrigated
20 (Col.21 + Col.22 + Col.23)	21	22	23
Total:			

Gross Cropped Area		
Gross unirrigated area†+	**Gross irrigated area†+**	**Total (Col.24+25)**
24	**25**	**26**
Total:		

The following calculations may be done for Col.24 and Col.25:

1. Col.24 = Col.14 + 2*Col.15 + Col.18 + 2*Col.21 + Col.22
2. Col.25 = Col.16 + Col.18 + 2*Col.19 + Col.21 + 2*Col.22 + 3*Col.23.

Note: †+Cols.24 and 25 will be filled-upon the basis of 'Totals' given in cols.14 to 23 after applying the above mentioned formulae.

Block-K1*:* Area under irrigated crops and usage of chemical fertilizers, seeds, manures and pesticides during Agricultural Year 2022-23 (July 2022 – June 2023).

Sl. No.	Items	Irrigated Crops									Total of Irrigated Crops		
		Crop: (Code)			Crop: (Code)			Crop: (Code)					
		HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others
		Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Area irrigated under crop												
2.	Seeds used – Quantity applied (kg)												
3.	Area treated with one or more chemical fertilizers under crop												
4.	Particulars of area treated with different chemical fertilizers under crop												
	(a) **Urea** [**02**]												
	1. Area treated												
	2. Quantity (kg.)												
	(b) **Calcium Ammonium Nitrate (CAN) [04]**												
	1. Area treated												
	2. Quantity (kg.)												
	(c) **Muriate of Potash (MOP) [11]**												
	1. Area treated												
	2. Quantity (kg.)												
	(d) **Super Phosphate (SP) [05,06]**												
	1. Area treated												
	2. Quantity (kg.)												
	(e) **Triple Superphosphate [07]**												
	1. Area treated												
	2. Quantity (kg.)												
	(f) **Di-Ammonium Phosphate (DAP) [13]**												
	1. Area treated												
	2. Quantity (kg.)												
	(g) **Zinc Sulphate [51]**												
	1. Area treated												
	2. Quantity (kg.)												
	(h) **Complex/Mixed [ ]**												

Sl. No.	Items	Irrigated Crops									Total of Irrigated Crops		
		Crop: (Code)			Crop: (Code)			Crop: (Code)					
		HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others
		Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	1. Area treated												
	2. Quantity (kg.)												
	(i) **Complex/Mixed [ ]**												
	1. Area treated												
	2. Quantity (kg.)												
	(j) **Complex/Mixed [ ]**												
	1. Area treated												
	2. Quantity (kg.)												
	(k) **Complex/Mixed [ ]**												
	1. Area treated												
	2. Quantity (kg.)												
5.	Particulars of area treated with different organic manures under crop												
	a) **Farm Yard Manure (FYM)/Compost/Bio-gas manure [80]**												
	1. Area treated												
	2. Quantity (kg.)												
	b) **Oil Cakes [81]**												
	1. Area treated												
	2. Quantity (kg.)												
	c) **Other organic manures [82]**												
	1. Area treated												
	2. Quantity (kg.)												
6.	**Area treated with Green Manure [87]**												
7.	**Bio-fertilizers**												
	a) Area treated with Rhizobium [83]												
	b) Area treated with Azetobactor [84]												
	c) Area treated with Blue-green algae [85]												

Sl. No.	Items	Irrigated Crops									Total of Irrigated Crops		
		Crop: (Code)			Crop: (Code)			Crop: (Code)					
		HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others
		Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	d) Area treated with Phosphate Solubilizing Bacteria (PSB) [86]												
	e) Area treated with Azospirillum [88]												
8.	**Area treated with Chemical Pesticides [89]**												
9.	**Area treated with Bio-Pesticides [90]**												
10.	**Area treated with Gypsum**												

1. Net area under a crop <= net sown area.
2. Net irrigated area under a crop <= net irrigated area.
3. Area treated with one or more chemical fertilizers under a crop >= area treated with any specific chemical fertilizer under that crop.
4. Area treated with one or more chemical fertilizers under a crop ≤ area under that crop.

Block-K2*:* Area under unirrigated crops and usage of chemical fertilizers, seeds, manures and pesticides during Agricultural Year 2022-23 (July 2022 – June 2023).

Sl. No.	Items	Unirrigated Crops									Total of Unirrigated Crops		
		Crop: (Code)			Crop: (Code)			Crop: (Code)					
		HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others
		Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Area unirrigated under crop												
2.	Seeds used – Quantity applied (kg)												
3.	Area treated with one or more chemical fertilizers under crop												
4.	Particulars of area treated with different chemical fertilizers under crop												
	(a) **Urea [02]**												
	3. Area treated												
	4. Quantity (kg.)												
	(b) **Calcium Ammonium Nitrate (CAN) [04]**												
	3. Area treated												
	4. Quantity (kg.)												
	(c) **Muriate of Potash (MOP) [11]**												
	3. Area treated												
	4. Quantity (kg.)												
	(d) **Super Phosphate (SP) [05,06]**												
	3. Area treated												
	4. Quantity (kg.)												
	(e) **Triple Superphosphate [07]**												
	3. Area treated												
	4. Quantity (kg.)												
	(f) **Di-Ammonium Phosphate (DAP) [13]**												
	3. Area treated												
	4. Quantity (kg.)												
	(g) **Zinc Sulphate [51]**												
	3. Area treated												
	4. Quantity (kg.)												
	(h) **Complex/Mixed [ ]**												

Sl. No.	Items	Unirrigated Crops									Total of Unirrigated Crops		
		Crop: (Code)			Crop: (Code)			Crop: (Code)					
		HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others
		Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	3. Area treated												
	4. Quantity (kg.)												
	(i) **Complex/Mixed [ ]**												
	3. Area treated												
	4. Quantity (kg.)												
	(j) **Complex/Mixed [ ]**												
	3. Area treated												
	4. Quantity (kg.)												
	(k) **Complex/Mixed [ ]**												
	1. Area treated												
	2. Quantity (kg.)												
5.	Particulars of area treated with different organic manures under crop												
	a) **Farm Yard Manure (FYM)/Compost/Bio-gas manure [80]**												
	1. Area treated												
	2. Quantity (kg.)												
	b) **Oil Cakes [81]**												
	1. Area treated												
	2. Quantity (kg.)												
	c) **Other organic manures [82]**												
	1. Area treated												
	2. Quantity (kg.)												
6.	**Area treated with Green Manure [87]**												
7.	**Bio-fertilizers**												
	a) Area treated with Rhizobium [83]												
	b) Area treated with Azetobactor [84]												
	c) Area treated with Blue-green algae [85]												

Sl. No.	Items	Unirrigated Crops									Total of Unirrigated Crops		
		Crop: (Code)			Crop: (Code)			Crop: (Code)					
		HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others	HYV	Hybrid	Others
		Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3	Code1	Code2	Code3
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	d) Area treated with Phosphate Solubilizing Bacteria (PSB) [86]												
	e) Area treated with Azospirillum [88]												
8.	**Area treated with Chemical Pesticides [89]**												
9.	**Area treated with Bio-Pesticides [90]**												
10.	**Area treated with Gypsum**												

1. Net area under a crop <= net sown area.
2. Net unirrigated area under a crop <= net unirrigated area.
3. Area treated with one or more chemical fertilizers under a crop >= area treated with any specific chemical fertilizer under that crop.
4. Area treated with one or more chemical fertilizers under a crop ≤ area under that crop.

