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भारत में फसल सांख्यिकी सुधार योजना के माध्यम से फसल सांख्यिकी प्रणाली का पुनरावलोकन

REVIEW OF CROP STATISTICS SYSTEM IN INDIA THROUGH THE SCHEME OF IMPROVEMNET OF CROP STATISTICS

2019-20

भारत सरकार

सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय

राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (क्षेत्र संकार्य प्रभाग)

कृषि सांख्यिकी मुख्यालय

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GOVERNMENT OF INDIA

MINISTRY OF STATISTICS & PROGRAMME IMPLEMENTATION

NATIONAL SAMPLE SURVEY OFFICE

(FIELD OPERATIONS DIVISION)

AGRICULTURAL STATISTICS HEADQUARTERS

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प्रस्तावना

राष्ट्रीय अर्थव्यवस्था में कृषि क्षेत्र द्वारा निभाई गई महत्वपूर्ण भूमिका को देखते हुए फसलों के अंतर्गत क्षेत्रफल और फसल उत्पादन पर समयबद्ध, विश्वसनीय तथा विस्तृत कृषि सांख्यिकी संग्रहण की आवश्यकता विशेष महत्व रखती है। निर्धारित कार्य प्रणाली का पालन करते हुए भू-उपयोग तथा फसलाधीन क्षेत्र के सांख्यिकी संग्रहण की प्राथमिक जिम्मेदारी राज्य प्राधिकारों की होती है। मुख्य फसलों की उपज दरों का आँकलन राज्य की विभिन्न एजेंसियों द्वारा यादृच्छिक प्रतिचयन की वैज्ञानिक तकनीकों का पालन करते हुये सामान्य फसल प्राक्कलन सर्वेक्षण (सा. फ. प्रा. सर्वे.) के माध्यम से किया जाता है।

2. राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (रा. प्र. स. का.), सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय, भारत सरकार की यह समग्र जिम्मेदारी है कि वह विश्वसनीय फसल प्राक्कलन हेतु उचित सर्वेक्षण तकनीक विकसित करने के लिए राज्यों के कर्मचारियों को प्रशिक्षण, तकनीकी सहयोग एवं पर्यवेक्षण का कार्य करे। फसल सांख्यिकी सुधार योजना, जो कि 1973-74 से लागू है, का उद्देश्य राष्ट्रीय सांख्यिकीय कार्यालय तथा राज्य सरकारों के संयुक्त प्रयासों से प्राथमिक क्षेत्र कार्य में तकनीकी पर्यवेक्षण द्वारा राज्यों में प्रचलित फसल सांख्यिकी संग्रहण प्रणाली की कमियों का पता लगाना और प्रणाली में सुधार के लिए उपाय सुझाना है। इसे प्राप्त करने के लिए क्षेत्रफल परिगणना तथा समुच्चयीकरण पर प्रतिदर्श जाँच का कार्य प्रत्येक मौसम में लगभग 10,000 प्रतिदर्श ग्रामों में किया जाता है तथा वर्ष भर में लगभग 32,000 फसल कटाई प्रयोगों का निरीक्षण भी किया जाता है।

3. फसल सांख्यिकी सुधार योजना के निष्कर्ष सभी शामिल राज्यों का समुच्चयन कर "***भारत में फसल सांख्यिकी सुधार योजना के माध्यम से फसल सांख्यिकी प्रणाली का पुनरावलोकन***" के अन्तर्गत प्रतिवेदन के रूप में प्रकाशित किए जाते हैं। यह प्रतिवेदन श्रृंखला में 45वीं है जो कि अखिल भारतीय स्तर पर कृषि वर्ष 2019-20 के दौरान फसल सांख्यिकी सुधार योजना के निष्कर्षों को प्रस्तुत करता है।

4. मैं इस प्रतिवेदन को तैयार करने में श्रीमती नितिका गुप्ता, उप महानिदेशक, रा.प्र.स.का.(क्षे.सं.प्र.), कृषि सांख्यिकी मुख्यालय फरीदाबाद के मार्गदर्शन में अधिकारियों की टीम, जो इस कार्य में सम्मिलित रही हैं, की निष्ठा एवं अथक प्रयासों की सराहना करता हूँ। आंकड़ों का संग्रहण, संसाधन तथा सम्बन्धित अन्य कार्य सम्पन्न करने वाले सभी अधिकारियों का योगदान भी प्रशंसनीय है। मैं सम्बन्धित राज्य कृषि सांख्यिकी प्राधिकारों एवं अन्य राज्यीय पदाधिकारियों, जो कि फसल सांख्यिकी सुधार योजना को कृषि वर्ष 2019-20 में सफलतापूर्वक संचालित करने में सहयोग देते रहे हैं, का हृदय से आभार व्यक्त करता हूँ।

5. प्रतिवेदन की विषयवस्तु व प्रस्तुतीकरण में सुधार हेतु सुझावों का स्वागत है।

अप्रैल, 2023

(डॉ बिभास चौधुरी)
अपर महानिदेशक

PREFACE

The need for timely, reliable and comprehensive statistics on area under crops and crop production assumes special significance in view of the vital role played by the Agricultural Sector in the Indian economy. The primary responsibility for collection of statistics of land use and area under crops following prescribed procedures rests with various State Authorities. The yield rates of principal crops are estimated through General Crop Estimation Surveys (GCES) conducted by State agencies following scientific techniques of random sampling.

2. The Field Operations Division of NSSO as a consequence of the Cabinet Resolution of 1952 that transferred work related to the estimation of food production and large-scale sample survey from the Indian Council Of Agricultural Research (I.C.A.R) to the National Sample Survey (NSS) spearheaded the systematic attempt to develop Statistical architecture for Crop Statistics in India. This involved monitoring, forecasting and estimation of area under major crops and estimation of crop wise yield. The twin surveys namely Land Utilizations Surveys (LUS) and Crop Yield Statistics (CYS) till 1970 institutionalized application of Statistical techniques in large scale sample survey related to crop statistics and acted as the hand holding exercise for many State governments to develop equivalent-capacity and offices to carry out statistical work related to crop statistics under their domain.

3. Currently, it has the overall responsibility of providing technical support to the States in developing suitable survey techniques for obtaining reliable estimates, assistance in training of staff and exercising supervision. The Scheme of Improvement of Crop Statistics (ICS) was taken up in the year 1973-74 with the objective of pointing out, through joint efforts of NSSO and State Governments, the deficiencies in the system of crop statistics by exercising technical supervision over the primary field work and suggesting remedial measures for strengthening the system. To achieve this, sample checks on area enumeration and area aggregation are carried out in a sample of about 10,000 villages in each season and conduct of around 32,000 crop cutting experiments in a year.

4. The findings of the ICS scheme are brought out in the form of Report "***Review of Crop Statistics System in India through the scheme of Improvement of Crop Statistics***" for the aggregate of the States covered. This report is forty fifth in the series and deals with the findings of the ICS scheme during the agricultural year 2019-20 at all India level.

5. I place on record my deep appreciation for the dedicated and painstaking efforts made by the team of officers under the guidance of Smt. Nitika Gupta, Deputy Director General of NSSO (FOD), Agricultural Statistics Headquarters, Faridabad who have been associated with the work of bringing out this report. The contribution of field officials in data collection and other related work is also appreciated. I also acknowledge with gratitude the support and cooperation received from State Agriculture Statistics Authorities and other State officials engaged in the field for the successful conduct of the ICS scheme during the year 2019-20.

6. Suggestions for improving the content and presentation of the report are welcome.

April, 2023

(Dr. Bivas Chaudhuri)
Addl. Director General

प्रकाशन से जुड़े अधिकारीगण

1	श्रीमती नितिका गुप्ता	उप महानिदेशक
2	श्री जी॰ रामचन्द्र राव	उप निदेशक
3	श्री रणविजय उपाध्याय	वरिष्ठ सांख्यिकीय अधिकारी
4	श्री राजेश कुमार	कनिष्ठ सांख्यिकीय अधिकारी
5	श्री पंकज कुमार चोटिया	कनिष्ठ सांख्यिकीय अधिकारी
6	श्री रजनीश सिंह	कनिष्ठ सांख्यिकीय अधिकारी

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A. Organization and Agricultural Statistics Schemes

1. National Statistical Commission (NSC)

The National Statistical Commission set up by the Government in January 2000 under the Chairmanship of Dr. C. Rangarajan, reviewed the statistical system and the entire gamut of Official Statistics in the country. The Rangarajan Commission submitted its report to the Government in August 2001. In line with the recommendations of the Rangarajan Commission, the Government of India resolved to set up a permanent National Statistical Commission (NSC), vide Notification No. 85 dated 1st June 2005 published in the Gazette of India, Extraordinary, Part-III-Section. The NSC was initially constituted on 12th July 2006 to serve as a nodal and empowered body for all core statistical activities of the country and to evolve, monitor and enforce statistical priorities and standards and ensure statistical co-ordination. The Commission consists of a part-time Chairman, four part-time Members and CEO, NITI Ayog as an ex-officio Member. The Chief Statistician of India (CSI) is the Secretary to the Commission. He has a dual role, as he is also the Secretary to the Government of India in the Ministry of Statistics and Programme Implementation (MoSPI). The National Statistical Commission took note of the findings and recommendations of all important bodies in the context of the prevailing status of Agricultural Statistics and attempted a fresh analysis focusing its attention on identification of the deficiencies of the system and the remedial measures required to set them right.

2. National Sample Survey Office (NSSO)

The Directorate of National Sample Survey (NSS) established in 1950 was re-organized into the present National Sample Survey Office (NSSO) under the Government of India's Resolution of 5th March, 1970. The organization now consists of four functional Divisions with a Director General (DG) at the apex level. Each of the Divisions viz. (i) Survey Design and Research Division, (ii) Data Processing Division (iii) Survey Coordination Division and (iv) Field Operations Division is headed by an Additional Director General.

The Field Operations Division (FOD) undertakes the field work relating to Socio-Economic Surveys, Industrial Surveys, Surveys for collection of retail prices in urban and rural areas, Urban Frame Survey for updation of area frame in Urban areas for use in Socio-economic surveys & Methodological Surveys/Studies and Sample Check on Agriculture Surveys under the scheme for Improvement of Crop Statistics (ICS) in 22 States/UTs.

3. National Commission on Agriculture

National Commission on Agriculture, under the Ministry of Agriculture & Farmers Welfare, was founded in 1976 to advise the Government on enhancing agricultural productivity.

4. Agricultural statistics

The Agricultural statistics System is comprehensive and provides data on a wide range of topics such as crop area and production, land use, irrigation, land holdings, agricultural prices and market intelligence, livestock, fisheries, forestry, etc.

5. Agriculture Surveys under NSSO (FOD)

In the context of agriculture surveys, the Field Operations Division (FOD) was instrumental in the creation of institutional framework through the Land Utilization Surveys (LUS) and CES (Crop Estimation Surveys) as large scale sample surveys by NSS during early 1950s. NSSO (FOD) is responsible for all activities including survey design, field operations, data processing and preparation of reports under the ICS scheme. The major functions of Agricultural Statistics Hqrs. NSSO (FOD) include supervision and control of the field work under the scheme for Improvement of Crop Statistics (ICS) and processing of data collected through schedules AS 1.0, AS 1.1 and AS 2.0 prescribed for ICS work. FOD undertakes the fieldwork for the Central Sample relating to the scheme for Improvement of Crop Statistics through its network of field offices spread all over the country. NSSO (FOD) is also entrusted with the responsibility of providing technical guidance and assistance to the states in developing suitable survey techniques for obtaining timely and reliable estimates of crop area and yield, and imparting training to State Govt. field personnel. The training courses on Agricultural Statistics for Senior Statistical Officers of FOD and State/UT Govt. officers are also conducted AS Hqrs. Faridabad of NSSO (FOD).

6. Improvement of Crop Statistics (ICS)

The scheme of ICS, which had a modest beginning in the year 1973-74, reached to the optimum coverage in the subsequent years. The scheme is closely related to the schemes of TRS, EARAS and GCES and was initiated with the objective of pointing out the deficiencies in the system of collection of area and yield statistics through the joint efforts of the NSSO (FOD) and State Agricultural Statistics Authority (SASA) and to suggest remedial measures. The scheme is operational in 20 States and 2 UTs covering about 44 crops.

7. General Crop Estimation Surveys (GCES)

FOD is mandated to provide technical guidance to 29 States/UTs in planning, implementation, procedural adherence and training of personnel associated with CCEs in the purview of General Crop Estimation Survey. GCES consists of performing a specified number of crop cutting experiments in randomly selected fields. Crop cutting experiment conducted under well designed estimation survey, is an effective technique for estimating the average yield by selecting the field, randomly locating a plot of a specified size, harvesting, threshing, weighing and recording the weight of the produce from the plot.

8. Timely Reporting Scheme (TRS)

The Ministry of Agriculture & Farmer's Welfare initiated TRS in 1968-69 in land record states in order to reduce the time lag between (a) completion of sowing and the availability of estimates of area sown and (b) the completion of harvesting and availability of estimates of production in respect of important crops.

9. Establishment of an Agency for Reporting Agricultural Statistics (EARAS)

The Ministry of Agriculture & Farmer's Welfare sponsored a scheme in 1975-76 for Establishment of an Agency for Reporting Agricultural statistics (EARAS) in three permanently settled States of Kerala, Odisha and West Bengal and also extended the same to Arunachal Pradesh, Nagaland, Sikkim and Tripura.

*****

B. Concepts & Definitions

1. Area Statistics

1.1 Schedule AS 1.0

Schedule AS 1.0 is designed to record the observations based on sample check on area enumeration, which consists of selecting and locating a sample of 20 serial/survey numbers in each selected village, with the help of the village map and records and noting down the actual utilization to which they are put in each season.

1.2 Schedule AS 1.1

Schedule AS 1.1 is designed to study the discrepancies between the figures of area under the crops/crop mixtures/non-crop utilizations (i) as totalled by the patwari, (ii) as reported by him in TRS statements/crop abstract/ non-crop utilization statements and (iii) as checked by the Senior Statistical Officers/State Supervisors. For arriving at (iii), the Supervisor has to total page by page the survey/Sub-survey number wise area figures recorded by the patwari in the Khasra register.

2. Yield Statistics

2.1 Yield rate of crops are obtained by conducting General Crop Estimation Surveys (GCES) using the objective technique of crop cutting experiments. The planning, organisation of field work, processing of data and bringing out the results of Crop Estimation Surveys(CES) are the responsibility of State Agriculture Statistical Authority (SASA). The objective of the sample check is to point out departures from the procedures prescribed for the conduct of experiments and inaccuracies in reporting ancillary information under the CES, thereby improving the quality of yield data.

2.2 The Schedule AS 2.0

Schedule AS 2.0 is designed for recording the observations of the supervisory staff by conducting sample check on crop cutting experiments. On the basis of the data collected through schedule AS 2.0, AS Hqrs. prepares estimates of yield rates of the principal crops along-with their percentage standard error. All these estimates mentioned above are

expressed in gms / plot, which are converted to Kg / hectare by using suitable conversion factor.

2.3 Standard Error

The calculation of standard errors and their study is helpful in assessing the adequacy of the sample size, trend of changes in yield rates and in planning other allied studies.

$$\% \text{ Standard Error} = \frac{\text{S.E. of the Estimate}}{\text{Estimate}} \times 100$$

2.4 Conversion factor

Converting the yield from Grams per plot to Kg. per hectare

$$\frac{\text{Weight of produce in Gms.}}{\text{Plot size in Meters.}} \times \frac{10000}{1000}$$

3. Reference period

The reference period for a survey is the Agriculture Year (July to June) e.g. agriculture year 2019-20 corresponds to the period starting from July 2019 to June 2020.

4. Seasons

Agriculture Year can be broadly divided into the following three seasons based on the periods of sowing and harvesting:

Kharif	-	July to December
Rabi	-	January to March
Summer (or Zaid Rabi)	-	April to June

Periods of area enumeration or Girdawari vary from State to State and are fixed according to the sowing periods of various seasonal crops.

5. Survey Records

Khasra register, maps, jamabandi (list of land holdings) etc. are maintained by the Patwari (primary worker of the revenue department of the State) and these are updated from time to time. These records are useful for identification of survey / sub-survey numbers and also for checking the area aggregation figures.

6. Design of Sample Check

The design for crop survey is generally a composite one without any stratification according to inputs such as irrigation and / or seed. The design adopted for selection of villages for the sample check on area is that of stratified simple random sampling, where a tehshil/ anchal/ sub-division/ block/ taluka or a group of them based on geographical

contiguity forms a 'Stratum' except Kerala and West Bengal where District is Stratum. For the supervision of crop cutting experiments, District is the 'Stratum'.

7. Crop mixtures

Two or more crops of the same season grown in the same field constitute a crop mixture. The constituent crops may be raised in different rows of pure nature or may be intermixed in lines.

8. Nine Fold Classification of Area

The land utilization is broadly classified in terms of following nine fold classifications:-

i. Forests

Area not available for cultivation

ii. Area under non-agricultural uses

iii.Barren and unculturable land or within cultivated holdings

Other uncultivated land excluding Current fallow

iv. Permanent pastures and other grazing lands

v. Miscellaneous tree crops and groves not included in the area sown

vi. Culturable waste

Fallow land

vii. Fallow land other than current fallow

viii. Current fallow

ix. Net area sown

9. Geographical Area

India has an area of 3,287,263 sq. km. It is the seventh largest country of the world after Russia, Canada, China, the U.S.A., Brazil and Australia. India accounts for about 2.4 per cent of the total surface area of the world occupying 3.28 million square kms of land.

10. Net Area Sown

This represents the total area sown with crops and orchards. Area sown more than once in the same year is counted only once.

11. Gross Cropped Area

This represents the total area sown once and/or more than once in a particular year, i.e. the area is counted as many times as there are sowings in a year. This total area is also known as total cropped area or total area sown.

12. Current Fallow

This represents cropped area which is kept fallow during the current year.

13. Area Sown more than once

This represents the areas on which crops are cultivated more than once during the agriculture year. This is obtained by deducting Net Area Sown from Gross Cropped Area.

14. Irrigated Area

The area is assumed to be irrigated for cultivation through such sources as canals (Govt. & Private), tanks, tube-wells, other wells and other sources.

15. Cropping Intensity

Cropping Intensity refers to raising of a number of crops from the same field during one agriculture year; it can be expressed as

Cropping Intensity = (Gross Cropped Area / Net Area Sown) x 100

16. Recovery ratio:

The ratio between the cobs to grain (wet), Paddy to rice (after taking away husk) is known as recovery ratio. The first weight of the produce taken out from the plants is in terms of cobs in case of Jowar, Bajra, Maize, weight of grains in case of Paddy, Wheat, Barley and Gram etc.

i) **Driage ratio**:

The ratio of weight between the wet grains or produce to dried and marketable produce.

ii) **Ginning ratio**:

The weight of cotton to lint Cotton without seeds i.e. (cotton – seeds). This ratio is obtained from ginning factories.

iii) **Net weight**:

While reporting the weight of the produce of a crop, when sown in mixture, the percentage of the experimental crop sown in that mixture is also given. In this case, we have to work out the produce, had it been sown pure. In Agricultural statistics, the net weight will always be more than gross weight.

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C. Data Processing under ICS Scheme

1. Scrutiny of data

As per the existing procedure, all Agricultural Statistics schedules are to be scrutinized at field level by the officers concerned of Regional Offices (ROs) & Sub Regional Offices (SROs)/ NSROs in case of Central sample and by the State officials in case of State sample as per the Scrutiny Programme. A second level scrutiny is done at FOD Hqrs., Faridabad as per the prescribed scrutiny instructions to ensure completeness, correctness and quality of data.

2. Coding of data

Prior to the dispatch of schedules for further processing, local units are converted into standard units of area as per the conversion factors given in Agricultural statistics(AS) schedule and as per coding programme for the purpose of facilitating smooth data processing.

3. Data Processing

After the scrutiny and coding of data, the subsequent stages of processing of data at FOD Hqrs. are data entry, data validation and generation of tables and annexures. The tabulation programme is drawn up keeping in view the objectives of the ICS scheme. The tabulation of data from the Central and State samples is done independently both by NSSO (FOD) and the SASAs concerned.

4. Data Validation

The data entry is done in specified record layouts from the data available in the AS schedules. The data entered are stored as “dbf” files. A validation programme is executed on the data files for ensuring accuracy with reference to certain important lines of information.

5. Data Tabulation

After the data are validated and made error free, different tables are generated. The A-series tables are generated for Area statistics and Y-series tables are generated for Yield

statistics. These tables are checked in State units at AS Hqrs. for consistency of data. Discrepancies, if any, are rectified and tables are regenerated. After the tables are found consistent, State wise annexures are generated using in-house software. These annexures are also scrutinized for any abnormal or inconsistent entries and regenerated, if required.

6. Preparation of Status Reports

The Status Reports for each season and for each State/UT contains full account of the present position of estimation of crop production, the procedures followed for enumeration of area and yield, deficiencies observed in the system of crop statistics and the steps to be taken for improving the system of collection of agricultural statistics. The season-wise, state-wise Reports entitled, “Review of Crop Statistics System in States through Scheme for Improvement of Crop Statistics” and an all India report on the “Review of Crop Statistics System in India through Scheme for Improvement of Crop Statistics” are prepared on the basis of the analyzed data of ICS Scheme.

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कार्य सारांश

फसल सांख्यिकी सुधार योजना को 1973-74 के रबी मौसम से लागू किया गया है जिसका मुख्य उद्देश्य भारत सरकार के राष्ट्रीय सांख्यिकीय कार्यालय क्षेत्र संकार्य प्रभाग तथा राज्य कृषि सांख्यिकी प्राधिकारों के संयुक्त प्रयास से क्षेत्रफल तथा उपज सांख्यिकी संग्रहण की राज्य प्रणाली की कमियों का पता लगाकर उपचारी कदमों द्वारा क्षेत्रफल तथा उपज सांख्यिकी की गुणवत्ता एवं विश्वसनीयता में सुधार करना है। वर्ष 2019-20 के दौरान इस योजना में देश के जिन 20 राज्यों तथा 2 संघ राज्य क्षेत्रों को शामिल किया गया है वे हैं: आन्ध्र प्रदेश, असम, बिहार, छत्तीसगढ़, गुजरात, हरियाणा, हिमाचल प्रदेश, झारखंड, जम्मू एवं कश्मीर, कर्नाटक, केरल, मध्य प्रदेश, महाराष्ट्र, ओडिशा, पंजाब, राजस्थान, तमिलनाडु, तेलंगाना, उत्तर प्रदेश, उत्तराखंड, पश्चिम बंगाल तथा पुडुचेरी। तेलंगाना एक नवनिर्मित राज्य है जो कि आंध्र प्रदेश राज्य से पृथक किया गया है। वर्ष 2019-20 के लिए सम्पूर्ण भारत के स्तर पर योजना के निष्कर्षों की मुख्य बातें निम्न प्रकार हैं:

1. 17 राज्यों तथा जम्मू-कश्मीर एवं पुडुचेरी केंद्र शासित प्रदेशों में भू-अभिलेखों की प्रणाली का पालन किया जा रहा है, जो अखिल भारतीय रिपोर्टिंग क्षेत्र का लगभग 86 प्रतिशत है। गैर-भू अभिलेख राज्यों / स्थायी रूप से बसे राज्यों या ईएआरएएस राज्यों का अखिल भारतीय स्तर पर रिपोर्टिंग क्षेत्र लगभग 9 प्रतिशत है परंतु कुछ राज्यों (देश के कुल रिर्पोटिंग क्षेत्र में शेष 5 प्रतिशत) में क्षेत्रफल सांख्यिकी संग्रह की प्रणाली संतोषजनक नहीं है। इन राज्यों में फसल सांख्यिकी का संकलन मुख्यतः पारम्परिक प्रणाली से ही किया जाता है। इनमें से कुछ राज्यों में स्थिति में सुधार लाने के लिए छिटपुट प्रयास किये गये हैं लेकिन एक नियमित प्रणाली अभी भी विकसित की जानी शेष है। **(पैरा 2.1.5)**

2. अखिल भारतीय स्तर पर **2019-20** के दौरान फसल सांख्यिकी सुधार के अनुसार प्रति प्राथमिक कर्मी का औसत कार्य भार **8** गाँव है जिसमें प्रति गाँव औसतन भौगोलिक क्षेत्रफल **600** हैक्टेयर है, तथा **1300** सर्वेक्षण संख्या निहित है। राष्ट्रीय कृषि आयोग ने सिफारिश की है कि जहां कहीं भी पटवारी का कार्य क्षेत्र वृहद है तो इसे घटा दिया जाना चाहिए। **(सारणी-2) (पैरा 2.4.1)**

3. छत्तीसगढ़, मध्य प्रदेश, उत्तर प्रदेश तथा उत्तराखंड में अमान्य मिश्रित फसलों के लघु संघटकों के अधीन क्षेत्रफल को नजर अंदाज करके उसके सम्पूर्ण क्षेत्र को मुख्य संघटकों के अन्तर्गत दर्ज किया जाता है

जिससे मुख्य फसलों के अन्तर्गत क्षेत्र का आंकलन ज्यादा हो जाता है। इस प्रणाली में सुधार की आवश्यकता है। **(पैरा 2.4.2 iii)**

4. वर्ष **1973-74** के फसल सांख्यिकी सुधार योजना के आरंभ होने के समय सामान्य फसल प्राक्कलन योजना के अंतर्गत **1,73,097** प्रयोग नियोजित किए गए। वर्ष **2018-19** में ये प्रयोग बढ़कर **17,26,577** हो गए। ये प्रयोग **19** भू-अभिलेख राज्यों /संघ शासित प्रदेशों, **3** ईएआरएएस राज्यों- केरल, ओडिशा, पश्चिम बंगाल और अन्य राज्यों- गोवा, मेघालय एवं दादरा और नगर, हवेली और दमन और दीव के केंद्र शासित प्रदेशों के अन्य राज्यों में किए गए तथा जो वर्ष **2019-20** के लिए फसल सांख्यिकी सुधार योजना के अंतर्गत प्रतिदर्श चयन का आधार बने। फसल प्राक्कलन सर्वेक्षण नागालैंड और सिक्किम में अभी तक आयोजित नहीं किए जा सके हैं। **(पैरा 3.1.2)**

5. जी॰सी॰ई॰एस॰ के अधीन यह देखा गया है कि कुछ राज्यों में कम क्षेत्रफल की फसलों को भी शामिल किया जाता हैं, जबकि अन्य राज्यों के अन्तर्गत ज्यादा क्षेत्रफल रहने के बावजूद इन फसलों को शामिल नहीं किया जाता है। इस विषमता को दूर करने के लिए इन राज्यों में जी॰सी॰ ई॰ एस॰ विस्तारण की समय-समय पर समीक्षा की सलाह दी जाती है । **(पैरा 3.1.5)**

6. कई राज्यों में कुछ फसलों के लिए उपज दर की मानक त्रुटि की गणना नहीं की जा रही है। यह सलाह दी जाती है कि सभी राज्य प्राधिकारों द्वारा सभी फसलों के लिए औसत उपज अनुमान के लिए मानक त्रुटि(स्टेन्डर्ड एरर) का परिगणन किया जाए ताकि प्रतिदर्श आकार की पर्याप्तता तथा अनुमानों की विश्वसनीयता का भी सही आंकलन किया जा सके। **(पैरा 3.1.6)**

7. सभी सम्बन्धित राज्य प्राधिकारों के ठोस प्रयासों एवं सहयोग के कारण वर्ष 2019-20 के दौरान दो राज्यों/ संघ शासित राज्यों - हरियाणा और जम्मू-कश्मीर में उच्च स्तरीय समन्वय समिति (एच॰एल॰सी॰सी॰) की बैठक आयोजित करना सम्भव हो सका। एच॰एल॰सी॰सी॰ / एस॰ टी॰ सी॰ की बैठकें नियमित अंतराल पर आयोजित किये जाने की आवश्यकता है। **(पैरा 4.1.3)**

8. 2019-20 के दौरान केंद्रीय प्रतिदर्श के लिए क्षेत्रफल परिगणना पर प्रतिदर्श जांच के लिए प्रत्युतर लगभग शत प्रतिशत दर्ज किया गया। कुछ राज्यों यथा- असम, गुजरात, हिमाचल प्रदेश, उत्तर प्रदेश और पश्चिम बंगाल ने 51% से कम प्रतिक्रिया दर्ज की गयी। राज्य प्रतिदर्श के प्रत्यतर-दर में संकलित आँकड़ो की गुणवत्ता में सुधार हेतु संबंधित राज्यों को समुचित उपाय करने की आवश्यकता **है।** **(पैरा 8.1.1)**

9. **2019-20** के दौरान कुछ राज्यों में गिरदावरी की सामयिक संपूर्ति की गई परंतु कुछ राज्य जैसे कि आंध्र प्रदेश, असम, बिहार, गुजरात, झारखंड, महाराष्ट्र, पंजाब, तेलंगाना एवं पश्चिम बंगाल में गिरदावरी की गैर-संपूर्ति चिंताजनक रही परिणामस्वरूप अखिल भारतीय स्तर पर गिरदावरी की सामयिक संपूर्ति पूर्व

खरीफ मौसम में प्रतिदर्श ग्रामों की 49 प्रतिशत, खरीफ मौसम में 50 प्रतिशत, रबी में 45 प्रतिशत तथा ग्रीष्म मौसम में मात्र 33 प्रतिशत मामलों में पायी गयी। सामान्य रूप से सभी राज्यों में समय पर गिरदावरी-संपूर्ति को सुनिश्चित करने के लिए समुचित कदम उठाये जाने की आवश्यकता है। **(पैरा 8.1.3)**

10. **2019-20** के दौरान अखिल भारतीय स्तर पर विभिन्न मौसमों में गिरदावरी पूरी होने के बाद ही टी॰ आर॰ एस॰ विवरण प्रस्तुत करने की प्रवृति 39 प्रतिशत से अधिक मामलों में देखी गई जिसके परिणामस्वरूप पूर्व खरीफ में 39 प्रतिशत प्रतिदर्श ग्रामों, खरीफ मौसम में **38** प्रतिशत प्रतिदर्श ग्रामों, रबी में **41** प्रतिशत प्रतिदर्श ग्रामों तथा ग्रीष्म में **42** प्रतिशत प्रतिदर्श ग्रामों में समय पर टी॰ आर॰ एस॰ विवरण प्रस्तुत किया गया। इसके साथ ही वर्ष 2019-**20** के दौरान पूर्व खरीफ, खरीफ, रबी तथा ग्रीष्म में क्रमशः **4, 10, 7** तथा **1** प्रतिशत प्रतिदर्श ग्रामों में गिरदावरी किये बिना ही टी॰ आर॰ एस॰ विवरण प्रस्तुत किया गया। गिरदावर- संपूर्ति के उपरान्त टी॰ आर॰ एस॰ विवरण की समय पर प्रस्तुति को सुनिश्चित करने के लिए उपचारी कदम उठाने की आवश्यकता है। **(सारणी-7, पैरा 8.1.4)**

11. 88 प्रतिशत मामलों में प्राथमिक कर्मियों के पास उपलब्ध नक्शे उपयोगी पाए गए। 64 प्रतिशत मामलों में पाया गया कि प्राथमिक कार्यकर्ता के पास उपलब्ध नक्शों का अंतिम अद्यतन 20 वर्षों से भी पहले किया गया था। राज्य कृषि सांख्यिकीय प्रणाली की कार्यकुशलता के लिये गाँवों के नक्शों का नियमित रुप से अद्यतन होना आवश्यक है। **(पैरा 8.1.4)**

12. अखिल भारतीय स्तर पर **2019-20** के दौरान क्षेत्रफल परिगणना के समय फसल तथा फसल क्षेत्रफल को दर्ज करने में विभिन्न राज्यों में पूर्व खरीफ में **78** प्रतिशत, खरीफ में **81** प्रतिशत, रबी में **81** प्रतिशत तथा ग्रीष्म मौसम में **81** प्रतिशत सर्वेक्षण संख्याओं में सामंजस्य पाया गया। शेष 22 प्रतिशत, **19** प्रतिशत, **19** प्रतिशत, **7** प्रतिशत पूर्व खरीफ, खरीफ, रबी क्रमश: ग्रीष्म मौसम में विसंगतियाँ पाई गई । इस तरह की विसंगतियाँ फसल क्षेत्रफल के आँकडों पर पर्याप्त असर डालती हैं। **(पैरा 8.1.6 से 8.1.8)**

13. अखिल भारतीय स्तर पर समग्र रूप से वर्ष 2019-20 के दौरान कटाई स्तर पर फसल कटाई प्रयोगों का प्रत्युतर खरीफ मौसम के दौरान कुछ राज्यों यथा- असम, बिहार, गुजरात, हरियाणा, हिमाचल प्रदेश, जम्मू और कश्मीर, कर्नाटक, मध्य प्रदेश, महाराष्ट्र, पंजाब, राजस्थान, उत्तर प्रदेश, उत्तराखंड और पश्चिम बंगाल को छोड़कर 80% से अधिक रहा और कोविड-19 महामारी के कारण पुडुचेरी को छोड़कर सभी राज्यों के लिए रबी और गरमा मौसम में 80% से कम रहा, जिससे कारण यह प्रत्युतर पूर्व खरीफ में

71 प्रतिशत, खरीफ में 70 प्रतिशत, रबी में 34 प्रतिशत तथा गरमा में 48 प्रतिशत रहा। कटाई स्तर पर फसल कटाई प्रयोगों के शत-प्रतिशत पर्यवेक्षण का लक्ष्य प्राप्त करने के लिए राज्य प्राधिकरणों द्वारा उचित कदम उठाए जाने की आवश्यकता है। **(पैरा 8.2.1)**

14. **2019-20** के दौरान अखिल भारतीय स्तर पर **65** प्रतिशत प्रयोगों को निर्धारित प्रक्रियाओं के अनुसार संचालित किया पाया गया। तथापि, प्रतिदर्श जांच के द्वारा पायी गयी कमियों को राज्यों के प्राथमिक कर्मियों के लिए आयोजित प्रशिक्षण कैम्पों में चर्चा के लिए उठाने की आवश्यकता है। सहायक विवरणों को दर्ज करने में अत्यधिक त्रुटियां, विशेषकर जब ऐसी जानकारी स्तरीकरण उपरांत विश्लेषण के लिए आधार बनती हो, तो एक चिन्ता का विषय है। **(पैरा 8.2.3)**

15. कुछ राज्यों में फसल कटाई प्रयोगों के संचालन के लिए उपकरणों की आपूर्ति की गई तथा प्राथमिक कर्मियों द्वारा उनका प्रयोग भी किया गया परंतु कुछ राज्यों में अभी भी उपकरणों की आपूर्ति तथा प्राथमिक कर्मियों द्वारा उनके प्रयोग की स्थिति के सन्दर्भ में सभी राज्यों में सुधार की आवश्यकता है। **(पैरा 8.2.4)**

16. फसल कटाई प्रयोगों के संचालन में कनिष्ठ कर्मचारियों सहित अन्य को कार्य का प्रत्यायोजन वर्ष 2019-20 के दौरान उत्तर प्रदेश में अधिक रहा। बिहार, झारखंड व उत्तर प्रदेश में स्थिति और चिंताजनक हो जाती है जहां पर अप्रशिक्षित कर्मियों द्वारा प्रयोगों का अधिक संचालन किया गया। **(पैरा 8.2.5)**

17. कुछ राज्यों में विभिन्न कारणों से फसल कटाई प्रयोगों के लिए चयनित गावों / क्षेत्रों का प्रतिस्थापन किया गया। प्रयोगात्मक फसल की अनुपलब्धता के कारण मूल रूप से चयनित गांव का प्रतिस्थापन **2019-20** के दौरान **10%** से **11%** के बीच रहा। इसे प्रतिदर्श गांवों के उचित चयन, समय पर क्षेत्र के चयन तथा किसान के साथ उचित संपर्क के द्वारा कम किया जा सकता है, जिसके लिए प्राथमिक कर्मियों पर दबाव डालने की आवश्यकता है। प्रायोगिक कर्मियों के प्रशिक्षण एवं फसल कटाई प्रयोगों के नियोजन के समय इस विषय पर ध्यान देने योग्य देने की आवश्यकता है। **(पैरा 8.2.6 तथा 8.2.7)**

18. आई॰ सी॰ एस॰ पर्यवेक्षक द्वारा की गयी रिपोर्टिंग पर आधारित तथा राज्य प्राथमिक कर्मचारियों द्वारा तदनुरूपी (फसल क्षेत्रफल आकलनों) की तुलना में राज्य प्राथमिक कर्मचारियों द्वारा क्षेत्रफल को कम आँके जाने (**under-estimation**) की सामान्य प्रवृत्ति का संकेत देता है। **(पैरा 9.1.1 एवं 9.1.2)**

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Executive Summary

The Scheme for Improvement of Crop Statistics (ICS) was introduced from Rabi season of 1973-74 with the main objective of improving the quality and reliability of area and yield statistics by pointing out, through joint efforts of Field Operations Division (FOD) of National Sample Survey Office (NSSO) of Government of India and State Agricultural Statistics Authority (SASA), deficiencies in the State system of collection of area and yield statistics and suggest remedial measures. During 2019-20, the scheme covered 20 States and 2 Union Territories of the country namely, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, West Bengal and Puducherry. The highlights of the findings of the scheme at all India level for the year 2019-20 are as follows:-

1. The system of land records is being followed in 17 States and 2 UTs of Jammu & Kashmir and Puducherry which account for about 86% of the All-India reporting area. The Non-Land Records States/ Permanently Settled States or EARAS states (the area statistics are generated on the basis of sample surveys) account for about 9% of the reporting area. A few States (accounting for remaining 5% of the total reporting area of the country) do not have a satisfactory system for collecting area statistics. Crop statistics are compiled in these States mainly by conventional methods. There have been sporadic attempts to improve the situation in some of these States, but a regular system is yet to be evolved.

(Para –2.1.3, Para –2.1.4 & Para –2.1.5)

2. The average workload per Primary worker (Patwari) as per ICS scheme during 2019-20 at all India level was found to be 8 villages having 1300 survey numbers and 600 hectares of geographical area per village. National Commission for Agriculture has suggested that there is need to reduce the jurisdiction of Patwari, wherever it is extensive. **(Table-2) (Para–2.4.1)**

3. For unrecognized mixtures, the entire area under minor constituents of crop mixtures in Chattisgarh, Madhya Pradesh, Uttar Pradesh and Uttarakhand is ignored as per the state specific procedure. As a result, the entire area thereof is recorded under major constituents

with the result that area under major crops tends to get overestimated. The system needs revision. **(Para-2.4.2 iii)**

4. At the time of inception of Improvement of Crop Statistics (ICS) Scheme, during the year 1973-74, a total of **1,73,097** experiments were planned under GCES. These experiments increased to **17,26,577** in number under GCES 2018-19, which formed the basis for sample selection for supervision of Crop Cutting Experiments under the ICS Scheme during agricultural year 2019-20 on various crops covering the 19 Land Records States/ UTs, 3 EARAS States of Kerala, Odisha and West Bengal and other States of Goa and Meghalaya and Union Territory of Dadra & Nagar Haveli and Daman & Diu. Crop Estimation Surveys are not conducted in Nagaland and Sikkim as yet. **(Para-3.1.2)**

5. Under GCES, some of the States cover the crops with lesser area whereas other States do not cover these crops even though the area under them is more. To remove this anomaly, a periodical review of GCES coverage in the States is advised. **(Para-3.1.5)**

6. The Standard error of yield rates of a few crops are not being calculated in some States. It is advisable that all the SASAs may calculate the standard error for the estimate of average yield for all the crops so as to assess the adequacy of sample size and also the reliability of estimates. **(Para-3.1.6)**

7. High Level Co-ordination Committee (HLCC) meetings were organized in the two States/UTs namely Haryana and Jammu & Kashmir during 2019-20 owing to the co-operation of respective SASAs. Convening of meeting of HLCCs/ State Technical Committees (STCs) at regular intervals needs to be pursued. **(Para-4.1.3)**

8. The overall response for sample check on enumeration of area **was almost cent percent for the Central Sample. Some States like Assam, Gujarat, Himachal Pradesh, U.P. and West Bengal reported response below 51%.** The response rate for State sample needs to be improved to bring about improvement in the quality of data collected. **(Para-8.1.1)**

9. During 2019-20, **some states are reporting timely completion of Girdawari** but instances of non-completion of Girdawari in Andhra Pradesh, Assam, Bihar, Gujarat, Jharkhand, Maharashtra, Punjab, Telangana, & West Bengal were alarmingly high resulting in timely completion of Girdawari in only **49%** sample villages during Early Kharif, **50%** during Late Kharif, **45%** during Rabi and **33%** during Summer of 2019-20. Suitable action needs to be taken by the respective State authority to ensure timely completion of Girdawari in all the States in general. **(Para 8.1.3)**

10. During 2019-20, **At all India level, over the various seasons, the tendency of submitting TRS statements after completion of Girdawari was observed in more than 39% of the cases** result in **38%** sample villages during Early Kharif, **41%** during Late Kharif, **42%**

during Rabi and **23%** during Summer season in particular. Further, the cases of submission of TRS statement without completion of Girdawari was of the order of **4%, 10%, 7% and 1%** sample villages during Early Kharif (Autumn), Late Kharif (Winter), Rabi and Summer respectively. Corrective action needs to be initiated for ensuring submission of TRS statements only after completion of Girdawari. **(Table-7,Para-8.1.4)**

11. Maps available with the Patwari workers were found usable in **88%** cases. In **64%** cases, the maps available with the Patwari worker were found to be last updated more than 20 years back. For efficient functioning of the Agricultural Statistics system, regular updation of village maps is essential. **(Para-8.1.5)**

12. During 2019-20, **consonance in recording crops and crop areas at the time of area enumeration were observed in 78% of the survey numbers during Early Kharif, 81% during Late Kharif, 81% during Rabi and 81% during Summer at all India level.** The errors were observed in remaining 22%, 19%, 19%, 7% for Early Kharif, Late Kharif, Rabi and Summer Season respectively. These discrepancies observed exert substantial impact on reporting of the crop area. **(Para-8.1.6 to 8.1.8)**

13. **The response achieved in respect of all the States was above 80%** in Kharif season except for some states like Assam, Bihar, Gujarat, Haryana, H.P., Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand and West Bengal) and below 80% in Rabi & Summer seasons for all States except Puducherry due to covid-19 pandamic that leads to the overall response at all india level (Pooled Sample) for crop cutting experiments at harvest stage during 2019-20 was **71%** for Autumn, **70%** for Winter, **34%** for Rabi and **48%** for Summer. Steps need to be taken by State authority to achieve the target of cent percent supervision of crop cutting experiments at the harvest stage. **(Para-8.2.1)**

14. During 2019-20, at all India level, the experiments were found to be conducted according to the prescribed procedures in **65%** cases. However, deficiencies noticed through the sample checks need to be emphasized in the training camps organised for Patwari workers in the States. The high incidence of errors in recording ancillary particulars is a matter of concern especially when such information forms the basis for post stratification analysis. (**Para-8.2.3)**

15. Primary workers were supplied with essential items of equipment and carry with them to the field for the conduct of crop cutting experiments at all India level in some of the States but position of supply of equipment for conduct of crop cutting experiments and their use by the Patwari workers needs improvement in some ICS implementing States.

(Para-8.2.4)

16. Delegation of work to others including juniors for conducting crop cutting experiments was found more frequent in **Uttar Pradesh** during 2019-20. Situation is found alarming in **Bihar, Jharkhand and Uttar Pradesh** where Crop Cutting experiments are being conducted by the untrained workers in larger proportion. **(Para-8.2.5)**

17. Instances of substitution of selected villages/fields for crop cutting experiments due to various reasons were observed in some States. The substitution of originally selected village due to non-availability of experimental crop was observed in the range of **10% to 11%** cases during 2019-20. These instances need to be reduced by proper selection of sample villages, timely selection of field and proper liaison with cultivators. This aspect needs to be stressed upon at the time of planning of the villages for crop cutting experiments as well as the training of the Patwari workers. **(Para-8.2.6 & 8.2.7)**

18. The comparison of estimates of crop area based on figures of the ICS Supervisor and by the State Patwari worker indicates a general trend of under-estimation of area by the State officials. **(Para-9.1.1 & 9.1.2)**

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PART-I
(TEXT)

1

INTRODUCTION

1.1 Improvement of Crop Statistics (ICS)

1.1.1 The primary responsibility of collection of crop statistics rests with the State Governments. Crop statistics have two major components - Area sown and Average Yield. While collection of land use statistics is attempted through various methods by the State governments, the yield rates of principal crops are estimated through General Crop Estimation Surveys (GCES) conducted by them. The estimates of area and yield are compiled by State Agricultural Statistics Authorities (SASAs) for their use and also transmitted to the Directorate of Economics and Statistics (DES) in the Union Ministry of Agriculture & Farmer's Welfare. The National Sample Survey Office (NSSO) through its Agricultural Statistics Headquarters in Field Operations Division (FOD), has the overall responsibility of (i) assisting the State and Union Territory (UT) governments in developing suitable survey techniques for obtaining reliable and timely estimates, (ii) bringing uniformity in definitions and concepts, (iii) providing guidance for training of the primary staff engaged in the conduct of GCES, (iv) examining documents relating to various stages of work pertaining to GCES and Coordination of results (v) exercising technical supervision over the primary field work through the scheme for Improvement of Crop Statistics (ICS) at the field level, right from planning stage till the release of the final reports at the Hqrs level. **This report throws light on the functioning of the system of reporting of crop statistics and also the quality of the data collected, based on the findings of the ICS scheme operational in 20 States and 2 UTs.**

1.1.2 While Timely Reporting Scheme (TRS) was able to provide estimates of area within a short period, there was an imperative necessity to point out and to take action with a view to remove the errors in the system of collection of statistics not only of area, but also of yield. In order to meet this requirement, another scheme viz., scheme for Improvement of Crop Statistics (ICS) was initiated from Rabi season of **1973-74** with the main objective of pointing out, through the joint efforts of the Central and State agencies, deficiencies in the system of collection of crop statistics and suggesting remedial measures for strengthening the system. The programme of ICS was initiated with a special emphasis on wheat in 9 major wheat growing States. The scheme was extended to 5 more land record States and to Odisha in 1974-75, to Kerala and West Bengal in Rabi 1975-76 covering various crops. It was also extended to UTs of Delhi and Puducherry in 1978-79 and 1980-81 respectively and to 3 new Land Record States namely Chhattisgarh, Jharkhand and Uttarakhand carved out from Madhya Pradesh, Bihar and Uttar Pradesh respectively in 2001-02. The scheme has also started implementation in Telangana state from the year

2015-16 onwards ever since its carving out from Andhra Pradesh. Due to diminishing of cropped area in Delhi over the years and lackluster co-operation of State field officials, the scheme has been discontinued from the year 2010-11.