Annexure-IV

List of Crops and their Codes

SL. NO.	CROP CODE	CROPS
1.	9999	All Crops
2.	0101	All Paddy (Total Of 0111, 0121, 0131)
3.	0111	Pre Kharif Paddy
4.	0121	Summer Paddy
5.	0131	Kharif Paddy
6.	0102	Jowar
7.	0103	Bajra
8.	0104	Maize
9.	0105	Ragi
10.	0106	Wheat
11.	0107	Barley
12.	0108	Small Millets
13.	0109	Jobstears
14.	0110	Grim
15.	0186	Sawan
16.	0187	Ramdana
17.	0188	Other Cereals
18.	0199	Total Cereals
19.	0201	Gram
20.	0202	Tur (Arhar)
21.	0203	Urad
22.	0204	Moong
23.	0205	Masur
24.	0206	Horsegram
25.	0207	Beans (Pulses)
26.	0208	Peas (Pulses)
27.	0209	Moth
28.	0288	Other Pulses
29.	0299	Total Pulses
30.	0399	Total Foodgrains
31.	0401	Sugarcane
32.	0402	Palmvriah
33.	0488	Other Sugar Crops
34.	0499	Total Sugar Crops
35.	0501	Pepper (Black)
36.	0502	Chillies
37.	0503	Ginger
38.	0504	Turmeric

SL. NO.	CROP CODE	CROPS
39.	0505	Cardamom (Small)
40.	0506	Cardamom (Large)
41.	0507	Betelnuts (Arecanuts)
42.	0508	Garlic
43.	0509	Coriander
44.	0510	Tamarind
45.	0511	Cumin Seed
46.	0512	Fennel / Anise Seed
47.	0513	Nutmeg
48.	0514	Fenugreek
49.	0515	Cloves
50.	0516	Cinnamon
51.	0517	Cocoa
52.	0518	Kacholam
53.	0519	Beetlvine
54.	0520	Ajwain
55.	0521	Saffron
56.	0522	Bayleafs (Tejpatta)
57.	0588	Other Condi. & Spices
58.	0599	Total Spices & Condiments
59.	0601	Mangoes
60.	0602	Orange
61.	0603	Mosambi
62.	0604	Lemon / Acid Lime
63.	0605	Other Citrus Fruits
64.	0606	Banana
65.	0607	Table Grapes
66.	0608	Wine Grapes (Black)
67.	0609	Apple
68.	0610	Pear
69.	0611	Peaches
70.	0612	Plum
71.	0613	Kiwi Fruit
72.	0614	Chiku
73.	0615	Papaya
74.	0616	Guava
75.	0617	Almond
76.	0618	Walnut
77.	0619	Cashewnuts
78.	0620	Apricot
79.	0621	Jack Fruit

SL. NO.	CROP CODE	CROPS
80.	0622	Lichi
81.	0623	Pineapple
82.	0624	Watermelon
83.	0625	Musk Melon
84.	0626	Bread Fruits
85.	0627	Ber
86.	0628	Bel
87.	0629	Sahatoot
88.	0630	Aonla (Amla)
89.	0631	Pomegranate
90.	0632	Custard Apple
91.	0633	Passion
92.	0634	Remputan
93.	0635	Jamun
94.	0636	Plantain
95.	0637	Kinnoo
96.	0638	Strawberry
97.	0688	Other Fruits
98.	0699	Total Fruits
99.	0701	Potato
100.	0702	Tapioca (Cassava)
101.	0703	Sweet Potato
102.	0704	Yam
103.	0705	Elephant Foot Yam
104.	0706	Colocasia/Arum
105.	0707	Other Tuber Crop
106.	0708	Onion
107.	0709	Carrot
108.	0710	Radish
109.	0711	Beetroot
110.	0712	Turnip (Shalgam)
111.	0713	Tomato
112.	0714	Spinach
113.	0715	Amaranths (Chaulai)
114.	0716	Cabbage
115.	0717	Other Leafy Vegetable
116.	0718	Brinjal
117.	0719	Peas (Vegetable) (Green)
118.	0720	Lady’s Finger (Bhindi)
119.	0721	Cauliflower
120.	0722	Cucumber

SL. NO.	CROP CODE	CROPS
121.	0723	Bottle Gourd (Lauki)
122.	0724	Pumpkin
123.	0725	Bitter Gourd
124.	0726	Other Gourd
125.	0727	Vench (Guar)
126.	0728	Beans (Green)
127.	0729	Drumstick
128.	0730	Green Chillies
129.	0731	Ridge Gourd
130.	0732	Tinda
131.	0733	Snake Gourd
132.	0734	Koval (Little Gourd)
133.	0788	Other Vegetables
134.	0799	All Vegetables
135.	0899	Total Food Crops
136.	1001	Groundnut
137.	1002	Castorseed
138.	1003	Sesamum (Til)
139.	1004	Rapeseed & Mustard (Toria/ Taramira)
140.	1005	Linseed
141.	1006	Coconut
142.	1007	Sunflower
143.	1008	Safflower
144.	1009	Soyabean
145.	1010	Nigerseed
146.	1011	Oil Palm
147.	1088	Other Oilseeds
148.	1099	Total Oilseeds
149.	1101	Cotton
150.	1102	Jute
151.	1103	Mesta
152.	1104	Sunhemp
153.	1188	Other Fibres
154.	1199	Total Fibres
155.	1201	Indigo
156.	1288	Other Dyes & Tanning Materials
157.	1299	Total Dyes & Tanning Materials
158.	1301	Opium
159.	1302	Tobacco
160.	1388	Other Drugs & Narcotics
161.	1399	Total Drugs & Narcotics

SL. NO.	CROP CODE	CROPS
162.	1401	Guar
163.	1402	Oats
164.	1403	Green Manures
165.	1488	Other Fodder Crops
166.	1499	Fodder & Green Manures
167.	1501	Tea
168.	1502	Coffee
169.	1503	Rubber
170.	1588	Other Plantation Crops
171.	1599	Total Plantation Crops
172.	1601	Orchids
173.	1602	Rose
174.	1603	Gladiolus
175.	1604	Carnation
176.	1605	Merigold
177.	1606	Jasmine
178.	1607	Chrysanthemum
179.	1608	Tuberose
180.	1609	Gerbera
181.	1610	Gaillardia
182.	1611	Anthurium (Flower)
183.	1688	Other Flowers
184.	1699	Total Floriculture Crops
185.	1701	Asgandh
186.	1702	Isabgol
187.	1703	Sena
188.	1704	Moosli
189.	1705	Other Medicinal Plant
190.	1706	Mehandi
191.	1707	Allovera
192.	1708	Bacopamonnieri
193.	1711	Lemon Grass
194.	1712	Mint
195.	1713	Menthol
196.	1714	Eucalyptus
197.	1715	Other Aromatic Plant
198.	1716	Sandalwood
199.	1717	Vanilla
200.	1799	Total Aromatic And Medicinal Plants
201.	1801	Canes
202.	1802	Bamboos

SL. NO.	CROP CODE	CROPS
203.	1803	Mulberry Crop
204.	1804	Thespesia
205.	1805	Teak
206.	1806	Subabul
207.	1807	Casuarina tree
208.	1888	Other Non-Food Crops
209.	1899	Total Other Non-Food Crops
210.	1999	Total Non-Food Crops