1.1.3 In 1976, the Working Group on Agricultural Statistics of the NSSO decided that reports be prepared regularly on the status of estimation of crop production in India, which would contain full account of the current position of estimation of crop production, the procedures followed for enumeration of area and yield in different States/UTs and the steps to be taken for improving the system. The reports should also give the position of training of staff entrusted with crop cutting work, the equipment supplied to them, the adequacy of experiments planned under General Crop Estimation Surveys (GCES), the response rate etc. Besides, the findings of the sample checks under ICS Scheme on the working of the system are also brought out indicating the remedial measures to rectify the deficiencies observed. Such status reports are being prepared every year from the Rabi season of **1973-74**. The reports are brought out separately for all India and the individual States/ UTs season-wise i.e. Kharif and Rabi. The All India report contains an overall account of the status of estimation of crop production in the country as also the technical details and results relating to the ICS Scheme for the States and UTs covered by it. It provides comparison of estimates based on sample checks under the various schemes viz. ICS, TRS, Final Forecasts and GCES.

1.1.4 The present report is the forty fifth in the existing series and relates to the Agriculture Year 2019-20. The first report was a combined report for 1973-74 (Rabi) and 1974-75 (Kharif & Rabi). From 1975-76 onwards, the reports are being published every year with an exception of the 5th report, which is a combined one for 1978-79 and 1979-80.

1.1.5 In the present report, the two components - Area Statistics and Yield Statistics are discussed in Chapters 2 and 3 respectively. The Chapters 4 to 7 deals with the Design and Methodology followed under the ICS scheme together with the NSSO's responsibility for coordinating the Central and State agencies in collection of supervised data on Agricultural Statistics. The detailed findings under ICS are discussed in Chapter-8.

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2 AREA STATISTICS

2.1 System of collection

2.1.1 According to the system adopted for collection of area statistics, the States and Union Territories (UTs) can be classified into three broad groups:

i. The States where Area statistics are collected by complete enumeration (normally known as Land Record States or Temporarily Settled States)
ii. The States where Area statistics are collected on the basis of sample surveys (normally known as Non-land Records States or Permanently Settled States)
iii. The States where satisfactory system of collection of Area statistics is yet to be developed.

2.1.2 In the Land Records States, there exists a primary agency (commonly known as Patwari), in-charge of a village or group of villages to carry out field-to-field crop inspection in each crop season of an agriculture year and to record crop areas and land utilisation. The agency belongs to the Revenue (or Land Records) department and attends to the work along-with the collection of land revenue and other duties. The Patwari is required to note down the details of crop enumeration and land utilisation in a register, commonly known as the "Khasra Register". After completion of entries for a village in a season, the Patwari prepares an abstract of area sown to various crops and sends a statement of crop abstract (Jinswar statement) to the next higher officer in revenue hierarchy. Similarly, at the end of the year, they prepare a land utilisation statement showing the abstract of area under different utilisations. The crop-wise and utilisation-wise area figures, so compiled for villages are successively aggregated at the circle, tehsil and district levels. The district-wise figures are then reported to the State Agricultural Statistics Authority (SASA), who may either be the Director of Statistical Bureau, the Director of Agriculture or the Director of Land Records. The State level figures compiled by SASAs are transmitted to the Directorate of Economics and Statistics (DES) in the Ministry of Agriculture & Cooperation, Government of India which is responsible for releasing the All-India estimates.

2.1.3 The system of land records is being followed in 17 States viz., Andhra Pradesh, Assam, (except two hill districts of North Cachar and Karbi Anglong), Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Telanagana, Uttar Pradesh and Uttarakhand as also in 5 Union Territories of Chandigarh, Delhi, Dadra & Nagar Haveli, Jammu & Kashmir and Puducherry. These States and UTs account for about 86% of the

All-India reporting area. In the hilly districts of Uttarakhand, complete area enumeration is envisaged in only 20% of the villages of each tehsil each year according to a five yearly roster. The system of land records also exists in Andaman district of Andaman & Nicobar Islands.

2.1.4 In the Non-Land Records States or Permanently Settled States viz., Kerala, Odisha and West Bengal, the area statistics are generated on the basis of sample surveys. After the Establishment of an Agency for Reporting Agricultural Statistics (EARAS), 20 % villages in these States are covered each year on complete enumeration basis by regular reporting Agencies. The EARAS was later extended to Arunachal Pradesh, Nagaland, Sikkim and Tripura. These States account for about 9% of the reporting area.

2.1.5 For remaining 5% of the reporting area of the country, a satisfactory system of collection of area statistics is yet to be developed. These include parts of Manipur, Meghalaya, Nicobar district of Andaman & Nicobar and Mizoram which are mostly hilly, inaccessible and with a major portion of the area not cadastrally surveyed. Some hilly tracts in States like Andhra Pradesh, Assam, Chhattisgarh and Madhya Pradesh which are not cadastrally surveyed also belong to this category. In addition, some cadastrally surveyed areas like plains of Manipur, Goa, Daman & Diu and Lakshadweep do not have a satisfactory system of reporting. Crop statistics are compiled in these areas mainly by conventional methods. There have been sporadic attempts to improve the situation in some of these States but a regular system is yet to be evolved.

2.1.6 In order to improve the timeliness and quality of Agricultural Statistics, the Ministry of Agriculture & Farmer's Welfare, Government of India introduced two schemes viz., the Timely Reporting Scheme (TRS) and the Scheme "Establishment of an Agency for Reporting Agricultural Statistics (EARAS)". The State-wise year of introduction of the schemes of TRS, EARAS and ICS is given in **Table-1**.

2.1.7 While implementing the ICS scheme, NSSO (FOD) is required to examine the working of these schemes (viz. TRS & EARAS) and forward reports to the Union Ministry of Agriculture & Farmers' Welfare, SASAs and other agencies for their information and necessary action.

2.2 Timely Reporting Scheme (TRS)

2.2.1 The objective of the Timely Reporting Scheme (TRS) initiated by the Union Ministry of Agriculture & Farmer's Welfare in **1968-69** in land records States is to reduce the time lag between the completion of sowing and the availability of estimates of area sown and between completion of harvesting and availability of estimates of production in respect of important crops. Under this scheme, area enumeration is completed on a priority basis in a random sample of 20% of the villages during each crop season in a State. All the villages in a State are divided in five independent non-overlapping sets, the intention being to canvass one set in a year and thus covering the entire State in a period of five years. The scheme is intended to provide timely and reliable estimates of area under important crops. The scheme provides for supervision through whole time statistical staff. During the year covered by this report, the scheme was in operation in 17 States and 2 Union Territories of Jammu & Kashmir and Puducherry.

Table – 1
State-wise year of introduction of TRS / EARAS and ICS Scheme

Sl. No.	Name of the State	Season and year of introduction	
		TRS / EARAS	ICS
1.	Andhra Pradesh	Kharif, 1971-72	Kharif, 1974-75
2.	Assam	Late Kharif 1973-74	Kharif, 1974-75
3.	Bihar	Late Kharif 1969-70	Rabi, 1973-74
4.	Chhattisgarh	Rabi, 2001-02	Rabi, 2001-02
5.	Gujarat	Kharif, 1972-73	Rabi, 1973-74
6.	Haryana	Rabi, 1973-74	Rabi, 1973-74
7.	Himachal Pradesh	Kharif, 1978-79	Kharif, 1974 -75*
8.	Jammu & Kashmir	Kharif, 1975-76	Rabi, 1974-75**
9.	Jharkhand	Rabi, 2001-02	Rabi, 2001-02
10.	Karnataka	Kharif, 1969-70	Rabi, 1973-74
11.	Madhya Pradesh	Rabi, 1972-73	Rabi, 1973-74
12.	Maharashtra	Kharif, 1968-69	Rabi, 1973-74
13.	Punjab	Kharif, 1975-76	Rabi, 1973-74***
14.	Rajasthan	Kharif, 1972-73	Rabi, 1973-74
15.	Tamil Nadu	1972-73	Kharif, 1974-75
16.	Telangana	Kharif, 2015-16	Kharif, 2015-16
17.	Uttar Pradesh	Kharif, 1968-69	Rabi, 1973-74
18.	Uttarakhand	Rabi, 2001-02	Rabi, 2001-02
19.	Puducherry	Kharif, 1980-81	Kharif, 1980-81
20.	Kerala #	1975-76	Early Kharif, 1975-76
21.	Odisha #	1976-77	Kharif, 1974 -75****
22.	West Bengal #	1981-82	Rabi, 1975-76*****

* The SASA Himachal Pradesh could participate in ICS from Kharif 78-79 as TRS started in the state from 1978-79 (Ref: A report on the status of estimation of Agricultural Production in Himachal Pradesh 1978-79, Chapter 2, Para-3).

** The ICS Scheme was introduced in J & K from Kharif 1974-75 (Ref: A report on the status of Estimation of Agricultural Production in J & K 1975-76, Chapter 7, Para-4.1).

*** The ICS Scheme was introduced in Punjab from Rabi 1973-74 (Ref: A report on the status of Estimation of Agricultural Production in Punjab 1975-76, Chapter 11, Para-4).

**** The ICS Scheme was introduced in Odisha from Winter 1974-75 (Ref: A report on the status of Estimation of Agricultural Production in Odisha 1976-77, Chapter 16, Para-2.1).

***** The ICS Scheme was introduced in West Bengal from Rabi 1975-76 (Ref: A report on the status of Estimation of Agricultural Production in West Bengal 1981-82, Chapter4, Para-4).

\# EARAS States, rest are TRS States.

2.3 Establishment of an Agency for Reporting Agricultural Statistics (EARAS)

2.3.1 As a sequel to the introduction of the TRS in the Land Records States, the Ministry of Agriculture & Farmer's Welfare sponsored a scheme, 'Establishment of an Agency for Reporting Agricultural Statistics (EARAS)' in the States of Kerala, Odisha and West Bengal, which was also extended to Arunachal Pradesh, Nagaland, Sikkim and

Tripura. This scheme provides for setting up, in a phased manner, a whole time agency to cover a sample of 20 percent of the villages every year so that all the villages in the States can be covered once in a period of five years. In the sample villages, the scheme envisages that crop area may be reported on the basis of complete enumeration.

2.3.2 In Kerala, the scheme was initiated during **1975-76** with 10% sample size which was later increased to 20% in 1977-78. The method of collection of area statistics in Kerala has undergone a change from 1987-88 onwards. The State was divided into 811 Investigator Zones. A sample of 100 key plots is selected from each Investigator Zone. With respect to each key plot, a cluster consisting of five sub-survey division numbers is formed and land utilisation statistics are collected from these 100 clusters of five sub-survey division numbers each.

2.3.3 In Odisha, the scheme was introduced during **1976-77**, covering 6% of the villages which subsequently increased to 10% in 1977-78 and reached 20% level from 1981-82 onwards. For this purpose, each Community Development Block has been considered as a stratum.

2.3.4 In West Bengal, the scheme was implemented during **1981-82**, covering 7% of the villages. In 1982-83, the coverage was extended to about 10% of the villages. By 1985-86, the coverage reached to the level of 14%. From Kharif, 1996-97 the crop-wise area enumeration work is done in all EARAS Mouzas.

2.4 Major quality aspects of Area Statistics - Current Status

I -Workload of the Primary Workers

2.4.1 One aspect, which has a bearing on the quality of area statistics, is the workload per primary worker, commonly known as Patwari. The National Commission on Agriculture in its Report (1976) had also recommended that the jurisdiction of the Patwari should be reduced, wherever it is extensive. The factors that will have to be taken into account during the examination of the recommendation of the total workload involved in area enumeration are (a) physical jurisdiction of the Patwari (b) number of survey/sub-survey numbers per village (c) number of entries in each season and (d) workload with regard to other items of work entrusted to them due to multifarious nature of their duties. While the issue will have to be considered by each State in the light of the prevalent situation, the sample checks under ICS Scheme provide some idea of the average workload per primary worker for collection of land use statistics in terms of the number of villages, survey/serial numbers and total geographical area under their jurisdiction. The average workload per primary worker as revealed by the sample checks under ICS Scheme during 2018-19 in all TRS/EARAS States and Union Territory is given in **Table-2**. It can be observed that the workload of the primary worker in various States/UT varies from 2 villages in Tamil Nadu to 22 villages in Jharkhand, from 500 survey numbers per village in Assam and Maharashtra to 3400 survey numbers per village in Haryana, from 200 hectares of the geographical area per village in Assam, Himachal Pradesh, Odisha, Uttarakhand and West Bengal to 1200 hectares in Andhra Pradesh.

Table - 2
Workload of Patwari during 2019-20

Sl.No.	State	No. of villages	Survey / Sub survey Nos. per village('000')	Geographical Area per village ('000' Ha.)
1	Andhra Pradesh	3	1.6	1.2
2	Assam	11	0.5	0.2
3	Bihar	20	1.3	0.3
4	Chhattisgarh	5	1.2	0.5
5	Gujarat	3	0.8	1.1
6	Haryana	4	3.4	0.9
7	Himachal Pradesh	11	1.0	0.2
8	Jammu & Kashmir	5	1.0	0.5
9	Jharkhand	22	1.0	0.3
10	Karnataka	4	0.8	1.0
11	Kerala	#	#	#
12	Madhya Pradesh	4	0.8	0.5
13	Maharashtra	4	0.5	0.9
14	Odisha	21	1.0	0.2
15	Punjab	6	2.2	0.6
16	Rajasthan	8	0.8	0.9
17	Tamil Nadu	2	2.5	0.8
18	Telangana	3	2.0	1.1
19	Uttar Pradesh	6	0.7	0.3
20	Uttarakhand	11	1.7	0.2
21	West Bengal	5	1.0	0.2
22	Puducherry	11	1.2	0.3
All India average		**8**	**1.3**	**0.6**

 # In Kerala, each Investigator is assigned with one Investigator zone within which 500 sub-survey division numbers (100 key plots and to each key plot, a cluster consisting of five sub-survey division numbers) are enumerated by him in each season.

II - Treatment of Crop mixtures

2.4.2 The major Land Records States of the country can be broadly divided into the following three categories according to the manner of treatment of areas under crops grown in mixtures:

(i) States where allocation of the area to the constituent crops grown in mixture is done at field level on the basis of seed ratio/eye estimation. This procedure is followed in Andhra Pradesh, Assam, Bihar, Haryana, Himachal Pradesh (except Kangra district), Jharkhand, Karnataka, Maharashtra and Tamil Nadu.

(ii) States where some major crop mixtures have been identified and area at the field level of the recognised mixtures is recorded as such for the mixtures. Allocation to the constituent crops is done at higher levels on the basis of fixed ratios. For unrecognized mixtures, the allocation of areas to the components is done at field level on the basis of

seed ratio/ eye estimation. The States following this procedure are Gujarat, Kangra district of Himachal Pradesh, Jammu & Kashmir, Punjab and Rajasthan.

(iii) States where some major mixtures have been identified and area of these mixtures is recorded as such at field level, the allocation to the constituent crops being done at higher levels following fixed ratios. For unrecognized mixtures, the entire area is recorded against the major crop of crop mixture and the minor constituents are ignored. States of Chhattisgarh, Madhya Pradesh, Uttar Pradesh and Uttarakhand follow this procedure. A revision is felt necessary in these States in regard to the present system of recording areas of the constituents of the unrecognized crop mixtures. Under the existing system, area under minor constituents tends to be ignored while that under major constituents gets over estimated.

(iv) In three Non- land Records States viz., Kerala, Odisha and West Bengal, the practice of sowing crops in mixture is not much in vogue.

****

3

YIELD STATISTICS

3.1 General Crop Estimation Surveys

3.1.1 General Crop Estimation Surveys (GCES) consist of performing a specified number of crop cutting experiments in randomly selected fields. Crop cutting experiment conducted under well designed estimation survey, is an effective technique for estimating the average yield by selecting the field, randomly locating a plot of a specified size, harvesting, threshing, weighing and recording the weight of the produce from the plot. In a sub sample of experiments, further processing of the harvested produce is also done to determine the percentage recovery of dried grains or the marketable form of the produce, depending on the nature of the crop.

3.1.2 At the time of inception of Improvement of Crop Statistics (ICS) Scheme, during the year 1973-74, a total of 1,73,097 experiments were planned under GCES. These experiments increased to 17,26,577 in number under GCES 2018-19 which formed the basis for sample selection for supervision of Crop Cutting Experiments under the ICS Scheme during agriculture year 2019-20 on various crops covering 19 Land Records States/ UTs, 3 EARAS States of Kerala, Odisha and West Bengal and other States of Goa and Meghalaya and Union Territory of Dadra & Nagar Haveli and Daman & Diu. Crop Estimation Surveys are not conducted in Nagaland and Sikkim as yet.

3.1.3 The sampling design generally adopted for the CES is that of stratified multi-stage random sampling with Tehsils/ Talukas/Revenue Inspector Circles/CD Blocks/Anchals etc. as strata and village within a stratum as first stage unit of sampling, survey number/field within each selected village as sampling unit at the second stage and experimental plot of a specified shape and size as the ultimate sampling unit. In some States, the sampling design takes into account the stratification according to input viz., Irrigation and Seed variety for major crops. Experiments for a crop / variety are allotted to districts and then to strata within a district in proportion to area under the crop / variety in districts / strata within a district. In Land Record States, villages selected under Timely Reporting Scheme (TRS) in a stratum for the current year form the sampling frame for the first stage sampling units. Villages are selected through Simple Random Sampling Without Replacement (SRSWoR).

3.1.4 In 3 Non-Land Record States of Kerala, Odisha and West Bengal, both area and yield are estimated on the basis of sample surveys. The crop cutting experiments are planned in a sub-sample of the primary units selected for the purpose of area enumeration, while the general procedure for selection of sampling units at different stages is the same

as that in the other States. Some special features in these States which require specific mention are listed as follows:-

i) In Kerala, blocks / city corporations or municipalities with an area of 10 sq kms and above are treated as separate stratum. Municipalities with an area of less than 10 sq kms are merged with adjoining blocks and treated as a single stratum. The blocks are divided into a number of Investigator Zones depending on the area of a block, nature of land, etc. City corporation area is divided into three Investigator Zones. Each Municipality with an area more than 10 sq. kms is treated as a single Investigator Zone. The number of crop cutting experiments conducted in each Investigator Zone is 8 per season for Paddy, 3 each for Coconut and Banana, and 2 each for Tapioca, Arecanut, Cashewnut, Pepper, Plantain and Jackfruit in an agricultural year. In Municipal area having separate Investigator Zone, 10 crop cutting experiments are conducted in respect of Paddy per season. For city corporation areas, 8 experiments for Paddy per season in one Investigator Zone are conducted.

ii) In Odisha, crop-cutting experiments for Paddy are conducted in a sub-sample of 40% of EARAS villages having even serial numbers except serial numbers ending with " Zero" i.e. 10, 20, etc. in each block and for other crops, in 50 % of EARAS villages occurring against the even serial numbers i.e. 2, 4, 6, etc. during Autumn and Winter seasons. In summer season, all the villages selected for area enumeration under EARAS are covered under CES for Paddy and other crops. For Paddy, the crop cutting experiments are planned in proportion to crop area subject to minimum of two and maximum four experiments in a village. For other crops, only one experiment is conducted in a village.

iii) In West Bengal, the EARAS has not only become the primary source for area statistics but also for providing the frame for selection of villages for conduct of crop cutting experiments (CCEs) under GCES in the State. Ten mouzas out of all the EARAS mouzas in a block are randomly selected for CCEs. A 10% systematic sample (subject to a minimum of 100 plots) of all the plots in a selected mouza is taken and the type of land use for each plot in the sample is identified. In this way, a sub-frame of plots cultivating each crop is prepared for each such mouza. If the number of plots growing a crop in a mouza is too small, all the plots growing the crop are enumerated. The plots for conducting CCEs are sampled out of this sub-frame. In all, 20 plots are taken in the form of two inter-penetrating sub-samples of size 10 each for each block for a crop. On the basis of these, two independent estimates of yield rate are obtained for a block and these are later combined to give an overall estimate.

3.1.5 The coverage of crops under GCES in the States is constantly reviewed in order to ensure that yield rates are obtained scientifically by the method of crop cutting experiments for all the important crops of a State as well as in all major States for a crop. An examination of the coverage of crops in different States reveals that though some of the States with lesser area under certain crops are covering them under GCES, others with larger areas under that crop are not covering them. In order to remove this anomaly, a periodical review of GCES planning in the States is advised. However, the States are of the view that due to the large number of crops already covered, coupled with the constraints of staff resources, it may not be possible to extend GCES further.

3.1.6 The precision of the estimates of average yield is judged by the standard error of the estimate. The calculation of standard errors and their study is helpful in assessing the adequacy of the sample size, trend of changes in yield rates and in planning other allied studies. NSSO has impressed upon the States, the need for calculation of the standard errors annually. In case the %SE of a crop is greater than 5% and 10% for non-dried & dried crops respectively at the district level, SASA is expected to increase plan according to precision table in the next Agricultural Year. This is indispensable to ensure control over sampling process and precision of estimates at the district level which should be less than 5% and 10% for non-dried & dried crops respectively.

3.1.7 A study to ascertain whether the non-response was affecting the representative character of the sample was attempted using the data collected under ICS Scheme. The percentage of fields with Irrigation, High Yielding Variety of seeds and Fertilizers were computed for (a) fields where experiments were conducted and (b) all the fields chosen. The results of analysis presented in **Annex-VII** do not provide any clear evidence of distortion of the representativeness of the sample by the experiments lost. However, due to limited number of observations on which the comparisons have been made, no firm conclusion can be drawn.

3.1.8 The GCES covers principal cereals and pulses, major fibers like Cotton, Jute and Mesta, principal Oil seeds such as Groundnut, Sesamum, Linseed, Rape & Mustard and Castor as well as Sugarcane and Tobacco, wherever these crops are sown in larger tracts. A few minor food and non-food crops (like Fruits and Vegetables) are also covered in some States. The percentage coverage of area under major crops is generally high in most of the States. States where percentage coverage is the lowest for a crop are shown in **Table – 3.**

3.1.9 The design for crop survey is generally a composite one without any stratification according to inputs such as irrigation and / or seed. The differential yield rates are, however, worked out on a post stratification basis using the ancillary data regarding inputs applied, collected during the course of conduct of experiments. The National Commission on Agriculture had also recommended that the sampling design for crop cutting surveys should be reviewed with a view to introducing stratification according to irrigated and rain fed areas as well as high yield and local varieties of seed. The position during 2018-19 regarding pre-stratification on the basis of irrigation and variety of seeds is shown in **Table – 4.**

Table - 3
Percentage of crop area covered (lowest) under GCES for major crops during 2018-19

Sl. No.	Crop	Minimum Area (% of the total area under the crop)	Name of State
1.	Rice (Autumn)	2	Kerala
2.	Rice (Winter)	3	Kerala
3.	Rice (Summer)	2	Kerala
4.	Rice (Combined)	35	Jammu & Kashmir
5.	Jowar (Kharif HYV- Tra- Combined)	27	Karnataka
6.	Bajra (Kharif)	65	Telangana
7.	Maize	7	Haryana
8.	Maize (Rabi)	36	Tamil Nadu
9.	Maize (Combined)	35	Jammu & Kashmir
10.	Ragi (Rabi)	30	Andhra Pradesh
11.	Wheat (Tra-Irr & UI)	38	Jammu & Kashmir
12.	Barley	29	Haryana
13.	Gram	40	Haryana
14.	Redgram /Tur	21	Haryana
15.	Cotton	45	Haryana
16.	Mesta	97	Andhra Pradesh, Bihar
17.	Jute	78	Meghalaya
19.	Groundnut	64	Chhattisgarh
20.	Groundnut (Rabi)	65	Andhra Pradesh
21.	Sesamum (Kharif)	47	Chhattisgarh
22.	Sesamum (Rabi)	59	Andhra Pradesh
23.	Castor	70	Telangana
24.	Sugarcane	0.04	Kerala
25.	Linseed	63	Chhatisgarh
26.	Rape & Mustard	51	Chhatisgarh
27.	Chillies (Rabi)	3	Chhattisgarh
28.	Tobacco	28	Telangana

Note:-

CES data pertains to the year 2018-19 as this forms the basis for sample selection on Crop Cutting Experiment under ICS scheme 2019-20.

Table – 4
Status of Pre-Stratification under CES during 2018-19

Sl. No.	State	Crops for which pre-stratification is done according to		
		Both Irrigation & Seed	Irrigation only	Seed only
1.	Andhra Pradesh	-	Paddy(Kharif & Rabi)	-
2.	Bihar	Paddy (Aghani) and Wheat	Paddy (Bhadai) and Sugarcane	Paddy (Garma) and Maize (Bhadai & Garma)
3.	Chhattisgarh	Paddy* and Wheat*	-	-
4.	Gujarat	-	Paddy (Kh.), Wheat and Cotton	-
5.	Jharkhand	-	-	Paddy (Aghani) and Wheat
6.	Karnataka	Paddy (Kh., Rabi* & Sum *), Jowar (Kh., Rabi &Summer**), Bajra (Kh.), Maize (Kh., Rabi &Summer**), Ragi (Kh., Rabi & Summer**) and Wheat	Groundnut @ (Kh., Rabi & Sum.), Cotton (Kh.), Gram and Sun flower (Kh., Rabi & Sum)	Maize (Summer)
7.	Madhya Pradesh	Paddy and Wheat	-	-
8.	Maharashtra	-	Paddy (Kh.), Jowar (Rabi), Bajra, Wheat and Cotton	-
9.	Rajasthan		Gram and Wheat	-
10.	Tamil Nadu	-	Jowar, Bajra, Maize, Ragi, Groundnut, Sesamum and Cotton	-

Note: Kh. – Kharif, Sum - Summer

@ - Pre-stratification only in the relevant districts and not for the State as a whole.

**** - Pre-stratification according to seed is for irrigated category.***

***** - Pre-stratification according to irrigation is only for HYV.***

3.1.10 In some of the States, the limitation of the official acreage statistics under Irrigation or under High Yielding crops has been a handicap in adopting pre-stratification. To obviate this difficulty, it is necessary that land records are maintained in each State for area under Irrigation and under High Yielding Variety of seed.

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4

CO-ORDINATION

4.1. Forums for Coordination

4.1.1 The NSSO (FOD) is vested with the responsibility of coordinating all the technical aspects between States and Central agencies besides performing the role of providing technical advice and ensuring adoption of uniform concepts, definitions and procedures in GCES in different States. It reviews the plans, details of implementation and the results of the surveys, participates in the training camps organised for the State field workers and undertakes inspection of fieldwork. It publishes annually a report titled "Consolidated Results of Crop Estimation Surveys on Principal Crops" covering different aspects of GCES, such as organisation, training, supervision, coverage, response and estimation etc. To guide NSO (FOD) in discharging these functions smoothly, following forums have been set up:

- National Statistical Commission
- High Level Coordination Committee at State level
- Zonal meetings of SASAs (State Agricultural Statistics Authority)
- The Conference of Central and State Statistical Organisations (CoCSSO)

I – National Statistical Commission:

4.1.2 The National Statistical Commission, set up by the Government in January 2000 under the Chairmanship of Dr. C. Rangarajan, reviewed the statistical system and the entire gamut of Official Statistics in the country. The Rangarajan Commission submitted its report to the Government in August 2001. One of the key recommendations of this Commission was to establish a permanent National Commission on Statistics to serve as a nodal and empowered body for all core statistical activities of the country, evolve, monitor and enforce statistical priorities and standards and to ensure statistical co-ordination among the different agencies involved. In line with the recommendations of the Rangarajan Commission, the Government of India resolved to set up a permanent National Statistical Commission (NSC), vide Notification No. 85 dated 1st June 2005 published in the Gazette of India, Extraordinary, Part-III-Section. The NSC was initially constituted on 12th July 2006. The Commission consists of a part-time Chairman, four part-time Members and Secretary, Planning Commission as an ex-officio Member. The Chief Statistician of India (CSI) is the Secretary to the Commission and also the Secretary to the Government of India in the Ministry of Statistics and Programme Implementation (MoSPI). The NSC took note of the

findings and recommendations of all important bodies in the context of the prevailing status of Agricultural Statistics and attempted a fresh analysis focusing its attention on identification of the deficiencies of the system and the remedial measures required to set them right.

II – High Level Co-ordination Committees

4.1.3 High Level Co-ordination Committees (HLCCs) on Agricultural Statistics have been constituted at the State level. These committees include representatives at the highest possible level of executive in the State Government departments connected with area and yield estimation, Principal Advisor, Union Ministry of Agriculture & Farmer's Welfare and the Additional Director General, NSSO (FOD). The Committee is usually headed by a senior officer of the State Government at the level of Secretary like the Financial Commissioner, the Agricultural Production Commissioner, the Chairman or Member, Board of Revenue etc. Such committees have been formed in all Land Records States and Non Land Record States. In West Bengal, a Steering Technical Committee consisting of the concerned departments discharges similar functions. In Odisha, High Level Coordination Committee (HLCC) also carries out the functions of State Level Coordination Committee (SLCC) in the State. During the year under review viz. 2019-20, two meetings of these committees were held in the States/UTs of Haryana and Jammu & Kashmir. In the meeting of these committees, various issues relating to area forecasts, estimates of yield rates and crop production, the functioning of TRS/EARAS and ICS schemes and other aspects of Agricultural Statistics are discussed. These meetings have proved very useful in sorting out problems relating to coordination of the efforts of the associated departments of the States, other operational problems and in taking steps for improving the functioning of the system.

III – Zonal meetings of SASAs

4.1.4 In mid-seventies, the Governing Council of NSSO recommended periodical meetings of State Agricultural Statistics Authorities (SASAs) in different zones of the country to discuss common technical issues. Accordingly, the States were grouped into 4 zones as under: -

(i) Southern Zone: Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Puducherry.
(ii) Western Zone: Gujarat, Madhya Pradesh, Maharashtra, Goa, Daman & Diu, Dadra and Nagar Haveli.
(iii) Northern Zone: Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Uttar Pradesh and Delhi.
(iv) Eastern Zone: Assam, Bihar, Odisha and West Bengal.

Since 1977, three rounds of such meetings in each of the Eastern zone, Northern Zone, Southern Zone and Western Zone have been held. The issues discussed in the meetings included problems relating to area and yield estimation, review of the working of the TRS and ICS schemes, methodological aspects of crop surveys, collection and analysis of ancillary data, progress of implementation of the recommendations of National Commission on Agriculture and recording of area under high yielding varieties of crops. No such meetings have been held since 1986-87. It will be helpful, if such meetings are held

periodically as they could be useful in studying the technical aspects of agriculture survey in different States of a zone.

IV - The Conference of Central and State Statistical Organizations (COCSSO)

In order to strengthen the coordination of statistical activities among the Ministry of Statistics and Programme Implementation, other Central Ministries and State Statistical Organisations, the Conference of Central and State Statistical Organisations (COCSSO) was organized for the first time in the year 1971. Earlier, it was supposed to be organized once in every two years. The objectives of the conference are:

- To provide a platform for discussion on the statistical issues of common interest to the Central and the State Statistical Organizations;
- To provide an overall perspective to the development of statistical system and to make recommendations/suggestions on issues having bearing on the development of the statistical system;
- To solve the technical issues relating to statistics;
- To set up Working Groups on specific issues/tasks relating to official statistics;
- To provide guidelines in the collection of statistics and maintenance of statistical standards and quality, besides uniformity in statistical standards;
- To consider the Action Taken Report of the follow up action on the recommendations of the previous meetings(s) of COCSSO; and
- To review the role of the Statistical Advisers in the Central and States/UT Governments.
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- During the year 2019-20, 27th COCSSO was held at Kolkata, West Bengal on 11th and 12th November, 2019. The theme of conference was “Sustainable Development Goals (SDGs)”.

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5 IMPROVEMENT OF CROP STATISTICS (ICS) SCHEME

5.1.1 The ICS scheme, which had a modest beginning in the year 1973-74, reached to the optimum coverage in subsequent years as indicated in **Table – 5.** Since then, the scale of sample checks has been more or less stabilized. During 2019-20, the scheme was operational in 20 States and two Union Territories of Jammu & Kashmir and Puducherry including EARAS States of Kerala, Odisha and West Bengal. The scheme is also being implemented in newly carved State Telangana starting from 2015-16. In these States/ UT, the sample checks were carried out by both the agencies. The work of checking of crop abstract statements was suspended in Central sample in 1993-94, it was revived in 1999-2000 and again suspended since 2008-09.

Table – 5

Sample size for various checks under ICS

Year	Sample check on Area Enumeration (Number of villages.)		Sample check on Area Aggregation (Number of villages)		Supervision on Crop Cutting Experiments (Number of experiments)	
	Central	State	Central	State	Central	State
1973-74	1648	1958	1648	1958	2308	2568
1974-75	3695	2566	1848	1283	9892	7244
1975-76	4017 +560 grids	4310	3837	4090	12906	11760
1976-77	4050 +560 grids	4852	3870	4740	13307	13338
1977-78	4742 +560 grids	4777	4379	4270	15692	14151
1978-79	4732 +560 grids	4993	4390	4650	15518	14970
1979-80	4742 +560 grids	4853	4390	4650	15480	14380
1980-81	4722 +560 grids	4960	4458	4498	15450	14700
1981-82	4755 +250 grids	4992	4265	4304	15670	14830
1982-83	4651 +250 grids	4901	4265	4304	15740	14929
1983-84	4757 +250 grids	5007	4271	4301	15420	14610
1984-85	4754 +250 grids	5004	4527	4567	15540	14726
1985-86	4754 +250 grids	5004	4639	4669	15562	14752
1986-87	5005	5415	4650	4680	15570	14712
1987-88	5004	5415	4650	4680	15570	14760
1988-89	4952	5362	4694	4734	15594	14984
1989-90	4952	5362	4694	4734	15398	14588
1990-91	4952	5362	4694	4734	15600	14700
1991-92	4952	5362	4692	4722	15660	14840
1992-93	4952	5352	4692	4722	15660	14840

Year	Sample check on Area Enumeration (Number of villages.)		Sample check on Area Aggregation (Number of villages)		Supervision on Crop Cutting Experiments (Number of experiments)	
	Central	State	Central	State	Central	State
1993-94	4952	5352	-	4739	15660	14840
19 94-95	4952	5352	-	4739	15660	14840
1995-96	4949	5349	-	4739	15660	14840
1996-97	4949	5349	-	4739	15660	14840
1997-98	4949	5349	-	4739	15660	14840
1998-99	4949	5349	-	4739	15660	14840
1999-2000	4948	5358	4698	4738	15658	14908
2000-01	4949	5359	4699	4739	15660	14910
2001-02	4949	5359	4699	4739	15660	15660
2002-03	4949	5359	4699	4739	15660	15660
2003-04	4949	5359	4699	4739	15732	15732
2004-05	4949	5359	4699	4739	15732	15732
2006-07	4949	5359	4699	4739	15732	15732
2007-08	4949	5359	4699	4739	15732	15732
2008-09	4949	5349	*	4739	15732	15732
2009-10	4949	5349	*	4739	15732	15732
2010-11	4939	5349	*	4739	15662	15662
2012-13	4939	5349	*	4739	15662	15662
2014-15	4939	5349	*	4739	15662	15662
2015-16	4939	5349	*	4739	15662	15662
2016-17	4939	5349	*	4739	15662	15662
2017-18	4939	5349	*	4739	15662	15662
2018-19	4939	5349	*	4739	15662	15662
2019-20	4939	5349	*	4739	15662	15662

**** Work was withheld in Central sample from 08.12.2008.***

5.1.2 The scheme accomplishes its objectives by conducting sample checks on the primary field work through :

a) Physical verification of the crop enumeration done by the village primary workers in a sample of about 10,000 villages in each season,

b) Checking of the aggregation of crop-wise area in the Khasra register of these villages, and

c) Supervision on about 32,000 crop cutting experiments at harvest stage in a year.

5.1.3 The sample checks are undertaken by the supervisory staff of NSSO (FOD) and of the State Governments on a matching basis in two non-overlapping samples. The basic data collected through these checks are exchanged between the two agencies. The scheme is operational in 20 States and 2 Union Territories.

5.1.4 Two schedules viz., Sch AS 1.0 and AS 2.0 for recording the findings of the sample check on (a) enumeration of area in a village and (b) the crop cutting experiments respectively, are designed to be filled-in by the supervisory staff of Central (NSSO-FOD) and State agencies after conducting the sample checks. The filled-in schedules are sent to both the agencies on reciprocal basis for tabulation and analysis. The NSSO (FOD) is responsible for all aspects of the scheme right from the primary stage of preparation of survey design,

selection of sample units, field work, and data processing till the end stage of report writing.

5.1.5 The programme of sample check on area enumeration actually consists of selecting and locating a sample of 20 survey/sub survey numbers (fields) in terms of 4 clusters of 5 survey/ sub survey nos. each, within each selected sample village with the help of the village maps and recording the actual utilisation to which the land under survey numbers are put during each season and comparing these with the corresponding entries by the primary workers in respect of these selected fields.

5.1.6 The concurrent inspection of crop cutting experiments at harvest stage consists of examining whether the conduct of the experiments by the State primary workers conforms to the procedures prescribed under the GCES. The inspection covers aspects such as the selection of fields and random coordinates, marking of experimental plots of specified shape and size, harvesting of plants, weighment of the produce etc. In addition, the position regarding the supply and use of equipment for conducting the experiments, training received by primary workers, crop condition, use of inputs etc. is also ascertained.

5.1.7 The observations of the supervisor on area enumeration are recorded in specially designed Schedule AS 1.0. As the sample for ICS Scheme is generally chosen as a sub-sample of the villages under TRS or EARAS, the data from these sample checks, serve as an important indicator of the manner in which both the schemes are functioning. The observations of the supervisor on conduct of crop cutting experiments are recorded in Schedule AS 2.0. The ICS sample villages for crop cutting experiments being part of GCES villages, reveal the manner of implementation of GCES in different States.

5.1.8 The data collected through the sample check programme under the ICS scheme are analysed facilitating factual appraisal of the State system with reference to the following:-

- Timeliness in completion of area enumeration and working of TRS.
- Discrepancies in recording crop and crop area, their frequency and impact.
- Discrepancies in recording ancillary information (viz. Irrigation, Seed Variety), their frequency and impact.
- Departures from the prescribed procedure for conducting crop cutting experiments and their impact.

5.1.9 The yield data from the supervised experiments are also used for obtaining the average yield rates and standard errors of specified crops. These estimates are forwarded to the Ministry of Agriculture & Farmer's Welfare. They are used by the Ministry to validate the estimates provided by the State Governments.

5.1.10 Two features introduced later in the ICS programme are (a) sample check of aggregation of area figures above village level and (b) District Level Committee consisting of representatives of the Central and State Governments to probe into the reasons for large differences/no differences between the entries of the supervisor and primary worker in area enumeration.

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6

DESIGN AND SAMPLE SELECTION FOR ICS SCHEME

6.1 Sample Check on Area Enumeration

6.1.1 The total sample size for sample check on area enumeration under the scheme is distributed among the different States on a joint consideration mainly of crop area and availability of man power resources. Then within a State, villages are allotted to the districts in proportion to the gross cropped area in the districts. The design adopted for selection of villages for the sample check on area is that of stratified simple random sampling, where a teshil/anchal/sub-division /block/ taluka or a group of them based on geographical contiguity forms a 'Stratum' except Kerala and West Bengal where District is the Stratum.

6.1.2 The sample size is allocated to the strata in proportion to average gross cropped area of last three years in the stratum. In a stratum, sample villages are then selected by Simple Random Sampling without Replacement (SRSWoR) from the list of TRS villages in Land Records States. It is ensured that at least two villages are selected from each stratum. In Odisha, sample villages for check on area are selected from the crop cutting villages for minor crops under GCES, which is a sub-sample of the EARAS villages. In West Bengal, from Kharif 1996-97, the crop-wise area enumeration work is being done by the Directorate of Land Records and Surveys (DLR&S) in all EARAS mouzas. The frame for selection of villages for sample check on area enumeration under ICS Scheme is the list of EARAS villages.

6.2 Sample Check on Crop Cutting Experiments

6.2.1 The total number of experiments to be supervised by each agency under the scheme is distributed among the specified crops and States taking into account mainly the crop area and availability of man power resources. District is the 'Stratum' for supervision of crop cutting experiments. Within a State, the experiments are allotted to the strata and crops in proportion to the number of crop cutting experiments planned under GCES. The number of villages in a district for inspecting experiments on a crop is determined at the rate of two experiments per village, except for minor crops in Odisha where it is one experiment per village.

6.2.2 While selecting the villages for sample check on crop cutting experiments, it is prescribed that as far as possible, the experiments are to be located in the list of the sample villages selected for check on area enumeration. Shortfall, if any, in the requisite quota of a stratum is to be made up by selecting from the corresponding GCES list for the stratum. In West Bengal, the sampling design for supervision of crop cutting experiments is that of stratified multistage sampling where districts are taken as strata. Blocks within a District are First Stage Units (FSU) and selected with Probability Proportion to Size (PPS), size being area under an experimental crop in the block. Mouzas within a selected block are Second Stage Units (SSUs) and selected through Simple Random Sampling without Replacement (SRSWOR). The total number of mouzas to be selected in a district for sample check on crop cutting experiments will be equal to the half of the number of crop cutting experiments (2 experiments on a crop in each mouza) indicated against a district in the plan of work.

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7

ANALYSIS OF DATA

7.1 Check on Area Enumeration

7.1.1 Keeping in view the basic objective of the scheme of pointing out the deficiencies in the system of collection of area statistics and also the types of data collected through Schedule AS 1.0, the analysis of the information available in Schedules AS 1.0 aims at studying the following major aspects:-

- Timeliness in completion of area enumeration and submission of crop abstract
- Discrepancies in recording the basic area figures and their impact
- Discrepancies in recording ancillary information and their impact

7.1.2 Under the Timely Reporting Scheme (TRS), the primary worker is required to complete crop area enumeration (Girdawari) in the TRS villages in each season of the State on priority basis according to a prescribed time schedule, which is either in advance of the normal Girdawari period or in the first part of it. He is also expected to submit TRS statements to his higher authorities by pre-specified dates. A provision exists in Schedule AS 1.0 for collecting information on the due and actual dates of completion of Girdawari as well as the submission of TRS statement. Analysis of the data collected indicates how far the time programme under TRS is being adhered to by the primary workers and throws light on delays.

7.1.3 The possible errors of the primary worker while recording of area figures which may creep into the crop enumeration exercise are:-

- Non-Reporting of crops actually sown in the field,
- Reporting of crops not actually sown in the field,
- Incorrect assessment of area under the crop.

7.1.4 The occurrence of these errors can be assessed by comparing the entries of the ICS supervisors and that of State primary workers. Two measures are adopted for the purpose of the assessment. The first one is the simple proportion of the number of survey numbers/serial numbers in which the error is noticed to the total number of survey/serial number for which both the entries are available. As the tabulation is done crop-wise, a survey number will be counted as many times as the number of crops in it. The second measure is the ratio of total crop area in the sample reported by the primary worker to that

reported by the supervisor. This measure is worked out crop-wise and indicates the impact of the errors on crop area figures.

7.1.5 The State primary workers are also required to report ancillary items of information like Irrigation particulars and Varieties of Seeds. Discrepancies in recording these items in the sample clusters have been studied in the same manner as indicated in the previous paragraph.

7.1.6 For preparation of crop abstract, the primary workers are required to total the area figures of survey/sub-survey numbers under each crop or non-crop utilisation for each season. Under the ICS scheme, the supervisor also totals the area for different crops/ non-crop use independently. A comparison of the two totals helps to measure the extent of inaccuracy in the aggregation done by the primary worker.

7.1.7 The data collected under the scheme are analysed for other purposes as well. An illustration of this is the average workload per Patwari in the various States derived from the ICS data of 2019-20 and presented in Table-2 of Chapter-2. Detailed analysis undertaken in the reports of individual States would help to judge the extent to which the workload of the State primary workers had any bearing on lack of timeliness and inaccuracies noticed in area enumeration.

7.1.8 While the main objective of the scheme is to improve the system of collection of crop statistics in the States by finding out the deficiencies through sample checks, the sample observations have also been utilized for building up estimates of crop areas. These estimates are based on the supervisor and the primary worker's entries. Two estimates are prepared for each crop. For obtaining a measure of the effect of inaccuracies to measure the effect of errors in the area enumeration work done by the patwari, two estimates of area under a given crop are calculated on the basis of the patwari and supervisor's entries for the selected sample of 20 survey/serial numbers within the supervised villages as given in Schedule AS 1.0 and these estimates are denoted by A-III and A-IV respectively.

A-III: Estimates of crop area obtained from patwari's entries for 20 survey/serial numbers
A-IV: Estimates of crop area obtained from supervisor's entries for 20 survey/serial numbers

7.1.9 These estimates are compared with the corresponding TRS estimates and final estimates of DES, Ministry of Agriculture & Farmer's Welfare and have been presented in Annex-**XII**. The method of estimation for these estimates is given in the Appendix.

7.2. Check on Crop Cutting Experiments

7.2.1 Unlike the sample check on area, the sample check on crop cutting experiments is concurrent. The supervisor is present during the conduct (specifically at harvest stage) of experiment. He observes the extent of the primary worker's adherence to the prescribed procedure and corrects mistakes, if any, observed on the spot. He also collects information on the supply and use of essential equipment, training received by the primary worker, arrangements for proper storage of grains for the purpose of driage experiments, ancillary information on inputs like Irrigation, Seeds, Fertilizers etc. The analysis of data collected through Schedule AS 2.0, therefore, provides an insight of various aspects of crop cutting

experiments like availability of basic records, reasons for substitution of sampling units, types and frequency of various types of mistakes in conducting crop cutting experiments, supply and use of equipment etc.

7.2.2 Average yield rate of specified crops in a State based on the supervised experiments and their standard errors are also calculated by following the same procedure as adopted by the States for GCES and thus, these estimates can be compared with the corresponding GCES estimates. Appendix gives the formula for working out the estimate of average yield rate and the standard error thereof.