Annexure-V

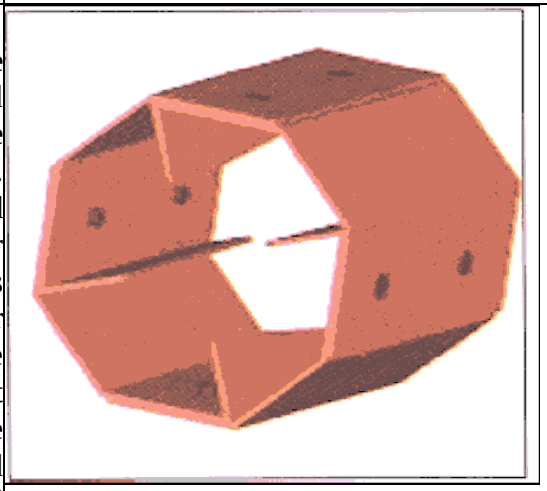
List of Fertilizers and Pesticides

Sl. No.	Description	Code	Nutrient Content		
			N	P	K
1	2	3	4	5	6
A. Macro Nutrient					
1	All Chemical Fertilizers	00	00.0	00.0	00.0
2	Ammonium Sulphate	01	20.6	00.0	00.0
3	Urea	02	46.0	00.0	00.0
4	Ammonium Chloride	03	25.0	00.0	00.0
5	Calcium Ammonium Nitrate	04	25.0	00.0	00.0
6	Single Super Phosphate	05	00.0	16.0	00.0
7	Single Super Phosphate	06	00.0	14.0	00.0
8	Triple Super Phosphate	07	00.0	46.0	00.0
9	Bone Meal (Raw)	08	00.0	20.0	00.0
10	Bone Meal (Steamed)	09	00.0	22.0	00.0
11	Rock Phosphate	10	00.0	18.0	00.0
12	Muriate of Potash	11	00.0	00.0	60.0
13	Potassium Sulphate	12	00.0	00.0	50.0
14	Diammonium Phosphate	13	18.0	46.0	00.0
15	Ammonium Phosphate Sulphate	14	16.0	20.0	00.0
16	Ammonium Phosphate Sulphate / Nitro Phosphate	15	20.0	20.0	00.0
17	Ammonium Phosphate Sulphate	16	18.0	9.0	00.0
18	Urea Ammonium Phosphate	17	28.0	28.0	00.0
19	Urea Ammonium Phosphate	18	24.0	24.0	00.0
20	Urea Ammonium Phosphate	19	20.0	20.0	00.0
21	Mono Ammonium Phosphate	20	00.0	52.0	00.0
22	Nitro Phosphate	21	23.0	23.0	00.0
23	Ammonium Nitrate Phosphate	22	23.0	23.0	00.0
24	Nitro Phosphate Potash	23	15.0	15.0	15.0
25	N P K Mixture	24	10.0	26.0	26.0
26	N P K Mixture	25	12.0	32.0	16.0
27	N P K Mixture	26	22.0	22.0	11.0
28	N P K Mixture	27	14.0	35.0	14.0
29	N P K Mixture	28	17.0	17.0	17.0
30	N P K Mixture	29	14.0	28.0	14.0
31	N P K Mixture	30	19.0	19.0	19.0
32	N P K Mixture	31	16.0	16.0	16.0
33	N P K Mixture	32	13.0	33.0	0.0
34	N P K Mixture	33	12.0	61.0	0.0
35	N P K Mixture	34	10.0	10.0	04.0

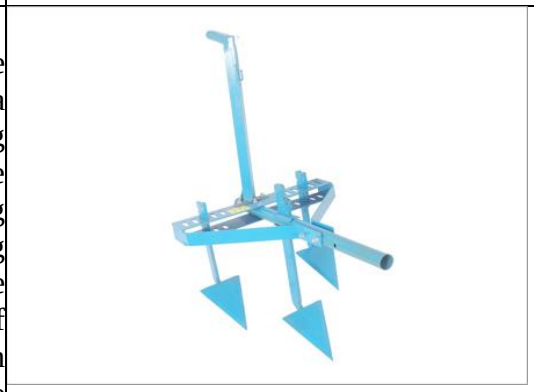
Sl. No.	Description	Code	Nutrient Content		
			N	P	K
1	2	3	4	5	6
36	N P K Mixture	35	10.0	10.0	10.0
B. Micro Nutrient					
37	Zinc Sulphate Heptahydrate/Monohydrate	51	00.0	00.0	00.0
38	Manganese Sulphate	52	00.0	00.0	00.0
39	Sodium Tetraborate (Borax)	53	00.0	00.0	00.0
40	Solubor	54	00.0	00.0	00.0
41	Copper Sulphate	55	00.0	00.0	00.0
42	Ferrous Sulphate	56	00.0	00.0	00.0
43	Ammonium Molybdate	57	00.0	00.0	00.0
C. Organic Fertilizer/Manure					
44	FYM	80	000	000	000
45	Oil Cakes	81	000	000	000
46	Other Organic Manures	82	000	000	000
D. Bio-fertilizers					
47	Rhizobium	83	000	000	000
48	Azetobactor	84	000	000	000
49	Blue Green Algae	85	000	000	000
50	Phosphate Sublizing Bacteria (PSB)	86	000	000	000
51	Azospirillum	88	000	000	000
E. Green Manure					
52	GREEN MANURE	87	000	000	000
F. Others					
53	Gypsum	41	000	000	000
54	Chemical Pesticides	89	000	000	000
55	Bio-pesticides	90	000	000	000

Annexure-VI

Machinery & Implement and their Codes and descriptions

Sl. No.	Code	Item/Definition	Picture
A. Manual Tools /Machines / Equipment			
1.	101	**Hand Seed Fertilizer Drill** This is a small manually operated single row seed cum fertilizer drill in which fluted roller metering mechanism is provided. A ground wheel is provided to drive the metering rollers. Seed and fertiliser are stored in a small hopper and a long beam is provided by which the implement could be pulled by one operator. Another worker guides the machine.	
2.	102	**Winnowing Fan** This is a mechanical device for generating winds for cleaning of grains from chaff when natural wind is not available. It consists of a frame, 3-bladed fan, bicycle pedal drive arrangement with seat, pulley belt transmission system and a grill partition.	
3.	103	**Hand Maize Sheller** The Octagonal Hand Maize Sheller is a manually operated simple device to remove maize grains from the dehusked cobs. The sheller consists of 4 mild steel fins tapered along their length, one edge of the fin is taper. For operation, the sheller is held in left hand and the dehusked maize cob in right hand (for right hand person). The cob is inserted in the sheller and is given forward and backward twist or given clockwise and anticlockwise strokes repeatedly.	

Sl. No.	Code	Item/Definition	Picture
4.	104	**Chaff Cutter** Two persons operate the machine, one feeds the forage or grass in the feeding trough and another rotates the flywheel with handle. The material fed in the hopper is gripped between the feed rolls which pull it and the material get chopped between blades mounted on the flywheel and stationary shear plate. Dry or green fodder can easily be chopped with the machine.	
5.	105	**Knapsack Sprayer** Knapsack sprayer consists of a pump and a air chamber permanently installed in a 9 to 22.5 liters tank. The handle of the pump extending over the shoulder or under the arm of operator makes it possible to pump with one hand and spray with the other. Uniform pressure can be maintained by keeping the pump in continuous operation.	
6.	106	**Sugarcane Crusher** The vertical type sugarcane crusher, consists of crushing roller, king and extracting roller. The crusher can be operated either by a pair of bullocks or electric motor/stationary engine with gear drive. The crushing roller has horizontal V -grooves on its periphery that help in crushing the sugarcane. The other rollers have straight grooved for extracting and removing juice.	
7	108	**Others**	
B. Animal Drawn Implements			

Sl. No.	Code	Item/Definition	Picture
8.	201	**Wooden Plough** This plough is suitable for ploughing in wetlands for raising rice crop using a pair of bullocks. The depth of cut in black soil is 3.5 cm and the width is 100-130 mm. The shoe is made of single casting with ribbed surface. The pole shaft is made of babul or vengai wood.	
9.	202	**Cultivator (Triphali)** The unit consists of reversible tines, frame, handle and a wooden beam. The working width of the cultivator can be adjusted by varying the spacing between the tines or expanding the frame. For operation the implement is attached to a pair of bullock by beam and moved in the soil. The tines dig into the soil and cut a small furrow slice.	
10.	203	**Seed Drill/Seed Cum Fertilizer Drill** It is a standardized animal drawn seed cum fertilizer drill which is suitable for crops like wheat, gram, sorghum, soybean, lentil, pea, sunflower, safflower etc. The shoe type furrow openers with non clogging boot place the seed at desired depth.	
11.	204	**Levelling Karah:** The animal drawn leveling Karah consists of a heavy batten made of Sal wood having 1500mm length and 100mm thickness on which a Mild Steel angle frame is fixed by means of screws. The frame carries a bar to which curved and pointed hooks are attached. It is secondary tillage equipment for clod crushing, stubble or trash collection, levelling and smoothing of land surface before seeding.	

Sl. No.	Code	Item/Definition	Picture
12.	205	**Seed Planter** Animal drawn 3-row inclined plate planter is a multi-crop planter for planting of bold and small seeds. The planter consists of a frame with tool bar, modular seed boxes; furrow openers and ground wheel. It has three independent seed boxes with inclined plate type seed metering mechanism. Seed plates for sowing different seeds can be selected and easily changed.	
13.	206	**Animal Drawn Puddler** It is rectangular blade type puddller suitable for puddling operation under wetland conditions. It has a wooden frame on which bushes are mounted. Shaft carrying the blades fixed in a staggered fashion rotates in the bushes. The blades are fixed at an angle to the direction of motion. The blades on the implement rotate and impart a lateral and turning action on the soil particles, thus achieving a good puddle.	
14.	207	**Others**	
C. Powered Equipments/Machines			
15.	301	**Power Sprayer** The motorized knapsack mist blower has a small 2-stroke petrol/ kerosene engine of 35 cc to which a centrifugal fan is connected. The centrifugal fan is usually mounted vertically. The fan produces a high velocity air stream, which is diverted through a 90-degree elbow to a flexible (plastic) discharge hose, which has a divergent outlet. The spray tank that has also a compartment for fuel and engine-fan unit is mounted on a common frame, which fits to the back of operator.	

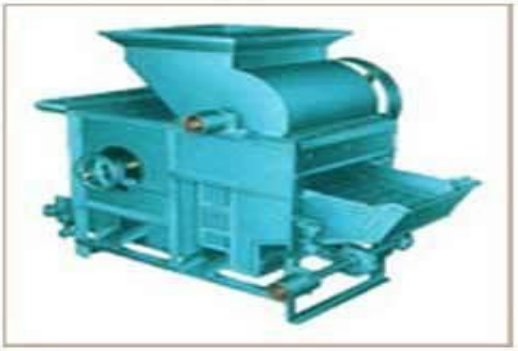
Sl. No.	Code	Item/Definition	Picture
16.	302	**Power Tiller** The power tiller is powered with a diesel engine. The engine power is transmitted to ground wheels through V –belt pulley. A tail wheel is provided at the rear to maintain the operating depth. The rotary weeding attachment does weeding.	
17.	303	**Agricultural Tractor** It is prime-mover used for operating various agricultural equipments/ machines.	
18.	304	**Tractor Drawn MB Plough** It is a tractor-operated implement and consists of share point, share, mouldboard, landslide, frog, shank, frame and hitch system. The working of the plough is controlled by hydraulic system lever and three-point linkage.	
19.	305	**Tractor Drawn Disc Harrow** The tractor mounted disc harrow consists of two gangs of discs mounted one behind the other. The discs on the front gang throw soil outward and the rear gang inward. Therefore, no soil remains uncut by the offset disc harrow.	
20.	306	**Tractor Drawn Seed Drill/Seed Cum Fertilizer Drill** It consists of seed box, fertilizer box, seed metering mechanism, fertilizer metering mechanisms, seed tubes, furrow openers, seed rate adjusting lever and transport cum power transmitting wheel.	

Sl. No.	Code	Item/Definition	Picture
21.	307	**Tractor Drawn planter** It has a hopper, ground wheel and seed metering mechanism, which are mounted on a common frame and hitched to the tractor with the three point linkage. It consists of modular frame, individual hopper for each row with seed and fertilizer chamber, vertical roller metering mechanism ground wheel etc. It is suitable for planting groundnut, soybean Bengal gram etc.	
22.	308	**Tractor Drawn Leveller** It consists of hitch system, replaceable cutting blade with sharp edge, and a curved plate with side wings, which form a bucket. The blade is made from medium carbon steel or low alloy steel, hardened and tempered to suitable hardness. During operation, the blade digs into the soil and extra soil is collected in the bucket, which is released in the depressions of the field. The angle and pitch of leveller is adjustable. The leveller can also angled left or right, or reversed for back filling.	
23.	309	**Tractor Drawn Potato Digger** The tractor pto operated potato digger elevator consists of a crescent/ convex/ triangular shape-cutting blade, elevator rollers generally made of iron bars, power transmission device and a tractor hitching system. The crescent shape blade helps in digging of the potatoes, which are carried to the shaking conveyor belt and finally delivered at the rear of the machine in windrows form	

Sl. No.	Code	Item/Definition	Picture
24.	310	**Power Thresher** It consists of spike tooth cylinder, aspirator type blower and sieve shaker. Two top covers, three concaves, three sieves, variable cyc1inder speeds are provided for threshing different crops. It is suitable for threshing wheat, maize, sorghum, rice, gram, pigeon pea, soybean, mustard, sunflower, safflower and linseed crops.	
25.	311	**Power Chaff Cutter** The chaff cutter consists of a trough, cutting blades, flywheel, cover plate, feed rolls, shear plate and stand. The blades are made of high carbon steel or alloy steel hardened and tempered to suitable hardness. The chaff cutter is powered by a electric motor and power to the flywheel is transmitted through V belt and pulley	
26.	312	**Power Cane Crusher** The horizontal type sugarcane crusher consist of crushing rollers, roller axles, and set of gears, side blades, trash blades and gear guard. There are three rollers, one for feeding and other two for crushing. The rollers are made of high-grade cast iron and V -grooved in order to hold the sugarcane. The rollers are held between cast iron side plates and mounted on heavy cast iron frame. The rollers receive power from motor or engine through a set of gears. The machine is operated by electric motor or stationary engine	

Sl. No.	Code	Item/Definition	Picture
27.	313	**Combine Harvester (Tractor Powered)** Machine is used for harvesting field crops and consists of cutting unit, threshing unit, cleaning and grain handling units. The cutting section includes reel, cutter bar, an auger and a feeder conveyer. Threshing section has threshing cylinder, concave and cylinder beater. The cleaning section mainly consists of straw walker, chaffer sieve, grain collection pan and blower. It is powered by a tractor	
28.	314	**Combine Harvester (Self Propelled)** Machine is used for harvesting field crops and consists of cutting unit, threshing unit, cleaning and grain handling units. The cutting section includes reel, cutter bar, an auger and a feeder conveyer. Threshing section has threshing cylinder, concave and cylinder beater. The cleaning section mainly consists of straw walker, chaffer sieve, grain collection pan and blower. It is powered by a diesel engine mounted on it.	
29.	315	**Cultivator (Tractor drawn)** It consists of a rectangular frame made of mild steel angle or channel section, heavy-duty tynes made of mild steel flat or plate section, reversible shovels joined to tynes with fasteners, and hitch assembly.	