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8 FINDINGS UNDER ICS SCHEME

8.1 Sample Check on Area Enumeration

I – Response

8.1.1 **Annex-I** gives the State-wise response achieved (i.e. the percentage of the filled-in Schedules AS 1.0 received) in sample check on enumeration of area under ICS Scheme during 2019-20. It is encouraging to note that response for the Central Sample was cent percent except in the States like Bihar (99% in Late Kharif), Jammu & Kashmir (65% in Kharif), Odisha (99% in Late Kharif) and Rajasthan (99% in Kharif). Further it is noteworthy to state that response for the State Sample was cent percent in the States/UTs like Andhra Pradesh, Chattisgarh, Karnataka, Kerala and Puducherry for all the seasons covered. The response for the State Sample was below 51% in Assam (44% in Summer), Gujarat (37% in Summer), Himachal Pradesh (36% in Rabi), Uttar Pradesh (33% in Kharif, 27% in Rabi & 11% in Summer) and West Bengal (17% in Early Kharif, 17% in Late Kharif, 11% in Rabi & 2% in Summer). The concerned State SASA(s) may take suitable measures to improve the response rate to improve the quality of data collected.

II - Completion of Girdawari (Area Enumeration) under TRS/EARAS

8.1.2 **Annex-II** shows the percentage of villages in which crop area enumeration (Girdawari) was found to have been completed in time, late or found not completed till the time of the sample check i.e. supervisor's visit, during each season of 2019-20. A summary showing agency wise brief picture of the timeliness in completing area enumeration by primary workers is given below in **Table-6** for 2019-20 and 2018-19. The graphic presentation of the status of completion of Girdawari at all India level for pooled sample is presented in **Chart-I :**

8.1.3 One of the main objectives of the TRS/EARAS is to reduce the time lag between completion of sowing and availability of estimation of area sown. Delays in completion of area enumeration, violating the prescribed time schedule and subsequent delays in submission of crop abstracts defeat the very purpose of the Scheme. Details of completion of area enumeration during 2019-20 are given in **Annex-II**. Some states like Chattisgarh (95% in Kharif and 73% in Rabi), Haryana (99% in Kharif), Himachal Pradesh (94% in Kharif and 95% in Rabi), Kerala (99% in Early Kharif, 100% in Late Kharif and 62% in Summer), Madhya Pradesh (98% in Kharif & 94% Rabi), Odisha (98% in Early Kharif & 91% in Late Kharif), Rajasthan (78% in Late Kharif & 86% in Rabi), Tamil Nadu (98% in Rabi), Telangana

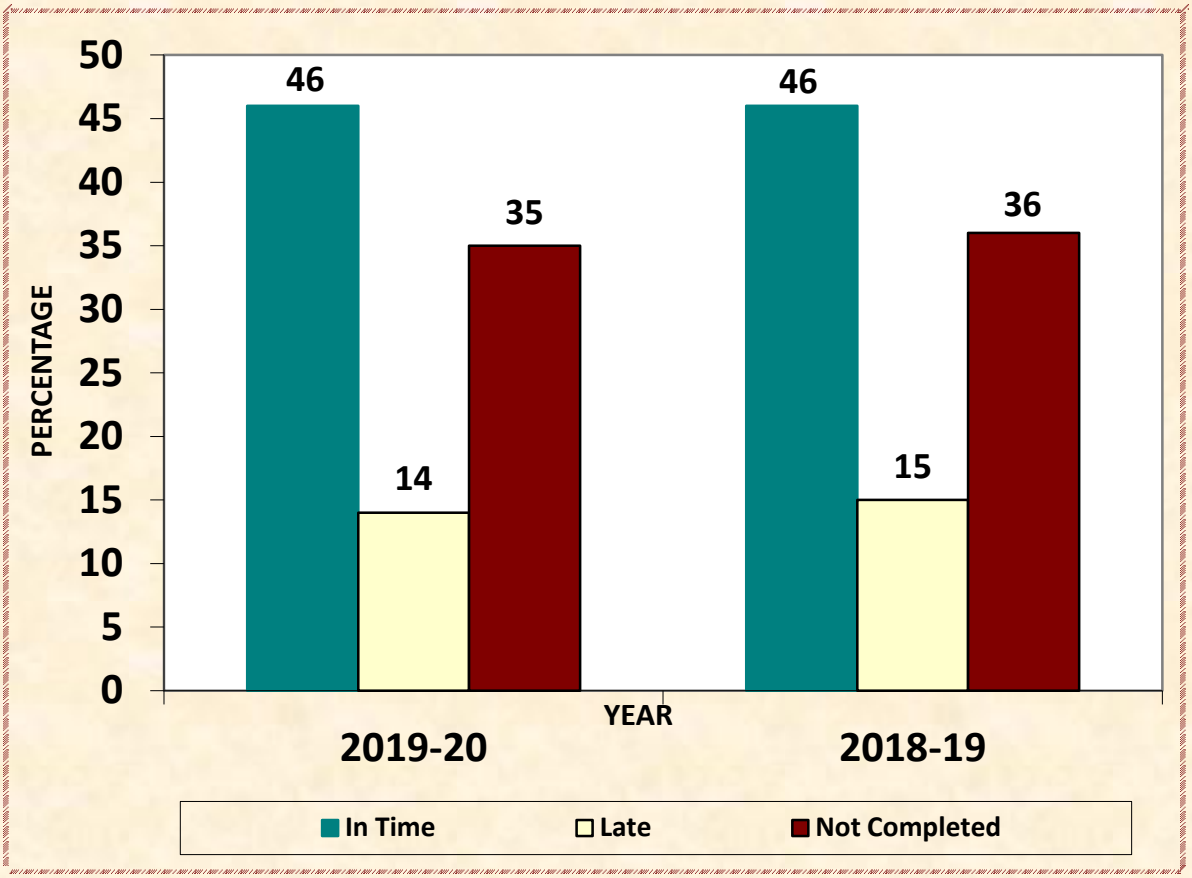
(90% in Kharif), Uttarakhand (88% in Kharif, 83% in Rabi & 94% in Summer) and Puducherry (100% in Kharif and Rabi I & 94% in Rabi II) are reporting timely completion of Girdawari. However, for all the States taken together on comparison of the position of timely completion of area enumeration work during 2019-20 with that of the last year, it is observed that, the timely completion of area enumeration was found to be of the order of 49% during Early Kharif, 50% during Late Kharif, 45% during Rabi and 33% during Summer of 2019-20 as against 45%, 51%, 48% and 33% during 2018-19. The position remains unsatisfactory for some of the States like Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Karnataka, Maharashtra, Punjab, Telangana and West Bengal. The estimates of area cannot be compiled with such high level of non-response at the basic level and these States need to take suitable administrative measures to improve the position so as to ensure the reliability of the area estimates.

Table – 6
All India Status of completion of Girdawari during 2019-20 and 2018-19

Status	Percentage of Villages					
	2019-20			2018-19		
	Central	State	Pooled	Central	State	Pooled
Early Kharif						
In time	40	60	49	44	47	45
Late	8	11	9	7	17	12
Not Completed	51	24	39	49	36	43
Late Kharif						
In time	48	52	50	48	53	51
Late	10	23	16	10	26	18
Not Completed	41	19	31	39	16	29
Rabi						
In time	37	57	45	44	54	48
Late	11	16	13	10	21	15
Not Completed	51	21	38	44	19	33
Summer						
In time	30	37	33	26	45	33
Late	7	28	17	6	18	10
Not Completed	35	24	30	65	32	54
All Seasons						
In time	41	52	46	41	52	46
Late	10	20	14	9	22	15
Not Completed	45	22	35	47	22	36

Note:- * Excluding information on completion of Girdawari not available (item- 7) and system of Girdawari does not exist (item-8) of Annex-V, State wise Status Report 2019-20 & 2018-19.

CHART - I
ALL INDIA STATUS OF COMPLETION OF GIRDWARI



III - Submission of TRS/EARAS Statements

8.1.4 The details of submission of TRS/EARAS statements during 2019-20 are presented in **Annex-III.** Timely submission of these statements needs considerable improvement. **At all India level, over the various seasons, the tendency of submitting these statements after completion of Girdawari was observed in more than 50% of the selected villages of various states like** Chhattisgarh (Kharif 97% & Rabi 92%), Haryana (Kharif 97% & Rabi 93%), Himachal Pradesh (Kharif 71% & Rabi 81%), Jammu & Kashmir (Kharif 66%, Rabi 86%), Karnataka (Kharif 75% & Rabi 66%, Summer 92%), Kerala (Autumn 98%, Winter 99% & Summer 98%), Madhya Pradesh (Kharif 96% & Rabi 98%), Odisha (Autumn 92%, Winter 95% & Summer 100%), Punjab (Kharif 57%, Rabi 54%), Rajasthan (Kharif 95%, Rabi 91%),Tamil Nadu (Phase-I 90%, Phase–II 89%, Phase–III 99%), Uttar Pradesh (Kharif 62%), Uttarakhand (Kharif 98%, Rabi 80% and Summer 96%) and Puducherry (Kharif 100%, Rabi I 100% & Rabi II 100%). Also, the matter of serious concern is 7% of those cases where submission of Statement made without completion of area enumeration work**.** The percentage of villages for which TRS statement was submitted without completion of Girdawari was found to be high in very few States, for instance Andhra Pradesh (Kharif 66% & Rabi 49%), Bihar (Bhadai 6%), Jharkhand (Early Kharif- 14%, & Rabi 7%), Jammu & Kashmir(Kharif 6%), Karnataka (Kharif-8%), Tamil Nadu (Phase I-10%, Phase-II - 12%) and Telangana (Kharif 76%, Rabi 54%). It is reiterated that these State governments may take appropriate administrative measures to curb this recurring

tendency. In 2019-20, TRS statements were submitted in time after completion of Girdawari only in 52% sample villages during Autumn, 57% during Winter, 56% during Rabi and 41% during Summer. Further, the submission of TRS statement without completion of Girdawari was 4%, 10%, 7% and 1% of the sample villages during Early Kharif (Autumn), Late Kharif (Winter), Rabi and Summer respectively. Although, there is a decline vis-à-vis previous year, yet it is a matter of great concern and indicates serious procedural breach of guidelines for area enumeration. Remedial measures are required to be taken for ensuring timely submission of TRS statements only after completing the Girdawari. A brief summary of the season-wise status for the years **2019-20** and **2018-19** is presented in **Table-7.**

Table – 7

Status of Submission of TRS/EARAS Statement during 2019-20 and 2018-19

Season	Percentage of villages for which TRS statement							Infor-mation about TRS not available
	Submitted					Not Submitted		
	Without completing Girdawari		After completing Girdawari		But date of submission not known	Though Girdawari completed	As Girdawari not completed	
	By due date	After due date	By due date	After due date				
2019-20								
Early Kharif	2	2	38	14	2	3	37	0
Late Kharif	9	1	41	16	4	6	21	0
Rabi	6	1	42	14	4	5	26	0
Summer	0	1	23	18	7	10	28	0
2018-19								
Early Kharif	6	2	42	6	1	3	36	0
Late Kharif	10	1	43	16	3	8	19	0
Rabi	10	1	41	17	5	7	19	0
Summer	4	1	28	12	5	6	43	0

Note: - * Excluding percentages of TRS statements submitted but could not be compared with girdawari completion (Item-8) of Annex - VI, State wise Status Report 2019-20 & 2018-19.

IV - Availability and Usability of village maps

8.1.5 **Annex-IV** gives the details regarding updation of village maps, their availability and usability. It may be seen that at all India level, maps available with the primary workers were found usable for identification of the survey numbers in 88% cases during 2019-20. Information in respect of updation of the maps reveals that in 64 % cases, maps available were updated more than 20 years ago. Use of outdated maps leads to problems of identification of survey numbers. For efficient functioning of the State system, regular updation of maps is essential.

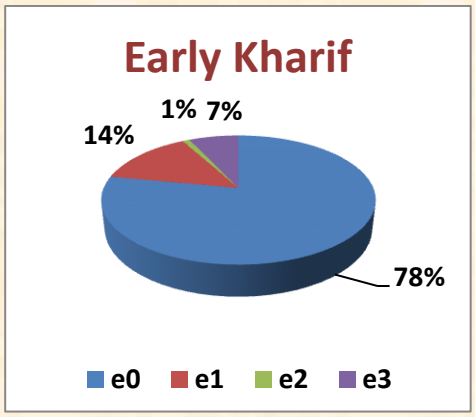
V - Accuracy of Girdawari

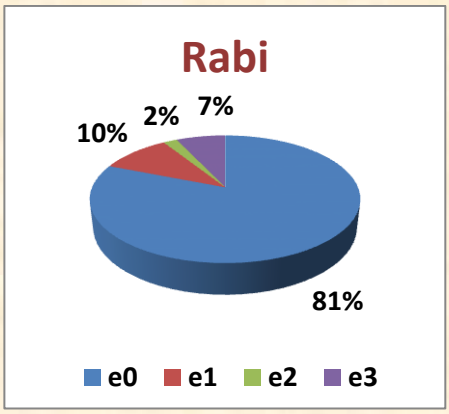
8.1.6 **Annex-IV (a)** and **Chart-II** show the percentage of survey numbers in which the three different types of discrepancies in recording the crop/ crop areas by the State primary

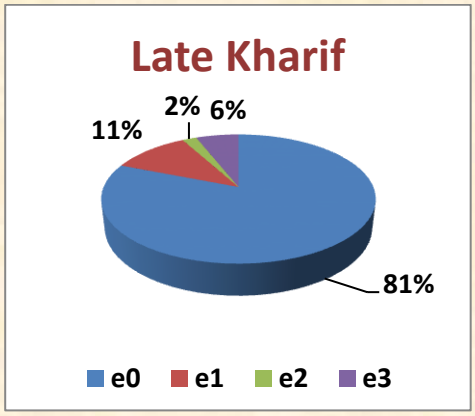
workers were noticed (viz. e1, e2 and e3). It can be seen that at all India level, there were no discrepancies observed in 78 % in Early Kharif, 81% in Late Kharif, 81% in Rabi and 81% in Summer. The magnitude of accuracy was found to be high in almost three-fourth of states like Andhra Pradesh (92% Late Kharif), Bihar (99% Early Kharif ,89% Late Kharif, 99% Rabi and 100% Summer), Chhattisgarh (94% Kharif and 95% Rabi), Gujarat (98% Kharif, 99% Rabi & 100% Summer), Haryana (92% Kharif, 95% Rabi, 100% Summer), Jammu & Kashmir (94% Kharif and Rabi 91%), Jharkhand (83% Rabi), Karnataka(85% Kharif, 81% Rabi & 92% Summer), Kerala (94% Early Kharif, 95% L.Kharif, 83% Summer), Madhya Pradesh (84% Kharif, 85% Rabi), Maharashtra (90% Summer), Odisha (100% Kharif, 98% Summer), Punjab (94% Kharif & 96% Rabi), Rajasthan (82% Kharif, 88% Rabi), Tamilnadu (88% Rabi), Uttarakhand (93% Late Kharif, 95% Rabi), West Bengal (Late Kharif 98%, Rabi 98% and Summer 98%) and Puducherry (Kharif 94%, Rabi-I 93%, Rabi-II 97%).However, the discrepancy of one or the other type was observed in 22% of the selected survey numbers during Early Kharif, 19% during Late Kharif, 19% during Rabi and 7% during Summer 2019-20. The situation in States like Himachal Pradesh, Jharkhand, Telangana and Uttar Pradesh need some improvement. The accuracy of crop inspection could not be measured effectively in case of Assam because of abnormally low cases of completion of area enumeration by the State primary workers till the time of ICS supervision.

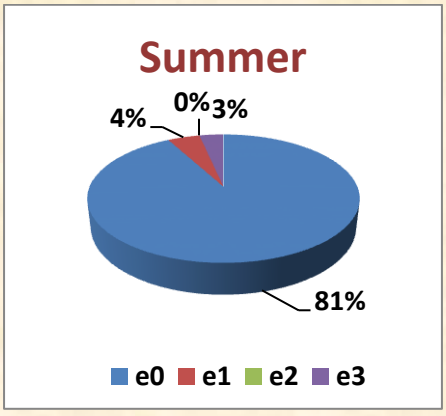
CHART –II

ERRORS OBSERVED IN AREA ENUMERATION DURING 2019-20









e0 : No error
e1 : Not reporting the crop actually sown
e2 : Reporting the crop not sown
e3 : Incorrect reporting of area under a crop

8.1.7 The most predominant error observed was that of **not recording the crops actually sown in the field (e_1)**, which occurred mostly in Andhra Pradesh (Rabi 38%), Bihar (Late Kharif 11%), Jharkhand (Early Kharif 50%, Late Kharif 62% & Rabi 17%), Karnataka (Rabi 27%), Maharashtra (Late Kharif 19% & Rabi 10%), Tamil Nadu (Phase-I 18%, Phase II 23%, Phase III 8%), Uttar Pradesh (Kharif 8%, Rabi 9% & Summer 30%), Uttarakhand (Summer 18%) and West Bengal (Early Kharif 13%). **Reporting of crops not actually sown (e_2) was the least occurring of the three errors.** It was found mostly in Haryana (Late Kharif 2% & Rabi 2%), Himachal Pradesh (Kharif 5% & Rabi 6%), Karnataka (Kharif 2%, Rabi 4%), Madhya Pradesh (Kharif 3% & Rabi 3%), Maharashtra (Rabi 2%), Rajasthan (Kharif 3% & Rabi 2%), Tamil Nadu (Phase-I 2% & Phase-II 4%), Uttar Pradesh (Kharif 3%, Rabi 2% & Summer 2%), and Puducherry (Late Kharif 3% & Rabi 2%). **The error of inaccurate assessment of area under crop (e_3)** was found dominant in Himachal Pradesh (Kharif 7% & Rabi 6%), Karnataka (Kharif 7% & Rabi 7%,), Kerala (Summer 17%), Madhya Pradesh (Kharif 7% & Rabi 6%), Maharashtra (Kharif 18% & Rabi 20%), Rajasthan (Kharif 10% & Rabi 6%), Uttar Pradesh (Kharif 11%, Rabi 11% & Summer 8%), and Puducherry (Kharif 3%).

8.1.8 The impact of errors in recording crops and crop areas on the estimates of area was studied for some major crops by calculating the ratio of area under crop in the sample clusters “as reported” by primary worker to area “as observed" by supervisors during the sample check. It can be observed from **Annex-IV (b),** which presents this ratio that for most of the crops in various States, the impact of recording errors was not pronounced. One of the reasons for this may be the mutual cancellation of over and under reporting of areas under the crops, thus reducing the over-all impact. However, the cases of under-reporting of crop areas by the primary workers were observed to be high in respect of Haryana (Bajra, Sugarcane), Maharashtra (Jowar Kharif, Cotton & Groundnut), Tamil Nadu (Paddy Summer & Jowar Rabi) and Uttar Pradesh (Gram).

VI - Discrepancies in recording Irrigation particulars

8.1.9 Annex-IV(c) reveals that there had been specific instances where the irrigation particulars recorded by the patwari differed considerably from that of the supervisor. During 2019-20, it was observed at all India level for all seasons taken together there had been a match of information regarding irrigation particulars as reported by patwari and that observed during sample check programmes in 84% of the survey numbers and in just 14% of the survey numbers there is mismatch . This percentage of mismatch found to be more than 20% in States like Andhra Pradesh (Rabi 39%), Jharkhand (E.Kharif 50%,L.Kharif 62%), Karnataka (Rabi 31%), Maharashtra (Kharif 21% & Rabi 59%), Tamil Nadu (Phase II 27%), Telangana (Kharif 45% & Rabi 27%) and Uttar Pradesh (Summer 31%). The accuracy of crop inspection could not be measured in West Bengal due to non- availability of this information (as the same is not collected by the State primary workers). In case of Central Samples of Assam, Bihar (All Seasons), Gujarat (All Seasons) & Jharkhand (All Seasons) the observations in this respect could not either be incorporated as they are not reflecting the true picture because of low completion of area enumeration by the State primary workers.

VII - Discrepancies in recording variety particulars of seed used

8.1.10 Information on distribution of survey numbers as per the type of seed used is presented in **Annex-IV (d).** There were almost 83% of the selected survey number where seed variety observed by technical personnel was in consonance with that of reported by the patwari at all India level for all seasons taken together, and there is difference in 17% of the selected survey numbers. The seed variety differed in more than 25% of the selected survey numbers in Andhra Pradesh (Rabi 39%), Karnataka (Rabi 30%), Maharashtra (Rabi 60%), Punjab (Kharif 38% & Rabi 39%) Tamil Nadu (Phase-I 29% & Phase-II 30%), Telangana (Kharif 45% & Rabi 27%) and Uttar Pradesh (Zaid Rabi 31%). This aspect requires adequate attention of the State Government for controlling the situation. In case of Assam, Bihar (All Seasons), Gujarat (All Seasons) & Jharkhand (All Seasons), the observations in this respect could not be incorporated as they are not reflecting the true picture because of low completion of area enumeration by the State primary workers.

8.2 Sample Check on Crop Cutting Experiments

I – Response

8.2.1 **Annex-VI** reflects the number of experiments planned and percentage response at harvest stage achieved under the sample checks on crop cutting experiments in each State during different seasons of 2019-20. **The response achieved in respect of all the States in Kharif season was above 80%** except in Assam (Early Kharif 41%), Bihar (Early Kharif 61%, Late Kharif 63%), Gujarat (Kharif 58%), Haryana (Kharif 66%), Himachal Pradesh (Kharif 76%), Jammu & Kashmir (Kharif 41% &), Karnataka (Kharif 67%), Madhya Pradesh (Kharif 79%), Maharashtra (Kharif 48%), Punjab (Kharif 76%), Rajasthan (Kharif 77%), Uttar Pradesh (Kharif 56%), Uttarakhand (Kharif 78%) and West Bengal (Early Kharif 49% & Late Kharif 54%) and below 80% in Rabi & Summer seasons for all the States except Puducherry due to Covid-19 Pandamic & other reasons. The overall response at all India level (Pooled) was of the order of 71% for Early Kharif, 70% for Late Kharif, 34% for Rabi and 48% for Summer during 2019-20 as against 58% for Early Kharif, 69% for Late Kharif, 71% for Rabi and 74% for Summer in corresponding seasons during 2018-19. The less than usual response for Central Sample vis-à-vis previous years for 2019-20 for Rabi & Summer at 25% and 40% respectively is due to cessation of field work for Central Sample on the instructions of NSSO, Hqrs. during Covid-19 outbreak.

II – Distribution of number of experiments conducted by important inputs

8.2.2 **Annex-VII** gives details of the crop-wise percentage distribution of experiments according to important inputs viz. Irrigation, High Yielding Varieties of Seeds and Fertilizers applied.

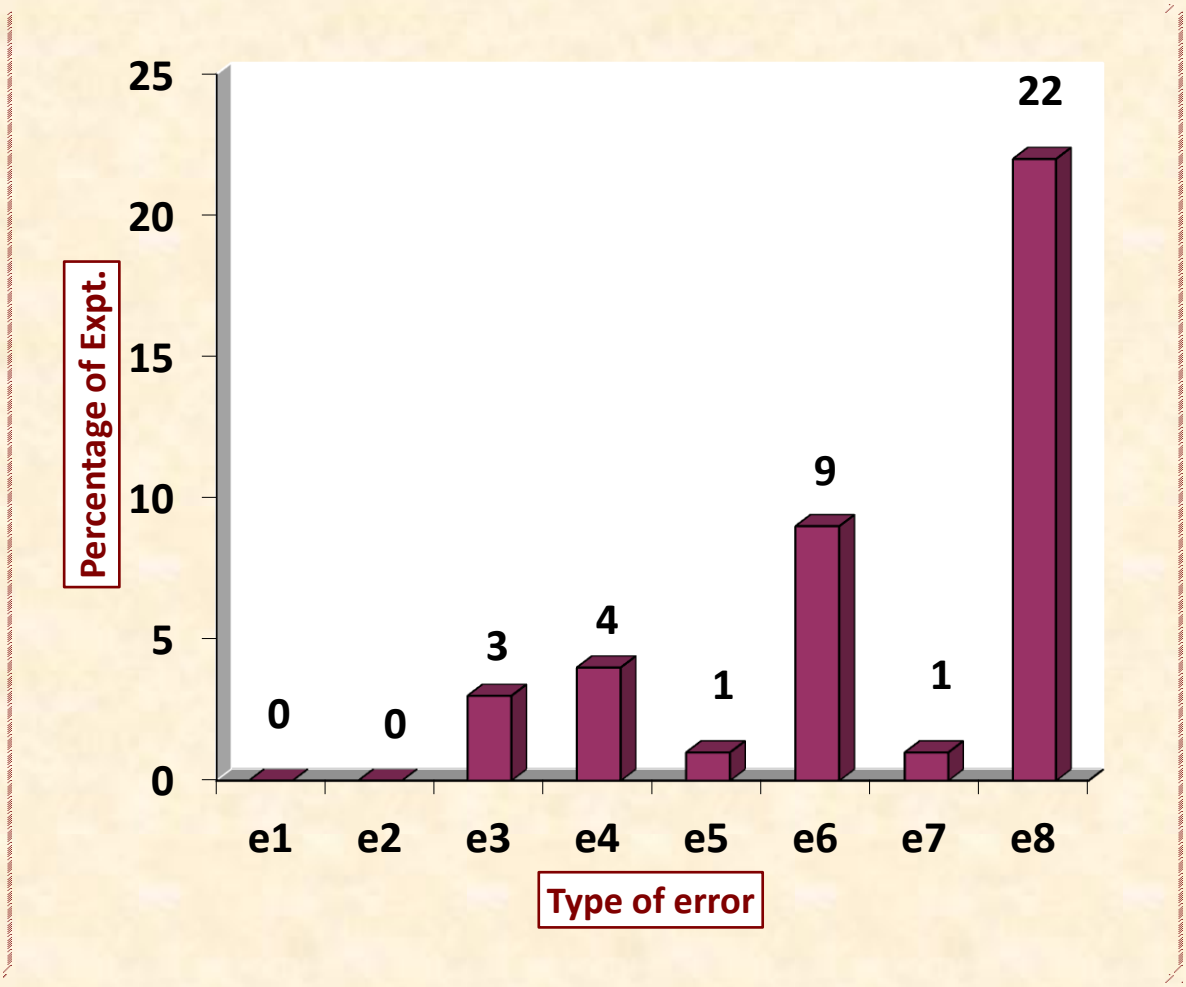
III - Departure from prescribed procedures

8.2.3 The type of departure from the prescribed procedure during the conduct of crop cutting experiments and the percentage of cases where State primary workers were observed to be deviating from the procedure is summarized in **Annex-VIII**. The graphical representation of the incidence of errors in conducting crop cutting experiments is

presented in **Chart-III**. In all, 65% cases of the experiments (during Autumn, Winter, Rabi and Summer taken together) were conducted in accordance with the prescribed procedures during 2019-20. There is scope for further improvement. Therefore, it is necessary that these observations are taken with seriousness and strong administrative measures coupled with intensive training of the field staff may be taken to improve the quality of the data collected. It may be observed from the data presented that **e_6 error** i.e. reporting of ancillary particulars like irrigation, high yielding varieties of seed, fertilizer and manure used during 2019-20 was found in 9% experiments in all seasons taken together**.** In this regard, it is pertinent to note that correct information regarding ancillary data forms the basis for post stratification analysis and therefore, mistakes in their reporting needs to be checked properly.

CHART –III

INCIDENCE OF ERRORS IN CONDUCT OF CROP CUTTING EXPERIMENTS DURING 2019-20



e_1 = Error in selection of survey/sub survey numbers.

e_2 = Error in selection of field within survey/sub survey numbers.

e_3 = Error in measurement of field.

e_4 = Error in selection of random numbers, location & marking of plots.

e_5 = Error in weighment of produce.

e_6 = Error in reporting ancillary information.

e_7 = Inadequate arrangement for storing of produce for driage and incorrect reporting of constituents in crop mixtures.

e_8 = Others (Comparison not possible between Supervisor & Primary Worker entries)

IV - Supply and Use of Equipment

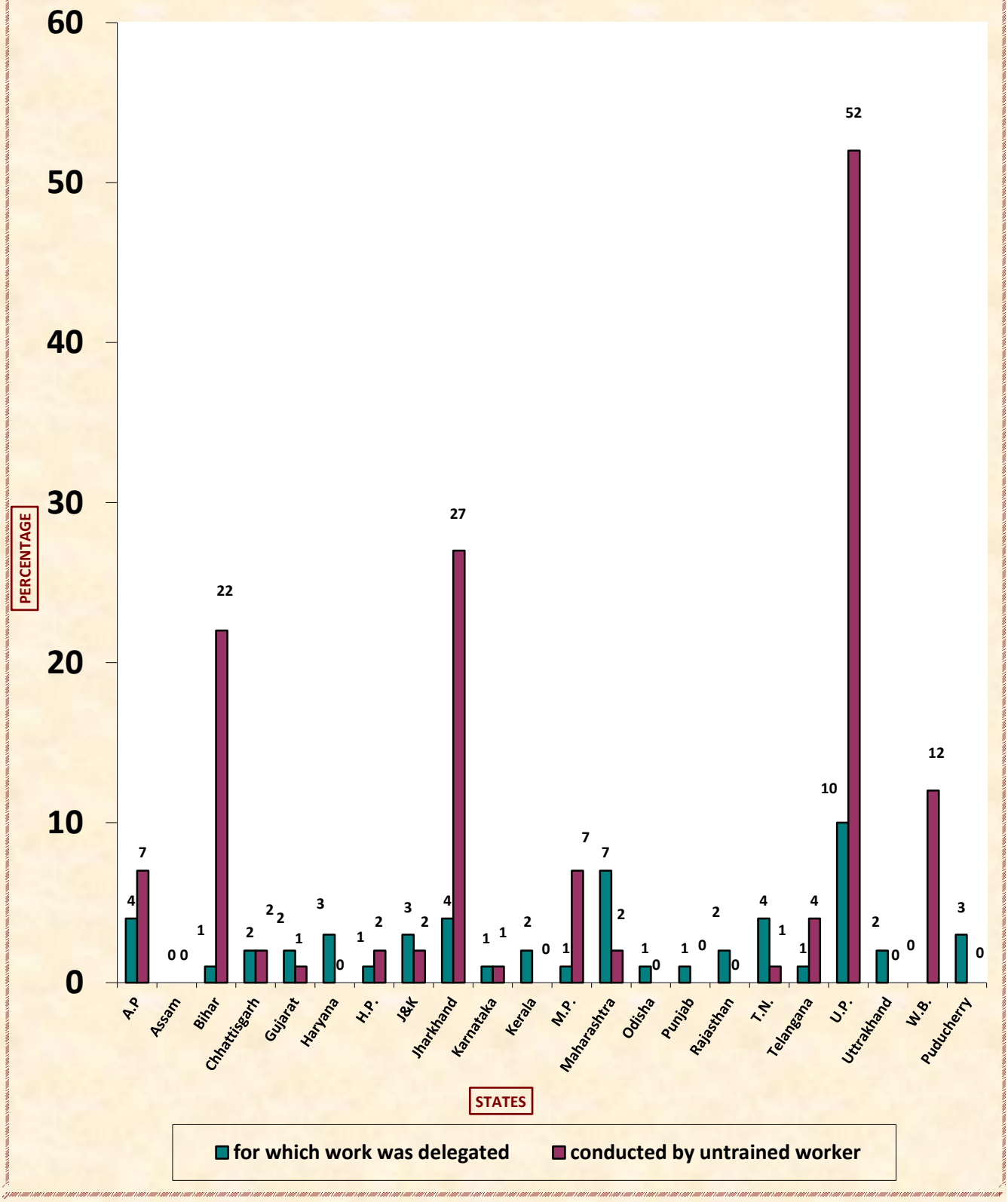
8.2.4 While an untrained or negligent worker cannot conduct the experiments properly, accuracy in their conduct also requires supply of essential equipment and their proper use. Information on these two latter aspects, collected during the sample checks of 2019-20, is presented in **Annex-IX.** It was found that the primary workers were supplied with essential items of equipment such as Tapes, Pegs, Balances and set of Weights in as many as 76%, 35%, 65% and 76% supervised experiments respectively during 2019-20 and not supplied with essential equipment in 24%, 65%, 35% and 24% of experiments during 2019-20 as against 26%, 67%, 39% and 30% during 2018-19.

It was found that the primary workers were not using the supplied items such as Tapes, Pegs, Balances and set of Weights in as many as 14%, 8%, 14%, 12% during 2019-20 as against 17%, 8%,17%,14% during 2018-19 for the conduct of crop cutting experiments at all India level and to a large extent in most of the States. This also calls for strong administrative measures for bringing about improvement in the situation since the use of non-standardized equipment brings in an element of subjectivity in the process of conducting the experiments.

V - Delegation of Work by Primary Workers

8.2.5 The fieldwork of General Crop Estimation Survey is entrusted to the officials of the State governments who are normally one rank higher than the primary workers for area enumeration. Cases of delegation of crop cutting work, particularly to the officials of junior & senior rank, were observed in several States as shown in **Annex-X and Chart - IV**. Delegation of work was observed for all the seasons taken together in Andhra Pradesh 4%, Bihar 1%, Chhattisgarh 2%, Gujarat 2%, Haryana 3%, Himachal Pradesh 1%, Jammu & Kashmir 3%, Jharkhand 4%, Kerala 2%, Madhya Pradesh 1%, Maharashtra 7%, Punjab 1%, Rajasthan 2%, Tamil Nadu 4%, Telangana 1%, Uttar Pradesh 10%, Uttrakhand 2% and 3% in Puducherry during 2019-20. The percentage of experiments conducted by workers for all the seasons taken together without proper training was 7% in Andhra Pradesh, 22% in Bihar, 2 % in Chattisgarh, 1% in Gujarat, 2% in Himachal Pradesh, 2% in Jammu & Kashmir, 27% in Jharkhand, 7% in Madhya Pradesh, 2% in Maharashtra, 1% in Tamil Nadu, 4% in Telangana, 52% in Uttar Pradesh and 12% in West Bengal during 2019-20. Although these small percentages do not speak for themselves, the damage done to the quality of fieldwork is substantial. Proper arrangements are needed in this regard for ensuring training of the field worker entrusted with CES work especially for those who are joining these ranks after the regular training camps are over, or those entrusted with these duties as a stop gap arrangement.

CHART-IV
DELEGATION OF WORK BY PRIMARY WORKER FOR THE YEAR 2019-20

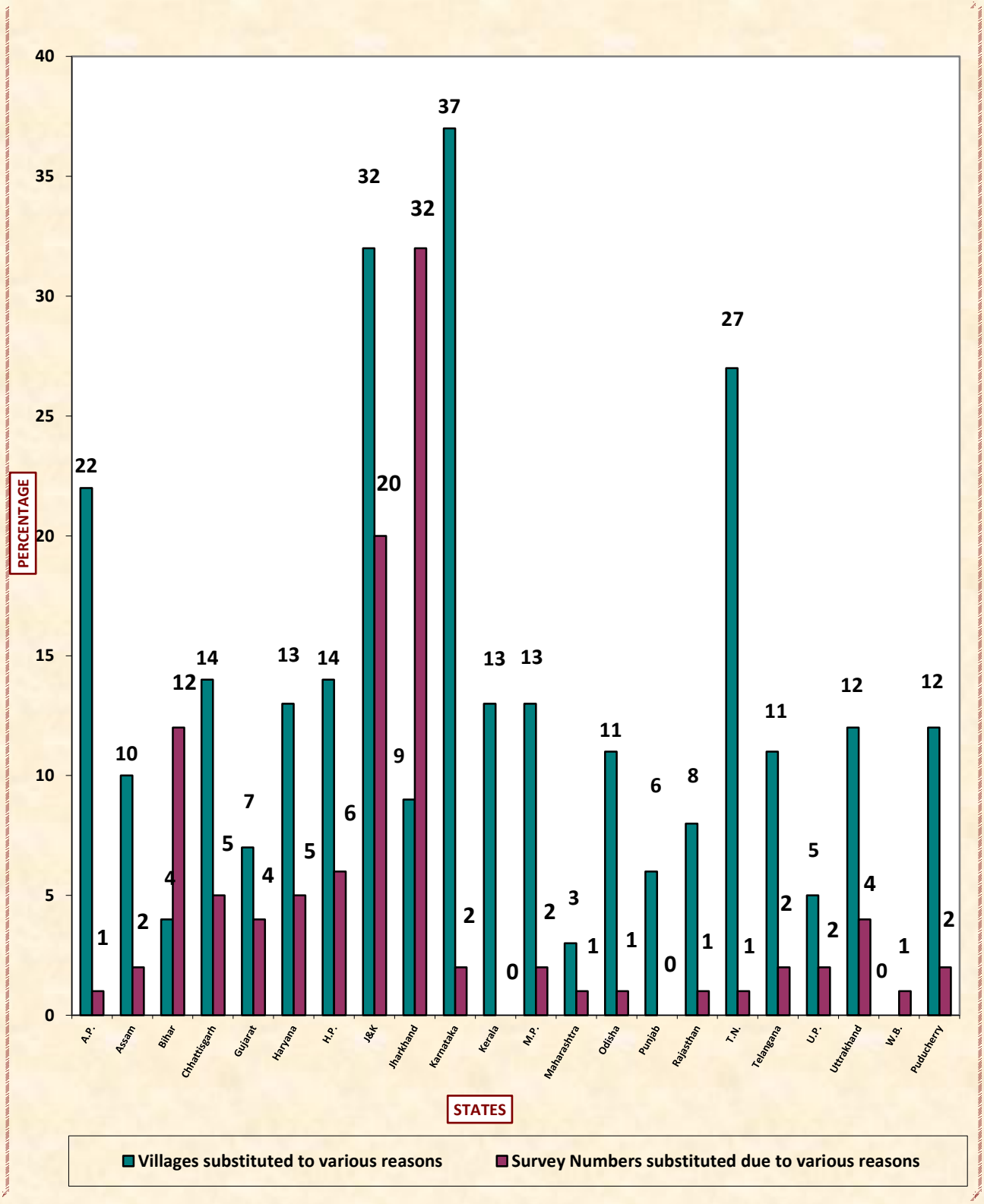


VI - Substitution of sampling units

8.2.6 Instructions for the conduct of GCES prohibit substitution of sampling units once selected, particularly at village level, except in case of inappropriate selection leading to units not growing the experimental crop at all or where the selected fields cannot accommodate the experimental plot of specified size or percentage of experimental crop is less than the prescribed one by the State Government for GCES. The percentage of such substitutions is presented in **Annex-XI and Chart V.** Such instances relating to substitution of villages were 10% or more at least in one season due to various reasons in respect of all the States except Bihar, Gujarat, Maharashtra, Punjab, Rajasthan, Telangana, Uttar Pradesh and West Bengal during 2019-20. The prominent reason for substitution of sampling units is unavailability of updated/quality GCES data that forms basis for selection of villages for CCEs under GCES and sample supervision under ICS Scheme. In some of the cases, the fields were substituted either because the crop was harvested prior to selection of field or crop was harvested before the date fixed for the experiment. Hence, updated GCES planning, better and regular liaison between the primary workers and the cultivators to ascertain the changes in the cultivator's programme of harvesting etc. would go a long way in controlling such high incidence of substitution.

8.2.7 Further, it has been observed in the field that the substitution of originally selected village due to non-availability of experimental crop i.e. "crop not sown" was of the order of 10%, 11%, 11% and 10% during Early Kharif, Late Kharif, Rabi and Summer during 2019-20 respectively. It varied around 22% of the experiments conducted in Andhra Pradesh, 5% to 14% in Assam, 0% to 9% in Bihar, 11% to 35% in Chhattisgarh, 5% in Gujarat, 11% to 13% in Haryana, 12% to 22% in Himachal Pradesh, 2% to 14% in Jharkhand, 29% to 40% in Karnataka, 2% to 29% in Kerala, 8% to 13% in Madhya Pradesh, 2% to 4% in Maharashtra, 6% to 17% in Odisha, 5% in Rajasthan, 20% to 31% in Tamil Nadu, 3% in Telangana, 1% to 4% in Uttar Pradesh, 4% to 12% in Uttarakhand and 10% to 50% in Puducherry in various seasons of 2019-20. There is a need to look into this aspect in all the States which are showing this trend and take corrective action, more specifically updated & qualitative GCES planning.

CHART- V
SUBSTIUTION OF SAMPLING UNITS IN THE YEAR 2019-20



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9 ESTIMATION OF AREA AND AVERAGE YIELD RATES

9.1 Estimation of Area

9.1.1 **Annex-XII** gives State-wise Area Estimates (1.0) based on Patwari's entries (A-III) and Supervisors' observation of crop area in sample village (A-IV) under each major crop. State wise estimates of crop area aggregation (1.1) are not being worked out due to suspension of work of area aggregation check for Central sample with effect from 2008-09. However, the estimates under A-III and A-IV have been compared with the corresponding (latest released) final estimates of area issued by the Ministry of Agriculture & Farmer's Welfare and the TRS estimates. The ICS analysis enables observing the deviation in estimates of area under crops based on crop area reported by Supervisors and the primary workers in the sampled survey numbers. The ratio of estimates of crop area at all India level based on supervisory check under ICS (A-IV) and the entries of State primary workers (A-III) in the corresponding sampling units of ICS are given in Table below:

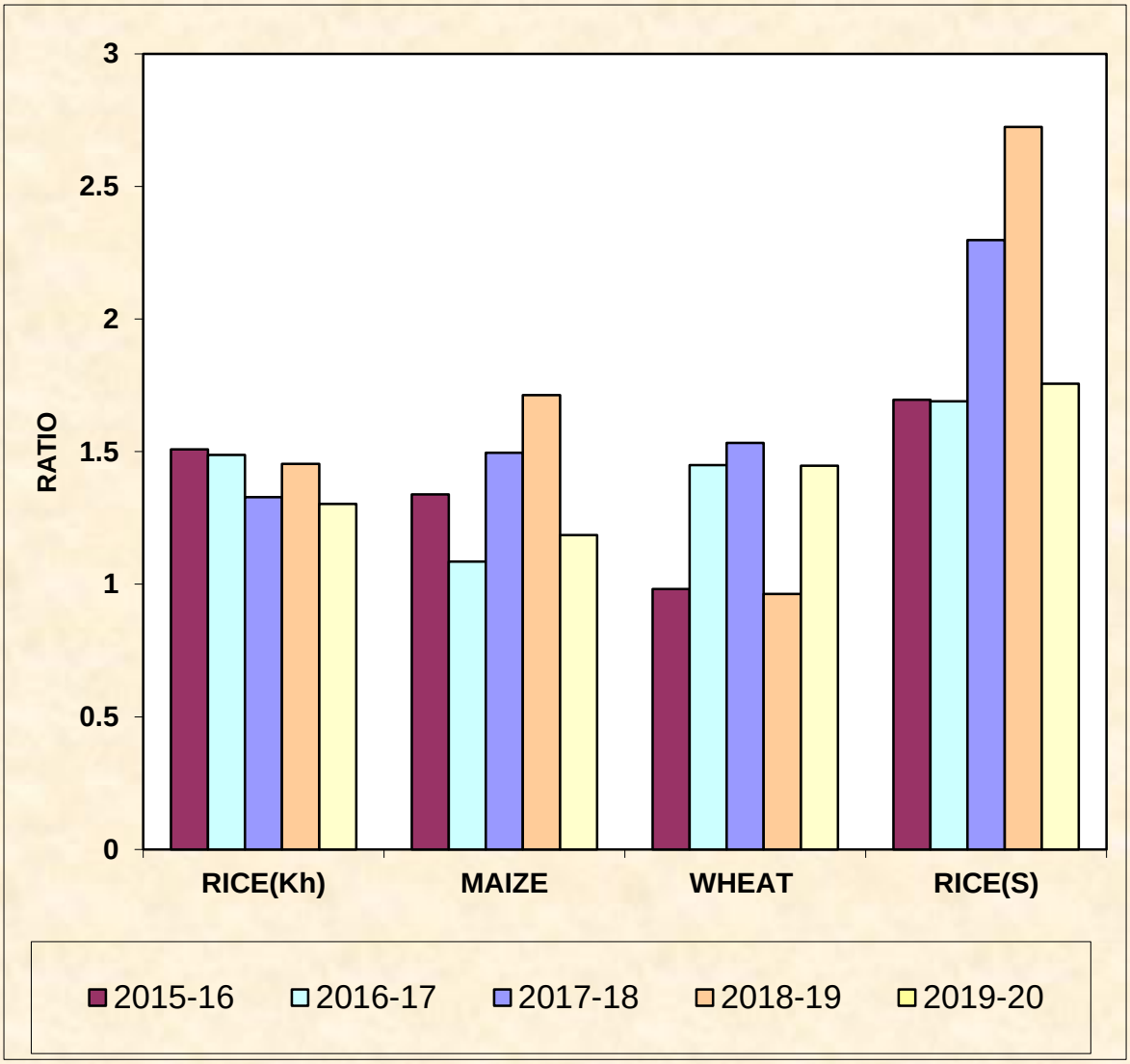
Table - 8
Ratio of Area Estimates (A-IV/A-III)

S. NO.	CROP	2019-20	2018-19	2017-18	2016-17	2015-16
1	Rice (Kh)	1.3029	1.4539	1.3279	1.4875	1.5081
2	Rice (Sum)	1.7568	2.7242	2.2977	1.6896	1.6954
3	Jowar (Kh)	0.6901	0.9551	1.2485	1.3339	0.7962
4	Jowar (R)	1.7739	1.9360	2.4622	2.4125	1.8301
5	Bajra	1.0676	2.0017	1.3868	1.3113	1.2625
6	Maize	1.1854	1.7130	1.4962	1.0853	1.3399
7	Ragi	1.0155	0.9630	1.0721	1.1000	1.0242
8	Cotton	1.6969	1.4602	1.7712	1.7315	1.7311
9	Groundnut	1.8744	1.6185	2.3101	1.9809	1.6884
10	Sugarcane	1.3096	2.0148	1.8223	1.2769	1.6054
11	Wheat	1.4470	0.9638	1.5335	1.4493	0.9816
12	Barley	1.0394	1.0789	1.0556	1.1146	0.9773
13	Gram	1.4974	1.1721	1.3831	1.3367	1.2419
14	R & M	1.1880	1.2819	1.6108	1.4193	1.3864

Note: - A-III denotes estimates of area based on Patwari's entries
A-IV denotes estimates of area based on supervisor's entries

9.1.2 The findings given bring to focus a trend of under reporting of area by the State primary worker for all major crops covered in the analysis during 2019-20. Therefore, the trend of under estimation of area under these crops requires serious consideration by the State and Central Government authorities for taking suitable remedial measures. Rice and Wheat account for more than sixty percent of the total cropped area under food grains and around three fourth of total food grains production in the country. A graphical presentation of the trend in terms of these ratios for the past five years starting from 2015-16 can be seen in **Chart-VI** for Rice (Kharif & Summer), Wheat and Maize. Table-8 clearly shows wide variation between supervisors reporting of area and the area recorded by primary workers which also indicates under-reporting of area figures from primary workers. The concerned State government should take suitable remedial measures for narrowing this gap.

CHART-VI
RATIO OF AREA ESTIMATES (A-IV/A-III)

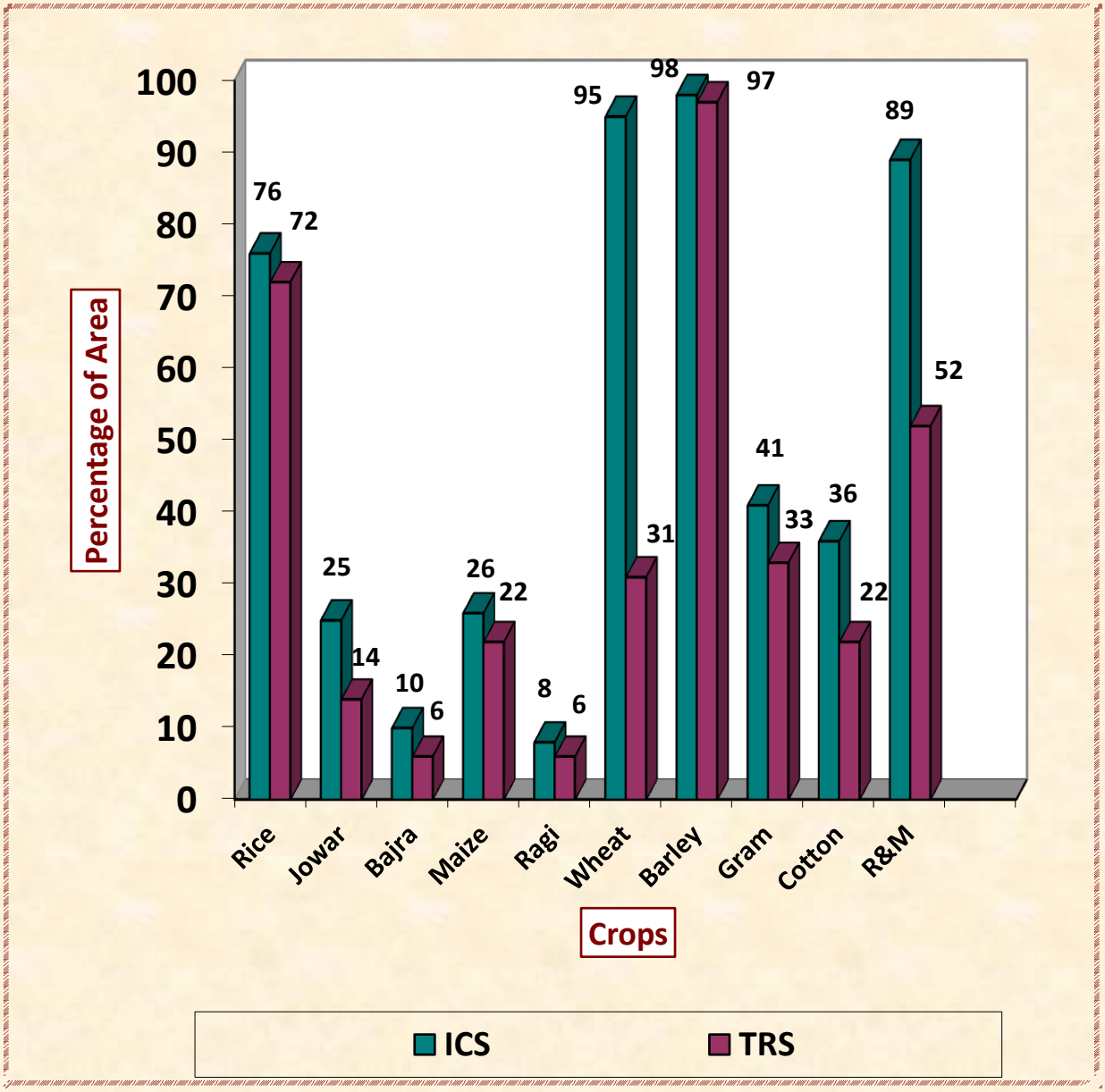


***Note**: A-III & A-IV denote estimated Area based on Patwari's and Supervisor's entries respectively*

9.1.3 The percentage of area under various categories according to input factors viz. irrigation and high yielding variety of seeds for different crops as estimated from ICS data has been presented in **Annex-XIII** and corresponding graphical presentation of Irrigation in **Chart-VII.** The TRS estimates according to seed variety could not be compared due to non-availability of the relevant data for most of the States. On comparison of the ICS and TRS estimates of area according to irrigation, it is observed that the difference between these two estimates varies from crop to crop and State to State.

CHART-VII

PERCENTAGE OF IRRIGATED AREA UNDER ICS & TRS DURING 2019-20



9.2. Estimation of Yield Rates

9.2.1 Estimates of yield rates for important crops based on sample check on crop cutting experiments along with the percentage of standard errors and the corresponding CES estimates are presented in **Annex-XIV**. The percentage standard error at all India level for ICS estimates for 14 important crops varies from 1.2% (Wheat in Punjab) to 29.2% (Gram in Jharkhand) for the year 2019-20. Ratio of estimates of yield rates under ICS and CES at all India level are given in **Table-9** for last five years since 2015-16. The yield rates under ICS Scheme are higher as compared to CES estimates in case of Sugarcane (Kharif), Barley and Gram and lower in the case of Rice (Kharif & Summer), Jowar (Kharif & Rabi), Wheat, Bajra, Maize, Ragi, Cotton and Groundnut crops during 2019-20.

9.2.2 Moreover, for a comparative study, the trend of yield rates of the crops such as Rice (Kharif), Rice (Summer), Maize, Gram and Wheat at all India level under ICS and CES for the last available five years (2015-16 to 2019-20) are also presented in **Chart-VIII (a), (b), (c), (d) & (e).**

9.2.3 The average yield rates of some important crops for different categories of input factors viz., Irrigated & Un-irrigated and High Yielding & Local variety of seeds have been calculated using the number of experiments falling under each category as weights and presented in **Annex-XV**. Similar data in respect of fields treated with Fertilizers & Manure have been calculated and presented in **Annex-XVI.**

Table - 9
Ratio of Yield Estimates (ICS/CES)

Sl. No	Crop	2019-20	2018-19	2017-18	2016-17	2015-16
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Rice (Kh)	0.7747	1.0585	0.9252	1.0804	0.8492
2	Rice (S)	0.6141	0.6753	0.9323	0.9177	1.1697
3	Jowar (Kh)	0.8993	1.1864	1.1801	0.7841	0.7210
4	Jowar (R)	0.9833	0.9284	1.1759	1.3944	0.7564
5	Bajra	0.8592	0.9430	0.8024	1.0280	0.8637
6	Maize	0.6979	0.8814	1.1754	0.8680	1.0095
7	Ragi	0.8957	0.7318	1.2466	0.2057	0.9078
8	Cotton	0.5119	0.4969	0.7148	0.6441	0.9038
9	Groundnut	0.8295	0.5975	1.5874	0.5247	0.9631
10	Sugarcane	1.0233	0.7263	1.1046	0.9027	1.0086
11	Wheat	0.8163	1.0039	0.9855	1.0901	1.1126
12	Barley	1.0167	1.0258	0.8393	0.9010	0.7443
13	Gram	1.1076	0.8369	1.0189	1.0632	0.8059
14	R & M	0.9137	1.0645	1.1124	1.1681	0.9930

Note :- (1) *CES data pertains to year 2019-20 in column 3.*
(2) *CES data pertains to year 2017-18 in column 4.*
(3) *CES data pertains to year 2016-17 in column 5.*
(4) *CES data pertains to year 2015-16 in column 6.*
(5) *CES data pertains to year 2013-14 in column 7.*

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Chart - VIII (a)
Trend of yield rates under ICS & CES
Rice Kharif

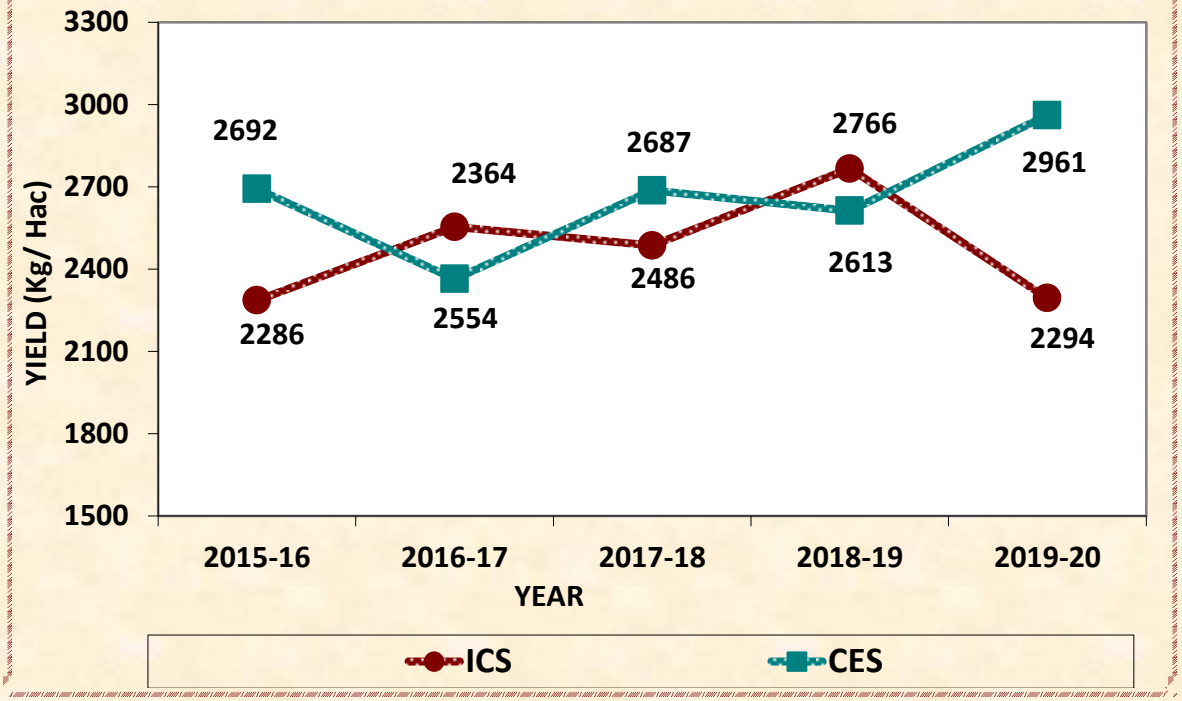


Chart - VIII (b)
Trend of yield rates under ICS & CES
Rice Summer

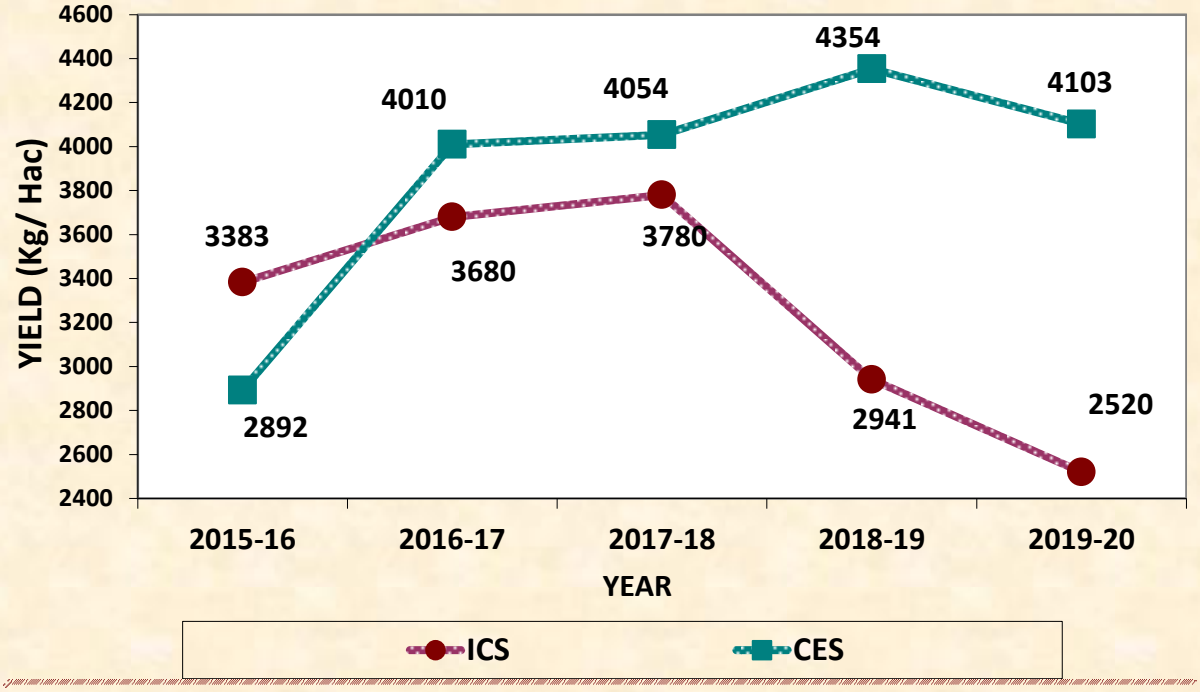


Chart-VIII(c)
Trend of yield rates under ICS & CES
Maize

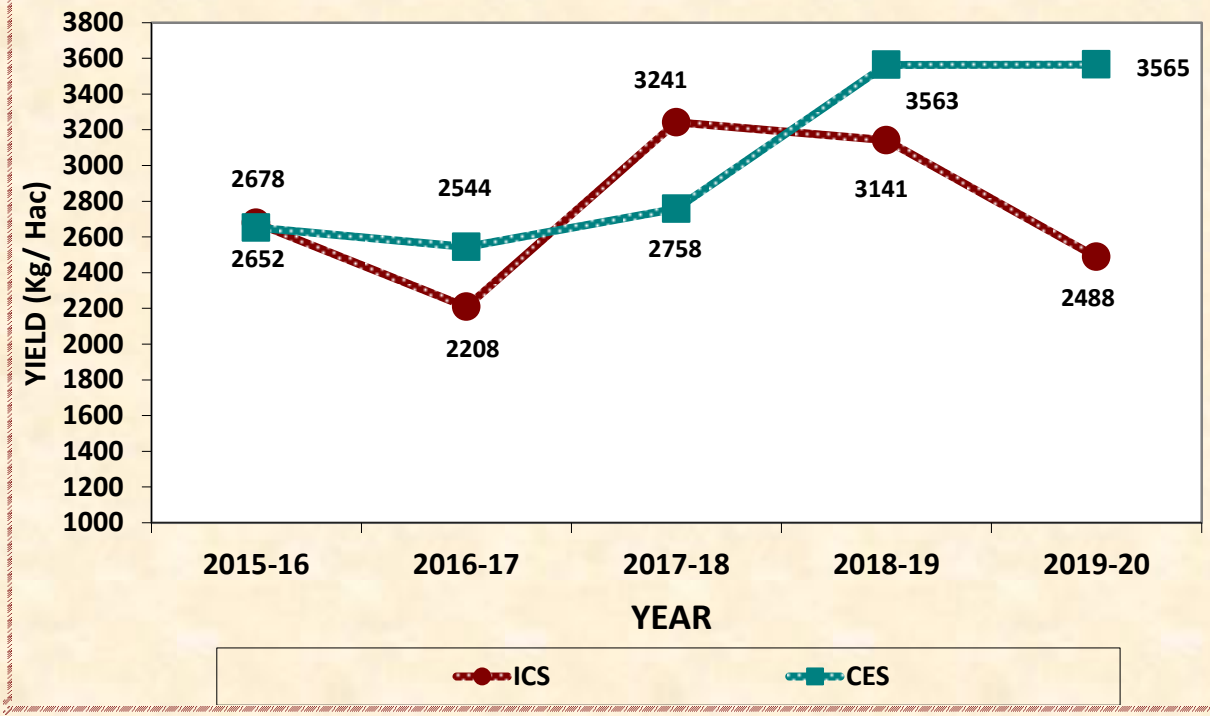


Chart - VIII (d)
Trend of yield rates under ICS & CES
Gram

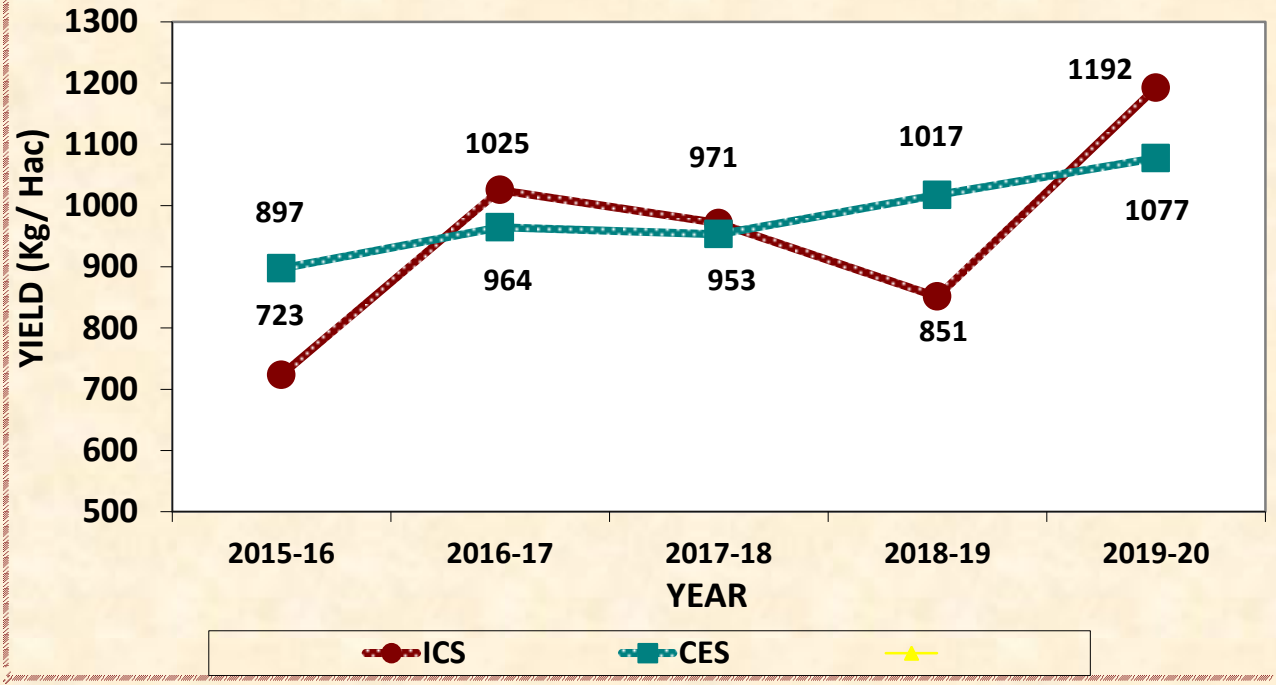
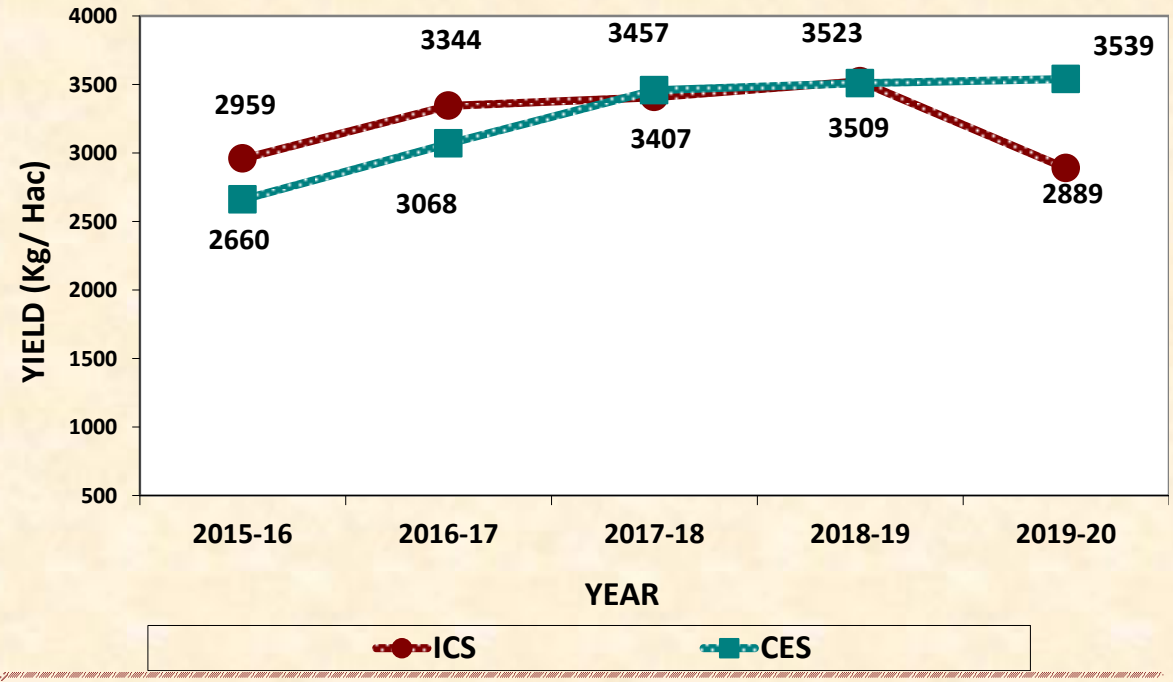


Chart - VIII (d)
Trend of Yield rate under ICS & CES
Wheat



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PART-II
(ANNEXURES)

ANNEX - I

RESPONSE IN SAMPLE CHECK ON AREA ENUMERATION DURING 2019-20

Sl. No.	State	AGENCY	Sample Size	Percentage Response			
				Kharif		Rabi	
				Early Kharif	Late Kharif	Rabi	Summer
1	2	3	4	5	6	7	8
1	Andhra	C	220		100	100	
	Pradesh	S	350		100	100	
		P	570		100	100	
2	Assam	C	160	100	100	100	100
		S	160	54	51	59	44
		P	320	77	75	80	72
3	Bihar	C	240	100	99	98	56
		S	240	56	52	90	79
		P	480	78	76	94	68
4	Chhattisgarh	C	100		100	100	
		S	100		100	100	
		P	200		100	100	
5	Gujarat	C	340		100	96	0
		S	340		69	91	37
		P	680		85	94	18
6	Haryana	C	200		100	100	100
	@	S	200		83	78	
		P	400		91	89	100
7	Himachal	C	140		100	100	
	Pradesh	S	140		95	36	
		P	280		98	68	
8	Jammu &	C	100		65	100	
	Kashmir	S	140		81	100	
		P	240		75	100	
9	Jharkhand	C	60	100	100	100	100
		S	60	72	90	68	70
		P	120	86	95	84	85
10	Karnataka	C	300		100	100	100
		S	300		100	100	100
		P	600		100	100	100
11	Kerala	C	80	100	100		100
		S	80	100	100		100
		P	160	100	100		100
12	Madhya	C	360		100	100	
	Pradesh	S	360		83	75	
		P	720		91	88	
13	Maharashtra	C	440		100	100	100
		S	440		84	75	69
		P	880		92	87	85
14	Odisha	C	220	100	99		100
		S	220	100	100		96
		P	440	100	100		98
15	Punjab	C	200		100	100	
		S	200		70	0	
		P	400		85	50	
16	Rajasthan	C	300		99	100	
		S	300		96	95	
		P	600		97	97	

Annex-I (Contd……)

Sl. No.	State	AGENCY	Sample Size	Percentage Response			
				Kharif		Rabi	
				Early Kharif	Late Kharif	Rabi	Summer
1	2	3	4	5	6	7	8
17	Tamil Nadu	C	260	100	100	100	
	$	S	260	99	98	96	
		P	520	100	99	98	
18	Telangana	C	160		100	100	
		S	250		91	89	
		P	410		94	93	
19	Uttar	C	690		100	100	99
	Pradesh	S	690		33	27	11
		P	1380		66	63	55
20	Uttarakhand	C	110		100	100	100
		S	110		95	95	100
		P	220		97	97	100
21	West Bengal	C	250	100	100	100	100
		S	400	17	17	11	2
		P	650	49	49	45	40
22	Puducherry	C	9		100	100	100
		S	9		100	100	100
		P	18		100	100	100
For States Covered		C	4939	100	99	100	85
		S	5349	68	77	68	49
		P	10288	83	88	83	67

Note:

1. @- The Field work was not carried out for State sample during Summer season.
2. $- For Tamil Nadu: Autumn , Winter and Rabi indicate I, II & III phases respectively.

ANNEX - II

TIMELINESS IN COMPLETION OF GIRDAWARI DURING 2019-20

Sl. No.	State	AGENCY	Percentage of villages where Girdawari was completed during											
			Early Kharif			Late Kharif			Rabi			Summer		
			In time	Late	Not com-pleted till Sample check visit	In time	Late	Not com-pleted till Sample check visit	In time	Late	Not com-pleted till Sample check visit	In time	Late	Not com-pleted till Sample check visit
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra	C				0	0	100	0	0	100			
	Pradesh	S				30	40	29	68	13	19			
		P				18	25	57	42	8	50			
2	Assam	C	0	0	100	0	0	100	0	0	100	0	0	100
		S	0	0	99	0	0	100	0	0	100	0	0	100
		P	0	0	100	0	0	100	0	0	100	0	0	100
3	Bihar	C	0	0	98	0	0	99	0	0	100	0	2	98
		S	3	23	64	4	5	77	4	14	79	5	34	61
		P	1	11	83	2	3	88	2	7	90	4	25	71
4	Chhattisgarh	C				96	2	1	68	18	13			
		S				94	1	0	77	23	0			
		P				95	2	3	73	20	7			
5	Gujarat	C				0	0	100	0	0	99	NC	NC	NC
		S				1	7	90	4	5	90	0	2	94
		P				0	3	95	2	2	95	0	0	18
6	Haryana	C				99	1	1	58	41	2	33	0	67
	@	S				100	0	0	67	33	0	0	0	0
		P				99	1	0	62	37	1	33	0	67
7	Himachal	C				97	2	1	99	1	0			
	Pradesh	S				92	7	0	88	12	0			
		P				94	4	0	95	5	0			
8	Jammu &	C				55	40	3	NC	NC	NC			
	Kashmir	S				74	25	1	45	55	0			
		P				67	31	2	45	55	0			
9	Jharkhand	C	0	0	100	0	0	93	0	0	100	0	0	100
		S	18	33	2	24	24	2	20	20	46	5	40	31
		P	8	14	58	10	10	56	8	8	78	2	17	72
10	Karnataka	C				72	19	7	45	16	39	NC	NC	NC
		S				56	41	0	46	44	0	61	34	0
		P				64	30	3	45	30	20	61	34	0
11	Kerala	C	99	1	0	100	0	0				73	28	0
		S	100	0	0	100	0	0				51	49	0
		P	99	1	0	100	0	0				62	38	0
12	Madhya	C				99	1	0	95	4	0			
	Pradesh	S				97	2	0	92	5	0			
		P				98	1	0	94	4	0			
13	Maharashtra	C				6	4	90	1	1	98	NC	NC	NC
		S				20	48	7	50	16	6	13	48	9
		P				12	24	52	21	7	56	13	48	9
14	Odisha	C	95	5	0	90	10	0				NC	NC	NC
		S	100	0	0	92	8	0				99	1	0
		P	98	3	0	91	9	0				99	1	0
15	Punjab	C				42	54	4	38	60	2			
		S				40	56	0	NC	NC	NC			
		P				41	55	2	38	60	2			

Annex-II (Contd….)

Sl. No.	State	AGENCY	Percentage of villages where Girdawari was completed during											
			Early Kharif			Late Kharif			Rabi			Summer		
			In time	Late	Not com-pleted till Sample check visit	In time	Late	Not com-pleted till Sample check visit	In time	Late	Not com-pleted till Sample check visit	In time	Late	Not com-pleted till Sample check visit
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	Rajasthan	C				83	17	0	90	9	0			
		S				74	21	0	81	12	0			
		P				78	19	0	86	10	0			
17	Tamil Nadu	C	69	18	11	80	7	13	67	33	0			
	$	S	93	2	3	82	10	6	98	2	0			
		P	81	10	7	81	9	9	88	12	0			
18	Telangana	C	0	0	0	1	0	99	0	0	100			
		S	0	0	0	18	43	38	68	11	21			
		P	0	0	0	11	26	62	40	6	54			
19	Uttar	C				49	20	28	37	15	42	41	12	21
	Pradesh	S				44	39	4	42	36	1	18	44	0
		P				48	24	22	38	19	33	39	15	19
20	Uttarakhand	C				92	6	0	84	11	2	91	6	0
		S				85	14	1	83	14	1	100	0	0
		P				88	10	0	83	13	1	94	4	0
21	West Bengal	C	17	16	64	18	6	76	23	2	75	0	0	0
		S	38	53	9	46	46	7	81	2	17	71	29	0
		P	22	24	53	24	15	61	32	2	67	2	1	0
22	Puducherry	C				100	0	0	100	0	0	89	11	0
		S				100	0	0	100	0	0	100	0	0
		P				100	0	0	100	0	0	94	6	0
For States covered		C	40	8	51	48	10	41	37	11	51	30	7	35
		S	60	11	24	52	23	19	57	16	21	37	28	24
		P	49	9	39	50	16	31	45	13	38	33	17	30

Note:

1. $- For Tamil Nadu: Autumn , Winter and Rabi indicate I, II, & III phases respectively.
2. @- The Field work was not carried out for State sample during Summer season.
3. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

ANNEX - III

TIMELINESS IN SUBMISSION OF TRS/ EARAS STATEMENT DURING 2019-20

Sl. No.	State	SEASON	AGENCY	Percentage of Villages for which							
				TRS Statement submitted					TRS Statement not Submitted		
				Without completing Girdawari		After completing Girdawari		Information regarding date of submission not known	Though Girdawari completed	Girdawari not completed	Information regarding TRS submission not available
				By due date	After due date	By Due date	After due date				
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra	Kharif	C	100	0	0	0	0	0	0	0
	Pradesh		S	44	0	53	0	2	0	0	0
			P	66	0	33	0	1	0	0	0
		Rabi	C	97	3	0	0	0	0	0	0
			S	17	2	79	2	0	0	0	0
			P	47	2	49	1	0	0	0	0
2	Assam	E.Kh.	C	0	0	0	0	0	0	100	0
			S	0	7	0	0	39	0	54	0
			P	0	2	0	0	14	0	84	0
		L.Kh.	C	0	0	0	0	0	0	100	0
			S	0	8	0	0	43	0	49	0
			P	0	3	0	0	14	0	83	0
		Rabi	C	0	0	0	0	0	0	100	0
			S	0	2	0	0	0	0	98	0
			P	0	1	0	0	0	1	99	0
		Summer	C	0	0	0	0	0	0	100	0
			S	0	3	0	0	0	0	97	0
			P	0	1	0	0	0	0	99	0
3	Bihar	Bhadhai	C	0	0	0	0	0	0	100	0
			S	0	14	3	15	1	6	54	0
			P	0	6	2	7	0	3	79	0
		Aghani	C	0	0	0	0	0	0	100	0
			S	0	2	0	8	5	3	76	0
			P	1	1	0	4	2	1	88	0
		Rabi	C	0	0	0	0	0	0	100	0
			S	0	0	0	0	2	10	80	0
			P	0	0	0	0	1	5	91	0
		Summer	C	0	0	0	0	0	2	98	0
			S	0	0	0	0	0	13	61	0
			P	0	0	0	0	0	10	71	0
4	Chhattisgarh	Kharif	C	2	0	74	22	1	1	0	0
			S	0	0	74	24	2	0	0	0
			P	1	0	74	23	2	1	0	0
		Rabi	C	0	0	74	9	0	4	13	0
			S	0	0	75	25	0	0	0	0
			P	0	0	75	17	0	2	7	0
5	Gujarat	Kharif	C	0	1	87	7	2	5	0	0
			S	0	0	1	0	0	0	99	0
			P	0	0	7	1	3	2	87	0
		Rabi	C	0	0	4	1	2	1	93	0
			S	0	0	0	0	0	1	99	0
			P	0	0	5	1	2	3	86	0
		Summer	C	0	0	3	0	1	2	93	0
			S	NC	NC	NC	NC	NC	NC	NC	NC
			P	0	0	0	1	10	1	85	1

Annex-III (Contd....)

S. No.	State	SEASON	AGENCY	Percentage of Villages for which							
				TRS Statement submitted					TRS Statement not Submitted		
				Without completing Girdawari		After completing Girdawari		Information regarding date of submission not known	Though Girdawari completed	Girdawari not completed	Information regarding TRS submission not available
				By due date	After due date	By Due date	After due date				
1	2	3	4	5	6	7	8	9	10	11	12
6	Haryana	Kharif	C	0	0	0	4	10	1	85	1
	@		S	0	0	76	24	0	0	0	0
			P	0	0	82	15	1	2	0	0
		Rabi	C	0	0	84	8	0	8	2	0
			S	0	0	49	46	0	4	0	0
			P	0	0	69	24	0	6	1	0
		Summer	C	0	0	1	0	0	32	67	0
			S								
			P	0	0	1	0	0	32	67	1
7	Himachal	Kharif	C	1	0	51	10	0	26	0	0
	Pradesh		S	0	0	62	21	6	6	0	0
			P	1	0	56	15	3	16	0	1
		Rabi	C	0	0	72	11	0	17	0	0
			S	0	0	57	20	8	16	0	0
			P	0	0	67	14	3	17	0	0
8	Jammu &	Kharif	C	8	0	34	17	0	37	0	0
	Kashmir		S	3	2	42	33	13	7	0	0
			P	5	1	39	27	8	18	0	0
		Rabi	C	NC	NC	NC	NC	NC	NC	NC	NC
			S	2	0	55	31	0	12	0	0
			P	2	0	55	31	0	12	0	0
9	Jharkhand	Bhadhai	C	15	0	0	0	0	0	85	0
			S	7	7	0	36	0	29	9	0
			P	11	3	0	15	0	12	52	0
		Aghani	C	0	0	0	0	5	2	93	0
			S	0	0	0	31	14	43	12	0
			P	0	0	0	13	9	19	60	0
		Rabi	C	0	0	0	0	0	0	100	0
			S	17	0	0	20	17	17	29	0
			P	7	0	0	8	7	7	71	0
		Summer	C	0	0	0	0	0	0	100	0
			S	10	0	0	33	10	26	21	0
			P	4	0	0	14	4	11	68	0
10	Karnataka	Kharif	C	8	0	51	22	0	18	0	0
			S	1	6	52	23	14	3	0	0
			P	5	3	52	23	7	11	0	0
		Rabi	C	0	0	31	16	0	13	39	0
			S	0	0	44	39	14	0	1	0
			P	0	0	38	28	7	7	20	0
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC
			S	0	0	55	37	7	1	0	0
			P	0	0	55	37	7	1	0	0
11	Kerala	Autumn	C	0	0	84	13	1	3	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	92	6	1	1	0	0
		Winter	C	0	0	98	1	0	1	0	0
			S	0	0	99	1	0	0	0	0
			P	0	0	98	1	0	1	0	0
		Summer	C	0	0	29	66	1	1	0	0
			S	0	0	35	65	0	0	0	0
			P	0	0	32	66	1	1	0	0
12	Madhya	Kharif	C	0	0	93	5	1	0	0	0
	Pradesh		S	1	0	84	9	5	0	0	0
			P	1	0	89	7	3	0	0	0
		Rabi	C	0	0	87	12	1	1	0	0
			S	0	0	75	22	2	0	0	0
			P	0	0	82	16	1	0	0	0

Annex-III (Contd....)

S. No.	State	SEASON	AGENCY	Percentage of Villages for which							
				TRS Statement submitted					TRS Statement not Submitted		
				Without completing Girdawari		After completing Girdawari		Information regarding date of submission not known	Though Girdawari completed	Girdawari not completed	Information regarding TRS submission not available
				By due date	After due date	By Due date	After due date				
1	2	3	4	5	6	7	8	9	10	11	12
13	Mahara-	Kharif	C	4	0	5	1	0	4	86	0
	shtra		S	0	2	22	27	29	9	7	0
			P	2	1	13	13	13	6	50	0
		Rabi	C	3	0	0	0	0	2	94	0
			S	0	0	54	0	36	0	6	0
			P	2	0	23	0	16	1	57	0
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC
			S	0	2	17	33	38	1	8	0
			P	0	2	17	33	38	1	8	0
14	Odisha	Autumn	C	0	0	82	3	2	12	0	0
			S	1	0	98	1	0	0	0	0
			P	0	0	90	2	1	6	0	0
		Winter	C	0	1	83	9	0	7	0	0
			S	0	0	92	8	0	0	0	0
			P	0	0	87	8	0	4	0	0
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC
			S	0	0	99	1	0	0	0	0
			P	0	0	99	1	0	0	0	0
15	Punjab	Kharif	C	0	4	11	20	0	65	0	0
			S	0	1	88	7	3	0	0	0
			P	0	3	42	15	1	38	0	0
		Rabi	C	0	2	30	24	1	44	0	0
			S	NC	NC	NC	NC	NC	NC	NC	NC
			P	0	2	30	24	1	44	0	0
16	Rajasthan	Kharif	C	0	0	48	50	0	1	0	0
			S	0	0	48	44	6	0	0	0
			P	0	0	48	47	3	0	0	0
		Rabi	C	0	0	64	34	1	1	0	0
			S	0	0	48	36	15	0	0	0
			P	0	0	56	35	8	1	0	0
17	Tamil	Phase-I	C	11	2	55	32	0	0	0	0
	Nadu		S	4	2	52	43	0	0	0	0
			P	8	2	53	37	0	0	0	0
		Phase-II	C	10	3	78	8	0	0	0	0
			S	5	5	73	17	0	0	0	0
			P	8	4	76	13	0	0	0	0
		Phase-III	C	0	2	60	38	0	0	0	0
			S	0	1	85	14	0	0	0	0
			P	0	1	77	22	1	0	0	0
18	Telangana	Kharif	C	99	0	1	0	0	0	0	0
			S	59	2	29	8	2	0	0	0
			P	75	1	18	5	1	0	0	0
		Rabi	C	91	8	0	0	0	1	0	0
			S	18	2	77	2	0	0	0	0
			P	49	5	45	1	0	1	0	0
19	Uttar	Kharif	C	2	0	30	31	1	9	26	0
	Pradesh		S	0	4	21	45	24	1	0	0
			P	2	1	28	34	7	7	20	0
		Rabi	C	0	1	21	23	3	10	38	0
			S	5	1	48	12	26	1	0	0
			P	1	1	26	20	8	8	30	0
		Summer	C	1	1	20	25	4	26	18	0
			S	1	8	20	22	39	3	0	0
			P	1	1	20	25	7	24	16	0

ANNEX III (Contd.....)

S. No.	State	SEASON	AGENCY	Percentage of Villages for which							
				TRS Statement submitted					TRS Statement not Submitted		
				Without completing Girdawari		After completing Girdawari		Information regarding date of submission not known	Though Girdawari completed	Girdawari not completed	Information regarding TRS submission not available
				By due date	After due date	By Due date	After due date				
1	2	3	4	5	6	7	8	9	10	11	12
20	Uttrakhand	Kharif	C	0	2	85	13	0	0	0	0
			S	1	0	55	43	1	0	0	0
			P	0	1	70	28	0	0	0	0
		Rabi	C	0	2	79	12	2	4	0	0
			S	0	1	66	2	0	0	0	0
			P	0	1	73	7	1	2	0	0
		Summer	C	0	0	70	23	0	6	0	0
			S	0	0	64	36	0	0	0	0
			P	0	0	68	28	0	4	0	0
21	West Bengal	E.Kharif	C	0	0	7	3	0	8	80	2
			S	0	8	0	67	0	0	26	0
			P	0	2	5	16	0	6	69	1
		L.Kharif	C	2	1	8	1	0	13	76	0
			S	1	3	6	70	0	0	19	0
			P	2	2	7	16	0	10	64	0
		Rabi	C	0	0	8	11	0	6	75	0
			S	0	0	2	2	0	79	17	0
			P	0	0	7	10	0	16	67	0
		Summer	C	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	100	0	0
			P	0	0	0	0	0	3	0	0
22	Puducherry	Kharif	C	0	0	100	0	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	100	0	0	0	0	0
		Rabi-I	C	0	0	33	67	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	67	33	0	0	0	0
		Rabi-II	C	0	0	78	22	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	89	11	0	0	0	0
FOR STATES		Early	C	3	0	32	8	0	4	51	0
COVERED		Kharif	S	2	5	45	21	4	3	19	0
			P	2	2	38	14	2	3	37	0
		Late	C	10	1	39	13	1	8	28	0
		Kharif	S	8	2	45	19	8	2	14	0
			P	9	1	41	16	4	6	21	0
		Rabi	C	8	1	29	13	1	6	42	0
			S	3	1	52	15	8	2	17	0
			P	6	1	42	14	4	5	26	0
		Summer	C	0	1	10	11	1	12	51	0
			S	0	1	38	23	13	4	16	0
			P	0	1	23	18	7	10	28	0
All seasons			C	7	1	30	12	1	8	39	0
			S	5	1	47	18	8	2	16	0
			P	6	1	39	16	4	6	26	0

Note:

1. @- The Field work was not carried out for State sample during Summer season.
2. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

ANNEX - IV

INFORMATION REGARDING UPDATION OF VILLAGE MAPS AND THEIR USABILITY DURING 2019-20

Sl. No.	State	Percentage of villages in which			
		Maps updated more than 20 years ago	Availability of Maps		Maps not available
			Usable	unusable	
1	2	3	4	5	6
1	Andhra Pradesh	76	91	2	7
2	Assam	80	93	4	3
3	Bihar	86	75	0	23
4	Chhattisgarh	60	97	1	2
5	Gujarat	41	60	18	22
6	Haryana	27	99	0	0
7	Himachal Pradesh	54	94	3	2
8	Jammu & Kashmir	56	59	31	10
9	Jharkhand	90	52	6	42
10	Karnataka	62	81	3	16
11	Kerala	84	99	1	0
12	Madhya Pradesh	40	98	1	1
13	Maharashtra	24	86	6	8
14	Odisha	94	100	0	0
15	Punjab	51	99	0	1
16	Rajasthan	59	99	0	1
17	Tamil Nadu	95	96	1	3
18	Telangana	61	61	12	27
19	Uttar Pradesh	85	95	3	2
20	Uttarakhand	91	92	6	2
21	West Bengal	98	97	0	3
22	Puducherry	100	100	0	0
For States Covered		64	88	4	8

ANNEX - IV (a)

PERCENTAGE OF SURVEY NUMBERS IN WHICH ERRORS IN RECORDING CROP AREA WERE OBSERVED DURING 2019-20

Sl. No.	State	AGENCY	Percentage of survey numbers with different types of errors in enumeration of area during															
			KHARIF								RABI							
			Early Kharif				Late Kharif				RABI				SUMMER			
			e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Andhra Pradesh	C					0	0	0	0	0	100	0	0				
		S					92	4	0	3	86	11	0	3				
		P					92	4	0	3	59	38	0	2				
2	Assam	C																
	@	S																
		P																
3	Bihar	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	#	S	99	0	0	1	89	11	0	0	99	1	0	0	100	0	0	0
		P	99	0	0	1	89	11	0	0	99	1	0	0	100	0	0	0
4	Chhattisgarh	C					89	5	1	5	91	4	1	4				
		S					99	1	0	0	100	0	0	0				
		P					94	3	1	3	95	2	1	2				
5	Gujarat	C#																
		S					98	0	0	2	99	0	0	0	100	0	0	0
		P					98	0	0	2	99	0	0	0	100	0	0	0
6	Haryana	C					88	6	3	3	91	4	4	2	100	0	0	0
	*	S					97	1	1	1	100	0	0	0	0	0	0	0
		P					92	4	2	2	95	2	2	1	100	0	0	0
7	Himachal Pradesh	C					74	8	9	9	77	6	8	8				
		S					91	3	1	5	94	2	2	1				
		P					82	6	5	7	83	5	6	6				
8	Jammu & Kashmir	C					89	5	1	6	NC	NC	NC	NC				
		S					98	1	0	1	91	7	0	2				
		P					94	2	1	3	91	7	1	2				
9	Jharkhand	C	0	100	0	0	0	100	0	0	NC	NC	NC	NC				
	@	S	85	15	0	0	84	16	0	0	83	17	0	0				
		P	50	50	0	0	38	62	0	0	83	17	0	0				
10	Karnataka	C					82	8	1	9	33	51	5	11	NC	NC	NC	NC
		S					88	5	3	4	93	2	2	3	92	4	2	2
		P					85	6	2	7	63	27	4	7	92	4	1	2
11	Kerala	C	93	1	0	5	95	1	0	4					93	0	0	7
		S	96	1	1	2	95	1	2	2					77	0	0	22
		P	94	1	1	4	95	1	1	3					83	1	0	17
12	Madhya Pradesh	C					75	8	5	11	77	9	5	10				
		S					95	2	1	2	98	1	0	1				
		P					84	5	3	7	85	5	3	6				
13	Maharashtra	C					35	34	2	30	51	10	4	34	NC	NC	NC	NC
		S					84	7	1	8	78	10	1	11	90	5	1	4
		P					61	19	1	18	69	10	2	20	90	5	1	4

ANNEX IV (a) (Contd.....)