Sl. No.	Code	Item/Definition	Picture
30.	316	**Rotavator** It consists of a steel frame, a rotary shaft on which blades are mounted, power transmission system, and gearbox. The blades are of L-type, made from medium carbon steel or alloy steel, hardened and tempered to suitable hardness. The PTO of tractor drives the rotavator. Rotary motion of the PTO is transmitted to the shaft carrying the blades through gearbox and transmission system. A good seedbed and pulverization of the soil is achieved in a single pass of the rotavator.	
31.	317	**Cage Wheels Used for Puddling** Mounted on the wheels of tractors and used for puddling operation	
32.	318	**Self Propelled Reaper** It is self propelled front mounted, walk behind type reaper windrower. The reaping attachment consists of cutter bar, two crop conveyor belts, crop row dividers and star wheels. The cutter bar and conveyor belts are driven by engine through belt-pulley and safety clutch. It is suitable for harvesting and windrowing of erect rice and wheat crops.	
33.	319	**Power Maize Sheller** The machine consists of a threshing cylinder, concave and centrifugal blower mounted on a frame. Crop feeding is manual. The threshing cylinder is of spike tooth type. Round bars are used as spikes, which are fitted on circular rings. The head comes out through the opening at the far	

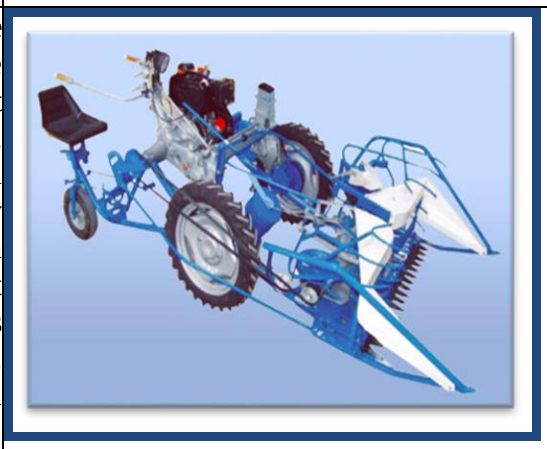
Sl. No.	Code	Item/Definition	Picture
		end of threshing drum. A blower is used for cleaning the grains.	
34.	320	**Groundnut Decorticator** Used for separating the kernels from groundnut pods.	
35.	321	**Tractor Mounted Reaper** The machine is mounted in front of the tractor and the power to the machine is given from tractor PTO with the help of intermediate shaft running beneath the chassis of the tractor and a coupling shaft. Height of the machine above ground is controlled by tractor hydraulic with the help of pulleys and steel ropes. After the crop is cut by the cutter bar, it is held in a vertical position and delivered to one side of the machine by lugged belt conveyors and fall on the ground in the form of a windrow perpendicular to the direction of movement of machine.	
36.	322	**Raised Bed Planter** The bed planter consists of a frame, planting hoppers, fertilizer box, furrow openers bed shaper and power transmitting wheel. The furrow openers are ridger type and have mouldboard and share point. The machine makes two beds. Machine can sow two or three rows of wheat on each bed. Machine has seed metering unit of vertical disc type.	

Sl. No.	Code	Item/Definition	Picture
37.	323	**Zero Till Seed Cum Fertilizer Drill** No till drill consists of frame, seed box, fertilizer box, seed metering mechanism, fertilizer metering mechanism, seed tubes, furrow openers ,seed adjusting lever and transport cum power transmitting wheel. The main difference between Zero-till drill machine and conventional drill is that it has narrow shovels known as inverted T -type furrow openers instead of tyne type furrow openers. The main advantage of narrow shovels is lower draft requirement and easier penetration in the soil.	
38.	324	**Strip Till Drill (Tractor Drawn)** It consists of a standard seed drill with a rotary attachment mounted in the front. The rotary system has C-type blades, which prepare a 75 mm wide strip in the front of every furrow opener. Thus with every row, 125 mm of the strip is left untilled and only 40 percent of area is tilled. Tilling and sowing is done simultaneously.	
39.	325	**Sugarcane Cutter Planter (Tractor Drawn)** Machine consists of furrow opening unit, sett cutting unit, fertilizer application unit, chemical application unit, sett covering unit and seed box. For the operation, two labourers sitting on the machine feed completes sugarcane one by one into the sett cutting unit by picking from the seed hopper. The rotating blades cut the setts automatically before dropping into the furrows. Fertilizer and chemicals are also applied simultaneously a long with the setts, before covering of furrows.	

Sl. No.	Code	Item/Definition	Picture
40.	326	**Vegetable Transplanter** The machine consists of seedljng tray, seat for the operator, furrow opener, compaction wheels, finger guide tunnel, picker wheel type metering mechanism. Picking forks has spring mounted rubber flappers, which open before passing through the tunnel and close during its passage. These flappers open again at the bottom end of the tunnel to release the seedlings in a furrow. The inclined wheels compact the soil around the seedlings. Two persons one for each row sitting on the machine are required to place the seedlings in the flappers when these open at the top position. The root side of the seedlings is kept towards the operator.	
41.	327	**Aero Blast Sprayer** The machine consists of tank of 400 litres capacity, , pump, fan, control valve, filling unit, spout adjustable handle and spraying nozzles to release the pesticide solution in to stream of air blast produced by the centrifugal blower. The air blast distributes chemical in the form of very fine particles throughout its swath, II which is on one side of tractor. The major portion of swath is taken care of by the main blast through the main spout and the auxiliary nozzles cover the swath area near the tractor. The sprayer is mounted on the tractor 3-point linkage and is operated by tractor pto.	

Sl. No.	Code	Item/Definition	Picture
42.	328	**Power Weeder (Self Propelled)** The power from the engine is transmitted with the help of belt pulleys and chain- sprockets to the rotary and ground wheels for rotating the blades and propelling the machine forward. The clutch is also provided on both sides for turning the machine to right or left. The rotary blades are the soil working tool for weeding or seedbed preparation.	
43.	329	**Pneumatic Planter** It consists of pneumatic metering system for five independent rows. Separate sets of seed plates are required for planting different sizes of seeds. It is provided with compressor for creating suction and pressure heads for singulation of seeds independently in the five hoppers. (**Apprx. Cost Rs. 80000/-)**	
44.	330	**Self Propelled Rice Transplanter** It consists of prime mover, transmission, engine, float, lugged wheels, seedling tray, seedling tray shifter, pickup fork and pickup fork cleaner. It is a walk behind type rice transplanter using mat type nursery and it transplants the seedling uniformly without damaging them. The planting depth and hill-to-hill spacing can be adjusted. Automatic depth control helps in maintaining uniform planting depth.	

Sl. No.	Code	Item/Definition	Picture
45.	331	**Straw Combine** Straw combine tractor mounted and is tractor pto operated. It has cutter bar reel, feeding auger and bruising cylinder like a traditional thresher. Straw thrown and stubble left by the grain combine is collected by straw combine and delivered to the cylinder concave section, where it is cut into pieces and passed through the concave.	
46.	332	**Tractor Drawn Disc Plough** The plough consists of common mainframe, disc beam assemblies, rockshaft, a heavy spring loaded furrow wheel and a gauge wheel. The discs of the plough are made of high carbon steel or alloy steel and the edges are hardened and sharpened. The discs are mounted on tapered roller bearings.	
47.	333	**The laser land leveler** consists of a laser transmitter, a laser receiver, an electrical control panel, a twin solenoid hydraulic control valve, two wheels and a leveling bucket. The laser transmitter transmits a laser beam, which is intercepted by the laser receiver mounted on the leveling bucket. The control panel mounted on the tractor interprets the signal from the receiver and opens or closes the hydraulic control valve, which raises or lowers the bucket. Some laser transmitters have the ability to operate over graded slopes ranging from 0.01% to 15% and apply dual controlled slope in the field. The leveling bucket can be either 3-point linkage mounted or pulled by the tractor's drawbar. Bucket dimensions, number of wheels and capacity will vary according to the	