Sl. No.	State	AGENCY	Percentage of survey numbers with different types of errors in enumeration of area during															
			KHARIF								RABI							
			Early Kharif				Late Kharif				RABI				SUMMER			
			e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
14	Odisha	C	100	0	0	0	100	0	0	0					NC	NC	NC	NC
		S	100	0	0	0	100	0	0	0					98	2	0	0
		P	100	0	0	0	100	0	0	0					98	2	0	0
15	Punjab	C					92	3	3	2	96	2	1	1				
		S					98	1	0	1	NC	NC	NC	NC				
		P					94	2	2	2	96	2	1	1				
16	Rajasthan	C					68	9	4	19	79	7	3	11				
		S					96	2	1	2	97	1	1	1				
		P					82	5	2	10	88	4	2	6				
17	Tamil Nadu	C	66	17	2	14	52	35	5	9	38	43	3	16				
		S	72	19	2	7	80	12	3	5	97	1	1	1				
		P	69	18	2	11	67	23	4	7	88	8	1	4				
18	Telangana	C					0	100	0	0	0	100	0	0				
		S					86	12	0	2	99	0	0	0				
		P					54	45	0	1	73	26	0	0				
19	Uttar	C					73	10	4	14	73	11	2	13	53	35	2	10
	Pradesh	S					89	3	3	5	89	4	2	5	87	11	0	1
		P					78	8	3	11	77	9	2	11	60	30	2	8
20	Uttarakhand	C					90	4	1	5	96	2	0	2	96	3	0	1
		S					96	2	1	2	93	2	3	3	69	30	1	0
		P					93	3	1	3	95	2	1	2	81	18	0	0
21	West	C	82	14	1	3	97	2	0	0	100	0	0	0	NC	NC	NC	NC
	Bengal	S	88	9	0	3	98	2	0	0	88	12	0	0	98	0	0	3
		P	84	13	1	3	98	2	0	0	98	2	0	0	98	0	0	3
22	Puducherry	C					91	0	9	0	94	3	3	0	75	0	0	25
		S					96	0	0	4	92	3	2	2	100	0	0	0
		P					94	0	3	3	93	3	2	2	97	0	0	3
For States		C	75	14	1	9	70	17	3	11	72	17	3	9	83	9	1	8
covered		S	81	13	1	5	92	4	1	3	93	3	1	2	80	2	0	18
		P	78	14	1	7	81	10	2	7	81	11	2	6	81	4	0	3

Note:

1. e_0 = No error
2. e_1 = Not reporting the crop which is actually grown in the survey numbers .
3. e_2 = Recording a crop as sown in the field when actually no crop has been sown in the field.
4. e_3 = Under (or) over assessment of the area under the crop sown in the field.
5. @ = Data could not be tabulated due to non-completion of Girdwari.
6. # =Observations do not reflect true picture of discrepancies in the State since primary worker's entries are not available for comparison for large number of samples.
7. *- The Field work was not carried out for State sample during Summer season.
8. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

ANNEX - IV(b)

IMPACT OF ERRORS IN RECORDING CROP AREA DURING 2019-20

Sl. No.	State	AGENCY	Ratio of area based on Patwari's & Superviser's entries in sample clusters														
			Paddy			Jowar		Bajra	Maize	Ragi	Cotton	Ground-nut	Sugar-cane	Wheat	Barley	Gram	Rape & Mustard
			Aut.	Wint.	Sum.	Kharif	Rabi										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Andhra	C		NC	NC	NC	NC	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000	
	Pradesh	S		1.0440	1.0061	1.0061	0.0000	0.9347	0.0000	NA	1.0436	1.0014	0.9950			0.9978	
		P		1.0440	1.0061	1.0061	0.0000	0.9347	0.0000		1.0436	1.0014	0.9950			0.9978	
2	Assam	C															
	@	S															
		P															
3	Bihar	C #	NR	NR	NR									NR		NR	NR
		S	NC	0.9998										0.9932		1.0000	0.0000
		P	NC	0.9998										0.9932		1.0000	0.0000
4	Chhatti-	C		0.9833					1.0243					1.0016		1.0128	0.9469
	sgarh	S		1.0017					0.9755					1.0000		1.0008	1.0000
		P		0.9932					0.9977					1.0006		1.0095	0.9726
5	Gujarat	C #															
		S		1.0108				0.0000	0.9955		0.0000	0.0000		0.9965		1.0000	
		P		1.0108				0.0000	0.9955		0.0000	0.0000		0.9965		1.0000	
6	Haryana	C		0.9829				0.7896	0.0000		1.0285		0.4627	1.0327	1.0000	1.0426	1.0378
		S		1.0678				0.9868	0.0000		0.9953		1.0073	1.0000	1.0000	0.9789	1.0000
		P		1.0213				0.8554	1.0000		1.0122		0.6224	1.0174	1.0000	1.0332	1.0199
7	Himachal	C		1.0604					1.2261					1.1244	1.3782		
	Pradesh	S		1.0484					0.9922					0.8933	0.9949		
		P		1.0531					1.1220					1.1126	1.1643		
8	Jammu	C		0.9560					1.0102					NC			
	&	S		1.0394					0.9957					1.1238			
	Kashmir	P		1.0139					1.0031					1.1238			
9	Jhar-	C															
	khand	S	1.0000	1.0000					1.0000								
	@	P	1.0000	1.0000					1.0000								
10	Karna-	C		1.0127	NC	0.9929	0.8493	0.9185	0.9764	0.9326	0.9388	1.0231	0.9346	1.0350		0.8700	
	taka	S		0.9587	1.0023	0.9572	1.1073	1.0603	1.0121	0.9723	1.0003	0.9930	0.9515	0.9777		1.0118	
		P		0.9817	1.0023	0.9759	1.0320	0.9748	0.9939	0.9593	0.9731	1.0037	0.9438	0.9911		0.9578	
11	Kerala	C	0.9926	1.0010	1.0010												
		S	0.9960	1.0201	0.9874												
		P	0.9943	1.0111	0.9905												
12	Madhya	C		0.9753		0.9838			1.0324		1.0017	0.9845		0.9927		0.9803	0.9503
	Pradesh	S		0.9933		1.0419			0.9871		1.0000	1.0051		1.0042		0.9818	0.9990
		P		0.9840		1.0134			1.0126		1.0012	0.9921		0.9975		0.9809	0.9607
13	Mahara-	C		1.0244		0.7755	0.8140	0.8272			0.6431	0.9252	1.6811	0.8303		0.9259	
	shtra	S		0.9981		0.9690	0.9384	0.9663			1.0049	0.7812	0.9550	0.9645		0.9493	
		P		1.0088		0.8536	0.9307	0.9507			0.8249	0.8050	1.0208	0.9141		0.9446	
14	Odisha	C	0.9977	1.0000	NC				1.0000								
		S	0.9999	1.0000	0.9524				1.0000								
		P	0.9986	1.0000	0.9524				1.0000								
15	Punjab	C		0.9970					1.0674		0.9972		1.0182	1.0011	1.3281	1.5556	1.0000
		S		0.9985					1.0108		0.8645		1.0000	NC	NC	0.0000	NC
		P		0.9975					1.0556		0.9637		1.0146	1.0011	1.3281	1.5556	1.0000
16	Raja-	C				1.0003		1.0110	1.9061		1.0828	0.0000	0.0000	1.0057	0.9050	1.0025	0.9848
	sthan	S				1.0115		1.0439	1.0062		0.4434	0.0000	0.0000	1.0314	1.0127	0.9507	1.3204
		P				1.0029		1.0282	1.4301		0.5807	0.0000	0.0000	1.0191	0.9649	0.9743	1.1620

ANNEX IV (b) (Contd.....)

Sl. No.	State	AGENCY	Ratio of area based on Patwari's & Superviser's entries in sample clusters														
			Paddy			Jowar		Bajra	Maize	Ragi	Cotton	Ground-nut	Sugar-cane	Wheat	Barley	Gram	Rape & Mustard
			Aut.	Wint.	Sum.	Kharif	Rabi										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
17	Tamil	C	0.8479	0.8823	0.6832	3.1810	0.0000	1.0213	0.9191	0.0000	0.9648	0.9830	0.9830				
	Nadu	S	2.2406	0.9406	0.9942	0.8753	0.4585	1.0000	1.0013	0.0000	0.8365	0.9413	0.9413				
		P	1.4435	0.9114	0.8203	2.3070	0.4585	1.0099	0.9457	0.0000	0.9162	0.9645	1.0368				
18	Telangana	C	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	NC	0.0000	0.0000				
		S	1.0466	0.0000	1.0005	1.0315	1.0000	0.0000	1.0041	0.0000	0.9677	1.0000	0.0000				
		P	1.0466	0.0000	1.0005	1.0315	1.0000	0.0000	1.0041	0.0000	0.9677	1.0000	0.0000				
19	Uttar	C		1.8494		0.9909		1.0045	1.0615				0.9913	1.0568		0.3469	1.0760
	Pradesh	S		0.9929		1.0042		1.0067	1.0650				1.0139	0.9846		1.0022	1.0300
		P		1.5885		0.9970		1.0049	1.0633				0.9983	1.0362		0.4062	1.0729
20	Uttara-	C		0.9475						1.7953			0.0000	0.9877			
	khand	S		1.0151						1.1077			0.9936	1.0135			
		P		0.9797						1.4475			1.0038	0.9993			
21	West	C	0.9570	0.9930	NC									NC			0.9310
	Bengal	S	0.9091	0.9770	NC									1.0000			1.0000
		P	0.9556	0.9880	NC									1.0000			0.9972
22	Pudu-	C		NC	1.0281												
	cherry *	S		0.9353	1.0062												
		P		0.9353	1.0135												
For states		C	0.9068	1.1772	0.8731	1.1197	0.8388	0.9884	1.0485	0.9475	0.7360	0.9820	0.9758	1.0116	0.6417	0.8839	1.0220
covered		S	1.3484	1.0038	0.9991	0.9772	0.9830	1.0278	1.0079	0.9734	0.9594	0.9906	0.9698	1.0063	0.7604	0.9645	1.2462
		P	1.1853	1.0914	0.9886	1.0705	0.9633	1.0094	1.0267	0.9649	0.8689	0.9872	0.9727	1.0032	0.9708	0.9344	1.1121

Note:-

1. @ - Observations are not given due to insufficient data.
2. # - Observations do not reflect true picture of discrepancies in the State since primary worker's entries are not available for comparison for large number of samples. Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
3. NA = Data Not available
4. NR= Data Not Reported
5. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

DISCRIPANCIES IN RECORDING IRRIGATION PARTICULARS DURING 2019-20

Sl. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Supervisor				Patwari			
				Irr	UI	Total	Irr	UI	NR	Total	Irr	UI	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra	Kharif	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	Pradesh		S	53	42	95	3	1	0	5	0	0	4	5
			P	53	42	95	3	13	1	5	1	0	4	5
		Rabi	C	0	0	0	63	37	0	100	0	0	100	100
			S	54	33	88	4	7	0	12	1	0	11	12
			P	38	23	61	22	16	0	39	0	0	38	39
2	Assam	Early	C											
	@	Kharif	S											
			P											
		Late	C											
		Kharif	S											
			P											
		Rabi	C											
			S											
			P											
		Summer	C											
			S											
			P											
3	Bihar	Bhadai	C	NR										
	#		S	46	54	100	0	0	0	0	0	0	0	0
			P^	46	54	100	0	0	0	0	0	0	0	0
		Aghani	C	NR										
			S	89	0	89	11	0	0	11	0	0	11	11
			P^	89	0	89	11	0	0	11	0	0	11	11
		Rabi	C	NR										
			S	88	11	99	1	0	0	1	0	0	1	1
			P^	88	11	99	1	0	0	1	0	0	1	1
		Summer	C	NR										
			S	93	7	100	0	0	0	0	0	0	0	0
			P^	93	7	100	0	0	0	0	0	0	0	0
4	Chhattisgarh	Kharif	C	27	65	92	3	5	1	8	0	3	5	8
			S	27	71	98	0	1	0	2	0	0	1	2
			P	27	68	95	1	3	1	5	0	2	3	5
		Rabi	C	52	43	95	1	3	1	5	0	1	4	5
			S	33	67	100	0	0	0	0	0	0	0	0
			P	44	53	97	1	2	1	3	0	1	2	3
5	Gujarat	Kharif	C	NR										
			S	10	89	99	0	1	0	1	1	0	0	1
			P^	10	89	99	0	1	0	1	1	0	0	1
		Rabi	C	NR										
			S	61	38	99	1	0	0	1	0	0	0	1
			P^	61	38	99	1	0	0	1	0	0	0	1
		Summer	C	NR										
			S	100	0	100	0	0	0	0	0	0	0	0
			P^	100	0	100	0	0	0	0	0	0	0	0
6	Haryana	Kharif	C	84	7	91	5	1	3	9	3	0	6	9
	*		S	95	3	98	1	0	1	2	1	0	1	2
			P	89	5	94	3	1	2	6	2	1	4	6
		Rabi	C	90	2	92	4	0	4	8	4	0	4	8
			S	98	2	100	0	0	0	0	0	0	0	0
			P	94	2	96	2	0	2	4	2	0	2	4
		Summer	C	100	0	100	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0	0	0	0
			P	100	0	100	0	0	0	0	0	0	0	0

ANNEX IV (c) (Contd.....)

S. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Supervisor				Patwari			
				Irr	UI	Total	Irr	UI	NR	Total	Irr	UI	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
7	Himachal	Kharif	C	14	67	81	2	7	10	19	1	10	8	19
	Pradesh		S	18	78	95	1	3	1	4	0	1	3	4
			P	16	72	88	1	5	5	12	1	6	6	12
		Rabi	C	11	72	83	2	6	8	17	1	10	7	17
			S	3	91	95	0	3	2	5	0	2	2	5
			P	8	79	87	1	5	6	13	1	7	5	13
8	Jammu &	Kharif	C	32	62	94	3	2	1	6	1	1	5	6
	Kashmir		S	52	46	99	1	0	0	1	0	0	1	1
			P	45	52	97	1	1	1	3	0	0	2	3
		Rabi	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	70	23	93	2	5	0	7	0	0	7	7
			P	70	23	93	2	5	1	7	0	1	7	7
9	Jharkhand	E. Kharif	C	NR										
	@		S	5	79	85	0	15	0	15	0	0	15	15
			P^	3	47	50	0	50	0	50	0	0	50	50
		L. Kharif	C	NR										
			S	1	83	84	0	16	0	16	0	0	16	16
			P^	1	37	38	3	59	0	62	0	0	62	62
		Rabi	C	NR										
			S	35	48	83	0	17	0	17	0	0	17	17
			P^	35	48	83	0	17	0	17	0	0	17	17
		Summer	C	NR										
			S	0	0	0	0	0	0	0	0	0	0	0
			P^	0	0	0	0	0	0	0	0	0	0	0
10	Karnataka	Kharif	C	31	58	89	4	6	1	10	1	2	8	11
			S	32	60	91	2	3	3	8	1	2	5	8
			P	31	59	90	3	4	2	9	1	2	6	9
		Rabi	C	26	16	42	26	26	5	57	2	4	51	57
			S	51	44	95	2	1	2	5	1	1	2	5
			P	39	30	69	14	13	4	31	2	3	27	31
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	79	14	93	4	0	2	6	2	1	4	6
			P	79	14	93	4	0	1	6	1	1	4	6
11	Kerala	Autumn	C	10	81	91	0	1	0	2	0	1	1	2
			S	34	59	93	1	1	1	0	0	1	1	2
			P	17	75	91	0	1	1	2	1	1	1	2
		Winter	C	21	74	94	0	1	0	2	1	1	1	2
			S	36	55	90	1	2	2	5	1	3	1	5
			P	28	65	92	1	1	1	3	1	1	1	3
		Summer	C	16	68	84	0	1	0	1	0	0	0	1
			S	20	63	82	0	1	0	1	0	0	0	1
			P	18	65	83	0	1	0	1	0	0	0	1
12	Madhya	Kharif	C	10	76	86	1	8	5	14	1	4	8	14
	Pradesh		S	14	83	97	0	2	1	3	0	1	2	3
			P	12	79	91	1	5	3	9	1	3	5	9
		Rabi	C	80	6	86	8	1	5	14	4	1	9	14
			S	82	17	99	1	0	0	1	0	0	1	1
			P	81	10	91	5	1	3	9	3	1	5	9
13	Maharashtra	Kharif	C	14	49	63	12	22	2	35	1	2	34	36
			S	31	60	91	4	3	1	8	1	1	7	8
			P	23	55	78	8	12	1	21	1	2	19	22
		Rabi	C	15	5	20	53	25	1	79	0	1	79	80
			S	42	40	82	7	10	1	17	1	1	16	17
			P	23	16	40	39	20	1	59	0	1	59	60
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	83	8	90	6	1	1	9	1	1	7	9
			P	83	8	90	6	1	1	9	1	1	7	9

Annex-IV (c) (Contd.....)

S. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Supervisor				Patwari			
				Irr	UI	Total	Irr	UI	NR	Total	Irr	UI	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
14	Odisha	Autumn	C	13	87	100	0	0	0	0	0	0	0	0
			S	10	90	100	0	0	0	0	0	0	0	0
			P	11	89	100	0	0	0	0	0	0	0	0
		Winter	C	1	98	100	0	0	0	0	0	0	0	0
			S	18	82	100	0	0	0	0	0	0	0	0
			P	10	90	100	0	0	0	0	0	0	0	0
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	48	50	98	1	1	0	2	0	0	2	2
			P	48	50	98	1	1	0	2	0	0	2	2
15	Punjab	Kharif	C	93	0	94	4	0	3	6	3	0	3	6
			S	99	0	99	1	0	0	1	0	0	1	1
			P	95	0	95	3	0	2	5	2	0	2	5
		Rabi	C	97	0	97	2	0	1	3	1	0	2	3
			S	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			P	97	0	97	2	0	1	3	1	0	2	3
16	Rajasthan	Kharif	C	18	68	86	1	8	4	13	1	4	9	13
			S	18	78	96	1	2	1	3	0	1	2	3
			P	18	73	91	1	5	2	8	1	2	5	8
		Rabi	C	76	13	89	6	2	3	11	3	1	7	11
			S	80	18	98	1	0	1	2	1	0	1	2
			P	78	16	93	4	1	2	7	2	1	4	7
17	Tamil Nadu	Phase-I	C	44	32	76	6	13	2	20	2	3	17	22
			S	45	30	75	6	13	2	21	2	2	19	22
			P	45	31	76	6	13	2	20	2	2	18	22
		Phase-II	C	46	13	58	12	25	5	41	2	5	35	41
			S	59	23	82	10	3	3	16	2	1	12	16
			P	53	18	71	10	13	4	27	2	3	23	27
		Rabi	C	30	23	54	0	42	3	45	0	3	43	46
			S	78	20	98	1	0	1	2	1	0	1	2
			P	70	20	91	1	6	1	8	1	0	8	9
18	Telangana	Kharif	C	0	0	0	0	0	0	0	0	0	0	0
			S	38	49	87	8	4	0	13	0	1	12	13
			P	24	31	55	24	21	0	45	0	0	45	45
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0
			S	90	9	99	0	0	0	1	0	0	0	1
			P	66	7	73	24	3	0	27	0	0	26	27
19	Uttar Pradesh	Kharif	C	62	23	85	7	4	4	15	3	2	10	15
			S	77	16	93	3	1	3	7	2	1	3	7
			P	67	21	87	6	3	3	12	3	2	8	12
		Rabi	C	82	4	86	10	1	2	14	3	0	11	14
			S	88	5	94	4	0	2	6	2	0	4	6
			P	84	4	88	9	1	2	12	2	0	9	12
		Summer	C	60	3	63	33	2	2	37	2	0	35	37
			S	88	0	88	11	0	0	12	0	0	11	12
			P	66	2	68	28	2	2	31	2	0	30	32
20	Uttarakhand	Kharif	C	49	45	94	3	2	1	6	1	1	4	6
			S	50	48	97	1	1	1	2	0	1	2	2
			P	49	46	95	2	2	1	4	1	1	3	4
		Rabi	C	61	37	98	2	0	0	2	0	0	2	2
			S	60	36	95	2	0	3	5	2	0	2	5
			P	60	36	97	2	0	1	3	1	0	2	3
		Summer	C	96	1	97	3	0	0	3	0	0	3	3
			S	68	1	69	30	0	1	31	1	0	30	31
			P	81	1	82	18	0	0	18	1	1	18	18

S. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Supervisor				Patwari			
				Irr	UI	Total	Irr	UI	NR	Total	Irr	UI	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
21	West Bengal	Early Kharif	C	NOT APPLICABLE										
	$		S											
			P											
		Late Kharif	C											
			S											
			P											
		Rabi	C											
			S											
			P											
		Summer	C											
			S											
			P											
22	Puducherry	Kharif	C	60	23	83	0	0	9	9	6	3	0	9
			S	64	34	99	0	0	0	0	0	0	0	0
			P	63	30	93	0	0	3	3	2	1	0	3
		Rabi-I	C	94	0	94	3	0	3	6	3	0	3	6
			S	75	17	92	2	1	2	6	3	0	3	7
			P	80	12	93	2	1	2	6	3	0	3	7
		Rabi-II	C	100	0	100	0	0	0	0	0	0	0	0
			S	67	25	92	0	0	0	0	0	0	0	0
			P	71	22	93	0	0	0	0	0	0	0	0
FOR STATES		Early Kharif	C	28	52	80	3	11	1	16	1	2	14	17
COVERED			S	36	47	83	4	9	1	14	1	1	13	16
			P	32	49	81	4	10	1	15	1	1	14	16
		Late Kharif	C	34	45	80	7	10	3	20	1	2	17	20
			S	41	53	94	3	2	1	6	1	1	4	6
			P	38	49	87	5	6	2	13	1	2	10	13
		Rabi	C	62	10	72	18	7	3	28	2	1	25	28
			S	71	24	95	2	2	1	5	1	0	4	5
			P	66	16	81	11	5	2	18	2	1	16	18
		Summer	C	28	50	79	8	1	1	10	1	0	9	10
			S	33	52	85	2	1	0	3	0	0	2	3
			P	31	51	83	4	1	0	5	0	0	4	5
All seasons			C	43	34	77	11	9	2	22	2	2	19	22
			S	48	45	92	3	2	1	6	1	1	4	6
			P	45	39	84	7	6	2	14	1	1	12	14

Note:

1. @ - Observations are not given due to insufficient data.
2. # - Observations do not reflect the true picture of discrepancies in the State since primary worker's entries are not available for comparison for large number of samples.
3. * - The Field work was not carried out for State sample during Summer season.
4. $ - Recording of irrigation particulars discontinued as per the decision taken in 21st STC meeting in 1988.
5. P^ - Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
6. NR - Not Reported.
7. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

DISCREPANCIES IN RECORDING SEED VARIETY PARTICULARS DURING 2019-20

Sl. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Superviser				Patwari			
				HY	L	Total	HY	L	NR	Total	HY	L	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra	Kharif	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	Pradesh		S	80	15	95	4	0	0	5	1	0	4	5
			P	80	15	95	4	4	1	5	2	0	4	5
		Rabi	C	0	0	0	91	9	0	100	0	0	100	100
			S	74	13	88	11	0	0	12	1	0	11	12
			P	52	9	61	35	3	0	39	1	0	38	39
2	Assam	Early	C											
	@	Kharif	S											
			P											
		Late	C											
		Kharif	S											
			P											
		Rabi	C											
			S											
			P											
		Summer	C											
			S											
			P											
3	Bihar	Bhadai	C	NR										
	#		S	24	76	100	0	0	0	0	0	0	0	0
			P^	24	76	100	0	0	0	0	0	0	0	0
		Aghani	C	NR										
			S	24	76	100	0	0	0	0	0	0	0	0
			P^	24	76	100	0	0	0	0	0	0	0	0
		Rabi	C	NR										
			S	72	27	99	28	0	0	1	0	0	1	1
			P^	72	27	99	28	0	0	1	0	0	1	1
		Summer	C	NR										
			S	0	100	100	0	0	0	0	0	0	0	0
			P^	0	100	100	0	0	0	0	0	0	0	0
4	Chhattisgarh	Kharif	C	64	29	93	3	3	1	7	1	2	5	7
			S	79	20	99	0	1	0	1	0	0	1	1
			P	71	25	96	2	2	1	4	0	1	3	4
		Rabi	C	39	56	95	1	3	1	5	0	1	4	5
			S	34	66	100	0	0	0	0	0	0	0	0
			P	37	60	97	1	2	1	3	0	1	2	3
5	Gujarat	Kharif	C	NR										
			S	53	46	99	0	1	0	1	1	0	0	1
			P^	53	46	99	0	1	0	1	1	0	0	1
		Rabi	C	NR										
			S	37	63	99	0	0	0	1	0	0	0	1
			P^	37	63	99	0	0	0	1	0	0	0	1
		Summer	C	NR										
			S	100	0	100	0	0	0	0	0	0	0	0
			P^	100	0	100	0	0	0	0	0	0	0	0
6	Haryana	Kharif	C	89	2	91	6	0	3	9	3	0	6	9
	*		S	96	2	98	1	0	1	2	1	0	1	2
			P	92	2	94	4	1	2	6	2	0	4	6
		Rabi	C	91	1	93	4	0	4	7	4	0	4	7
			S	95	5	100	0	0	0	0	0	0	0	0
			P	93	3	96	2	0	2	4	2	0	2	4
		Summer	C	100	0	100	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0	0	0	0
			P	100	0	100	0	0	0	0	0	0	0	0
7	Himachal	Kharif	C	32	39	71	15	4	10	28	3	18	8	29
	Pradesh		S	54	40	95	1	3	1	5	1	1	3	5
			P	43	39	82	8	3	5	17	2	10	6	18
		Rabi	C	33	38	71	18	2	8	28	1	21	7	29
			S	50	44	94	1	1	2	5	0	2	2	5
			P	39	40	79	12	2	6	20	1	14	5	21
8	Jammu &	Kharif	C	36	56	92	4	3	1	8	1	2	5	8
	Kashmir		S	64	35	99	0	0	0	1	0	0	1	1
			P	53	43	96	2	1	1	4	1	1	2	4
		Rabi	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	87	5	92	2	6	0	8	1	0	7	8
			P	87	5	92	2	6	1	8	1	0	7	8

ANNEX IV (d) (Contd.....)

Sl. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Superviser				Patwari			
				HY	L	Total	HY	L	NR	Total	HY	L	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
9	Jharkhand	Early	C	NR										
	@	Kharif	S	6	79	85	0	15	0	15	0	0	15	15
			P^	3	46	50	7	42	0	50	0	0	50	50
		Late	C	NR										
		Kharif	S	5	79	84	0	16	0	16	0	0	16	16
			P^	2	36	38	20	42	0	62	0	0	62	62
		Rabi	C	NR										
			S	2	81	83	17	0	0	17	0	0	17	17
			P^	2	81	83	17	0	0	17	0	0	17	17
		Summer	C	NR										
			S	0	0	0	0	0	0	0	0	0	0	0
			P^	0	0	0	0	0	0	0	0	0	0	0
10	Karnataka	Kharif	C	64	26	89	6	2	1	10	2	1	8	10
			S	78	12	90	6	1	3	9	3	2	5	9
			P	71	19	90	6	1	2	9	2	1	6	10
		Rabi	C	34	8	42	36	16	5	57	3	3	51	57
			S	72	23	95	2	0	2	4	2	0	2	4
			P	53	16	69	19	8	4	30	3	1	27	31
		Summer	C	75	0	75	24	1	0	25	0	0	25	25
			S	57	42	99	0	0	0	0	0	0	0	0
			P	64	25	89	10	0	1	10	0	0	10	10
11	Kerala	Autumn	C	12	85	97	0	1	0	2	0	0	1	1
			S	37	58	96	1	1	1	2	1	0	1	2
			P	20	77	97	0	1	1	2	1	0	1	2
		Winter	C	19	79	98	0	1	0	1	0	0	1	1
			S	37	57	93	1	1	2	4	2	1	1	4
			P	28	68	96	0	1	1	2	1	0	1	2
		Summer	C	3	96	99	0	0	0	0	0	0	0	1
			S	6	91	96	0	0	0	1	0	0	0	1
			P	5	93	97	0	0	0	1	0	0	0	1
12	Madhya Pradesh	Kharif	C	44	41	85	4	6	5	15	2	5	8	15
			S	59	39	97	1	1	1	3	1	1	2	3
			P	50	40	90	3	4	3	10	1	3	5	10
		Rabi	C	55	30	85	4	7	5	15	1	5	9	15
			S	60	39	99	1	0	0	1	0	0	1	1
			P	57	34	90	2	4	3	10	1	3	5	10
13	Maharashtra	Kharif	C	58	6	64	26	8	2	36	2	1	34	36
			S	74	11	85	12	1	1	14	1	7	7	14
			P	67	9	75	19	4	1	24	1	4	19	24
		Rabi	C	17	3	20	63	16	1	80	0	1	79	80
			S	67	15	82	14	2	1	17	2	0	16	18
			P	33	7	40	48	12	1	60	1	1	59	60
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	78	11	89	6	1	1	9	1	1	7	9
			P	78	11	89	6	1	1	9	1	1	7	9
14	Odisha	Autumn	C	95	5	100	0	0	0	0	0	0	0	0
			S	78	22	100	0	0	0	0	0	0	0	0
			P	86	13	100	0	0	0	0	0	0	0	0
		Winter	C	99	1	100	0	0	0	0	0	0	0	0
			S	96	4	100	0	0	0	0	0	0	0	0
			P	98	2	100	0	0	0	0	0	0	0	0
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	39	59	98	1	1	0	2	0	0	2	2
			P	39	59	98	1	1	0	2	0	0	2	2
15	Punjab	Kharif	C	45	5	49	48	0	3	51	1	47	3	51
			S	87	1	88	12	0	0	12	0	11	1	12
			P	59	4	62	36	0	2	38	1	35	2	38
		Rabi	C	50	11	61	38	0	1	39	0	36	2	39
			S	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			P	50	11	61	38	1	1	39	0	36	2	39
16	Rajasthan	Kharif	C	49	36	85	7	4	4	14	3	3	9	15
			S	46	49	95	2	1	1	4	1	1	2	4
			P	48	43	90	4	2	2	9	2	2	5	9
		Rabi	C	63	25	88	5	3	3	12	2	3	7	12
			S	72	25	98	1	0	1	2	0	0	1	2
			P	68	25	93	3	2	2	7	1	2	4	7

ANNEX IV (d) (Contd.....)

Sl. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Superviser				Patwari			
				HY	L	Total	HY	L	NR	Total	HY	L	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
17	Tamil Nadu	Phase-I	C	59	12	71	14	11	2	27	2	8	17	28
			S	61	15	76	9	10	2	21	3	0	19	22
			P	60	14	73	12	11	2	24	2	4	18	25
		Phase-II	C	43	9	52	24	19	5	48	0	13	35	48
			S	71	11	81	11	2	3	15	2	1	12	16
			P	58	10	68	17	10	4	30	1	7	23	31
		Rabi	C	30	23	54	0	43	3	46	1	1	43	46
			S	88	9	97	1	0	1	2	1	0	1	2
			P	80	11	91	1	7	1	9	1	0	8	9
18	Telangana	Kharif	C	0	0	0	90	10	0	100	0	0	100	100
			S	79	8	87	12	0	0	13	0	0	12	13
			P	50	5	55	41	4	0	45	0	0	45	45
		Rabi	C	0	0	0	87	13	0	100	0	0	100	100
			S	96	3	100	0	0	0	0	0	0	0	0
			P	71	3	73	23	4	0	27	0	0	26	27
19	Uttar Pradesh	Kharif	C	73	12	85	8	2	4	14	3	1	10	14
			S	85	9	94	3	1	3	6	2	0	3	6
			P	77	11	88	7	2	3	12	3	1	8	12
		Rabi	C	80	6	86	10	2	2	14	2	1	11	14
			S	89	5	94	4	0	2	6	2	0	4	6
			P	82	6	88	8	2	2	12	2	0	9	12
		Zaid Rabi	C	56	7	62	28	6	2	37	2	1	35	37
			S	87	1	88	11	0	0	12	0	0	11	12
			P	63	5	68	24	5	2	31	2	0	30	32
20	Uttarakhand	Kharif	C	47	47	94	2	2	1	5	1	0	4	5
			S	43	54	97	1	1	1	2	0	0	2	2
			P	45	51	96	2	1	1	4	1	0	3	4
		Rabi	C	56	40	96	2	0	0	3	0	1	2	3
			S	48	47	95	2	0	3	5	2	0	2	5
			P	52	44	96	2	0	1	4	1	1	2	4
		Summer	C	78	19	97	3	0	0	3	0	0	3	3
			S	68	1	69	30	0	1	31	1	0	30	31
			P	73	9	82	18	0	0	18	0	0	18	18
21	West Bengal	Early Kharif	C	3	89	92	3	4	1	8	1	1	6	8
			S	7	84	91	0	9	0	9	0	0	9	9
			P	4	88	92	2	5	1	8	1	1	7	8
		Late Kharif	C	4	93	98	1	1	0	2	0	0	2	2
			S	70	28	98	2	0	0	2	0	0	2	2
			P	27	71	98	1	1	0	2	0	0	2	2
		Rabi	C	0	100	100	0	0	0	0	0	0	0	0
			S	0	88	88	12	0	0	12	0	0	12	12
			P	0	98	98	2	0	0	2	0	0	2	2
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	0	100	100	0	0	0	0	0	0	0	0
			P	0	100	100	0	0	0	0	0	0	0	0
22	Puducherry	Kharif	C	57	29	86	0	0	9	9	9	0	0	9
			S	75	19	94	0	0	0	0	0	0	0	0
			P	69	23	91	0	0	3	3	3	0	0	3
		Rabi-I	C	94	0	94	3	0	3	6	3	0	3	6
			S	77	14	91	3	0	2	6	2	0	3	6
			P	82	10	92	3	0	2	6	2	0	3	6
		Rabi-II	C	100	0	100	0	0	0	0	0	0	0	0
			S	69	22	91	0	0	0	0	0	0	0	0
			P	72	19	92	0	0	0	0	0	0	0	0
FOR STATES COVERED		Early Kharif	C	46	33	79	9	10	1	19	1	5	14	20
			S	54	29	83	6	8	1	14	2	0	13	15
			P	50	31	81	7	9	1	17	2	3	14	18
		Late Kharif	C	53	22	75	17	5	3	24	2	6	17	24
			S	72	21	93	5	1	1	7	1	2	4	7
			P	62	22	84	11	3	2	16	1	4	10	16
		Rabi	C	52	15	68	24	6	3	32	2	6	25	32
			S	73	22	95	4	1	1	5	1	0	4	5
			P	61	18	79	15	3	2	21	1	3	16	21
		Summer	C	20	69	89	7	2	1	10	1	0	10	11
			S	20	76	96	1	0	0	2	0	0	2	2
			P	20	73	93	4	1	0	5	0	0	5	5
All seasons			C	50	23	74	18	5	2	26	2	5	19	26
			S	65	28	93	4	1	1	6	1	1	4	7
			P	58	25	83	12	3	2	16	1	3	12	17

Note:

1. @ -Observations are not given due to insufficient data.
2. # - Observations do not reflect the true picture of discrepancies in the State since primary worker's entries are not available for comparison of large number of samples.
3. * - The Field work was not carried out for State sample during Summer season.
4. P^ - Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
5. NR - Not Reported.
6. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

ANNEX-VI

RESPONSE IN SAMPLE CHECK ON CROP CUTTING EXPERIMENTS DURING 2019-20 (At Harvest stage only)

Sl. No.	State	AGENCY	Kharif				Rabi/ Summer				Grand Total of Planning
			Early Kharif		Late Kharif		Rabi		Summer		
			No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra	C			460	93	220	50			680
	Pradesh	S			460	92	220	84			680
		P			920	93	440	67			1360
2	Assam	C	170	36	120	98	190	58	40	45	520
		S	170	45	120	77	190	39	40	75	520
		P	340	41	240	88	380	48	80	60	1040
3	Bihar	C	120	67	240	69	350	8	40	0	750
		S	120	56	240	58	350	43	40	45	750
		P	240	61	480	63	700	25	80	23	1500
4	Chhattisgarh	C			200	88	150	17			350
		S			200	76	150	13			350
		P			400	82	300	15			700
5	Gujarat	C			750	74	240	33			990
		S			750	43	240	25			990
		P			1500	58	480	29			1980
6	Haryana	C			320	93	380	1			700
		S			320	39	380	44			700
		P			640	66	760	23			1400
7	Himachal	C			150	84	150	0			300
	Pradesh	S			150	69	150	13			300
		P			300	76	300	7			600
8	Jammu &	C			160	60	120	0			280
	Kashmir	S			160	21	120	0			280
		P			320	41	240	0			560
9	Jharkhand	C	40	100	80	100	100	18			220
		S	40	75	80	68	100	70			220
		P	80	88	160	84	200	44			440
10	Karnataka	C			620	51	200	60	80	25	900
		S			620	83	200	77	80	78	900
		P			1240	67	400	68	160	51	1800
11	Kerala	C	100	98	100	90			320	71	520
	$	S	100	96	100	90			320	70	520
		P	200	97	200	90			640	70	1040
12	Madhya	C			628	92	524	25			1152
	Pradesh	S			628	67	524	61			1152
		P			1256	79	1048	43			2304
13	Maharashtra	C			850	43	450	33			1300
		S			850	52	450	44			1300
		P			1700	48	900	38			2600
14	Odisha	C	260	99	390	92			180	8	830
		S	260	94	390	91			180	94	830
		P	520	97	780	92			360	51	1660
15	Punjab	C			380	91	320	2			700
		S			380	61	320	41			700
		P			760	76	640	22			1400
16	Rajasthan	C			520	86	420	17			940
		S			520	68	420	63			940
		P			1040	77	840	40			1880

ANNEX-VI (Contd.....)

Sl. No.	State	AGENCY	Kharif				Rabi/ Summer				Grand Total of Planning
			Early Kharif		Late Kharif		Rabi		Summer		
			No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	
1	2	3	4	5	6	7	8	9	10	11	12
17	Tamil Nadu	C			420	92	320	63	0	0	740
	#	S			420	75	320	74	0	0	740
		P			840	83	640	68	0	0	1480
18	Telangana	C			360	95	120	22			480
		S			360	95	120	91			480
		P			720	95	240	56			960
19	Uttar Pradesh	C			1380	95	840	19	80	90	2300
		S			1380	17	840	14	80	15	2300
		P			2760	56	1680	16	160	53	4600
20	Uttarakhand	C			130	88	60	0			190
		S			130	69	60	77			190
		P			260	78	120	38			380
21	West	C	180	96	160	100	220	50	190	8	750
	Bengal	S	180	2	160	9	220	0	190	4	750
		P	360	49	320	54	440	25	380	6	1500
22	Puducherry	C			10	100	10	100	10	100	30
		S			10	100	10	100	10	100	30
		P			20	100	20	100	20	100	60
For States		C	870	81	8428	81	5384	25	940	40	15622
covered		S	870	60	8428	58	5384	43	940	57	15622
		P	1740	71	16856	70	10768	34	1880	48	31244

Note:

1- $ In Kerala, 220 experiments of Whole year crops are included in Summer season.

2- # In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and categorization of crops, the data have been presented seasonwise instead of whole year.

DISTRIBUTION OF PERCENTAGE OF EXPERIMENTS ACCORDING TO IMPORTANT INPUTS DURING 2019-20

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
Paddy-Autumn						
1	Assam	C	H	29.41	11.76	47.06
		S		10.81	0.00	43.24
		P		19.72	5.63	45.07
		C	T	10.00	4.00	16.00
		S		5.80	0.00	23.19
		P		8.28	2.37	18.93
2	Bihar	C	H	40.00	13.33	66.67
		S		68.42	10.53	97.37
		P		55.88	11.76	83.82
		C	T	30.00	10.00	50.00
		S		65.00	10.00	92.50
		P		47.50	10.00	71.25
3	Jharkhand	C	H	0.00	0.00	5.00
		S		0.00	0.00	11.11
		P		0.00	0.00	7.89
		C	T	0.00	0.00	5.00
		S		0.00	0.00	11.11
		P		0.00	0.00	7.89
4	Kerala	C	H	37.76	86.73	70.41
		S		69.79	79.17	77.08
		P		53.61	82.99	73.71
		C	T	37.00	85.00	69.00
		S		69.07	78.35	76.29
		P		52.79	81.73	72.59
5	Odisha	C	H	7.83	66.82	88.48
		S		8.29	87.80	88.29
		P		8.06	77.01	88.39
		C	T	7.83	66.82	88.48
		S		8.29	87.80	88.29
		P		8.06	77.01	88.39
6	Tamil Nadu #	C	H	100.00	100.00	100.00
	Phase-I	S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
7	West Bengal	C	H	77.32	92.78	95.88
		S		100.00	100.00	100.00
		P		78.22	93.07	94.27
		C	T	75.00	90.00	93.00
		S		100.00	100.00	100.00
		P		75.96	90.38	93.27
Paddy-Winter						
1	Andhra Pradesh	C	H	94.12	95.42	95.42
		S		92.16	100.00	100.00
		P		93.14	97.71	97.71
		C	T	91.72	92.99	92.99
		S		92.16	100.00	100.00
		P		91.94	96.45	96.45

#= In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2019-20 and consequent, categorization of crops, the data have been presented seasonwise instead of whole year.

T= Total (Harvest+Missed+Lost).

I= Irrigation

HYV= High yield variety

F= Fertilizers

NA=Data not available, NR=Data not reported.