Sl. No.	Code	Item/Definition	Picture
		available power source and field conditions.	
48.	334	**Straw Baler:** The tractor PTO operated machine consists of reel type straw pick up assembly, and straw compaction and tying units. It automatically picks up the residue straw from field with the help of reel which is transferred into bale chamber with the help of feeder and then straw is compressed with the reciprocating ram into a compact variable length size. It also automatically ties the knots using metal wire or nylon rope.	
49.	335	**Reaper-Binder** is a unique harvesting machine that reaps the crop as well as binds it simultaneously with a twine. This Innovative Mechanical machine ensures 100% recovery of straw with negligible grain losses at a surprisingly low cost of operation. This machine is mainly used in Wheat, Paddy, Oats, Barley and other grain crops.	
50.	336	**Sugarcane Harvester**: It is a chopper harvester with a cleaning system and whole cane harvesters are also available. It can cut one/two rows of cane at a time. The cane is fed between the crop dividers and is cut at the root zone by base cutter blades and simultaneously de-topped from top. The cane is then fed through the roller train and is cut by the chopper drums into small cane pieces of 24.5 to 30 cm.	

Sl. No.	Code	Item/Definition	Picture
51.	337	**Tractor Mounted Post Hole Digger-** Used for digging pits which are ideal for installing fence posts, decks, planting trees and shrubs, ice fishing, and more.	
52.	338	**Happy Seeder:** are specially designed for sowing of wheat in standing paddy stubbles after combine harvesting. it saves working time, fuel & irrigation expenses.	
53.	339	**Tractor Mounted Spray Pump**: It is mounted on the tractor three point linkage and is powered by tractor PTO. It is used for spraying pesticides and fertilizer on the crops, in order to protect it from the pest and increase the fertility of the soil respectively.	
54.	340	**Brush Cutter:** It is equipped with a Mini Petrol engine and used as an Agricultural Grass Cutting Machine, which is widely used in Agriculture Industry for cutting grass, vegetable stems, etc. With little modification it is also used for cereal crop harvesting.	

Sl. No.	Code	Item/Definition	Picture
55.	341	**Chain Saw:** It is also called power saw and is a light and portable machine normally and operated by one person. Cutting is done by an endless chain fitted with cutters, which runs around a flat piece called the bar.	
56.	342	**Portable Augur Digger:** It is equipped with a Mini Petrol engine. Used for digging pits which are ideal for installing fence posts, decks, planting trees and shrubs, ice fishing, and more.	
57.	343	**Hedge Trimmers;** sometimes also called hedge shears, or hedge clippers used for cutting hedge.. These are designed as large scissors or large pruning shears. Motorized hedge trimmers allow work to be done faster and with less effort.	
58.	344	**Diesel Engine Pumpset** The pump for water lifting is coupled to a Diesel engine.	
59.	345	**Electric Pump Sets** The pump is driven by an electric motor	

Sl. No.	Code	Item/Definition	Picture
60.	346	**Sprinkler Irrigation Sets** Irrigation by sprinkler is nearest to natural rainfall, where water is sprayed into air in the form of coarse droplets. The major components of sprinkler system are: (i) pump, which lifts the water from source and sends it under pressure in the system. (ii) main lines, which may be permanent or portable; portable lines are usually made of aluminum where as permanent lines may be of steel, asbestos cement or PVC. Main lines receive water from pump and discharge into laterals. (iii) lateral lines, which are usually made from aluminum and are portable; however in some orchards and nurseries permanent laterals are buried, (iv) riser pipes which are attached to the laterals. The height of the riser depends on the height of the crop, (v) sprinkler head, which convert the water stream into coarse droplets and also throw the droplets to a distance, since the sprinkler head rotates while in operation, a circular pattern is achieved.	
61.	347	**Drip Irrigation Set** Also known as trickle irrigation; it is one of the efficient ways of applying irrigation water to the horticultural crops. The water can be applied on the surface or sub surface, very near to the root zone of the plant. The system consists of main line, sub lines, supply lines, laterals and emitters. The water is discharged either through emitters or micro-tubes. The pipe lines are made from black PVC to avoid growth of algae in the lines. Besides above, the system has a centrifugal pump, fertilizer tank and filtration tank.	

Sl. No.	Code	Item/Definition	Picture
62.	348	**Solar Pumping Sets** A solar water pump has a mini power house at its heart and consists of a calibrated and matching solar array of modules – tuned with the equivalent power of pump. Each solar array has a number of solar modules connected in parallel or series. Every solar PV panel generates current by converting solar radiation to electrical energy. The electrical energy from the entire array is controlled, tuned and directed by the inbuilt controller in DC pumps or through the Variable Frequency Driver (VFD) and enables the connected pump to draw water and feed the delivery pipelines.	
63.	349	**Drone Technology**	
64.	350	Tractor operated Check Basin Former	
65.	351	Tractor operated Sugarcane Seedling Transplanter (Two rows)	

Sl. No.	Code	Item/Definition	Picture
66.	352	Tractor operated inter row-cum-intra row weeder for Orchards	
67.	353	Tractor operated Horizontal Two side Discharge Shredder for Orchards	
68.	354	Tractor operated Hydro-Mechanically controlled Offset Orchard Manager	
69.	355	Tractor operated Manure Spreader for Orchards	

Sl. No.	Code	Item/Definition	Picture
70.	356	Tractor operated Two Row forward-reverse Rotavator for Sugarcane crop	
71.	357	Tractor operated Banana Stem Shredder	
72.	358	Tractor operated Sugarcane Leaf Shredder	
73.	359	Tractor drawn Super Seeder	

Sl. No.	Code	Item/Definition	Picture
74.	360	Tractor Operated Smart Seeder	
75.	361	Hey Rack	
76.	362	Super SMS	
77.	363	Tractor drawn crust breaker / weed Slasher	
78.	364	Tractor drawn Ridger/Furrow Opener	

Sl. No.	Code	Item/Definition	Picture
79.	365	Tractor drawn Bund Former	
80.	366	Self-propelled Combine Maize Harvester	
81.	367	Others	

Annexure-VII

Concepts and Definitions

1. Operational Holding

1.1 Operational holding is defined as '*all land which is used wholly or partly for agricultural production and is operated as one technical unit by one person alone or with others, without regard to the title, legal form, size or location*'. The technical unit has been defined as '*that unit which is under the same management and has the same means of production such as labour force, machinery and animals*'. It would be seen from this definition that the actual cultivator and not the owner is the unit for collection of data.

1.2 An operational holding would include both cultivated and uncultivated area. If, for example, an operational holding consists of four survey numbers out of which one survey number is put to non-agricultural uses, the total area of the operational holding would be equal to the total geographical area of the four survey numbers. The holding will exclude Government Forest land, Government waste land and village common grazing land. If Government waste land is allotted to an individual then it will be included in the holding.

1.3 If all the survey numbers of an operational holding are put to non-agricultural uses, then it would not be considered as an operational holding for the purpose of Agriculture Census as also for Input Survey. Besides, 'Abadi Area' (Residential Area) is completely excluded from the total area of the holding.

1.4 If, during the reference year, the entire area of the operational holding is under current fallow, this will still be considered as an operational holding for Agriculture Census, but as no information can be gathered in Input Survey from such holding, these holdings will not be included in the sampling frame for collecting information in Input Survey. Nevertheless, these holdings will be included for preparation of multiplier tables in their respective size classes. If the entire area of the holding is under current fallow and was fallow during the previous year of the current year (year of reference) also, it will also not be considered as an operational holding for Input Survey.