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
2	Assam	C	H	0.00	0.00	0.00
		S		2.13	10.64	47.87
		P		0.94	13.21	50.47
		C	T	0.00	0.00	0.00
		S		2.13	10.64	47.87
		P		0.93	13.08	50.00
3	Bihar	C	H	64.53	59.30	92.44
		S		51.45	56.07	100.00
		P		57.97	57.68	96.23
		C	T	47.44	43.59	67.95
		S		47.59	51.87	92.51
		P		47.51	47.27	78.86
4	Chhattisgarh	C	H	50.00	88.75	93.75
		S		50.00	92.50	90.00
		P		50.00	90.63	91.88
		C	T	50.00	88.75	93.75
		S		50.00	92.50	90.00
		P		50.00	90.63	91.88
5	Gujarat	C	H	63.33	95.00	100.00
		S		63.83	42.55	93.62
		P		63.55	71.96	97.20
		C	T	47.50	71.25	75.00
		S		63.83	52.55	93.62
		P		53.54	60.63	81.89
6	Haryana	C	H	100.00	100.00	100.00
		S		100.00	100.00	95.00
		P		100.00	100.00	98.46
		C	T	100.00	100.00	100.00
		S		100.00	100.00	95.00
		P		100.00	100.00	98.46
7	Himachal Pradesh	C	H	71.59	64.71	74.51
		S		51.52	18.18	63.64
		P		63.10	46.43	70.24
		C	T	60.00	55.00	63.33
		S		30.91	10.91	38.18
		P		46.09	33.91	51.30
8	Jammu & Kashmir	C	H	86.67	66.67	96.67
		S		73.91	82.61	100.00
		P		78.95	76.32	98.68
		C	T	74.29	57.14	82.86
		S		73.91	82.61	100.00
		P		74.07	71.60	92.59
9	Jharkhand	C	H	11.25	43.75	83.75
		S		0.00	0.00	0.00
		P		6.72	33.58	73.88
		C	T	11.25	43.75	83.75
		S		0.00	0.00	0.00
		P		6.52	32.61	71.74
10	Karnataka	C	H	71.43	77.14	93.33
		S		60.31	83.97	88.55
		P		65.25	80.93	90.68
		C	T	65.79	71.05	85.96
		S		57.25	79.71	84.06
		P		61.11	75.79	84.92

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
11	Kerala	C	H	83.33	82.22	82.22
		S		90.00	93.33	35.56
		P		86.67	87.78	58.89
		C	T	83.33	82.22	82.22
		S		90.00	93.33	35.56
		P		86.67	87.78	58.89
12	Madhya Pradesh	C	H	34.00	69.00	76.00
		S		34.88	66.28	76.74
		P		34.41	67.74	76.34
		C	T	34.00	69.00	76.00
		S		34.88	66.28	76.74
		P		34.41	67.74	76.34
13	Maharashtra	C	H	25.71	84.29	94.29
		S		21.74	73.91	91.30
		P		24.14	80.17	93.10
		C	T	21.95	71.95	80.49
		S		18.87	64.15	79.25
		P		20.74	68.89	80.00
14	Odisha	C	H	26.54	82.31	95.77
		S		27.56	95.67	91.34
		P		27.04	88.91	93.58
		C	T	26.54	82.31	95.77
		S		27.56	95.67	91.34
		P		27.04	88.91	93.58
15	Punjab	C	H	99.47	97.33	99.47
		S		100.00	97.56	98.37
		P		99.68	97.42	99.03
		C	T	97.89	95.79	97.89
		S		100.00	97.56	98.37
		P		98.72	96.49	98.08
16	Tamil Nadu	C	H	98.28	100.00	98.28
	Phase-II	S		91.67	97.92	97.92
		P		95.28	99.06	98.11
		C	T	95.00	96.67	95.00
		S		91.67	97.92	97.92
		P		93.52	97.22	96.30
17	Telangana	C	H	94.29	95.71	100.00
		S		94.29	97.14	97.14
		P		94.29	96.43	98.57
		C	T	94.29	95.71	100.00
		S		94.29	97.14	97.14
		P		94.29	96.43	98.57
18	Uttar Pradesh	C	H	95.61	92.73	99.55
		S		92.62	91.80	100.00
		P		95.14	92.58	99.62
		C	T	95.61	92.73	99.55
		S		92.62	91.80	100.00
		P		95.14	92.58	99.62
19	Uttarakhand	C	H	83.33	50.00	66.67
		S		66.00	54.00	64.00
		P		74.49	52.04	65.31
		C	T	83.33	50.00	66.67
		S		66.00	54.00	64.00
		P		74.49	52.04	65.31

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
20	West Bengal	C	H	57.50	89.38	100.00
		S		64.29	100.00	100.00
		P		58.05	90.23	100.00
		C	T	57.50	89.38	100.00
		S		64.29	100.00	100.00
		P		58.05	90.23	100.00
21	Puducherry	C	H	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
Paddy-Rabi/Summer						
1	Andhra Pradesh	C	H	100.00	98.20	97.30
		S		100.00	98.00	98.00
		P		100.00	98.10	97.63
		C	T	94.87	93.16	92.31
		S		90.91	89.09	89.09
		P		92.95	91.19	90.75
2	Assam	C	H	77.78	66.67	77.78
		S		66.67	46.67	80.00
		P		70.83	54.17	79.17
		C	T	35.00	30.00	35.00
		S		66.67	46.67	80.00
		P		48.57	37.14	54.29
3	Bihar	C	H	0.00	0.00	0.00
		S		100.00	66.67	77.78
		P		100.00	66.67	77.78
		C	T	0.00	0.00	0.00
		S		69.23	46.15	53.85
		P		27.27	18.18	21.21
4	Karnataka	C	H	100.00	63.16	94.74
		S		93.75	100.00	87.50
		P		97.14	80.00	91.43
		C	T	95.00	60.00	90.00
		S		93.75	100.00	87.50
		P		94.44	77.78	88.89
5	Kerala	C	H	95.92	91.84	87.76
		S		100.00	97.87	89.36
		P		97.92	94.79	88.54
		C	T	50.54	48.39	46.24
		S		54.02	52.87	48.28
		P		52.22	50.56	47.22
6	Odisha	C	H	91.67	100.00	33.33
		S		100.00	100.00	89.78
		P		99.33	100.00	85.23
		C	T	8.09	8.82	2.94
		S		100.00	100.00	89.78
		P		54.21	54.58	46.52
7	Tamil Nadu	C	H	95.83	100.00	95.83
		S		100.00	100.00	100.00
		P		97.92	100.00	97.92
		C	T	57.50	60.00	57.50
		S		100.00	100.00	100.00
		P		73.44	75.00	73.44

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
8	Telangana	C	H	100.00	100.00	100.00
		S		100.00	97.44	91.03
		P		100.00	98.70	95.45
		C	T	95.00	95.00	95.00
		S		97.50	95.00	88.75
		P		96.25	95.00	91.88
9	Puducherry	C	H	100.00	100.00	100.00
	Rabi-I	S		100.00	100.00	100.00
		P		100.00	100.00	80.00
		C	T	100.00	100.00	90.00
		S		100.00	100.00	100.00
		P		100.00	100.00	80.00
	Rabi-II	C	H	100.00	100.00	90.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
10	West Bengal	C	H	100.00	100.00	100.00
		S		0.00	0.00	0.00
		P		100.00	100.00	100.00
		C	T	7.14	7.14	7.14
		S		0.00	0.00	0.00
		P		7.14	7.14	7.14
Jowar- Kharif						
1	Karnataka	C	H	38.46	84.62	50.00
		S		31.82	84.09	61.36
		P		34.29	84.29	57.14
		C	T	20.41	44.90	26.53
		S		30.43	80.43	58.70
		P		25.26	62.11	42.11
2	Madhya Pradesh	C	H	0.00	27.08	61.46
		S		0.00	34.29	45.71
		P		0.00	30.12	54.82
		C	T	0.00	26.00	59.00
		S		0.00	34.29	45.71
		P		0.00	29.41	53.53
3	Maharashtra	C	H	6.45	87.10	93.55
		S		0.00	77.78	92.59
		P		3.45	82.76	93.10
		C	T	5.26	71.05	76.32
		S		0.00	70.00	83.33
		P		2.94	70.59	79.41
4	Rajasthan	C	H	1.75	24.56	54.39
		S		0.00	26.09	52.17
		P		0.97	25.24	53.40
		C	T	1.67	23.33	51.67
		S		0.00	21.43	42.86
		P		0.86	22.41	47.41
5	Tamil Nadu	C	H	20.00	85.00	45.00
		S		6.90	79.31	10.34
		P		14.49	82.61	30.43
		C	T	20.00	85.00	45.00
		S		6.90	79.31	10.34
		P		14.49	82.61	30.43

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
6	Telangana	C	H	0.00	7.50	95.00
		S		0.00	20.00	75.00
		P		0.00	13.75	85.00
		C	T	0.00	7.50	95.00
		S		0.00	20.00	75.00
		P		0.00	13.75	85.00
7	Uttar Pradesh	C	H	0.00	2.50	15.00
		S		0.00	0.00	0.00
		P		0.00	1.92	11.54
		C	T	0.00	2.50	15.00
		S		0.00	0.00	0.00
		P		0.00	1.92	11.54
Jowar-Rabi						
1	Karnataka	C	H	23.33	56.67	73.33
		S		15.38	64.62	24.62
		P		19.20	60.80	48.00
		C	T	20.29	49.28	63.77
		S		14.93	62.69	23.88
		P		17.65	55.88	44.12
2	Maharashtra	C	H	26.03	61.64	57.53
		S		35.42	47.92	69.79
		P		31.36	53.85	64.50
		C	T	17.92	42.45	39.62
		S		33.33	45.10	65.69
		P		25.48	43.75	52.40
3	Tamil Nadu	C	H	25.00	65.00	57.50
		S		16.67	100.00	50.00
		P		21.88	78.13	54.69
		C	T	25.00	65.00	57.50
		S		16.67	100.00	50.00
		P		21.88	78.13	54.69
4	Telangana	C	H	36.84	31.58	86.84
		S		65.79	47.37	89.47
		P		51.32	39.47	88.16
		C	T	35.00	30.00	82.50
		S		65.79	47.37	89.47
		P		50.00	38.46	85.90
BAJRA						
1	Andhra Pradesh	C	H	5.88	58.82	73.53
		S		5.56	38.89	38.89
		P		5.71	48.57	55.71
		C	T	5.26	52.63	65.79
		S		5.00	35.00	35.00
		P		5.13	43.59	50.00
2	Gujarat	C	H	28.00	100.00	86.00
		S		34.29	95.71	77.14
		P		30.59	98.24	82.35
		C	T	25.69	91.74	78.90
		S		33.80	94.37	76.06
		P		28.89	92.78	77.78
3	Haryana	C	H	75.49	96.08	89.22
		S		74.19	100.00	77.42
		P		75.19	96.99	86.47
		C	T	74.04	94.23	87.50
		S		74.19	100.00	77.42
		P		74.07	95.56	85.19
4	Karnataka	C	H	12.90	80.65	45.16
		S		12.50	83.13	20.83
		P		12.66	82.28	30.38
		C	T	8.51	53.19	29.79
		S		12.50	83.33	20.83
		P		10.53	68.42	25.26

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
5	Maharashtra	C	H	22.22	87.04	61.11
		S		21.05	50.00	57.89
		P		21.74	71.74	59.78
		C	T	22.22	87.04	61.11
		S		19.05	45.24	52.38
		P		20.83	68.75	57.29
6	Rajasthan	C	H	5.17	65.52	58.62
		S		11.11	74.07	44.44
		P		8.04	69.64	51.79
		C	T	5.00	63.33	56.67
		S		11.11	74.07	44.44
		P		7.89	68.42	50.88
7	Tamil Nadu	C	H	20.00	85.00	30.00
		S		20.69	93.10	44.83
		P		20.29	88.41	36.23
		C	T	20.00	85.00	30.00
		S		20.69	93.10	44.83
		P		20.29	88.41	36.23
8	Uttar Pradesh	C	H	36.00	77.33	88.67
		S		27.27	100.00	90.91
		P		34.88	80.23	88.95
		C	T	36.00	77.33	88.67
		S		27.27	100.00	90.91
		P		34.88	80.23	88.95
Maize						
1	Bihar	C	H	64.71	47.06	76.47
		S		52.94	11.76	76.47
		P		58.82	29.41	76.47
		C	T	29.73	21.62	35.14
		S		28.13	6.25	40.63
		P		28.99	14.49	37.68
2	Chhattisgarh	C	H	0.00	55.00	45.00
		S		0.00	70.00	45.00
		P		0.00	62.50	45.00
		C	T	0.00	55.00	45.00
		S		0.00	70.00	45.00
		P		0.00	62.50	45.00
3	Gujarat	C	H	0.00	60.53	100.00
		S		0.00	21.43	85.71
		P		0.00	43.94	93.94
		C	T	0.00	57.50	95.00
		S		0.00	21.43	85.71
		P		0.00	42.65	91.18
4	Haryana	C	H	68.75	81.25	75.00
		S		100.00	100.00	100.00
		P		79.19	87.50	83.33
		C	T	55.00	65.00	60.00
		S		100.00	100.00	100.00
		P		67.86	75.00	71.43
5	Himachal Pradesh	C	H	12.00	26.67	57.33
		S		5.71	17.14	61.43
		P		8.97	22.07	59.31
		C	T	10.00	22.22	47.78
		S		4.76	14.29	51.19
		P		7.47	18.39	49.43

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
6	Jammu & Kashmir	C	H	1.52	45.45	60.61
		S		3.45	53.45	84.48
		P		2.42	49.19	71.77
		C	T	1.47	44.12	58.82
		S		3.33	51.67	81.67
		P		2.34	47.66	69.53
7	Jharkhand	C	H	5.00	35.00	80.00
		S		0.00	0.00	33.33
		P		3.13	21.88	62.50
		C	T	5.00	35.00	80.00
		S		0.00	0.00	33.33
		P		3.13	21.88	62.50
8	Karnataka	C	H	13.33	96.67	93.33
		S		20.83	87.50	70.83
		P		17.95	91.03	79.49
		C	T	9.52	69.05	66.67
		S		20.00	84.00	68.00
		P		15.22	77.17	67.39
9	Madhya Pradesh	C	H	0.00	40.00	72.50
		S		0.00	37.88	74.24
		P		0.00	39.04	73.29
		C	T	0.00	40.00	72.50
		S		0.00	37.88	74.24
		P		0.00	39.04	73.29
10	Odisha	C	H	0.00	40.00	60.00
		S		0.00	47.50	45.00
		P		0.00	43.75	52.50
		C	T	0.00	40.00	60.00
		S		0.00	47.50	45.00
		P		0.00	43.75	52.50
11	Punjab	C	H	73.53	94.12	94.12
		S		87.50	68.75	100.00
		P		80.30	81.82	96.97
		C	T	71.43	91.43	91.43
		S		87.50	68.75	100.00
		P		79.10	80.60	95.52
12	Rajasthan	C	H	2.04	36.73	75.51
		S		0.00	47.62	78.57
		P		1.10	41.76	76.92
		C	T	2.00	36.00	74.00
		S		0.00	47.62	78.57
		P		1.09	41.30	76.09
13	Tamil Nadu	C	H	40.00	95.00	80.00
		S		47.06	100.00	88.24
		P		43.24	97.30	83.78
		C	T	40.00	95.00	80.00
		S		47.06	100.00	88.24
		P		43.24	97.30	83.78
14	Telangana	C	H	38.00	96.00	100.00
		S		40.00	100.00	96.00
		P		39.00	98.00	98.00
		C	T	38.00	96.00	100.00
		S		40.00	100.00	96.00
		P		39.00	98.00	98.00

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
15	Uttar Pradesh	C	H	55.36	61.31	95.83
		S		52.38	61.90	85.71
		P		54.76	61.43	93.81
		C	T	55.36	61.31	95.83
		S		51.16	60.47	83.72
		P		54.50	61.14	93.36
			Ragi			
1	Karnataka	C	H	12.50	62.50	91.67
		S		11.11	83.33	86.11
		P		11.67	75.00	88.33
		C	T	9.38	46.88	68.75
		S		10.00	75.00	77.50
		P		9.72	62.50	73.61
3	Uttarakhand	C	H	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
			Cotton			
1	Andhra Pradesh	C	H	20.51	100.00	97.44
		S		5.26	100.00	100.00
		P		12.99	100.00	98.70
		C	T	20.00	97.50	95.00
		S		5.26	100.00	100.00
		P		12.82	98.72	97.44
2	Gujarat	C	H	51.95	96.10	98.70
		S		74.19	96.70	100.00
		P		58.33	96.30	99.07
		C	T	41.67	77.08	79.17
		S		68.66	89.55	92.54
		P		48.65	80.31	82.63
	Haryana	C	H	100.00	100.00	96.30
		S		92.86	100.00	100.00
		P		97.56	100.00	97.56
		C	T	96.43	96.43	92.86
		S		92.86	100.00	100.00
		P		95.24	97.62	95.24
4	Karnataka	C	H	24.39	90.24	100.00
		S		40.00	98.00	76.00
		P		32.97	94.51	86.81
		C	T	22.22	82.22	91.11
		S		40.00	98.00	76.00
		P		31.58	90.53	83.16
5	Madhya Pradesh	C	H	70.45	95.45	97.73
		S		50.00	60.00	60.00
		P		64.06	84.38	85.94
		C	T	64.58	87.50	89.58
		S		50.00	60.00	60.00
		P		60.29	79.41	80.88

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
6	Maharashtra	C	H	31.11	100.00	99.26
		S		22.58	89.25	89.25
		P		27.63	95.61	95.18
		C	T	31.11	100.00	99.26
		S		22.58	89.25	89.25
		P		27.63	95.61	95.18
7	Punjab	C	H	100.00	100.00	98.61
		S		100.00	100.00	100.00
		P		100.00	100.00	99.16
		C	T	100.00	100.00	98.61
		S		100.00	100.00	100.00
		P		100.00	100.00	99.16
8	Rajasthan	C	H	95.00	95.00	100.00
		S		96.67	66.67	100.00
		P		95.71	82.86	100.00
		C	T	95.00	95.00	100.00
		S		85.29	58.82	88.24
		P		90.54	78.38	94.59
9	Tamil Nadu (Kharif)	C	H	20.00	100.00	75.00
		S		21.43	100.00	85.71
		P		20.59	100.00	79.41
		C	T	20.00	100.00	75.00
		S		21.43	100.00	85.71
		P		20.59	100.00	79.41
	Tamil Nadu (Rabi)	C	H	51.43	100.00	97.14
		S		60.00	100.00	93.33
		P		55.38	100.00	95.38
		C	T	46.15	89.74	87.18
		S		60.00	100.00	93.33
		P		52.17	94.20	89.86
10	Telangana	C	H	15.00	97.50	97.50
		S		25.00	85.00	90.00
		P		20.00	91.25	93.75
		C	T	15.00	97.50	97.50
		S		25.00	85.00	90.00
		P		20.00	91.25	93.75
Groundnut						
1	Andhra Pradesh	C	H	95.00	90.00	90.00
		S		94.74	94.74	89.47
		P		94.87	92.31	89.74
		C	T	95.00	90.00	90.00
		S		94.74	94.74	89.47
		P		94.87	92.31	89.74
2	Gujarat	C	H	63.19	87.50	94.44
		S		66.67	35.63	95.40
		P		64.50	67.97	94.81
		C	T	60.67	84.00	90.67
		S		64.44	34.44	92.22
		P		62.08	65.42	91.25
3	Karnataka	C	H	70.59	35.29	58.82
		S		56.25	75.00	34.38
		P		61.22	61.22	42.86
		C	T	30.00	15.00	25.00
		S		56.25	75.00	34.38
		P		41.67	41.67	29.17
4	Madhya Pradesh	C	H	10.00	25.00	65.00
		S		0.00	23.33	63.33
		P		5.71	24.29	64.29
		C	T	10.00	25.00	65.00
		S		0.00	23.33	63.33
		P		5.71	24.29	64.29

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
5	Maharashtra	C	H	21.43	75.00	82.14
		S		48.28	55.17	82.76
		P		30.59	68.24	82.35
		C	T	20.00	70.00	76.67
		S		38.89	44.44	66.67
		P		27.08	60.42	72.92
6	Rajasthan	C	H	87.50	68.75	87.50
		S		55.00	20.00	80.00
		P		75.00	50.00	84.62
		C	T	70.00	55.00	70.00
		S		39.29	14.29	57.14
		P		57.35	38.24	64.71
7	Tamil Nadu (Kharif)	C	H	21.05	100.00	42.11
		S		25.81	93.55	70.97
		P		23.19	97.10	55.07
		C	T	21.05	100.00	42.11
		S		25.81	93.55	70.97
		P		23.19	97.10	55.07
	Tamil Nadu (Rabi)	C	H	76.67	100.00	76.67
		S		76.47	100.00	88.24
		P		76.56	100.00	82.81
		C	T	57.50	75.00	57.50
		S		76.47	100.00	88.24
		P		66.22	86.49	71.62
8	Telangana	C	H	77.50	87.50	90.00
		S		77.50	82.50	90.00
		P		77.50	85.00	90.00
		C	T	77.50	87.50	90.00
		S		77.50	82.50	90.00
		P		77.50	85.00	90.00
Sugarcane						
1	Andhra Pradesh	C	H	100.00	53.33	90.00
		S		95.92	93.88	91.84
		P		98.17	71.56	90.83
		C	T	100.00	53.33	90.00
		S		87.04	85.19	83.33
		P		93.86	68.42	86.84
2	Assam	C	H	0.00	0.00	25.00
		S		0.00	0.00	25.00
		P		0.00	0.00	25.00
		C	T	0.00	0.00	2.50
		S		0.00	0.00	20.00
		P		0.00	0.00	8.33
3	Bihar	C	H	33.33	12.12	100.00
		S		65.22	39.13	82.61
		P		46.43	23.21	92.86
		C	T	27.50	10.00	82.50
		S		62.50	37.50	79.17
		P		40.63	20.31	81.25
4	Haryana	C	H	100.00	93.18	100.00
		S		95.24	100.00	100.00
		P		97.67	96.51	100.00
		C	T	100.00	93.18	100.00
		S		95.24	100.00	100.00
		P		97.67	96.51	100.00
5	Karnataka	C	H	100.00	92.86	92.86
		S		70.59	79.41	79.41
		P		83.87	85.48	85.48
		C	T	87.50	81.25	81.25
		S		70.59	79.41	79.41
		P		78.79	80.30	80.30

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
6	Maharashtra	C	H	94.44	86.11	94.44
		S		88.57	88.57	100.00
		P		91.55	87.32	97.18
		C	T	69.39	63.27	69.39
		S		77.50	77.50	87.50
		P		73.03	69.66	77.53
7	Punjab	C	H	98.00	96.00	100.00
		S		100.00	100.00	100.00
		P		98.57	97.14	100.00
		C	T	98.00	96.00	100.00
		S		100.00	100.00	100.00
		P		98.57	97.14	100.00
8	Rajasthan	C	H	100.00	41.94	54.84
		S		100.00	60.00	92.00
		P		100.00	50.00	71.43
		C	T	77.50	32.50	42.50
		S		83.33	50.00	76.67
		P		80.00	40.00	57.14
9	Tamil Nadu	C	H	97.06	97.06	88.24
		S		93.33	100.00	90.00
		P		95.31	98.44	89.06
		C	T	89.19	89.19	81.08
		S		93.33	100.00	90.00
		P		91.04	94.03	85.07
10	Uttar Pradesh	C	H	91.88	54.31	99.49
		S		100.00	100.00	100.00
		P		92.42	57.35	99.53
		C	T	91.88	54.31	99.49
		S		100.00	100.00	100.00
		P		92.42	57.35	99.53
11	Uttarakhand	C	H	96.43	96.43	96.43
		S		0.00	0.00	0.00
		P		96.43	96.43	96.43
		C	T	96.43	96.43	96.43
		S		0.00	0.00	0.00
		P		96.43	96.43	96.43
Wheat						
1	Assam	C	H	0.00	0.00	0.00
		S		0.00	0.00	100.00
		P		0.00	0.00	100.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	8.33
		P		0.00	0.00	2.70
2	Bihar	C	H	100.00	50.00	100.00
		S		95.06	53.09	95.06
		P		95.29	52.94	95.29
		C	T	2.11	1.05	2.11
		S		79.38	44.33	79.38
		P		28.22	15.68	28.22
3	Chhattisgarh	C	H	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
4	Gujarat	C	H	85.71	83.33	100.00
		S		100.00	61.90	100.00
		P		92.86	72.62	100.00
		C	T	25.35	24.65	29.58
		S		100.00	61.90	100.00
		P		42.39	33.15	45.65
5	Haryana	C	H	100.00	98.13	100.00
		S		100.00	98.94	98.94
		P		100.00	98.43	99.61
		C	T	90.91	89.20	90.91
		S		100.00	98.94	98.94
		P		94.07	92.59	93.70
6	Himachal Pradesh	C	H	0.00	0.00	0.00
		S		0.00	9.09	27.27
		P		0.00	9.09	27.27
		C	T	0.00	0.00	0.00
		S		0.00	6.67	20.00
		P		0.00	1.64	4.92
7	Jammu & Kashmir	C	H	0.00	0.00	0.00
		S		16.67	100.00	100.00
		P		16.67	100.00	100.00
		C	T	0.00	0.00	0.00
		S		1.67	10.00	10.00
		P		0.83	5.00	5.00
8	Jharkhand	C	H	100.00	100.00	100.00
		S		25.00	12.50	40.63
		P		29.41	17.65	44.12
		C	T	5.00	5.00	5.00
		S		25.00	12.50	40.63
		P		13.89	8.33	20.83
9	Karnataka	C	H	65.00	60.00	75.00
		S		56.52	54.35	8.70
		P		60.47	56.98	39.53
		C	T	52.00	48.00	60.00
		S		56.52	54.35	8.70
		P		54.17	51.04	35.42
10	Madhya Pradesh	C	H	72.97	59.46	94.59
		S		67.72	43.04	78.48
		P		68.72	46.15	81.54
		C	T	10.80	8.80	14.00
		S		67.62	43.04	78.48
		P		32.84	22.06	38.97
11	Maharashtra	C	H	87.18	97.44	92.31
		S		85.37	71.95	85.37
		P		85.95	80.17	87.60
		C	T	30.36	33.93	32.14
		S		77.78	65.56	77.78
		P		51.59	48.02	52.48
12	Punjab	C	H	100.00	100.00	100.00
		S		98.40	92.80	99.20
		P		98.98	95.43	99.49
		C	T	32.88	32.88	32.88
		S		98.40	92.80	99.20
		P		56.69	54.65	56.98

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ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
13	Rajasthan	C	H	88.24	58.82	41.18
		S		99.01	61.39	88.12
		P		95.39	60.53	72.37
		C	T	38.14	25.42	17.80
		S		83.33	51.67	74.17
		P		60.92	38.66	46.22
14	Uttar Pradesh	C	H	93.33	76.67	93.33
		S		100.00	92.41	68.35
		P		97.12	85.61	79.14
		C	T	10.00	8.21	10.00
		S		100.00	92.41	68.35
		P		21.13	18.62	17.21
15	Uttarakhand	C	H	0.00	0.00	0.00
		S		65.22	41.30	41.30
		P		65.22	41.30	41.30
		C	T	0.00	0.00	0.00
		S		50.00	31.67	31.67
		P		25.00	15.83	15.83
16	West Bengal	C	H	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
Barley						
1	Haryana	C	H	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	78.57	78.57	78.57
		S		100.00	100.00	100.00
		P		86.36	86.36	86.36
2	Himachal Pradesh	C	H	0.00	0.00	0.00
		S		0.00	0.00	20.00
		P		0.00	0.00	20.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	14.29
		P		0.00	0.00	4.55
3	Punjab	C	H	0.00	0.00	0.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	0.00	0.00	0.00
		S		100.00	100.00	100.00
		P		25.00	25.00	25.00
4	Rajasthan	C	H	95.45	81.82	54.55
		S		98.44	39.06	81.25
		P		97.67	50.00	74.42
		C	T	31.82	27.27	18.18
		S		82.89	32.89	68.42
		P		59.15	30.28	45.07
Gram						
1	Andhra Pradesh	C	H	10.00	96.67	100.00
		S		0.00	100.00	98.28
		P		5.08	98.31	99.15
		C	T	10.00	96.67	100.00
		S		0.00	100.00	98.28
		P		5.08	98.31	99.15

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
2	Bihar	C	H	100.00	100.00	100.00
		S		8.33	0.00	58.33
		P		15.38	7.69	61.54
		C	T	6.67	6.67	6.67
		S		7.14	0.00	50.00
		P		6.90	3.45	27.59
3	Chhhattisgarh	C	H	100.00	100.00	100.00
		S		0.00	0.00	0.00
		P		100.00	100.00	100.00
		C	T	5.00	5.00	5.00
		S		0.00	0.00	0.00
		P		2.78	2.78	2.78
4	Gujarat	C	H	46.67	73.33	60.00
		S		100.00	100.00	100.00
		P		42.94	76.47	64.71
		C	T	21.21	33.33	27.27
		S		100.00	100.00	100.00
		P		25.71	37.14	31.43
5	Haryana	C	H	63.64	77.27	51.52
		S		75.00	91.67	58.33
		P		66.67	81.11	53.33
		C	T	60.00	72.86	48.57
		S		75.00	91.67	58.33
		P		63.83	77.66	51.06
6	Jharkhand	C	H	0.00	0.00	100.00
		S		37.50	37.50	37.50
		P		33.33	33.33	44.44
		C	T	0.00	0.00	10.00
		S		37.50	37.50	37.50
		P		16.67	16.67	22.22
7	Karnataka	C	H	21.21	33.33	63.64
		S		20.00	72.50	25.00
		P		20.55	54.79	42.47
		C	T	18.42	28.95	55.26
		S		20.00	72.50	25.00
		P		19.23	51.28	39.74
8	Madhya Pradesh	C	H	57.89	23.68	78.95
		S		43.59	25.64	57.69
		P		48.28	25.00	64.66
		C	T	15.71	6.43	21.43
		S		43.59	25.64	57.69
		P		25.69	13.30	34.40
9	Maharashtra	C	H	45.28	88.68	88.68
		S		58.06	70.97	67.74
		P		52.17	79.13	77.39
		C	T	29.27	57.32	57.32
		S		58.06	70.97	67.74
		P		41.67	63.19	61.81
10	Punjab	C	H	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00

ANNEX VII (Contd.....)

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
11	Rajasthan	C	H	24.32	32.43	51.35
		S		46.81	22.34	47.87
		P		40.46	25.19	48.85
		C	T	8.04	10.71	16.96
		S		40.00	19.09	40.91
		P		23.87	14.86	28.83
12	Uttar Pradesh	C	H	0.00	10.00	5.00
		S		0.00	100.00	100.00
		P		0.00	25.00	20.83
		C	T	0.00	4.35	2.17
		S		0.00	100.00	100.00
		P		0.00	12.00	10.00
			Rape & Mustard			
1	Assam	C	H	0.00	0.00	50.00
		S		5.88	0.00	76.47
		P		2.38	0.00	60.71
		C	T	0.00	0.00	35.71
		S		4.35	0.00	56.52
		P		1.72	0.00	43.97
2	Bihar	C	H	86.96	30.43	86.96
		S		100.00	36.36	100.00
		P		94.64	33.93	94.64
		C	T	58.82	20.59	58.82
		S		100.00	36.36	100.00
		P		79.10	28.36	79.10
3	Chhattisgarh	C	H	0.00	0.00	14.29
		S		0.00	0.00	0.00
		P		0.00	0.00	7.69
		C	T	0.00	0.00	6.67
		S		0.00	0.00	0.00
		P		0.00	0.00	4.55
4	Gujarat	C	H	92.00	100.00	92.00
		S		92.00	60.00	84.00
		P		92.00	80.00	88.00
		C	T	56.10	60.98	56.10
		S		92.00	60.00	84.00
		P		69.70	60.61	66.67
5	Haryana	C	H	100.00	96.88	96.88
		S		97.62	100.00	90.48
		P		99.06	98.11	94.34
		C	T	91.43	88.57	88.57
		S		97.62	100.00	90.48
		P		93.75	92.86	89.29
6	Jharkhand	C	H	85.71	57.14	92.86
		S		28.57	7.14	14.29
		P		57.14	32.14	53.57
		C	T	60.00	40.00	65.00
		S		28.57	7.14	14.29
		P		47.06	26.47	44.12
7	Madhya Pradesh	C	H	60.87	43.48	60.87
		S		30.00	30.00	30.00
		P		51.52	39.39	51.52
		C	T	46.67	30.33	46.67
		S		30.00	30.00	30.00
		P		42.50	32.50	42.50

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
8	Punjab	C	H	86.67	86.67	100.00
		S		68.18	90.91	81.82
		P		75.68	89.19	89.19
		C	T	32.50	32.50	37.50
		S		68.18	90.91	81.82
		P		45.16	53.23	53.23
9	Rajasthan	C	H	93.10	82.76	96.55
		S		87.01	59.74	92.21
		P		88.68	66.04	93.40
		C	T	30.00	26.67	31.11
		S		83.75	57.50	88.75
		P		55.29	41.18	58.24
10	Uttar Pradesh	C	H	86.44	89.83	93.22
		S		73.33	86.67	86.67
		P		83.78	89.19	91.89
		C	T	58.62	60.92	63.22
		S		73.33	86.67	86.67
		P		60.78	64.71	66.67
11	West Bengal	C	H	81.82	84.55	100.00
		S		0.00	0.00	0.00
		P		81.82	84.55	100.00
		C	T	81.82	84.55	100.00
		S		0.00	0.00	0.00
		P		81.82	84.55	100.00

ANNEX - VIII

INCIDENCE OF ERRORS IN CONDUCTING CROP CUTTING EXPERIMENTS DURING 2019-20

Sl. No.	State	Season	AGENCY	% of Expts. where no error noticed	Percentage of experiments where errors noticed							
					e_1	e_2	e_3	e_4	e_5	e_6	e_7	e_8
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Andhra	Kharif	C	72	0	0	6	6	0	8	1	18
	Pradesh		S	42	0	0	0	2	1	3	0	55
			P	57	0	0	3	4	1	6	1	36
		Rabi	C	83	1	1	2	3	0	9	0	7
			S	54	0	0	0	1	1	6	0	42
			P	69	0	1	1	2	0	7	0	24
2	Assam	Early Kharif	C	84	0	0	0	0	0	6	0	11
			S	69	0	0	0	0	0	0	0	31
			P	76	0	0	0	0	0	3	0	22
		Late Kharif	C	97	0	0	0	2	0	2	0	0
			S	64	0	0	0	0	0	0	0	38
			P	82	0	0	0	1	0	1	0	17
		Rabi	C	75	0	0	2	0	0	5	0	20
			S	100	0	0	0	0	0	0	0	0
			P	85	0	0	1	0	0	3	0	12
		Summer	C	100	0	0	0	0	0	0	0	0
			S	100	0	0	0	0	0	0	0	0
			P	100	0	0	0	0	0	0	0	0
3	Bihar	Autumn	C	73	0	0	1	3	0	15	0	11
		(Bhadai)	S	13	0	0	0	0	0	3	0	85
			P	43	0	0	1	1	0	9	0	47
		Winter	C	77	0	0	1	1	0	19	0	7
		(Agahani)	S	31	0	0	0	0	1	3	1	68
			P	54	0	0	0	1	1	11	0	37
		Rabi	C	79	0	0	14	0	0	7	0	7
			S	4	0	0	0	0	0	5	2	96
			P	15	0	0	2	0	0	6	2	83
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	94	0	0	0	0	0	0	6	6
			P	94	0	0	0	0	0	0	6	6
4	Chhattisgarh	Kharif	C	86	2	1	1	5	2	5	0	5
			S	99	0	0	1	0	0	0	0	0
			P	93	1	1	1	3	1	2	0	2
		Rabi	C	69	0	0	4	23	4	0	0	23
			S	80	0	0	0	0	0	0	0	20
			P	74	0	0	2	13	2	0	0	22
5	Gujarat	Kharif	C	72	0	0	0	0	0	8	0	20
			S	51	0	0	1	1	0	4	1	46
			P	64	0	0	1	1	0	7	0	30
		Rabi	C	83	0	0	2	1	0	2	0	12
			S	75	0	0	0	0	0	0	0	25
			P	79	0	0	1	1	0	1	0	18
6	Haryana	Kharif	C	82	0	0	3	3	0	12	1	4
			S	82	0	0	0	0	0	3	0	17
			P	82	0	0	2	2	0	9	0	8
		Rabi	C	93	0	0	1	0	0	7	0	0
			S	85	0	0	1	0	1	7	0	6
			P	90	0	0	1	0	0	7	0	2
7	Himachal	Kharif	C	70	0	1	8	17	2	7	0	15
	Pradesh		S	80	0	0	8	7	6	13	0	9
			P	74	0	0	8	12	3	10	0	12
		Rabi	C	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	66	0	0	0	0	19	28	0	0
			P	66	0	0	0	0	19	28	0	0

ANNEX VIII (Contd.....)

S. No.	State	Season	AGENCY	% of Expts. where no error noticed	Percentage of experiments where errors noticed							
					e_1	e_2	e_3	e_4	e_5	e_6	e_7	e_8
1	2	3	4	5	6	7	8	9	10	11	12	13
8	Jammu &	Kharif	C	79	1	1	9	13	0	7	0	1
	Kashmir		S	26	0	0	15	6	3	2	4	70
			P	52	1	1	13	9	2	5	2	37
		Rabi	C	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	0	0	0	0	50	0	0	100	100
			P^	0	0	0	0	50	0	0	100	100
9	Jharkhand	Early Kharif	C	58	0	0	0	0	0	0	0	43
		(Bhadai)	S	100	0	0	0	0	0	0	0	0
			P	76	0	0	0	0	0	0	0	24
		Late Kharif	C	65	0	0	0	1	0	3	0	33
		(Agahani)	S	96	0	0	0	0	4	0	0	0
			P	78	0	0	0	1	1	1	0	19
		Rabi	C	56	0	0	6	6	0	0	0	39
			S	98	0	0	0	0	0	0	2	0
			P	90	0	0	1	1	0	0	2	7
10	Karnataka	Kharif	C	66	0	1	2	6	0	11	0	24
			S	59	0	0	1	2	0	10	0	38
			P	62	0	1	1	4	0	10	0	32
		Rabi	C	67	0	1	1	2	1	22	2	27
			S	62	0	0	0	2	1	14	1	24
			P	64	0	0	0	2	1	18	1	26
		Summer	C	51	0	0	0	2	0	2	0	47
			S	61	0	0	0	0	0	0	0	39
			P	56	0	0	0	1	0	1	0	43
11	Kerala	Autumn	C	81	0	0	3	1	0	2	0	14
	$		S	83	0	0	0	0	0	10	0	6
			P	82	0	0	2	1	0	6	0	10
		Winter	C	79	0	0	1	1	1	8	1	9
			S	99	0	0	0	0	0	0	0	1
			P	89	0	0	1	1	1	4	1	5
		Summer	C	74	0	0	0	0	0	2	0	24
			S	81	0	0	0	0	0	1	0	18
			P	77	0	0	0	0	0	2	0	21
12	Madhya	Kharif	C	88	1	1	1	1	1	6	0	4
	Pradesh		S	80	0	0	0	0	1	1	0	19
			P	85	0	0	0	1	1	4	0	10
		Rabi	C	91	1	0	1	3	0	1	1	5
			S	78	0	0	0	0	0	1	0	21
			P	82	0	0	0	1	0	1	0	17
13	Maharshtra	Kharif	C	55	1	2	11	27	1	15	3	22
			S	27	0	0	1	1	1	2	0	72
			P	43	1	2	7	16	1	9	1	44
		Rabi	C	59	2	1	13	32	0	9	1	15
			S	31	0	0	0	0	0	2	0	68
			P	42	1	0	5	13	0	5	0	47
14	Odisha	Autumn	C	87	0	0	2	1	0	1	0	11
			S	65	0	0	0	2	0	9	10	23
			P	76	0	0	1	1	0	5	5	17
		Winter	C	85	0	0	1	0	0	1	0	14
			S	83	0	0	0	0	1	1	4	12
			P	84	0	0	0	0	0	1	2	13
		Summer	C	100	0	0	0	0	0	0	0	0
			S	59	0	0	0	0	0	0	1	41
			P	62	0	0	0	0	0	0	1	38

ANNEX VIII (Contd.....)

S. No.	State	Season	AGENCY	% of Expts. where no error noticed	Percentage of experiments where errors noticed							
					e_1	e_2	e_3	e_4	e_5	e_6	e_7	e_8
1	2	3	4	5	6	7	8	9	10	11	12	13
15	Punjab	Kharif	C	67	0	0	4	4	1	21	0	15
			S	89	0	0	0	2	0	7	0	1
			P	76	0	0	2	3	1	16	0	9
		Rabi	C	67	0	0	1	6	0	1	0	26
			S	92	0	0	0	2	0	7	0	1
			P	83	0	0	0	3	0	5	0	10
16	Rajasthan	Kharif	C	58	2	2	5	8	1	41	0	9
			S	57	0	0	0	0	0	7	0	41
			P	58	1	1	3	4	1	25	0	23
		Rabi	C	42	1	5	4	2	0	24	0	37
			S	51	0	1	0	0	0	3	0	46
			P	49	0	2	1	1	0	9	0	43
17	Tamil Nadu #	Kharif	C	79	4	3	6	3	0	12	1	4
			S	80	0	0	4	3	7	7	1	3
			P	79	2	2	5	3	3	10	1	4
		Rabi	C	78	2	1	4	5	2	16	3	3
			S	92	0	0	0	2	0	5	2	1
			P	85	1	1	2	3	1	10	2	2
18	Telangana	Kharif	C	79	0	0	1	1	0	6	1	13
			S	54	0	0	8	3	2	10	1	34
			P	66	0	0	4	2	1	8	1	24
		Rabi	C	89	0	0	0	1	0	3	0	7
			S	70	0	0	9	8	0	11	0	17
			P	80	0	0	4	4	0	7	0	12
19	Uttar	Kharif	C	56	1	0	14	14	2	27	0	15
	Pradesh		S	23	6	0	1	1	0	7	0	77
			P	51	1	0	12	12	1	24	0	24
		Rabi	C	47	4	4	6	8	22	14	0	11
			S	100	0	0	0	0	0	0	0	0
			P	66	2	2	4	5	14	9	0	7
		Zaid Rabi	C	64	0	5	11	18	0	29	0	14
			S	Insufficient Data								
			P	64	0	4	10	15	0	27	0	14
20	Uttarakhand	Kharif	C	45	1	1	2	1	1	52	0	7
			S	83	0	1	1	2	0	3	1	10
			P	62	0	1	1	1	0	31	0	8
		Rabi	C	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	87	0	0	4	4	0	0	0	9
			P	87	0	0	4	4	0	0	0	9
21	West Bengal	Aus	C	80	0	0	0	1	3	2	1	15
			S	100	0	0	0	0	0	0	0	0
			P	80	0	0	0	1	3	2	1	14
		Aman	C	81	0	0	2	1	2	0	0	16
			S	93	0	0	0	0	0	0	0	7
			P	82	0	0	2	1	2	0	0	15
		Rabi	C	55	0	0	1	1	3	9	0	35
			S	NC	NC	NC	NC	NC	NC	NC	NC	NC
			P	55	0	0	1	1	3	9	0	35
		Summer	C	100	0	0	0	0	0	0	0	0
			S	100	0	0	0	0	0	0	0	0
			P	100	0	0	0	0	0	0	0	0

ANNEX VIII (Contd.....)

S. No.	State	Season	AGENCY	% of Expts. where no error noticed	Percentage of experiments where errors noticed							
					e_1	e_2	e_3	e_4	e_5	e_6	e_7	e_8
1	2	3	4	5	6	7	8	9	10	11	12	13
22	Puducherry	Kharif	C	70	0	0	0	0	0	0	0	30
			S	100	0	0	0	0	0	0	0	0
			P	85	0	0	0	0	0	0	0	0
		Rabi-I	C	50	10	10	10	30	0	20	0	20
			S	100	0	0	0	0	0	0	0	0
			P	75	5	5	5	15	0	10	0	10
		Rabi-II	C	100	0	0	0	0	0	0	0	0
			S	100	0	0	0	0	0	0	0	0
			P	100	0	0	0	0	0	0	0	0
For States covered		Early Kharif	C	49	0	1	1	1	1	3	4	24
			S	33	0	0	1	0	4	7	11	39
			P	42	0	0	1	0	2	5	7	22
		Late Kharif	C	70	1	1	6	8	1	15	1	14
			S	60	0	0	2	1	1	5	1	36
			P	66	1	0	4	5	1	11	1	23
		Rabi	C	72	1	1	3	5	3	10	1	14
			S	66	0	0	1	1	0	5	1	29
			P	69	0	1	2	3	1	7	1	22
		Summer	C	73	0	1	2	4	0	7	0	22
			S	74	0	0	0	0	0	1	0	25
			P	73	0	0	1	2	0	3	0	24
		All Seasons	C	69	1	1	5	7	1	13	1	15
			S	61	0	0	1	1	1	5	1	33
			P	65	0	0	3	4	1	9	1	22

Note:

1. e_1= Error in selection of survey/sub-survey nos.
2. e_2= Error in selection of field within survey/sub-survey nos.
3. e_3= Error in measurement of field
4. e_4= Error in selection of random nos.,location and marking of plots
5. e_5= Error in weighment of produce
6. e_6= Error in reporting ancillary information
7. e_7= Inadeqate arrangements for storing of produce for driage and incorrect reporting of constituents in crop mixture.
8. e_8 = Others.
9. $ In Kerala, whole year data has been included in Summer season
10. NR - Not Reported.
11. # - In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and consequent, categorization of crops, the data have been presented seasonwise instead of whole year
12. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

ANNEX - IX

SUPPLY AND USE OF EQUIPMENT FOR CROP CUTTING EXPERIMENTS DURING 2019-20

Sl. No.	State	Season	AGENCY	Percentage of experiments for which							
				Concerned Primary workers were not supplied with				Primary workers did not use the supplied items			
				Tape	Pegs	Balance	Weight	Tape	Pegs	Balance	Weight
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra	Kharif	C	0	96	3	0	0	0	2	2
	Pradesh		S	2	83	0	1	15	7	15	14
			P	1	90	2	1	7	4	8	8
		Rabi	C	2	95	2	0	0	0	0	0
			S	0	90	0	0	11	0	12	12
			P	1	92	1	0	5	0	6	6
2	Assam	Early Kharif	C	18	95	23	15	6	0	13	15
			S	0	86	5	3	3	8	3	8
			P	8	90	13	8	4	4	7	11
		Late Kharif	C	17	95	25	25	11	1	21	15
			S	0	71	0	0	17	9	11	13
			P	9	84	14	14	14	4	17	14
		Rabi	C	11	85	11	4	2	0	12	5
			S	0	86	0	1	0	0	0	0
			P	6	85	6	3	1	0	7	3
		Summer	C	33	94	33	33	0	0	0	0
			S	0	93	0	0	13	7	13	20
			P	13	94	13	13	8	4	8	13
3	Bihar	Autumn	C	100	98	100	71	0	1	0	0
		(Bhadai)	S	56	67	56	56	35	9	35	31
			P	78	82	78	64	17	5	17	15
		Winter	C	95	99	100	77	1	0	0	0
		(Aghani)	S	45	60	50	53	47	18	43	39
			P	70	79	75	65	24	9	21	19
		Rabi	C	100	100	100	83	0	0	0	0
			S	39	48	39	39	46	22	46	44
			P	48	56	48	45	39	19	39	38
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC
			S	44	44	44	44	0	0	0	0
			P	44	44	44	44	0	0	0	0
4	Chhattisgarh	Kharif	C	19	94	63	42	16	2	14	9
			S	0	55	54	54	0	0	0	0
			P	10	75	59	48	8	1	7	4
		Rabi	C	0	92	69	15	23	0	0	0
			S	0	50	50	0	0	0	0	0
			P	0	74	61	9	13	0	0	0
5	Gujarat	Kharif	C	13	89	18	7	19	6	21	16
			S	1	46	2	1	28	7	26	15
			P	9	73	12	5	22	6	23	16
		Rabi	C	18	93	22	2	17	5	24	10
			S	0	61	3	3	17	7	14	9
			P	10	78	13	3	17	6	20	9
6	Haryana	Kharif	C	13	97	26	10	3	0	2	1
			S	57	72	57	14	27	27	27	20
			P	26	90	35	11	10	8	9	7
		Rabi	C	12	92	21	13	6	0	1	2
			S	31	70	31	21	26	26	26	14
			P	19	84	24	16	13	9	10	6
7	Himachal	Kharif	C	25	95	52	32	17	2	32	27
	Pradesh		S	5	57	38	50	40	33	55	41
			P	16	78	46	40	27	16	42	33
		Rabi	C	NC	NC	NC	NC	NC	NC	NC	NC
			S	0	13	16	63	91	59	84	38
			P	0	13	16	63	91	59	84	38
8	Jammu &	Kharif	C	84	100	100	89	15	0	0	0
	Kashmir		S	73	99	80	82	23	0	20	18
			P	79	100	90	85	19	0	11	10
		Rabi	C	NC	NC	NC	NC	NC	NC	NC	NC
			S	100	100	100	100	0	0	0	0
			P*	100	100	100	100	0	0	0	0

ANNEX IX (Contd.....)

S. No.	State	Season	AGENCY	Percentage of experiments for which							
				Concerned Primary workers were not supplied with				Primary workers did not use the supplied items			
				Tape	Pegs	Balance	Weight	Tape	Pegs	Balance	Weight
1	2	3	4	5	6	7	8	9	10	11	12
9	Jharkhand	Early Kharif	C	95	100	95	85	0	0	0	0
			S	20	33	33	33	27	13	13	13
			P	63	71	69	63	11	6	6	6
		Late Kharif	C	95	100	100	85	0	0	0	0
			S	15	33	33	39	44	11	11	20
			P	63	73	73	66	18	4	4	8
		Rabi	C	100	100	94	94	0	0	0	6
			S	27	73	73	73	46	0	0	0
			P	40	78	77	77	38	0	0	1
10	Karnataka	Kharif	C	22	90	27	15	15	4	17	4
			S	26	58	27	16	26	12	25	23
			P	24	71	27	16	22	9	22	15
		Rabi	C	24	71	24	3	36	19	36	5
			S	27	53	26	26	36	22	30	30
			P	26	61	26	16	36	21	33	19
		Summer	C	7	67	13	4	27	16	27	4
			S	33	50	25	27	50	28	53	44
			P	21	58	19	16	39	23	41	25
11	Kerala	Autumn	C	0	29	2	5	1	14	8	0
	$ & *		S	0	9	0	0	4	5	4	0
			P	0	19	1	3	3	10	6	0
		Winter	C	1	20	3	0	3	3	4	0
			S	0	3	0	0	0	3	0	2
			P	1	12	2	0	2	3	2	1
		Summer	C	1	10	1	2	1	2	4	2
			S	0	0	0	0	0	0	0	0
			P	1	5	1	1	0	1	2	1
12	Madhya	Kharif	C	39	96	80	53	15	1	18	12
	Pradesh		S	0	13	12	13	17	14	11	8
			P	23	61	51	36	16	6	15	11
		Rabi	C	21	92	72	56	29	7	27	24
			S	0	5	1	5	15	43	30	25
			P	6	30	22	20	19	33	29	25
13	Maharastra	Kharif	C	82	98	89	65	8	1	6	3
			S	49	49	50	38	44	29	43	39
			P	68	77	72	53	23	13	22	18
		Rabi	C	95	100	94	13	2	0	2	0
			S	57	55	58	49	37	30	37	36
			P	72	73	73	35	23	18	23	22
14	Odisha	Autumn	C	0	6	0	0	0	2	3	1
			S	0	0	0	0	0	0	0	0
			P	0	3	0	0	0	1	2	0
		Winter	C	0	3	0	0	0	1	1	0
			S	0	0	0	0	2	2	2	2
			P	0	2	0	0	1	2	2	1
		Summer	C	0	0	0	0	0	53	0	0
			S	0	0	0	0	0	1	0	0
			P	0	0	0	0	0	5	0	0
15	Punjab	Kharif	C	63	97	93	49	4	2	2	2
			S	36	81	56	25	2	1	1	1
			P	52	91	78	39	3	2	2	2
		Rabi	C	64	100	95	51	2	0	2	0
			S	25	98	57	21	0	0	3	1
			P	39	99	71	31	1	0	2	0
16	Rajasthan	Kharif	C	82	97	95	67	5	1	3	3
			S	30	35	27	30	36	28	44	41
			P	58	69	64	50	19	22	22	20
		Rabi	C	100	100	100	58	0	0	0	4
			S	27	40	27	24	46	28	48	52
			P	48	57	48	34	32	20	34	38
17	Tamil	Kharif	C	3	25	27	0	2	12	3	0
	Nadu #		S	0	4	5	3	14	15	16	15
			P	2	16	17	1	7	13	9	7
		Rabi	C	3	15	12	1	1	9	1	0
			S	0	0	2	0	22	24	23	24
			P	2	7	7	0	12	17	12	12

ANNEX IX (Contd.....)