1.5 In some cases, land is divided amongst all the members of the family. Where it is divided among husband, wife and minor children and cultivation is being done by the husband as head of the family, the land may appropriately be treated as one operational holding.

1.6 There might be cases where in the record, a holding is shown jointly in the names of more than one co-sharer while in practice the land might have been privately divided and the co-sharers are independently cultivating. In such cases where there is no dispute these should be treated as many operational holdings as are the number of independent cultivators.

1.7 In some States, in the zamabandhi register against a Khata, names of three or four persons are shown. While from the records it would appear that there is only one holding, but in practice, all the three or four brothers are actually cultivating the land independently of each other although there is no legal partition of land. From the census point of view, this would constitute three or four operational holdings and thus these would be separately listed in the Sampling Frame for Input Survey.

1.8 For cultivated areas in the State Forests, no detailed land records are prepared. In the absence of the land records and revenue agency such areas are excluded for census purposes and thus will not be included in Input Survey also.

2. Parcel

2.1 A parcel is all land entirely surrounded by land of other holdings or by land not forming part of any holding. It may consist of one or more cadastral units, plots or fields.

3. Holder or the Operator

3.1 The holder, for census purposes, is the person who has the responsibility for the operation of the agricultural holding. He exercises the technical initiative and responsibility for the operation of the holding and may have full economic responsibility (i.e. as owner) for it or share this with others (as a tenant). When two or more persons share jointly (as partners) in the economic and technical responsibility for the operation of an agricultural holding, each is to be considered as the holder if they belong to different households and the holding will be termed as joint holding. For Input Survey any one of these could be taken as operational holder and be approached for giving response to questionnaire.

4. Total Area of the Holding

4.1 The total area of the holding should include the total of all land forming part of a unit which is under the same technical responsibility and management. It should also comprise the land occupied by the farm buildings, including the house of the holder, provided such buildings are within the cultivated area. If the farm buildings are located outside cultivated area and are covered under Abadi Area, then such buildings will not be included in the area of the holding.

5. Agricultural Production

5.1 For the purpose of Input Survey, Agricultural Production would mean the growing of field crops, fruits, grapes, nuts, seeds, tree nurseries (except those of forest trees), bulbs, vegetables and flowers, production of coffee, tea, cocoa, rubber, jute, oilseeds, fodder, grasses, etc.

5.2 In place where special efforts are made to raise grass, it would be treated as a crop for the purpose of the survey.

6. Land Utilisation

6.1 Usually for land records, a nine-fold classification of land use is followed by the State Governments. For the purpose of Input Survey and Agriculture Census, this has been abridged to only three categories comprising of uncultivated area, area under current fallow and net sown area. The most of the questions in Schedule 2.1 are focused on obtaining details of what is happening on net sown area. These details relate to knowing the cropping intensity under irrigated and unirrigated conditions. These concepts are explained below:

Net Area Sown

6.2 This would represent the total cultivated area during the reference year without any regard to number of times it has been cultivated in an year. Thus for finding the net sown area, the areas cultivated more than once during the same year will be counted only once. Both field crops and orchards will form part of the net sown area.

Area under Current Fallow

6.3 This would include all the areas which are usually cropped but have not been cultivated during the reference year. For an area to be classified as current fallow, it should be fallow during the current year and should have been cultivated during the previous year. If entire area of a holding is not being cultivated for the last two years including year of reference, such holdings will not be considered for Agriculture Census/Input Survey.

Uncultivated Area

6.4 This would include the following seven categories :-

i) *Fallow land other than current fallow*: This should include all lands which were taken up for cultivation but are temporarily out of cultivation for a period of greater than one year and not more than five years, i.e. less than or equal to five years. The reason for keeping lands fallow may be one or more of the following:-

a) Poverty of cultivators'
b) Inadequate supply of water;
c) Adverse climatic conditions;
d) Silting of canals and rivers; and
e) Unremunerative nature of farming

ii) *Culturable waste*: This should include lands available for cultivation, whether or not taken up for cultivation at any time. These are lands which were not cultivated during the current year and the last five years or more in succession for one reason or the other, i.e. > 5 years in succession. Such lands may be either fallow or covered with shrubs and jungles which are not put to any use. Land once cultivated but not cultivated afterwards for five years in

succession should also be included in this category at the end of the five years. Culturable waste land within the holdings would alone be covered for the Input Survey.

iii) *Permanent pastures and other grazing land*: This should include all grazing lands, whether they are permanent pastures and meadows or not. Village common grazing land shall be excluded for the purpose of Census.

iv) *Land under miscellaneous tree crops*: This would include cultivable land, which is not included in the net area sown but are put to some Agricultural use. Lands under Casuarine trees, thatching grasses, bamboo bushes and 'Orchards' should be classed under this category. Lands of this type outside the holdings will not be included.

v) *Forests*: This should include all lands classified as 'Forests' under any legal enactment dealing with forests or administered as forests, whether State owned or private, and whether wooded or maintained as potential forest land. The area of crops raised in the forest and grazing lands or areas open for grazing within the forests should remain included under the forest area. **Only private forests belonging to the operational holder would be covered for the purpose of Agriculture Census and Input Survey**.

vi) *Area under non-agricultural use*: This should include all lands occupied by buildings, tanks and ponds put to uses other than agricultural purpose within the holdings. Only such lands within the cultivated holding of the operational holder should be covered in Input Survey / Census.

vii) *Barren and uncultivated land*: This should include all barren and uncultivated land within cultivated holding of the operational holder.

7. Integrated Pest Management

7.1 Traditionally there have been a number of practices which have been adopted by farmers as plant protection measures. These practices could be categorized in four groups, viz., agronomic and cultural control, mechanical control, biological control and chemical control. Usually, a specific approach keeping in view crop variety and agro-climatic conditions is adopted by the farmer for protection of his crops against insects and pests. The approach may be a combination of methods falling in one or more of the above four categories. For best results the experts advise a judicious combination of these approaches and label it as Integrated Pest Management (IPM). The components of IPM program are outline below:

Agronomic and Cultural Practices including Crop Rotations

7.1.1 This is a preventive method and is based upon knowledge of life history and habits of pest. The practices covered in this category include: deep ploughing after harvesting a crop to expose the hiding or resting insects, weeding, removing and destroying of stubbles and other trash, adjusting the time of sowing to avoid peak

incidence period of pests, clean cultivation, the removal of alternative wild hosts, crop rotations and choosing of insect and disease resistant varieties.

Physical and Mechanical Control

7.1.2 This is one of the oldest methods and includes measures, such as collection of eggs and caterpillars (in active stages of pests); removal and destruction of infected part of the plant, beating of drums, laying of night traps and yellow traps. These methods are found effective at initial stage of the pest incidence when practiced by a large number of farmers in a particular area.

Biological Control

7.1.3 Most of the crops have their natural enemies in the form of parasites and predators and disease causing organism. Large scale multiplication and liberation of such other agents, which naturally occur in environment but are enemies of crops (friends of crops) results in effective control of the harmful organisms. These methods are often applied by specialized agencies in conjunction with chemical methods so that harmful effects of insecticide do not interfere with the activities of nature based enemies of pests.

Chemical Control

7.1.4 This method relates to use of insecticides, pesticides and weedicides, which are used as dusts, sprays and granules on the crops. Because of their nature of producing immediate results such chemicals are most popular among the farmers. Serious limitations, particularly those relating to residues on crops and destruction of useful insects, have been noted in recent years in usage of these chemicals.

8. Chemical Fertilizers, Organic Manure, Green Manure and Bio-Fertilizers

8.1 Package of practices followed for replenishing the nutrient losses from the soil as a result of cultivation to maintain the fertility of the soil involves use of organic manure, green manure, chemical fertilizers and bio-fertilizers. It is important that the Investigator understands the difference between these very clearly before interviewing for schedule 2.21 & 2.2.2. These are explained below:

Chemical Fertilizers

8.1.1 The chemical fertilizers refers to chemical compounds which are manufactured in factories and are used as soil nutrients. These are further classified as “macro nutrients” which supply nitrogen (N), phosphate (P) and Potash (K) and “micro nutrient” fertilizers which supply Zinc, Manganese, Copper, Iron, Aluminium etc. The popular macro nutrient fertilizers are Urea, DAP, MOP, CAN and a number of complex fertilizers and the physical mixtures of these. A specified

list of the chemicals is given at **Annexure-V**. Micro-nutrient fertilizers to be covered in Input Survey are also listed in this Annexure.

Organic Manure

8.1.2 The Organic Manure is usually not manufactured in chemical factories and is produced by the farmers in their fields using various types of agricultural wastes. Sometimes these are also prepared using the sewage silt or municipal waste in urban areas. The organic manure is usually bulky material and is transported in trolleys. The types of manures covered in this would be Farm Yard Manure (FYM), which is prepared by putting agricultural wastes in a pit for decomposition and composting. This would also include the Vermi Compost. The various forms of oil cakes which are used as fertilizers would also fall in this category. Earth-worm forms part of other organic manure.

Bio-fertilizers

8.1.3 Bio-fertilizers are sold in small packets and require storage at specified temperature. These carry some living bacteria on organic base. The examples of bio-fertilizers are Rhizobium, Azetobactor, Blue-green Algae and Phosphate Solubilizing Bacteria (PSB). When bio-fertilizers are put in the soil, the bacteria contained in the fertilizer packet are spread in the soil and start their activity, e.g., fixing the nitrogen from air to soil. Hence, bio-fertilizers are not soil nutrients in themselves, rather they act as catalysts/direct agents for making the soil nutrients available. These type of fertilizers are not very common among farmers and only some progressive farmers use them. Also because of their storage requirements these are not available everywhere.

Green Manure

8.1.4 Green manure refers to cultivation of a specific type of vegetation with the intention of ploughing it back in the soil when the leaves are tender and easily decomposable. The popular types of green manure used by the farmers include Sesbania (Dhencha), Sunhemp (Sanai), Indigo, Urd and Cowpea. There is also a practice of ploughing back the leafy portion of leguminous crops in the field after first or second picking for the purpose of green manuring. All such cases will be counted for the purpose of obtaining area under green manure.

9. Soil Health

9.1 For assessing the soil health status, State Governments have established testing laboratories in their respective State for testing the PH value, i.e. N (Nitrogen), P (Phosphorus) and K (Potash) values of the soil samples collected from the farmers' fields on nominal charges. Farmers are accordingly, advised by the Agriculture Departments of the State Governments to increase the fertility of the soil by using specific fertilizers and chemicals depending upon the PH values.

Besides it, soil samples are also tested at IARI, Pusa, New Delhi for the farmers who take the samples at IARI Lab, Delhi.

10. Seeds

Classes of Quality Seed

10.1 The various classes of seed that are used in a seed production programme are: (1) breeder seed, (2) foundation seed, (3) registered seed, and (4) certified seed. These classes of seeds were first clearly defined by the International Crop Improvement Association in 1946 in relation with fodder and forage crops; in 1968 it recommended the adoption of the same system in the case of grain crops as well. These different classes of seed have different requirements and serve different functions, a brief description of which is given below.

10.2 Breeder Seed: Breeder seed is the seed or the vegetative propagating material produced by the breeder who developed the particular variety. It is produced by the institution where the variety was developed in case the breeder who developed the variety is not available. In India, Breeder seed is also produced by other Agriculture Universities under the direct supervision of the breeder of the concerned crop working in that University; this arrangement is made in view of the large quantities of the breeder seed required every year. Breeder seed is used to produce the foundation seed.

10.3 Breeder seed is genetically pure. In case of self-pollinated species, mass selection is regularly practiced to maintain the genetic purity of the variety. Off-type plants are promptly eliminated and care is taken to prevent outcrossing or natural hybridization and mechanical mixtures.

10.4 Foundation Seed: foundation seed is obtained from breeder seed by direct increase. Foundation seed is genetically pure and is the source of registered and/or certified seed. Production of foundation seed is the responsibility of NSC. Foundation seed is produced on Government farms, at experiment stations, by Agriculture Universities or by competent seed growers under strict supervision of experts from NSC. This class of seed should be produced in the area of adaptation of the concerned variety.

10.5 Registered Seed: Registered seed is produced from foundation seed or from registered seed. Registered seed is genetically pure and is used to produce certified seed or registered seed. It is usually produced by progressive farmers according to technical advice and supervision provided by NSC. Often registered seed is omitted and certified seed is produced directly from foundation seed; this is the general practice in India.

10.6 Certified Seed: Certified seed is produced from foundation, registered or certified seed. This is so known because it is certified by a seed certification agency, in this case State Seed Certification Agency, to be suitable for raising a good crop.

The certified seed is annually produced by progressive farmers according to standard seed production practices. To be certified, the seed must meet the prescribed requirements regarding purity and quality. Certified seed is available for general described to farmers for commercial crop production. Its production is generally by State Seeds Corporations, but NSC also undertakes the supervision of certified seed production, if required. The production of breeder and foundation seeds is very costly since a very high standard of purity must be maintained. The requirements for certified seeds are relatively less rigid than those for foundation seed, and hence it is considerably cheaper.

Requirements for Certified Seed

10.7 Seed has to meet certain regid requirements before it can be certified for distribution. The first and foremost requirement is that the seed must be of an improved variety released by either the Central or a State Variety Release Committee for general cultivation and notified by the Ministry of Agriculture and Farmers Welfare, Government of India; this is essential for the seed to be certified. The other requirements are related to genetic purity, freedom from weeds, diseases and pests, germination etc. It may be noted that there is considerable variation in the requirements for certification in various crops. In certain cases, e.g., maize, the requirements are more rigid than in the others.

High-Yield Crops

10.8 High-yield agricultural crops are those that have been bred, genetically modified, or fertilized to increase their production yields. The health and well-being of the world's growing population are largely dependent on the ability of the agricultural industry to raise high yielding food and fiber crops. No one knows for certain when the first crops were cultivated. At some time in the past, people discovered that seeds from certain wild grasses could be collected and later planted where they could be controlled during the growing process and eventually harvested for food.

Hybrid Seed

10.9 In agriculture and gardening, hybrid seed is seed produced by cross-pollinated plants. Hybrid seed production is predominant in agriculture and home gardening. It is one of the main contributors to the dramatic rise in agricultural output during the last half of the 20th century. The alternatives to hybridization are open pollination and clonal propagation.

10.10 All of the hybrid seeds planted by the farmer will produce similar plants while the seeds of the next generation from those hybrids will not consistently have the desired characteristics. Controlled hybrids provide very uniform characteristics because they are produced by crossing two inbred strains. Elite inbred strains are used that express well-documented and consistent phenotypes (such as high crop yield) that are relatively good for inbred plants.

10.11 Hybrids are chosen to improve the characteristics of the resulting plants, such as better yield, greater uniformity, improved color, disease resistance. An important factor is the heterosis or combining ability of the parent plants. Crossing any particular pair of inbred strains may or may not result in superior offspring. The parent strains used are therefore carefully chosen so as to achieve the uniformity that comes from the uniformity of the parents, and the superior performance that comes from heterosis.

11. Cropwise Area (Irrigated and Unirrigated)

11.1 The classification system for crops has been used for coding system of them for the purpose of Agriculture Census and Input Survey, which can be seen at **Annexure-IV**.

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