S. No.	State	Season	AGENCY	Percentage of experiments for which							
				Concerned Primary workers were not supplied with				Primary workers did not use the supplied items			
				Tape	Pegs	Balance	Weight	Tape	Pegs	Balance	Weight
1	2	3	4	5	6	7	8	9	10	11	12
18	Telangana	Kharif	C	3	97	10	4	1	1	1	1
			S	8	64	12	10	12	9	13	14
			P	5	80	11	7	6	5	7	7
		Rabi	C	1	99	14	14	15	1	12	12
			S	16	90	16	16	12	2	14	14
			P	7	95	15	14	14	1	13	13
19	Uttar	Kharif	C	34	95	72	52	14	2	14	10
	Pradesh		S	7	28	14	14	16	15	35	24
			P	30	86	63	47	14	4	17	12
		Rabi	C	22	99	92	68	27	1	7	6
			S	0	28	11	8	41	31	53	42
			P	14	73	63	47	32	12	24	19
		Summer	C	60	100	96	65	19	0	3	0
			S	0	0	0	0	0	0	0	0
			P	59	96	90	61	21	4	9	4
20	Uttarakhand	Kharif	C	9	36	18	16	10	10	13	7
			S	0	0	0	0	0	0	0	0
			P	5	20	10	9	6	6	7	4
		Rabi	C	NC	NC	NC	NC	NC	NC	NC	NC
			S	2	0	0	0	4	9	7	9
			P	2	0	0	0	4	9	7	9
21	West	Autumn	C	2	99	8	0	0	0	2	0
	Bengal		S	0	50	0	0	0	0	0	0
	@		P	2	98	7	0	0	0	2	0
		Winter	C	1	93	13	0	0	0	0	0
			S	0	100	0	0	0	0	0	0
			P	1	94	11	0	0	0	0	0
		Rabi	C	0	94	4	0	0	0	0	0
			S	NC	NC	NC	NC	NC	NC	NC	NC
			P	0	325	4	0	0	0	0	0
		Summer	C	0	75	38	0	0	0	0	0
			S	0	25	0	0	0	0	0	0
			P	0	58	25	0	0	0	0	0
22	Puducherry	Kharif	C	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	0	0	0
		Rabi-I	C	0	10	10	0	0	0	0	0
			S	0	0	0	0	0	0	0	0
			P	0	5	5	0	0	0	0	0
		Rabi-II	C	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	0	0	0
For States Covered		Early Kharif	C	19	55	21	15	1	3	4	2
			S	9	26	11	11	8	4	7	6
			P	15	43	17	13	4	3	5	4
		Late Kharif	C	34	85	52	34	9	2	9	6
			S	17	45	23	18	21	13	22	19
			P	27	69	40	28	14	7	14	11
		Rabi	C	27	84	42	22	9	3	7	4
			S	19	47	24	20	26	21	28	25
			P	23	69	32	21	19	13	18	16
		Summer	C	14	38	22	15	7	5	6	2
			S	6	14	5	5	7	5	8	7
			P	10	25	13	9	7	5	7	5
All Seasons			C	31	81	47	30	8	3	8	5
			S	17	42	21	18	21	14	22	19
			P	24	65	35	24	14	8	14	12

Note:

1. @= ISI Equipments in place of Tape
2. $ In Kerala, whole year data has been included in Summer season
3. #= In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and consequent, categorization of crops, the data have been presented seasonwise instead of whole year.
4. * Since data from one agency is available, the same data has been taken against pooled data for comparison purpose .
5. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

ANNEX - X

DELEGATION OF WORK AND CONDUCT OF CROP CUTTING EXPERIMENTS BY UNTRAINED WORKERS DURING 2019-20

Sl. No.	State	AGENCY	Percentage of Experiments																					
			Early Kharif						Late Kharif						Rabi						Summer			
			DS	UW	DJ	UW	NCP	UW	DS	UW	DJ	UW	NCP	UW	DS	UW	DJ	UW	NCP	UW	DS	UW	DJ	UW	NCP	UW
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Andhra	C							1	0	3	0	95	2	2	0	13	13	120	16						
	Pradesh	S							0	0	0	0	100	2	1	0	0	0	99	6						
		P							1	0	2	0	98	2	1	0	7	7	110	11						
2	Assam	C	1	0	0	0	99	0	1	0	1	0	98	0	0	0	0	0	100	2	0	0	0	0	100	0
		S	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0
		P	1	0	0	0	99	0	0	0	0	0	99	0	0	0	0	0	100	1	0	0	0	0	100	0
3	Bihar	C	0	0	5	0	95	24	0	0	2	2	98	24	0	0	7	7	93	0	NC	NC	NC	NC	NC	NC
		S	0	0	0	0	100	33	1	1	0	0	99	32	0	0	0	0	100	0	0	0	0	0	100	44
		P	0	0	3	0	97	28	0	0	1	1	99	28	0	0	1	1	99	0	0	0	0	0	100	44
4	Chhattis-	C							2	0	2	0	96	5	8	0	0	0	92	0						
	garh	S							0	0	0	0	100	0	0	0	0	0	100	0						
		P							1	0	1	0	98	2	4	0	0	0	96	0						
5	Gujarat	C							0	0	1	0	99	0	0	0	0	0	100	2						
		S							2	0	0	0	98	2	6	0	3	0	91	0						
		P							1	0	1	0	99	1	3	0	1	0	96	1						
6	Haryana	C							2	0	2	1	98	0	0	0	2	0	98	0						
		S							0	0	3	0	97	0	3	0	2	0	94	0						
		P							1	0	2	0	97	0	1	0	2	0	97	0						
7	Himachal	C							0	0	2	2	106	3	NC	NC	NC	NC	NC	NC						
	Pradesh	S							0	0	0	0	121	0	0	0	0	0	100	0						
		P							0	0	1	1	113	2	0	0	0	0	100	0						
8	Jammu	C							0	0	4	2	96	3	NC	NC	NC	NC	NC	NC						
	&	S							0	0	2	0	98	0	0	0	0	0	100	0						
	Kashmir	P							0	0	3	1	97	2	0	0	0	0	100	0						
9	Jharkhand	C	5	5	0	0	95	40	8	5	3	3	90	63	0	0	0	0	100	33						
		S	0	0	0	0	100	0	0	0	4	4	96	0	0	0	0	0	100	0						
		P	3	3	0	0	97	23	4	3	3	3	93	37	0	0	0	0	100	6						
10	Karnataka	C							1	0	0	0	99	3	1	0	1	1	98	3	5	0	0	0	95	4
		S							1	0	0	0	99	0	1	0	0	0	99	0	0	0	0	0	100	0
		P							1	0	0	0	99	1	1	0	0	0	98	1	3	0	0	0	97	2
11	Kerala	C	4	0	0	0	98	2	3	0	0	0	97	1							2	0	0	0	98	0
	@	S	4	0	0	0	97	0	0	0	0	0	100	0							0	0	0	0	100	0
		P	4	0	0	0	97	1	2	0	0	0	98	1							1	0	0	0	99	0
12	Madhya	C							0	0	1	0	99	1	2	0	2	0	97	8						
	Pradesh	S							0	0	0	0	100	3	0	0	0	0	100	19						
		P							0	0	0	0	99	2	0	0	0	0	99	16						
13	Maha-	C							4	0	3	0	93	3	0	0	4	0	96	2						
	rashtra	S							6	0	3	0	91	0	3	0	2	0	96	0						
		P							5	0	3	0	92	2	2	0	3	0	96	1						
14	Odisha	C	0	0	0	0	100	0	1	0	0	0	99	0							0	0	0	0	100	0
		S	2	0	0	0	98	1	1	0	0	0	99	0							0	0	0	0	100	0
		P	1	0	0	0	99	1	1	0	0	0	99	0							0	0	0	0	100	0

ANNEX-X (Contd.....)

Sl. No.	State	AGENCY	Percentage of Experiments																					
			Early Kharif						Late Kharif						Rabi						Summer			
			DS	UW	DJ	UW	NCP	UW	DS	UW	DJ	UW	NCP	UW	DS	UW	DJ	UW	NCP	UW	DS	UW	DJ	UW	NCP	UW
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
15	Punjab	C							1	0	1	0	98	0	0	0	0	0	100	0						
		S							0	0	0	0	100	0	0	0	0	0	100	0						
		P							1	0	1	0	99	0	0	0	0	0	100	0						
16	Rajasthan	C							2	0	1	0	98	1	0	0	0	0	100	0						
		S							2	0	1	0	98	0	1	0	0	0	99	0						
		P							2	0	1	0	98	0	1	0	0	0	99	0						
17	Tamil	C							3	0	4	0	94	1	0	0	4	0	96	1						
	Nadu	S							0	0	0	0	100	0	0	0	0	0	100	0						
	#	P							2	0	2	0	96	1	0	0	2	0	98	1						
18	Telangana	C							2	0	0	0	98	9	0	0	0	0	100	4						
		S							1	0	0	0	99	1	2	0	0	0	98	0						
		P							1	0	0	0	98	5	1	0	0	0	99	2						
19	Uttar	C							1	0	11	10	89	50	0	0	0	0	100	68	0	0	0	26	68	25
	Pradesh	S							0	0	5	0	95	0	10	2	0	0	90	33	0	0	0	0	0	0
		P							1	0	10	8	89	42	4	1	0	0	96	55	0	0	0	23	72	30
20	Uttara-	C							0	0	2	0	98	0	NC	NC	NC	NC	NC	NC						
	khand	S							4	0	0	0	96	1	0	0	0	0	100	0						
		P							2	0	1	0	97	0	0	0	0	0	100	0						
21	West	C	0	0	0	0	100	5	1	0	0	0	99	4	0	0	0	0	100	11	0	0	0	0	100	0
	Bengal	S	0	0	0	0	100	0	0	0	0	0	100	29	NC	NC	NC	NC	NC	NC	0	0	0	0	100	50
		P	0	0	0	0	100	5	1	0	0	0	99	6	0	0	0	0	100	11	0	0	0	0	100	17
22	Pudu-	C							0	0	0	0	100	0	0	0	0	0	100	0	20	0	0	0	80	0
	cherry	S							0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0
		P							0	0	0	0	100	0	0	0	0	0	100	0	10	0	0	0	90	0
For States		C	1	0	1	0	99	6	1	0	3	2	96	12	1	0	3	1	100	10	2	0	6	5	92	5
Covered		S	2	0	0	0	99	5	1	0	1	0	99	2	1	0	0	0	98	4	0	0	0	0	100	4
		P	1	0	0	0	99	6	1	0	2	1	97	8	1	0	1	1	99	7	1	0	3	2	96	4

Note:

1- @= In Kerala Whole year data has been included in Summer season
2- # = In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and consc categorization of crops, the data have been presented seasonwise instead of whole year.
3- NA = Data Not available
4 DS=For which field work was delegated to equivalent/senior person
5 DJ=For which field work was delegated to juniors
6 NCP= For which field work was conducted by designated person(no change in primary worker)
7 UW=For which field work was conducted by untrained workers
8. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

ANNEX - XI

SUBSTITUTION OF SAMPLING UNITS OBSERVED DURING SAMPLE CHECK ON CROP CUTTING EXPERIMENTS UNDER ICS DURING 2019-20

Sl. No.	State	Season	Percentage of experiments for which substitution was done in respect of							
			Selected villages due to reason *				Selected survey nos.due to reason $			
Reason Code			1	2	3	9	1	2	3	9
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	Kharif	22	0	0	0	1	0	0	0
		Rabi	21	0	0	0	0	0	0	0
2	Assam	Early Kharif	10	0	0	0	0	0	0	4
		Late Kharif	5	5	0	0	0	0	0	0
		Rabi	14	0	0	0	0	0	0	2
		Summer	13	0	0	8	0	0	0	4
3	Bihar	Bhadai	9	3	1	0	3	0	0	13
		Aghani	1	1	0	0	2	0	0	12
		Rabi	2	0	0	0	0	2	0	4
		Summer	0	0	0	0	0	0	0	0
4	Chhattisgarh	Kharif	11	0	0	0	3	0	0	1
		Rabi	35	0	0	0	4	0	0	0
5	Gujarat	Kharif	5	1	0	0	2	0	0	2
		Rabi	5	0	0	3	1	0	0	6
6	Haryana	Kharif	11	1	0	1	2	0	0	3
		Rabi	13	0	0	0	2	0	0	2
7	Himachal Pradesh	Kharif	12	0	0	1	0	0	0	7
		Rabi	22	0	0	0	0	0	0	0
8	Jammu & Kashmir	Kharif	0	0	0	34	4	1	2	10
		Rabi	0	0	0	0	0	0	0	100
9	Jharkhand	Early Kharif	14	0	0	0	0	3	1	31
		Late Kharif	4	0	1	0	0	1	0	31
		Rabi	2	0	0	8	2	0	0	27
10	Karnataka	Kharif	29	2	0	5	0	1	0	1
		Rabi	34	1	0	2	0	0	0	1
		Summer	40	1	0	0	1	3	0	2
11	Kerala	Autumn	29	0	0	1	1	0	0	0
		Winter	21	0	0	0	1	0	0	0
		Summer@	2	0	0	2	0	0	0	0
12	Madhya Pradesh	Kharif	13	0	0	1	0	0	0	2
		Rabi	8	0	0	1	1	0	0	0
13	Maharashtra	Kharif	4	0	0	0	0	0	0	0
		Rabi	2	0	0	0	0	0	0	1
14	Odisha	Autumn	6	0	0	0	0	0	0	0
		Winter	11	0	0	0	0	0	0	1
		Summer	17	0	0	0	1	0	0	0
15	Punjab	Kharif	0	2	0	0	0	0	0	0
		Rabi	0	2	0	0	0	0	0	0
16	Rajasthan	Kharif	5	0	0	0	0	0	0	0
		Rabi	5	0	0	0	0	0	0	0
17	Tamil Nadu #	Kharif	31	0	0	0	0	0	0	0
		Rabi	20	0	0	0	0	0	0	0

ANNEX- XI (Contd.....)

Sl. No.	State	Season	Percentage of experiments for which substitution was done in respect of							
			Selected villages due to reason *				Selected survey nos.due to reason $			
Reason Code			1	2	3	9	1	2	3	9
1	2	3	4	5	6	7	8	9	10	11
18	Telangana	Kharif	3	0	0	0	0	0	0	0
		Rabi	3	0	0	0	0	0	0	0
19	Uttar Pradesh	Kharif	4	1	0	0	1	1	0	0
		Rabi	1	1	0	0	0	1	0	0
		Summer	4	2	0	4	1	0	0	0
20	Uttarakhand	Kharif	12	1	0	0	1	2	0	0
		Rabi	4	4	0	0	0	0	0	4
21	West Bengal	Aus	0	0	0	0	1	0	0	0
		Aman	0	0	0	0	1	0	2	0
		Rabi	0	2	0	0	0	0	0	0
		Summer	0	0	0	0	0	0	0	0
22	Puducherry	Kharif	50	10	0	0	0	5	0	0
		Rabi-I	10	0	0	0	0	0	0	0
		Rabi-II	20	0	0	0	0	0	0	0
For States covered		Early Kharif	10	1	0	0	0	0	0	4
		Late Kharif	11	1	0	1	1	0	0	2
		Rabi	11	0	0	1	1	0	0	2
		Summer	10	0	0	2	0	0	0	1
		All Seasons	11	1	0	1	1	0	0	2

Note:

* 1.Crop not sown
2.Entire crop harvested in the village.
3. Records not available
9.Others

$ 1.Crop harvested prior to selection.
2.Crop harvested before the date fixed.
3.Field partially harvested affecting the location of experimental plot.
9.Others.

@ In Kerala, data for whole year crops has been included in Summer season

\# In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year categorization of crops, the data have been presented seasonwise instead of whole year.

COMPARISON OF ESTIMATES OF CROP AREAS BASED ON ICS, TRS & FINAL ESTIMATES : 2019-20

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
				RICE-KHARIF					
1	Andhra	C	8	1703					
	Pradesh	S	1783	1928					
		P^	1099	1842	1523	1526	0.9980	0.7200	1.2068
2	Assam	C	NR	36					
	(Autumn)	S		22					
	*$$	P^		31	206	400	0.5150	0.0000	0.0772
	Assam	C		429					
	(Winter)	S		242					
	*$$	P^		367	1720	2024	0.8498	0.0000	0.1812
3	Bihar	C	0	649					
	(Bhadai)	S	91	1042					
	$$	P	0	832	453	462	0.9805	0.0000	1.8009
	Bihar	C	0	5228					
	(Aghani)	S	630	4218					
	$$	P	312	4728		2364	0.0000	0.1319	2.0002
4	Chhattis-	C	3632	3691					
	garh	S	4847	4840					
	$$	P	4230	4257	4385	3666	1.1961	1.1540	1.1611
5	Gujarat	C	0	672					
		S	232	1088					
		P^	106	862	147	850	0.1730	0.1250	1.0150
6	Haryana	C	1834	1864					
		S	1537	1451					
		P	1700	1677	1442	1447	0.9965	1.1749	1.1593
7	Himachal	C	59	51					
	Pradesh	S	279	264					
	@	P^	167	155		73	0.0000	2.3034	2.1374
8	Jammu &	C	62	64					
	Kashmir	S	152	142					
	$$	P	119	114	287	281	1.0231	0.4236	0.4057
9	Jharkhand	C	NR	96					
	(Bhadai)	S	409	423					
	@	P^	175	236	65	75	0.8667	2.3383	3.1509
	(Aghani)	C	NR	1144					
	*$$	S	1542	1765					
		P^	635	1400	1038	1283	0.8090	0.4948	1.0910
10	Karnataka	C	1416	1408					
		S	2288	2350					
		P	1852	1879	971	916	1.0600	2.0220	2.0515
11	Kerala	C	2	2					
	(Autumn)	S	1	1					
	@	P	2	2		46	0.0000	0.0353	0.0353
	Kerala	C	3	3					
	(Winter)	S	3	3					
	@	P	3	3		106	0.0000	0.0296	0.0296
12	Madhya	C	2759	2828					
	Pradesh	S	2700	2688					
		P	2732	2764	2144	1982	1.0817	1.3784	1.3947
13	Mahar-	C	1031	1104					
	ashtra	S	1262	1259					
	$$	P	1136	1174	1478	1478	0.9999	0.7686	0.7946
14	Odisha	C	665	667					
	(Autumn)	S	818	818					
	@	P	741	743		551	0.0000	1.3454	1.3477
	Odisha	C	4113	4113					
	(Winter)	S	3156	3156					
	@	P	3632	3632		3097	0.0000	1.1729	1.1729
15	Punjab	C	4729	4727					
	@	S	3056	3066					
		P	4040	4043		2920	0.0000	1.3835	1.3846
16	Tamil Nadu	C	1430	1733					
	P-I	S	2188	1773					
		P	1807	1753	991	880	1.1261	2.0538	1.9920
	P-II	C	448	473					
		S	461	579					
		P	455	526	535	862	0.6206	0.5276	0.6097
17	Telangana	C	0	2495					
	$$	S	2248	2359					
		P	1371	2412	1539	1096	1.4042	1.2505	2.2009

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
18	Uttar	C	9732	9622					
	Pradesh	S	2550	2782					
	$$	P	7966	7940	5899	5711	1.0329	1.3948	1.3903
19	Uttar-	C	222	264					
	akhand	S	227	111					
	$$	P	225	187	230	230	1.0000	0.9762	0.8148
20	W.Bengal	C	33	82					
	(Autumn)	S	1	1					
	@	P	26	65		165	0.0000	0.1602	
	(Winter)	C	670	2621					
	@	S	251	261					
		P	581	2122		4054	0.0000	0.1434	0.5235
21	Puducherry	C	0	0					
	$$	S	4	5					
		P^	1	1	4	14	0.2915	0.0729	0.0729
For states covered			35113	45748	25057	38558	0.6499	0.9107	1.1865
				RICE (RABI/ SUMMER)					
1	Andhra	C	0	930					
	Pradesh	S	1064	1107					
	@	P	654	1039		774	0.0000	0.8446	1.3421
2	Assam	C	0	448					
	*	S	0	245					
	$$	P^	0	380	418	396	1.0568	0.0000	0.9607
3	Bihar	C	0	0					
	* $$	S	0	412					
		P	0	204	83	60	1.3742	0.0000	3.3776
4	Karnataka	C	0	0					
	$$	S	341	341					
		P	171	171	260	269	0.9665	0.6339	0.6345
5	Kerala	C	1	1					
	@	S	4	4					
		P	2	2		46	0.0000	0.0507	0.0510
6	Odisha	C	0	0					
	@	S	156	159					
		P^	78	80		293	0.0000	0.2657	0.2718
7	Tamil Nadu	C	135	184					
		S	376	420					
		P	193	221	733	165	4.4432	1.1724	1.3386
8	Telangana	C	0	255					
		S	577	591					
		P	352	460	1550	915	1.6940	0.3843	0.5025
9	West	C	0	0					
	Bengal	S	0	0					
	@	P	0	0		1272	0.0000	0.0000	0.0000
10	Puducherry	C	6	6					
	Rabi-I $	S	13	12					
	@	P	9	9			0.0000	0.0000	0.0000
	Rabi-II	C	1	1					
	$$	S	6	6					
		P	4	4	10	5	2.2124	0.7931	0.7931
For states covered			1462	2569	3054	4194	0.7282	0.3487	0.6125
				JOWAR(KHARIF)					
2	Karnataka	C	224	247					
		S	149	160					
		P	186	204	182	128	1.4263	1.4595	1.5950
3	Madhya	C	34	34					
	Pradesh	S	87	74					
	$$	P	58	52	161	108	1.4907	0.5413	0.4827
4	Maharashtra	C	224	253					
	$$	S	206	222					
		P	216	239	390	309	1.2622	0.6990	0.7725
5	Rajasthan	C	245	255					
		S	115	109					
		P	181	183	659	643	1.0251	0.2817	0.2853
6	Tamil Nadu	C	1601	438					
		S	118	170					
		P	862	304	390	232	1.6822	3.7190	1.3125

Annex-XII .....contd)

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III	A-IV			TRS/ Final	A-III/ Final	A-IV/ Final
			As per primary worker	As per supervisor					
1	2	3	4	5	6	7	8	9	10
7	Telangana	C	0	6					
		S	35	35					
		P	21	24	58	57	1.0175	0.3693	0.4124
8	Uttar	C	58	95					
	Pradesh	S	67	70					
	$$	P	60	89	168	168	1.0000	0.3587	0.5292
For states covered			1585	1094	2008	1644	1.2212	0.9641	0.6656
JOWAR(RABI)									
1	Karnataka	C	265	652					
	$$	S	899	794					
		P	582	723	646	699	0.9242	0.8328	1.0344
2	Maharashtra	C	157	1985					
	$$	S	1906	1990					
		P	953	1987	1982	1982	1.0002	0.4812	1.0028
3	Tamil Nadu	C	0	4					
		S	28	28					
		P	6	13	98	218	0.4492	0.0282	0.0612
4	Telangana	C	0	40					
		S	11	11					
		P	7	22	31	31	1.0000	0.2180	0.7242
For states covered			1548	2746	2757	2930	0.9410	0.5285	0.9373
BAJRA									
1	Andhra	C	0	47					
	Pradesh	S	110	115					
		P	67	89	22	25	0.8800	2.6957	3.5689
2	Gujarat	C	NR	289					
		S	0	245					
		P^	0	269	27	435	0.0620	0.0000	0.6178
3	Haryana	C	461	482					
$$		S	283	285					
		P	381	393	446	493	0.9050	0.7724	0.7979
4	Karnataka	C	278	319					
		S	202	187					
		P	240	253	299	322	0.9286	0.7460	0.7856
5	Maharashtra	C	271	301					
	$$	S	1078	1148					
		P	638	687	673	673	1.0003	0.9486	1.0206
6	Rajasthan	C	801	825					
		S	1189	1140					
		P	992	980	4143	4287	0.9664	0.2313	0.2285
7	Tamil Nadu	C	48	32					
	P-I	S	70	117					
		P	22	22	45	67	0.6668	0.3203	0.3313
8	Uttar	C	816	615					
	Pradesh	S	186	190					
	$$	P	661	511	917	917	1.0000	0.7208	0.5570
For states covered			3001	3204	6572	7219	0.9103	0.4156	0.4438
MAIZE									
2	Bihar	C	0	543					
	$$	S	42	413					
		P	97	482	228	209	1.0893	0.4613	2.3048
3	Chhattisgarh	C	272	277					
	$$	S	201	205					
		P	237	241	119	128	0.9284	1.8476	1.8835
4	Gujarat	C	NR	235					
	@	S	247	324					
		P^	195	276	49	301	0.1631	0.6489	0.9172
5	Haryana	C	3	3					
		S	3	3					
		P^	3	3	7	6	1.1667	0.5239	0.5239
6	Himachal	C	249	220					
	Pradesh	S	99	108					
	@	P^	176	165	0	287	0.0000	0.6109	0.5743
7	Jammu &	C	293	295					
	Kashmir	S	308	299					
	$$	P	303	297	302	269	1.1241	1.1261	1.1069
8	Jharkhand	C	NR	155					
	@	S	414	454					
		P^	178	283		249	0.0000	0.7129	1.1371

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
9	Karnataka	C	1227	1291					
		S	1262	1256					
		P	1245	1274	1365	1287	1.0606	0.9670	0.9897
10	Madhya	C	1333	1304					
	Pradesh	S	914	925					
	$$	P	1143	1132	1069	1383	0.7730	0.8264	0.8184
11	Odisha	C	78	78					
	@	S	50	50					
		P^	64	64		61	0.0000	1.0497	1.0497
12	Punjab	C	105	95					
	@	S	26	26					
		P	73	67		115	0.0000	0.6354	0.5830
13	Rajasthan	C	223	107					
		S	125	126					
		P	175	116	853	876	0.9742	0.1997	0.1328
14	Tamil Nadu	C	267	296					
	@	S	138	149					
		P	203	223		169	0.0000	1.2027	1.3200
14	Telangana	C	0	425					
		S	434	448					
		P	265	439	377	391	0.9642	0.6768	1.1224
15	Uttar	C	192	372					
	Pradesh	S	192	188					
	$$	P	192	327	665	665	1.0000	0.2889	0.4913
For states covered			4546	5389	5034	6395	0.0000	0.7109	0.8427
					RAGI				
1	Karnataka	C	499	510					
		S	1329	1395					
		P	914	952	614	641	0.9579	1.4260	1.4859
2	Uttarakhand	C	108	83					
		S	131	110					
		P	119	96	84	84	1.0000	1.4194	1.1485
For states covered			1033	1049	698	725	0.9628	1.4253	1.4468
					COTTON				
1	Andhra	C	0	853					
	Pradesh	S	705	739					
		P	433	783	642	657	0.9772	0.6592	1.1913
2	Gujarat	C	0	2177					
	@	S	0	2234					
		P^	0	2203	399	2655	0.1503	0.0000	0.8298
3	Haryana	C	703	709					
	$$	S	110	615					
		P	435	666	683	723	0.9447	0.6018	0.9217
4	Karnataka	C	554	588					
	$$	S	878	865					
		P	716	727	548	817	0.6707	0.8760	0.8893
5	Madhya	C	528	532					
	Pradesh	S	458	460					
	$$	P	496	500	554	650	0.8523	0.7638	0.7685
6	Maharashtra	C	2564	4059					
	$$	S	3734	3730					
		P	3097	3909	4491	4491	1.0000	0.6896	0.8705
7	Punjab	C	133	130					
	@	S	45	46					
		P	97	95		248	0.0000	0.3905	0.3847
8	Rajasthan	C	194	152					
		S	197	374					
		P	195	261	760	760	1.0000	0.2569	0.3435
9	Tamil Nadu	C	165	174					
	Kharif	S	135	140					
		P	150	157	165	170	0.9706	0.8823	0.9252
	Tamil Nadu	C	0	5					
	Rabi	S	19	19					
		P	9	12	22		0.0000	0.0000	0.0000
10	Telngana	C	0	2678					
	@	S	1969	1973					
		P	1187	2253	2083	2127	0.9793	0.5581	1.0593
For states covered			6816	11566	10347	13298	0.7781	0.5126	0.8698

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
					GROUNDNUT				
1	Andhra	C	0	231					
	Pradesh	S	434	431					
		P^	267	354	563	568	0.9912	0.4694	0.6233
2	Gujarat	C	0	1460					
		S	96	1346					
		P^	44	1408	229	1629	0.1406	0.0270	0.8643
3	Karnataka	C	237	247					
		S	413	414					
		P	325	331	420	393	1.0687	0.8278	0.8410
4	Madhya	C	232	236					
	Pradesh	S	247	246					
		$$ P	239	241	208	217	0.9585	1.1003	1.1105
5	Maharashtra	C	44	34					
		$$ S	137	195					
		P	86	107	221	221	1.0000	0.3900	0.4850
6	Rajasthan	C	85	86					
		S	128	126					
		P	106	106	642	735	0.8740	0.1442	0.1437
7	Tamil Nadu	C	557	514					
	Kharif	S	430	239					
		P	493	377	279	209	1.3339	2.3583	1.8032
8	Tamil Nadu	C	0	0					
	Rabi	S	15	15					
		P	7	7	128	137	0.9310	0.0529	0.0530
9	Telngana	C	0	58					
		S	76	59					
		P	46	59	13	12	1.0833	3.8161	4.8934
For states covered			1560	2924	2562	3972	0.6450	0.3928	0.7360
					SUGARCANE				
1	Andhra	C	0	25					
	Pradesh	S	39	72					
		P^	24	54	86	86	1.0000	0.2815	0.6287
2	Assam	C	0	1					
	*$$	S	0	3					
		P^	0	1	22	30	0.7407	0.0000	0.0491
3	Bihar	C	0	479					
	$$	S	0	138					
		P^	0	320	234	224	1.0452	0.0000	1.4298
4	Haryana	C	132	182					
		S	95	95					
		P	116	143	113	96	1.1734	1.1995	1.4823
5	Karnataka	C	636	765					
	$$	S	1115	1126					
		P	875	946	444	429	1.0350	2.0404	2.2040
6	Maharashtra	C	190	169					
	@	S	707	767					
		P	425	441		822	0.0000	0.5170	0.5365
7	Punjab	C	48	52					
	@	S	13	13					
		P	34	36		91	0.0000	0.3711	0.3922
8	Rajasthan	C	0	0					
		S	0	0					
		P^	1	1	6	4	1.3423	0.2237	0.2237
9	Tamil Nadu	C	111	112					
	Kharif	S	198	223					
		P	154	168	133	131	1.0137	1.1763	1.2778
10	Uttar	C	2197	3079					
	Pradesh	S	1248	1244					
		$$ P	1963	2628	2208	2208	1.0000	0.8892	1.1900
11	Uttarakhand	C	104	102					
		S	94	93					
		P	99	98	92	92	1.0000	1.0775	1.0606
For states covered			3692	4835	3338	4214	0.7921	0.8761	1.1473

Annex-XII .....contd)

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
					WHEAT				
1	Assam	C	0	4					
		S	0	12					
		P^	0	7	17	11	0.0000	0.0000	0.6131
2	Bihar	C	NR	8292					
	* $$	S	708	4128					
		P^	350	6232	2085	2150	0.9697	0.1630	2.8986
3	Chhattisgarh	C	148	148					
	$$	S	341	341					
		P	243	243	106	110	0.9654	2.2150	2.2152
4	Gujarat	C	NR	622					
		S	50	626					
		P^	23	624	219	1018	0.2151	0.0227	0.6129
5	Haryana	C	2414	2343					
		S	1319	1919					
		P	1919	2151	2510	2534	0.9906	0.7572	0.8490
6	Himachal	C	260	243					
	Pradesh	S	10	10					
	@	P^	137	128		286	0.0000	0.4787	0.4489
7	Jammu &	C	0	0					
	Kashmir	S	90	85					
	$$	P^	57	54	279	244	1.1438	0.2333	0.2198
8	Jharkhand	C	0	139					
	*$$	S	709	934					
		P^	292	467	55	215	0.2561	1.3587	2.1727
9	Karnataka	C	108	199					
	$$	S	263	267					
		P	185	233	137	150	0.9133	1.2342	1.5503
10	Madhya	C	9753	9711					
	Pradesh	S	6479	6449					
	$$	P	8265	8229	5433	6551	0.8293	1.2617	1.2561
11	Maharashtra	C	428	1841					
	$$	S	1348	1408					
		P	847	1644	1057	1057	1.0000	0.8013	1.5550
12	Punjab	C	3635	3686					
	@	S	0	0					
		P	2138	2168		3521	0.0000	0.6072	0.6159
13	Rajasthan	C	846	833					
		S	875	763					
		P	860	798	3539	3118	1.1350	0.2759	0.2560
14	Uttar	C	7694	10724					
	Pradesh	S	3438	3522					
	@	P	6647	8953	9853	9853	1.0000	0.6747	0.9087
15	Uttarakhand	C	341	348					
	$$	S	322	321					
		P	331	334	316	316	1.0000	1.0488	1.0578
16	West	C	0	1					
	Bengal	S	56	56					
	@	P	12	13		188	0.0000	0.0630	0.0686
For states covered			22308	32279	25606	31322	0.8175	0.7122	1.0305
					BARLEY				
1	Haryana	C	21	25					
		S	31	31					
		P	25	27	18	12	1.4851	2.0911	2.2553
2	Himachal	C	4	3					
	Pradesh	S	7	7					
	@	P^	6	5		20	0.0000	0.2718	0.2497
3	Punjab	C	1	1					
	@	S	0	0					
		P	1	1		6	0.0000	0.1222	0.0895
4	Rajasthan	C	68	77					
		S	124	122					
		P	95	99	311	301	1.0324	0.3166	0.3292
For states covered			127	132	329	340	0.9678	0.3736	0.3888
					GRAM				
1	Andhra Pradesh	C	0	367					
		S	491	491					
		P^	302	443	452	459	0.9847	0.6577	0.9646
2	Bihar	C	NR	368					
	$$	S	16	22					
		P	8	197	54	53	1.0227	0.1545	3.7322

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
3	Chhattisgarh	C	518	506					
	$$	S	328	328					
		P	425	418	284	382	0.7439	1.1123	1.0952
4	Gujarat	C	NR	82					
		S	44	108					
		P^	20	94	55	405	0.1358	0.0502	0.2315
5	Haryana	C	41	39					
		S	4	4					
		P	24	23	38	44	0.8642	0.5538	0.5206
6	Jharkhand	C	0	50					
	* $$	S	51	94					
		P^	21	68	13	230	0.0565	0.0918	0.2967
7	Karnataka	C	234	550					
	$$	S	382	174					
		P	308	362	649	864	0.7512	0.3565	0.4186
8	Madhya	C	1593	1610					
	Pradesh	S	1043	1045					
	$$	P	1343	1354	2938	1926	1.5254	0.6972	0.7028
9	Maharashtra	C	502	1915					
	$$	S	1907	2052					
		P	1142	1977	2043	2043	0.9999	0.5589	0.9677
10	Punjab*	C	2	3					
	@	S	0	NR					
		P	1	2		2	0.0000	0.6698	1.0063
11	Rajasthan	C	357	357					
		S	482	490					
		P	418	422	2269	2463	0.9212	0.1698	0.1715
12	Uttar	C	264	1287					
	Pradesh	S	188	188					
		P	245	1017	616	621	0.9919	0.3949	1.6376
For states covered			4258	6376	9411	9491		0.4486	0.6718
RAPE & MUSTARD									
1	Assam	C	0	281					
	@	S	0	184					
	$$	P^	0	249	284	287	0.9880	0.0000	0.8661
2	Bihar	C	0	370					
	@	S	10	32					
		P^	5	203		75	0.0000	0.0681	2.6970
3	Chhattisgarh	C	260	265					
	$$	S	127	127					
		P	195	197	41	39	1.0502	4.9944	5.0566
4	Gujarat	C	0	4					
		S	0	0					
		P^	0	2	34	173	0.1970	0.0000	0.0132
5	Haryana	C	671	656					
	@	S	386	386					
		P	542	534		641	0.0000	0.8452	0.8325
6	Jharkhand	C	0	47					
	* $$	S	33	128					
		P^	43	81	4	291	0.0137	0.1471	0.2763
8	Madhya	C	459	482					
	Pradesh	S	128	129					
	$$	P	309	321	620	675	0.9185	0.4578	0.4763
9	Punjab	C	3	3					
	@	S	0	0					
		P	2	2		31	0.0000	0.0487	0.0487
10	Rajasthan	C	423	418					
		S	955	939					
		P	684	674	2522	3076	0.8198	0.2225	0.2190
11	Uttar	C	1291	3545					
	Pradesh	S	133	129					
	@	P	1006	2705	703	759	0.9259	1.3247	3.5625
12	West	C	0	6					
	Bengal	S	93	126					
	@	P	20	31		610	0.0000	0.0323	0.0509
For states covered			2806	4999	4208	6659		0.4213	0.7507

Source:- (1) TRS information collected in prescribed format from Shashtri Bhawan, New Delhi.
(2) Final Estimates collected from DES, M/o Agriculture, New Delhi.

Note:-

1) A-III = Estimates based on khasra entries in sample cluster.
2) A-IV = Estimates based on supervisors observations of crop area in sample cluster.
3) * = A-III figures not given due to insufficient data of primary workers
4) @ Data Not available for TRS estimates
5) $ Data Not available for Final Estimates
6) TRS is not applicable in the States of Kerala, Orissa and West Bengal
7) NA- Not Available/Applicable.
8) # - In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and consequent, categorization of crops, the data have been presented seasonwise instead of whole year.
9) P^= Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
10) NR= Not Reported.
11) $$= TRS area is of 2017-18.
12) NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

COMPARISON OF PERCENTAGE OF AREA UNDER DIFFERENT INPUTS AS ESTIMATED UNDER ICS & TRS : 2019-20

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RICE																
1	Andhra Pradesh	Kharif	96.07	0.65	96.72	2.85	0.43	3.28	100	0.00	0.00	95.80	0.00	0.00	4.20	100
		Rabi	98.81	0.26	99.08	0.61	0.31	0.92	100	NC	NC	NC	NC	NC	NC	NC
2	Assam	Autumn	1.98	1.83	3.81	5.01	91.18	96.19	100	NC	NC	NC	NC	NC	NC	NC
		Winter	0.00	0.00	0.00	2.63	97.37	100.00	100	0.00	0.00	0.00	0.00	0.00	0.00	0
		Summer	14.39	11.10	25.49	0.14	74.37	74.51	100	Data not available						
3	Bihar	Autumn	53.42	8.27	61.69	9.29	29.02	38.31	100	0.00	0.00	50.99	0.00	0.00	49.01	100
		Winter	73.42	11.89	85.31	5.09	9.60	14.69	100	NC	NC	NC	NC	NC	NC	NC
		Summer	0.00	0.00	0.00	0.00	100.00	100.00	100	NC	NC	NC	NC	NC	NC	NC
4	Chattis-garh	Kharif	33.99	0.13	34.12	49.46	16.42	65.88	100	0.00	0.00	34.46	0.00	0.00	65.54	100
5	Gujarat	Kharif	71.15	14.39	85.54	11.27	3.19	14.46	100	0.00	0.00	78.23	0.00	0.00	21.77	100
6	Haryana	Kharif	99.92	0.00	99.92	-	-	-	100	NC	NC	NC	NC	NC	NC	NC
7	Himachal Pradesh	Kharif	73.01	2.57	75.59	17.85	6.56	24.41	100	NC	NC	NC	NC	NC	NC	NC
8	Jammu & Kashmir	Kharif	48.64	41.30	89.94	8.56	1.50	10.06	100	NC	NC	NC	NC	NC	NC	NC
9	Jharkhand	Autumn	0.00	0.00	0.00	0.00	100.00	100.00	100	0.00	0.00	0.00	0.00	0.00	100.00	100
		Winter	5.15	0.62	5.77	16.75	77.48	94.23	100	NC	NC	NC	NC	NC	NC	NC
		Summer	Data Not Available													
10	Karnataka	Kharif	55.32	3.99	59.31	34.52	6.17	40.69	100	0.00	0.00	74.67	0.00	0.00	25.33	100
		Rabi	88.45	11.55	100.00	0.00	0.00	0.00	100	0.00	0.00	100.00	0.00	0.00	0.00	100
11	Kerala	Autumn	27.14	0.09	27.23	72.43	0.34	72.77	100	TRS NOT APPLICABLE						
		Winter	65.35	0.99	66.34	6.18	27.48	33.66	100							
		Summer	95.92	3.95	99.87	0.11	0.02	0.13	100							
12	Madhya Pradesh	Kharif	40.90	9.66	50.56	29.78	19.66	49.44	100	NC	NC	NC	NC	NC	NC	NC
13	Maharashtra	Kharif	34.59	4.04	38.63	50.60	10.77	61.37	100	0.00	0.00	21.54	0.00	0.00	82.18	100
14	Odisha	Autumn	2.31	0.05	2.36	88.61	9.03	97.64	100	TRS NOT APPLICABLE						
		Winter	9.77	0.00	9.77	89.84	0.39	90.23	100							
		Summer	84.45	1.91	86.37	13.63	0.00	13.63	100							
15	Punjab	Kharif	98.77	1.23	100.00	0.00	0.00	0.00	100	Data not available						
16	Tamil Nadu	Phase I	91.04	3.19	94.23	5.52	0.25	5.77	100	0.00	0.00	88.40	0.00	0.00	11.60	100
		Phase II	99.80	0.00	99.80	0.20	0.00	0.20	100	NC	NC	NC	NC	NC	NC	NC
		Rabi	99.95	0.00	99.95	0.00	0.05	0.05	100	0.00	0.00	95.91	0.00	0.00	4.09	100
17	Telangana	Kharif	96.45	2.22	98.67	1.33	0.00	1.33	100	0.00	0.00	99.03	0.00	0.00	0.97	100
		Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	99.94	0.00	0.00	0.06	100
18	Uttar Pradesh	Kharif	98.26	0.67	98.93	0.95	0.12	1.07	100	0.00	0.00	83.92	0.00	0.00	16.08	100
19	Uttara-khand	Kharif	86.71	2.77	89.48	0.44	10.08	10.52	100	0.00	0.00	73.91	0.00	0.00	26.09	100
20	West Bengal	Autumn	Data Not Available							TRS NOT APPLICABLE						
		Winter	0.09	0.01	0.10	1.51	98.39	99.90	100							
		Summer	NC	NC	NC	NC	NC	NC	NC							
21	Puducherry	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	0.00	0.00	0.00	0.00	0
		Rabi-I	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
		Rabi-II	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	0.00	0.00	0.00	100.00	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			72.01	3.29	75.29	16.18	8.53	24.71	100	0.00	0.00	71.67	0.00	0.00	28.58	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			78.47	2.95	81.42	11.99	6.59	18.58	100	0.00	0.00	71.74	0.00	0.00	28.52	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYY & LOCAL			75.38	2.69	78.07	15.47	6.46	21.93	100	0.00	0.00	63.31	0.00	0.00	37.04	100

@ = TRS data collected from Ministry of Agriculture, New Delhi

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
			JOWAR													
1	Karnataka	Kharif	9.42	0.44	9.86	62.40	27.74	90.14	100	0.00	0.00	15.38	0.00	0.00	84.62	100
		Rabi	17.33	4.72	22.05	54.10	23.85	77.95	100	0.00	0.00	15.79	0.00	0.00	84.21	100
2	Madhya Pradesh	Kharif	2.92	0.00	2.92	61.47	35.61	97.08	100	NC	NC	NC	NC	NC	NC	NC
3	Maharashtra	Kharif	8.64	0.00	8.64	85.36	6.00	91.36	100	0.00	0.00	1.54	0.00	0.00	98.46	100
		Rabi	25.06	7.00	32.06	46.60	21.34	67.94	100	0.00	0.00	22.45	0.00	0.00	77.55	100
4	Rajasthan	Kharif	3.50	0.43	3.93	42.81	53.26	96.07	100	0.00	0.00	0.46	0.00	0.00	99.54	100
5	Tamil Nadu	Phase I	12.92	3.48	16.40	60.54	23.06	83.60	100	0.00	0.00	7.95	0.00	0.00	92.05	100
		Phase II	24.01	9.62	33.63	57.85	8.51	66.37	100	0.00	0.00	15.31	0.00	0.00	84.69	100
6	Telangana	Kharif	0.00	0.00	0.00	87.79	12.21	100.00	100	0.00	0.00	0.00	0.00	0.00	100.00	100
		Rabi	88.65	0.49	89.14	8.06	2.80	10.86	100	0.00	0.00	58.06	0.00	0.00	41.94	100
7	Uttar Pradesh	Kharif	8.42	0.37	8.79	23.59	67.63	91.21	100	0.00	0.00	0.60	0.00	0.00	99.40	100
TOTAL FOR			19.74	5.06	24.80	51.50	23.71	75.20	100	0.00	0.00	14.10	0.00	0.00	85.90	100
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			19.74	5.06	24.80	51.50	23.71	75.20	100	0.00	0.00	14.10	0.00	0.00	85.90	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			7.99	0.34	8.34	62.19	29.47	91.66	100	0.00	0.00	20.46	0.00	0.00	79.54	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																
			BAJRA													
1	Andhra Pradesh	Kharif	17.09	0.00	17.09	81.74	1.17	82.91	100	0.00	0.00	13.64	0.00	0.00	86.36	100
2	Gujarat	Kharif	29.60	0.29	29.89	62.30	7.81	70.11	100	0.00	0.00	14.81	0.00	0.00	85.19	100
3	Haryana	Kharif	58.37	0.15	58.52	23.62	17.86	41.48	100	NC	NC	NC	NC	NC	NC	NC
4	Karnataka	Kharif	12.70	0.55	13.26	72.02	14.72	86.74	100	0.00	0.00	17.73	0.00	0.00	82.27	100
5	Maharshtra	Kharif	17.17	0.00	17.17	81.11	1.72	82.83	100	0.00	0.00	4.61	0.00	0.00	95.39	100
6	Rajasthan	Kharif	1.92	2.63	4.55	62.15	33.31	95.45	100	0.00	0.00	4.49	0.00	0.00	95.51	100
7	Tamil Nadu	Kharif	19.34	0.00	19.34	40.04	40.62	80.66	100	0.00	0.00	13.33	0.00	0.00	86.67	100
8	Uttar Pradesh	Kharif	7.16	0.06	7.22	91.17	1.62	92.78	100	0.00	0.00	9.05	0.00	0.00	90.95	100
TOTAL FOR			9.97	0.32	10.29	83.99	5.72	89.71	100	0.00	0.00	5.97	0.00	0.00	94.03	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			9.97	0.32	10.29	83.99	5.72	89.71	100	0.00	0.00	5.97	0.00	0.00	94.03	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			12.70	0.55	13.26	72.02	14.72	86.74	100	0.00	0.00	17.73	0.00	0.00	82.27	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RAGI																
1	Karnataka	Kharif	3.89	3.89	7.78	79.32	12.90	92.22	100	0.00	0.00	7.00	0.00	0.00	93.00	100
2	Uttrakhand	Kharif	0.00	0.00	0.00	0.00	100.00	100.00	100	0.00	0.00	0.00	0.00	0.00	100	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			3.75	3.75	7.50	76.47	16.03	92.50	100	0.00	0.00	6.16	0.00	0.00	93.84	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			3.75	3.75	7.50	76.47	16.03	92.50	100	0.00	0.00	7.00	0.00	0.00	93.00	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			3.89	3.89	7.78	79.32	12.90	92.22	100	0.00	0.00	7.00	0.00	0.00	93.00	100
MAIZE																
1	Bihar	Kharif	61.33	7.46	68.79	1.24	29.96	31.21	100	0.00	0.00	44.30	0.00	0.00	55.70	100
2	Chattisgarh	Kharif	1.35	0.00	1.35	59.53	24.44	98.65	100	0.00	0.00	4.20	0.00	0.00	95.80	100
3	Gujarat	Kharif	29.39	6.78	36.17	37.23	26.60	63.83	100	0.00	0.00	26.53	0.00	0.00	73.47	100
4	Haryana	Kharif	93.31	0.00	93.31	0.00	6.69	6.69	100	NC	NC	NC	NC	NC	NC	NC
5	Himachal Pradesh	Kharif	5.26	15.61	20.86	35.88	43.26	79.14	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Jharkhand	Kharif	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Jammu & Kashmir	Kharif	9.16	7.81	16.97	48.86	34.17	83.03	100	NC	NC	NC	NC	NC	NC	NC
8	Karnataka	Kharif	30.86	0.99	31.85	65.03	3.12	68.15	100	0.00	0.00	26.23	0.00	0.00	73.77	100
9	Madhya Pradesh	Kharif	1.20	0.03	1.22	72.82	25.96	98.78	100	NC	NC	NC	NC	NC	NC	NC
10	Odisha	Kharif	0.37	0.00	0.37	96.53	3.10	99.63	100	Not applicable						
11	Punjab	Kharif	82.91	5.49	88.40	0.00	11.60	11.60	100	Data not available						
12	Rajasthan	Kharif	0.10	0.00	0.10	60.90	39.01	99.90	100	0.00	0.00	0.12	0.00	0.00	99.88	100
13	Tamil Nadu	Kharif	33.40	0.54	33.94	58.63	7.44	66.06	100	Data not available						
14	Telangana	Kharif	10.97	0.87	11.85	87.83	0.33	88.15	100	Data not available						
15	Uttar Pradesh	Kharif	53.46	0.00	53.46	39.85	6.69	46.54	100	0.00	0.00	36.09	0.00	0.00	63.91	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			24.19	1.79	25.98	57.24	16.53	74.02	100	0.00	0.00	21.74	0.00	0.00	78.26	100.00
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			24.78	1.65	26.43	55.37	17.90	73.57	100	0.00	0.00	22.40	0.00	0.00	77.60	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			1.72	0.54	2.26	71.24	26.50	97.74	100	0.00	0.00	24.25	0.00	0.00	75.75	100

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
COTTON																
1	Andhra Pradesh	Kharif	14.90	0.06	14.96	82.55	2.48	85.04	100	0.00	0.00	22.74	0.00	0.00	77.26	100
2	Gujarat	Kharif	80.77	0.33	81.09	13.97	4.94	18.91	100	0.00	0.00	64.91	0.00	0.00	35.09	100
3	Haryana	Kharif	98.17	0.22	98.39	1.38	0.23	1.61	100	NC	NC	NC	NC	NC	NC	NC
4	Karnataka	Kharif	23.13	0.59	23.71	69.09	7.20	76.29	100	0.00	0.00	23.08	0.00	0.00	76.92	100
5	Madhya Pradesh	Kharif	58.78	0.00	58.78	36.51	4.71	41.22	100	NC	NC	NC	NC	NC	NC	NC
6	Maharashtra	Kharif	16.80	0.09	16.89	82.98	0.13	83.11	100	0.00	0.00	10.38	0.00	0.00	89.62	100
7	Punjab	Kharif	99.25	0.75	100.00	0.00	0.00	0.00	100	Data not available						
8	Rajasthan	Kharif	90.62	4.44	95.06	2.63	2.31	4.94	100	0.00	0.00	97.50	0.00	0.00	2.50	100
9	Tamil Nadu	Kharif	44.30	0.00	44.30	52.93	2.76	55.70	100	0.00	0.00	20.00	0.00	0.00	80.00	100
	Tamil Nadu	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	27.27	0.00	0.00	72.73	100
10	Telangana	Kharif	9.76	0.00	9.76	89.82	0.43	90.24	100	0.00	0.00	0.00	0.00	0.00	0.00	0
TOTAL FOR STATES COVERED UNDER ICS SCHEME			35.46	0.25	35.70	62.35	1.95	64.30	100	0.00	0.00	22.20	0.00	0.00	77.80	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			38.93	0.28	39.21	58.61	2.19	60.79	100	0.00	0.00	22.20	0.00	0.00	77.80	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS Estimates not available													
GROUNDNUT																
1	Andhra Pradesh	Kharif	5.57	3.06	8.63	86.32	5.04	91.37	100	0.00	0.00	5.33	0.00	0.00	94.67	100
2	Gujarat	Kharif	61.26	0.95	62.21	18.28	19.51	37.79	100	0.00	0.00	24.02	0.00	0.00	75.98	100
3	Karnataka	Kharif	6.16	1.06	7.22	63.74	29.03	92.78	100	0.00	0.00	8.10	0.00	0.00	91.90	100
4	Madhya Pradesh	Kharif	6.09	0.24	6.34	59.22	34.44	93.66	100	0.00	0.00	NC	0.00	0.00	NC	NC
5	Maharashtra	Kharif	24.32	0.62	24.94	65.45	9.61	75.06	100	0.00	0.00	7.24	0.00	0.00	92.76	100
6	Rajasthan	Kharif	60.53	9.61	70.15	14.69	15.16	29.85	100	0.00	0.00	85.36	0.00	0.00	14.64	100
7	Tamil Nadu	Kharif	61.32	0.72	62.04	37.42	0.54	37.96	100	0.00	0.00	10.75	0.00	0.00	89.25	100
	Tamil Nadu	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	89.06	0.00	0.00	10.94	100
8	Telangana	Kharif	5.79	0.00	5.79	94.21	0.00	94.21	100	0.00	0.00	0.00	0.00	0.00	30.77	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			42.39	1.35	43.74	39.50	16.76	56.26	100	0.00	0.00	33.51	0.00	0.00	66.49	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			42.87	1.37	44.24	38.78	16.98	55.76	100	0.00	0.00	33.51	0.00	0.00	66.49	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			6.16	1.06	7.22	63.74	29.03	92.78	100	0.00	0.00	8.10	0.00	0.00	91.90	100

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
SUGARCANE																
1	Andhra Pradesh	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	91.86	0.00	0.00	8.14	100
2	Assam	Kharif	0.00	0.00	0.00	0.00	0.00	0.00	0	Data not available						
3	Bihar	Kharif	69.41	21.42	90.84	2.09	7.07	9.16	100	0.00	0.00	52.14	0.00	0.00	47.86	100
4	Haryana	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	NC	NC	NC	NC	NC	NC	NC
5	Karnataka @	Kharif	77.82	21.19	99.01	0.33	0.66	0.99	100	NC	NC	NC	NC	NC	NC	NC
6	Maharashtra	Kharif	87.16	9.12	96.28	2.20	1.52	3.72	100	Data not available						
7	Punjab	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
8	Rajasthan	Kharif	NC	NC	NC	NC	NC	NC	NC	-	-	100.00	-	-	0.00	100
9	Tamil Nadu	Phase I	99.46	0.21	99.67	0.33	0.00	0.33	100	0.00	0.00	100.00	-	-	0.00	100
		Phase II	100.00	0.00	100.00	0.00	0.00	0.00	100	NC	NC	NC	-	-	NC	NC
10	Uttar Pradesh	Kharif	93.41	2.73	96.15	3.72	0.13	3.85	100	-	-	94.52	-	-	5.48	100
11	Uttarakhand	Kharif	97.74	2.26	100.00	0.00	0.00	0.00	100	-	-	0.00	-	-	100.00	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			89.83	6.76	96.59	2.79	0.61	3.41	100	0.00	0.00	87.97	0.00	0.00	12.03	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			90.08	6.54	96.62	2.87	0.52	3.38	100	0.00	0.00	87.97	0.00	0.00	12.03	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS estimates not available.													

Sl. No.	State	SEASON	Percentage of Area under different categories														
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
WHEAT																
1	Assam	Rabi	0.00	7.88	7.88	0.00	92.12	92.12	100	NC	NC	NC	NC	NC	NC	NC
2	Bihar	Rabi	83.54	8.88	92.41	1.12	6.47	7.59	100	NC	NC	NC	NC	NC	NC	NC
3	Chhattisgarh	Rabi	81.61	17.79	99.40	0.07	0.53	0.60	100	0.00	0.00	86.79	0.00	0.00	13.21	100
4	Gujarat	Rabi	85.59	7.41	93.01	1.75	5.24	6.99	100	0.00	0.00	96.35	0.00	0.00	3.65	100
5	Haryana	Rabi	96.01	2.65	98.66	0.05	1.29	1.34	100	0.00	0.00	NC	0.00	0.00	NC	NC
6	Himachal Pradesh	Rabi	41.78	4.17	45.96	26.70	27.34	54.04	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Jammu & Kashmir	Rabi	40.27	1.40	41.67	58.33	0.00	58.33	100	Data not available						
8	Jharkhand	Rabi	2.32	26.73	29.05	1.78	69.17	70.95	100	0.00	0.00	92.73	0.00	0.00	7.27	100
9	Karnataka	Rabi	53.46	28.11	81.57	10.42	8.01	18.43	100	0.00	0.00	67.12	0.00	0.00	32.88	100
10	Madhya Pradesh	Rabi	70.19	22.82	93.01	2.06	4.93	6.99	100	NC	NC	NC	NC	NC	NC	NC
11	Maharashtra	Rabi	76.36	8.48	84.84	12.53	2.63	15.16	100	0.00	0.00	70.01	0.00	0.00	29.99	100
12	Punjab	Rabi	91.86	8.14	100.00	0.00	0.00	0.00	100	Data not available						
13	Rajasthan	Rabi	85.00	11.26	96.26	2.87	0.87	3.74	100	0.00	0.00	99.35	0.00	0.00	0.65	100
14	Uttar Pradesh	Rabi	99.50	0.20	99.70	0.07	0.23	0.30	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Uttarakhand	Rabi	55.15	5.58	60.73	2.20	37.07	39.27	100	0.00	0.00	0.00	0.00	0.00	100.00	100
16	West Bengal	Rabi	86.61	0.00	86.61	0.00	13.39	13.39	100	TRS not applicable						
TOTAL FOR STATES COVERED UNDER ICS SCHEME			86.34	8.89	95.23	1.75	3.02	4.77	100	0.00	0.00	30.79	0.00	0.00	69.21	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			76.60	15.21	91.80	3.03	5.16	8.20	100	0.00	0.00	30.79	0.00	0.00	69.21	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			74.90	17.44	92.35	1.81	5.84	7.65	100	0.00	0.00	1.48	0.00	0.00	98.52	100

Sl. No.	State	SEASON	Percentage of Area under different categories														
			As per Sample check						TOTAL	As per T.R.S. @							TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated				
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
BARLEY																	
1	Haryana	Rabi	52.79	47.21	100.00	0.00	0.00	0.00	100	-	-	NC	-	-	NC	0	
2	Himachal Pradesh	Rabi	0.55	4.08	4.63	1.09	94.28	95.37	100	-	-	0.00	-	-	0.00	0	
3	Punjab	Rabi	0.00	0.00	0.00	0.00	0.00	0.00	0	Data not available							
4	Rajasthan	Rabi	82.95	15.32	98.28	0.93	0.80	1.72	100	0.00	0.00	97.43	0.00	0.00	2.57	100	
TOTAL FOR STATES COVERED UNDER ICS SCHEME			77.64	19.97	97.61	0.79	1.59	2.39	100	1.00	-	97.43	-	-	2.57	100	
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			71.03	13.12	84.16	0.79	0.68	1.48	100	-	-	97.43	-	-	2.57	100	
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY-WISE TRS ESTIMATES NOT AVAILABLE														
GRAM																	
1	Andhra Pradesh	Rabi	1.54	0.00	1.54	88.03	10.43	98.46	100	0.00	0.00	1.33	0.00	0.00	98.67	100	
2	Bihar	Rabi	0.00	0.00	0.00	0.00	0.00	0.00	0	NC	NC	NC	NC	NC	NC	NC	
3	Chhattisgarh	Rabi	17.88	20.26	38.14	1.11	60.75	61.86	100	-	-	67.42	-	-	32.58	100	
4	Gujarat	Rabi	39.07	38.65	77.72	8.19	14.09	22.28	100	-	-	81.82	-	-	18.18	100	
5	Haryana	Rabi	78.53	0.00	78.53	21.47	0.00	21.47	100	-	-	NC	-	-	NC	NC	
6	Jharkhand	Rabi	0.00	2.13	2.13	1.45	96.42	97.87	100	-	-	7.69	-	-	92.31	100	
7	Karnataka	Rabi	12.67	16.39	29.06	43.27	27.67	70.94	100	0.00	0.00	28.66	0.00	0.00	71.34	100	
8	Madhya Pradesh	Rabi	31.74	43.08	74.82	8.66	16.52	25.18	100	-	-	NC	-	-	NC	NC	
9	Maharashtra	Rabi	38.15	6.86	45.01	42.72	12.27	54.99	100	0.00	0.00	31.82	0.00	0.00	68.18	100	
10	Punjab	Rabi	0.00	0.00	0.00	0.00	0.00	0.00	0	Data not available							
11	Rajasthan	Rabi	19.99	18.46	38.45	25.25	36.30	61.55	100	-	-	45.09	-	-	54.91	100	
12	Uttar Pradesh	Rabi	6.13	5.40	11.54	1.57	86.89	88.46	100	Data not available							
TOTAL FOR STATES COVERED UNDER ICS SCHEME			24.18	16.46	40.63	26.96	32.40	59.37	100			33.33			66.67	100	
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			20.84	6.95	27.79	31.27	17.56	51.44	100	-	-	33.33	-	-	66.67	100	
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY WISE TRS ESTIMATES NOT AVAILABLE														

ANNEX XIII (Contd.....)

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RAPE & MUSTARD																
1	Assam	Rabi	0.12	0.54	0.66	4.26	95.08	99.34	100	0	0	NC	0	0	NC	NC
2	Bihar	Rabi	77.51	12.46	89.97	3.20	6.83	10.03	100	Data Not available						
3	Chattisgarh	Rabi	0.00	3.05	3.05	1.52	95.44	96.95	100	0	0	15	0	0	85	100
4	Gujarat	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	97.06	0.00	0.00	2.94	100
5	Haryana @	Rabi	91.55	0.00	91.55	8.30	0.15	8.45	100	0.00	0.00	0.00	0.00	0.00	0.00	0
6	Jharkhand	Rabi	0.66	30.03	30.70	1.35	67.95	69.30	100	0.00	0.00	0.00	0.00	0.00	0.00	0
7	Madhya Pradesh	Rabi	55.85	17.54	73.39	7.52	19.09	26.61	100	0	0	NC	0	0	NC	NC
8	Punjab	Rabi	29.20	70.80	100.00	0.00	0.00	0.00	100	Data Not available						
9	Rajasthan	Rabi	81.43	10.19	91.62	5.83	2.55	8.38	100	0	0	NC	0	0	NC	NC
10	Uttar Pradesh	Rabi	90.94	3.26	94.20	1.94	3.86	5.80	100	0.00	0.00	0.00	0.00	0.00	0.00	0
11	West Bengal	Rabi	31.67	7.57	39.24	0.00	60.76	60.76	100	TRS Not applicable						
TOTAL FOR STATES COVERED UNDER ICS SCHEME			84.49	4.99	89.48	3.13	7.39	10.52	100	0.00	0.00	51.90	0.00	0.00	48.10	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			61.57	11.30	72.87	5.88	21.24	27.13	100	0.00	0.00	52.00	0.00	0.00	48.00	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY-WISE TRS ESTIMATES NOT AVAILABLE													

1. @ -Data for oilseeds used

2. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

Note: # - In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and consequent, categorization of crops, the data have been presented seasonwise instead of whole year.

COMPARISON OF ESTIMATES OF YIELD RATES UNDER ICS AND CES DURING 2019-20

Sl. No.	State	AGENCY	ICS				C.E.S.				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
RICE (KHARIF)												
1	Andhra	C	160	149	3564	2.3						28
	Pradesh	S	160	148	3470	2.2						N.C.
		P	320	297	3513	1.6	3804	3804	5116	0.5	-31.33	27
2	Assam	C	100	34	2032	8.7						51
	(Aut)	S	100	37	NP							0
		P	200	71	1939	6.6	1500	698	1532	1.3	26.57	56
	Assam	C	120	118	2348	3.2						34
	(Wint)	S	120	92	2212	3.2						31
		P	240	210	2278	2.3	3000	2784	2108	0.6	8.06	33
3	Bihar	C	40	30	1378	14.4						79
	(Aut/ Bhadai)	S	40	34	1871	6						N.C.
		P	80	64	1762	5.3	952	720	1639	NR	7.50	42
	Bihar	C	240	165	2687	3.8						48
	(Wint/Winter)	S	240	138	2502	5.2						N.C.
		P	480	303	2616	3.0	41245	38955	3527	0.0	-25.83	53
4	Chhattisgarh	C	80	80	2309	5.4						48
		S	80	80	2266	3.7						33
		P	160	160	2279	3.0	2026	1596	1353	1.2	68.44	38
5	Gujarat	C	80	60	2322	7.4						57
	*	S	80	47	N.P.							N.C.
		P	160	107	2150	6.1	13121	11894	3268	2.0	-34.21	63
6	Haryana @	C	90	90	3191	3.2						31
		S	90	38	N.P.							0
		P	180	128	0	0.0	990	864	3268	1.6	-100.00	0
7	Himachal	C	60	51	2431	7.9						56
	Pradesh	S	60	33	1632	11.9						N.C.
		P	120	84	2039	6.7	1626	1042	2198	2.7	-7.24	61
8	Jammu &	C	70	30	1718	7.5						41
	Kashmir	S	70	22	0	0.0						N.C.
		P	140	52	1896	4.2	1362	1054	3375	3.0	-43.82	30
9	Jharkhand	C	20	20	1402	10.7						48
	(Aut/E. Kharif)	S	20	18	1228	13.9						N.C.
		P	40	38	1327	8.5	600	452	1675	0.0	-20.78	52
	Jharkhand	C	80	80	1768	4.7						42
	(Wint/L. Kharif)	S	80	54	N.P.							N.C.
	* @	P	160	134	1711	3.7	18120	15321	2108	0.0	-18.83	43
10	Karnataka	C	144	94	N.P.							57
	**	S	144	130	N.P.							56
		P	288	224	3085	3.8	13010	11199	5249	1.5	-41.23	56
11	Kerala	C	100	98	2180	10.4						103
	(Aut)	S	100	96	1966	10.3						101
		P	200	194	2062	7.3	2268	2264	2614	3.0	-21.12	102
	Kerala	C	100	90	3069	7.6						72
	(Wint)	S	100	90	2211	26.7						253
		P	200	180	2953	7.4	3144	3140	3058	1.3	-3.43	99
12	Madhya	C	100	100	2238	6.6						66
	Pradesh	S	100	86	N.P.							45
	*	P	200	186	2166	3.9	2760	2316	1127	10.0	92.19	53
13	Maharashtra	C	82	51	1901	16.1						115
	*	S	82	38	N.P.							N.C.
		P	164	89	1555	6.4	9712	7806	1943	0.0	-19.97	60
14	Odisha	C	220	217	N.P.							63
	(Aut)	S	220	205	N.P.							66
	**	P	440	422	1624	3.2	5837	5837	1806	1.0	-10.08	65
	Odisha	C	270	260	2198	2.9						47
	(Wint) @	S	270	254	N.P.							46
		P	540	514	2261	2.1	28003	28003	2499	0.3	-9.52	47
15	Punjab @	C	190	187	4181	1.8						24
		S	190	122	N.P.							25
		P	380	309	4086	1.4	1982	1976	6036	NR	-32.31	25
16	Tamil Nadu	C	40	40	4199	3.8						24
	(Phase-I)	S	40	38	4373	4.6						28
		P	80	78	4267	3.0	428	428	4104	1.3	3.96	26
	Tamil Nadu	C	80	58	4004	3.2						24
	(Phase-II)	S	80	48	0	0.0						0
		P	160	106	4004	3.2	1260	1260	3641	0.8	9.98	33
17	Telangana	C	70	65	3608	5.3						42
		S	70	69	3722	4.5						37
		P	140	134	3672	3.4	1894	1894	2814	0.8	30.49	39

Sl. No.	State	AGENCY	ICS				C.E.S.				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
18	Uttar	C	660	658	2808	1.4						35
	Pradesh	S	660	122	N.P.							N.C.
	* @	P	1320	780	2808	1.4	189064	188448	2873	NR	-2.26	38
19	Uttarakhand	C	50	47	2916	7.8						53
	* @	S	50	50	N.P.							N.C.
		P	100	97	2581	4.6	2674	2672	2339	0.9	10.35	45
20	West Bengal	C	100	97	2656	3.7						36
	E. Kharif *@	S	100	4	N.P.							0
		P	200	101	0	0.0	2281	2011	2590	1.2	-100.00	0
	L. Kharif *@	C	160	160	2866	2.5						32
		S	160	14	N.P.							0
		P	320	174	0	0.0	13308	12739	2774	0.5	-100.00	0
21	Puducherry	C	10	10	2029	9.7						31
	(Kh.)	S	10	10	2112	5.4						17
		P	20	20	2091	4.8	88	88	3280	2.3	-36.25	21
For states covered			7032	5256	2294	1.0	366059	351265	2961	0.2	-22.53	75
RICE (SUMMER)												
1	Andhra	C	120	26	0	0.0						0
	Pradesh	S	120	90	0	0.0						0
		P	240	116	4009	4.4	2994	2960	7122	0.5	-43.71	47
2	Assam	C	40	18	0	0.0						0
	*	S	40	30	N.P.							N.C.
		P	80	48	2904	4.9	2000	1066	2593	1.4	11.99	34
3	Bihar	C	40	18	N.P.							0
	**	S	40	24	N.P.							N.C.
		P	80	42	2226	3.9	440	389	2133	NR	4.36	25
4	Karnataka	C	40	7	N.P.							0
	**	S	40	32	N.P.							0
		P	80	39	3715	8.2	3540	2747	4919	4.3	-24.48	51
5	Kerala	C	100	31	2259	23.5						131
		S	100	29	3242	10.4						56
		P	200	60	2958	9.7	1608	799	3548	2.3	-16.63	75
6	Odisha	C	140	50	N.P.							0
	**	S	140	134	N.P.							0
		P	280	184	3425	3.4	6188	6188	3188	0.7	7.43	46
7	Tamil Nadu	C	40	17	4488	6.9						29
		S	40	21	2108	18.6						85
		P	80	38	3568	6.8	300	300	4303	0.9	-17.09	42
8	Telangana	C	80	6	0	0.0						0
		S	80	75	0	0.0						0
		P	160	81	3761	4.4	2180	2180	3723	0.5	1.02	40
9	West Bengal	C	140	10	3169	2.3						7
	*	S	140	0	N.P.							0
		P	280	10	0	0.0	11674	10891	3379	0.7	-100.00	0
10	Puducherry	C	10	10	3118	11.3						36
	(Rabi-I)	S	10	10	2544	13.9						N.C.
		P	20	20	2833	8.8	140	140	2732	3.2	3.70	39
	Puducherry	C	10	10	3356	8.6						27
	(Rabi-II)	S	10	10	3150	4.4						14
	*	P	20	20	3189	3.4	70	70	3328	2.3	-4.18	15
For states covered			1520	658	2520	2.2	31134	27730	4103	0.4	-38.59	57
JOWAR (KHARIF)												
1	Karnataka	C	50	14	N.P.							0
	**	S	50	37	N.P.							0
		P	100	51	1224	22.5	3584	2442	1662	4.1	-26.35	161
2	Madhya	C	100	92	1156	10.4						100
	Pradesh*	S	100	70	N.P.							80
		P	200	162	984	7.1	1746	1378	1491	2.2	-34.00	90
3	Maharashtra	C	80	38	722	18.5						114
	*@	S	80	54	N.P.							N.C.
		P	160	92	736	15.3	5604	3212	717	0.0	2.66	147
4	Rajasthan	C	60	55	660	11.8						88
		S	60	42	403	11.3						73
		P	120	97	467	8.4	10564	9826	709	0.0	-34.18	83
5	Tamil Nadu	C	40	40	1150	10.9						69
	#	S	40	29	0	0.0						0
		P	80	69	1150	10.9	440	440	1193	2.9	-3.62	91
6	Telangana	C	40	38	1004	20.1						124
		S	40	36	1185	11.4						68
		P	80	74	1129	10.0	514	512	1184	3.5	0.00	86
7	Uttar	C	40	40	1984	16.2						102
	Pradesh @	S	40	12	N.P.							N.C.
	*	P	80	52	1984	16.2	6656	5697	1349	NR	47.07	117
For states covered			820	597	885	5.7	29108	23507	984	0.7	-10.07	140

Sl. No.	State	AGENCY	ICS				C.E.S.				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
JOWAR(RABI)												
1	Karnataka	C	70	54	0	0.0						0
	*	S	70	55	N.P.							0
		P	140	109	1315	11.8	10286	8954	1106	1.9	18.90	123
2	Maharashtra @	C	150	62	695	26.1						206
	*	S	150	86	N.P.							N.C.
		P	300	148	622	15.8	21802	17878	785	0.0	-20.80	192
3	Tamil Nadu	C	40	36	1035	13.3						80
		S	40	24	899	8.9						N.C.
		P	80	60	933	7.4	640	640	1115	3.3	-16.31	58
4	Telangana @	C	40	20	958	19.1						85
	*	S	40	34	N.P.							117
		P	80	54	1129	14.5	354	354	2127	3.8	0.00	107
For states covered			600	371	881	9.4	33082	27826	896	0.6	-1.67	180
BAJRA												
1	Andhra	C	40	34	2404	16.3						95
	Pradesh	S	40	36	1380	11.3						68
		P	80	70	1519	9.5	498	404	2297	2.5	-33.87	80
2	Gujarat @	C	110	91	1793	13.8						132
	*	S	110	63	N.P.							N.C.
		P	220	154	2229	7.5	2232	2002	1738	0.0	28.25	93
3	Haryana	C	104	102	2776	21.1						213
	* @	S	104	31	N.P.							0
		P	208	133	0	0.0	1532	1438	1762	1.0	-100.00	0
4	Karnataka	C	50	21	N.P.							0
	**	S	50	42	N.P.							0
		P	100	63	1101	13.4	3896	2985	1153	2.8	-4.51	106
5	Maharashtra	C	60	14	2034	5.7						0
	*	S	60	30	N.P.							N.C.
		P	120	44	2023	4.3	5534	4359	762	NR	52.84	137
6	Rajasthan	C	60	57	1518	8.9						67
		S	60	44	1152	15.0						99
		P	120	101	1379	7.7	25736	25515	1189	0.0	15.99	77
7	Tamil Nadu	C	40	40	3866	4.2						26
	#	S	40	29	2035	11.2						60
		P	80	69	3255	4.0	444	424	2743	4.2	18.69	33
8	Uttar	C	150	150	2273	4.3						53
	Pradesh @	S	150	22	N.P.							N.C.
	*	P	300	172	2273	4.3	33800	33006	2115	NR	7.47	57
For states covered			1228	806	1146	5.9	73672	70133	1334	0.2	-14.08	168
MAIZE												
2	Bihar	C	40	17	N.P.							38
	**	S	40	14	N.P.							N.C.
		P	80	31	0	0.0	41245	13060	2078	NR	-100.00	0
3	Chhattisgarh	C	40	40	3745	5.6						36
		S	40	30	4165	13.8						76
		P	80	70	3795	5.2	556	464	3119	1.7	21.67	44
4	Gujarat	C	40	26	1527	9.7						49
	* @	S	40	28	N.P.							N.C.
		P	80	54	1526	9.0	2040	1876	1497	0.0	1.92	66
5	Haryana	C	20	16	2776	21						84
	* @	S	20	8	N.P.							0
		P	40	24	0	0	144	88	3000	12.6	-100.00	0
6	Himachal	C	90	75	2785	7.3						63
	Pradesh	S	90	70	2450	9.6						80
		P	180	145	2643	5.8	2628	2254	2821	1.3	-6.31	70
7	Jammu &	C	90	66	2034	5.7						35
	Kashmir	S	90	12	0	0.0						57
		P	180	78	2023	4.3	1380	1012	1943	5.0	4.12	38
8	Jharkhand	C	20	20	2460	16.5						74
	* @	S	20	12	N.P.							80
		P	40	32	2295	13.5	7830	6102	25172	0.0	-90.88	76
9	Karnatka	C	50	22	0	0.0						0
		S	50	44	0	0.0						0
		P	100	66	2982	8.8	12732	11440	4505	1.2	-33.81	71
10	Madhya	C	80	80	2127	9.3						83
	Pradesh	S	80	66	1828	9.9						80
		P	160	146	1964	6.8	1928	1768	2308	1.7	-14.90	82
11	Odisha	C	40	40	2646	4.1						26
		S	40	40	2438	8.9						56
		P	80	80	2605	3.7	2933	2933	2878	2.0	-9.49	33
12	Punjab	C	48	34	4135	11.3						66
		S	48	32	0	0.0						0
		P	96	66	0	0.0	362	361	3582	NR	-100.00	0
13	Rajasthan	C	50	47	1784	16.3						112
		S	50	40	1349	26.1						165
		P	100	87	1607	14.0	11172	11100	1297	0.0	23.86	131

ANNEX XIV (Contd.....)

Sl. No.	State	AGENCY	ICS				C.E.S.				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
14	Tamil Nadu	C	40	40	8811	4.1						26
		S	40	34	0	0.0						0
		P	80	74	8811	4.1	432	432	7839	1.6	12.40	35
15	Telangana	C	50	50	4617	9.0						63
		S	50	48	4482	7.8						54
		P	100	98	4539	5.9	2054	2054	4845	1.4	0.00	58
16	Uttar	C	170	160	2570	6.1						77
	Pradesh	S	170	42	N.P.							N.C.
	* @	P	340	202	2570	6.1	28348	27546	2467	NR	4.18	86
For states covered			1736	1253	2488	3.0	115784	82490	3565	0.4	-30.21	107
RAGI												
1	Karnataka	C	40	24	0	0.0						0
		S	40	34	0	0.0						0
		P	80	58	1315	8.4	1452	965	1457	4.9	-9.75	64
3	Uttarakhand	C	40	39	1385	5.8						36
	*	S	40	40	N.P.							N.C.
		P	80	79	1404	4.9	1114	1114	1488	1.2	-5.65	43
For states covered			160	137	1325	7.4	2566	2079	1480	1.6	-10.43	87
COTTON												
1	Andhra	C	40	39								
	Pradesh	S	40	38								
		P	80	77	548	13.3	952	924	1880	2.0	-70.85	117
2	Gujarat	C	220	151								
		S	220	62								
		P	440	213	529	7.5	29328	27077	1598	0.9	0.00	109
3	Haryana	C	56	54								
		S	56	28								
		P	112	82	280	4.8	940	908	275	0.0	1.82	43
4	Karnataka	C	56	37								
		S	56	39								
		P	112	76	225	26.1	3620	3099	518	2.9	-56.56	228
5	Madhya	C	48	44								
	Pradesh	S	48	20								
		P	96	64	879	10.4	962	819	1227	2.1	-28.36	83
6	Maharashtra	C	140	129								62
		S	140	80								
		P	280	209	458	5.5	13620	12992	248	0.0	84.98	80
7	Punjab	C	72	72								
		S	72	47								
		P	144	119	767	2.8	668	664	842	NR	-8.91	31
8	Rajasthan	C	40	40								
		S	40	26								
		P	80	66	581	6.6	7264	6957	1869	0.0	-68.92	54
9	Tamil Nadu (Kharif)	C	40	40								
		S	40	28								
		P	80	68	434	8.7	564	564	414	1.4	4.90	72
9	Tamil Nadu (Rabi)	C	40	35								
		S	40	30								
		P	80	65	476	8.5	256	256	427	2.6	0.00	69
10	Telangana	C	40	40								
		S	40	36								
		P	80	76	689	7.2	1420	1420	1769	1.1	-61.05	63
For states covered			1584	1115	523	3.0	59594	55680	1021	0.5	-48.81	101
GROUNDNUT												
1	Andhra	C	110	104	1143	7.2						74
	Pradesh	S	110	106	1190	7.7						79
		P	220	210	1164	5.3	2604	2492	1096	2.5	6.20	76
2	Gujarat * @	C	150	126	2955	5.9						66
		S	150	58	N.P.							0
		P	300	184	2844	5.3	3498	3352	2764	0.0	2.89	72
3	Karnataka	C	70	34	N.P.							0
	**	S	70	63	N.P.							0
		P	140	97	933	8.1	8308	6471	863	2.4	8.11	80
4	Madhya	C	40	40	1059	11.9						75
	Pradesh	S	40	26	1335	18.6						95
		P	80	66	1115	10.1	954	792	1141	3.2	-2.28	82
5	Maharashtra	C	60	17	803	45.6						188
	*	S	60	20	N.P.							N.C.
		P	120	37	717	19.1	4276	2711	877	0.0	-18.24	116
6	Rajasthan	C	40	32	2333	7.0						40
		S	40	20	0	0.0						0
		P	80	52	0	0.0	7620	5783	2195	0.0	-100.00	0
7	Tamil Nadu (Kharif)	C	40	36	3087	4.2						25
		S	40	31	0	0.0						0
		P	80	67	3087	4.2	700	700	2479	1.8	24.55	35

ANNEX XIV (Contd.....)

Sl. No.	State	AGENCY	ICS				C.E.S.				% Diff. (Col.6-Col.10/ Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
	Tamil Nadu (Rabi)	C	40	18	2981	16.6						70
		S	40	32	2650	16.2						92
		P	80	50	2792	11.6	460	460	3742	1.5	-25.39	82
8	Telangana	C	40	40	3667	14.8						94
		S	40	40	N.P.							61
		P	80	80	2575	8.2	198	198	2743	3.5	0.00	73
For states covered			1180	843	1728	3.6	28618	22959	2083	0.3	-17.05	105
SUGARCANE												
1	Andhra	C	60	57	81242	4.5						34
	Pradesh	S	60	48	72683	7.6						53
		P	120	105	78682	3.9	1602	1578	79335	0.5	-0.82	39
2	Assam	C	40	4	0	0.0						0
	* @	S	40	16	N.P.							N.C.
		P	80	20	33154	14.7	700	336	41010	0.2	-19.16	66
3	Bihar	C	40	33	69068	12.6						72
	* @	S	40	19	N.P.							N.C.
		P	80	52	57721	8.7	772	724	60649	NR	-4.83	63
4	Haryana	C	50	34	77936	0.0						0
	* @	S	50	20	N.P.							0
		P	100	54	0	0.0	1070	850	75183	0.0	-100.00	0
5	Karnataka	C	40	19	N.P.							0
	**	S	40	31	N.P.							0
		P	80	50	99931	10.5	1130	1020	98195	5.0	1.77	74
6	Maharashtra	C	68	19	0	0.0						0
	* @	S	68	27	N.P.							N.C.
		P	136	46	88623	11.7	4840	2406	84600	0.0	4.76	79
7	Punjab	C	70	52	80259	4.7						34
	* @	S	70	32	N.P.							15
		P	140	84	81714	2.3	698	683	80246	NR	1.83	21
8	Rajasthan	C	40	25	66978	20.7						104
		S	40	25	71964	10.8						54
		P	80	50	70769	9.6	450	388	73054	0.0	-3.13	68
9	Tamil Nadu	C	40	28	114038	5.6						29
		S	40	30	120872	19.4						106
		P	80	58	114507	5.4	468	468	107615	1.2	6.40	41
10	Uttar	C	200	197	89069	3.3						46
	Pradesh	S	200	14	N.P.							N.C.
	* @	P	400	211	89069	3.3	9336	9278	81313	NR	9.54	48
11	Uttarakhand	C	40	28	75933	9.6	0					51
	* @	S	40	0	N.P.		0					N.C.
		P	80	28	75933	9.6	0	0	0	0	0	51
For states covered			1376	758	84498	3.3	21066	17731	82575	0.4	0.00	91
WHEAT												
1	Assam	C	50	0	0	0.0						0
	* @	S	50	2	N.P.							N.C.
		P	100	2	0	0.0	700	114	1279	0.4	-100.00	0
2	Bihar	C	230	175	2914	2.8						37
		S	230	130	2759	4.4						N.C.
		P	460	305	2805	2.4	41265	40965	2595	NR	8.09	41
3	Chhattisgarh	C	40	0	0	0.0						0
	@	S	40	0	0	0.0						0
		P	80	0	0	0.0	892	642	1294	2.1	-100.00	0
4	Gujarat	C	150	40	0	0.0						0
	* @	S	150	40	N.P.							N.C.
		P	300	80	3083	4.0	40978	39087	2898	0.0	6.38	36
5	Haryana	C	180	1	4863	2.1						2
		S	180	86	0	0.0						0
		P	360	87	4863	2.1	2200	2182	4407	0.7	10.35	20
6	Himachal	C	110	0	0	0.0						0
	Pradesh	S	110	14	0	0.0						0
		P	220	14	0	0.0	2794	1778	2187	1.7	-100.00	0
7	Jammu &	C	120	0	0	0.0						0
	Kashmir	S	120	0	0	0.0						0
		P	240	0	0	0.0	1956	1576	2154	4.0	-100.00	0
8	Jharkhand	C	40	2	0	0.0						0
	*	S	40	32	N.P.							N.C.
		P	80	34	0	0.0	17520	11902	2022	0.0	-100.00	0
9	Karnataka	C	50	34	0	0.0						0
	*	S	50	40	N.P.							0
		P	100	74	877	11.4	3854	2947	1241	3.6	-29.33	98
10	Madhya	C	250	37	0	0.0						0
	Pradesh	S	250	158	877	11.4						0
		P	500	195	0	0.0	5830	5146	2896	0.6	-100.00	0

ANNEX XIV (Contd.....)

Sl. No.	State	AGENCY	ICS				C.E.S.				% Diff. (Col.6-Col.10/ Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
11	Maharashtra	C	150	39	1675	9.5						59
	* @	S	150	58	N.P.							N.C.
		P	300	97	1549	8.7	8854	7756	1713	0.0	-9.57	86
12	Punjab	C	220	4	0	0.0						0
		S	220	105	0	0.0						0
		P	440	109	4966	1.2	2332	2332	5004	NR	-0.76	13
13	Rajasthan	C	130	7	0	0.0						0
		S	130	70	0	0.0						0
		P	260	77	3977	4.2	38580	37604	3973	0.0	0.10	36
14	Uttar	C	570	32	3716	4.4						25
	Pradesh	S	570	77	N.P.							N.C.
	* @	P	1140	109	3716	4.4	229176	228503	3675	NR	1.12	46
15	Uttarakhand* @	C	60	0	0	0.0						0
		S	60	46	N.P.							N.C.
		P	120	46	2319	5.7	2668	2663	2782	0.8	-16.64	39
16	West Bengal	C	110	0	0	0.0						0
		S	110	0	0	0.0						0
		P	220	0	0	0.0	2528	2285	2682	0.9	-100.00	0
For states covered			4920	1229	2889	1.9	402127	387482	3539	0.1	-18.37	67
BARLEY												
1	Haryana	C	30	0	0	0.0						0
		S	30	16	4009	5.1						20
		P	60	16	4009	5.1	516	355	3414	1.6	17.43	20
2	Himachal	C	40	0	1307	5.0						0
	Pradesh	S	40	6	1913	18.2						45
		P	80	6	1328	4.8	1258	656	1679	4.5	-20.89	12
3	Punjab	C	30	0	0	0.0						0
		S	30	10	4089	3.0						10
		P	60	10	4089	3.0	252	228	3781	NR	8.15	10
4	Rajasthan	C	80	11	0	0.0						0
		S	80	56	0	0.0						0
		P	160	67	3585	3.8	4952	4924	3527	0.0	1.64	31
For states covered			360	99	3474	3.4	6978	6163	3417	0.2	1.67	34
GRAM												
1	Andhra Pradesh	C	60	57	1223	7.0						53
	*	S	60	58	1313	6.6						N.C.
		P	120	115	1268	4.8	1354	1354	1218	1.2	4.11	52
2	Bihar	C	40	37	1246	10.4						63
		S	40	28	1200	9.1						N.C.
		P	80	65	1084	18.8	720	710	730	0.0	48.49	152
3	Chhattisgarh	C	40	2	0	0.0						0
		S	40	0	0	0.0						0
		P	80	2	0	0.0	594	494	252	8.5	-100.00	0
4	Gujarat	C	40	15	0	0.0						0
	* @	S	40	2	N.P.							N.C.
		P	80	17	1185	9.4	2385	2320	1568	0.0	-24.43	39
5	Haryana	C	70	0	0	0.0						0
	*	S	70	24	0	0.0						0
		P	140	24	0	0.0	562	512	619	0.0	-100.00	0
6	Jharkhand	C	20	2	0	0.0						0
	*	S	20	8	N.P.							N.C.
		P	40	10	1105	29.2	7830	5094	1120	NR	-1.34	92
7	Karnataka	C	40	29	0	0.0						0
	*	S	40	40	N.P.							0
		P	80	69	845	11.3	9410	7482	696	2.0	21.41	94
8	Madhya	C	140	38	0	0.0						0
	Pradesh	S	140	78	0	0.0						0
	*	P	280	116	1424	4.6	5330	4306	1115	0.8	27.71	50
9	Maharashtra	C	100	46	1359	7.9						54
	* @	S	100	46	N.P.							N.C.
		P	200	92	1265	5.8	13656	12853	1096	0.0	15.47	56
10	Punjab	C	30	0	0	0.0						0
	*	S	30	0	N.P.							0
		P	60	0	0	0.0	92	88	1219	NR	-100.00	0
11	Rajasthan	C	120	29	0	0.0						0
		S	120	64	0	0.0						0
		P	240	93	1314	9.0	18736	17700	1079	0.0	21.75	86
12	Uttar	C	50	2	0	0.0						0
	Pradesh	S	50	4	N.P.							N.C.
	* @	P	100	6	1118	20.1	13278	13125	1371	NR	-18.45	49
13	West Bengal	C	Not Planned									N.C.
	**	S										N.C.
		P					725	630	1030	4.5	-100.0	N.C.
For states covered			1500	609	1192	3.5	74672	66668	1077	0.3	10.76	86

ANNEX XIV (Contd.....)

Sl. No.	State	AGENCY	ICS				C.E.S.				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
RAPE & MUSTARD												
1	Assam	C	70	50	600	5.7						40
	*	S	70	33	N.P.							N.C.
		P	140	83	602	4.9	1250	1042	617	0.9	-2.43	45
2	Bihar	C	40	32	1084	18.8						106
		S	40	30	1241	9.0						N.C.
		P	80	62	1201	8.6	1008	1002	1187	NR	1.18	68
3	Chhattisgarh	C	30	14	0	0.0						0
		S	30	12	0	0.0						0
		P	60	26	474	11.3	372	244	448	5.6	5.80	58
4	Gujarat	C	50	25	0	0.0						0
	* @	S	50	17	N.P.							N.C.
		P	100	42	1990	3.8	1206	1143	1932	0.0	2.99	25
5	Haryana	C	100	2	0	0.0						0
	*	S	100	42	1653	5.1						33
		P	200	44	1653	5.1	1040	990	1434	0.5	15.27	34
6	Jharkhand	C	20	14	712	10.9						41
		S	20	10	0	0.0						N.C.
		P	40	24	0	0.0	7830	4860	935	NR	-100.00	0
7	Madhya	C	60	46	1516	5.1						35
	Pradesh	S	60	18	N.P.							0
	*	P	120	64	1575	5.0	1116	996	1178	2.0	33.70	40
8	Punjab	C	40	3	0	0.0						0
	*	S	40	16	0	0.0						0
		P	80	19	1751	5.1	568	556	1482	NR	18.15	22
9	Rajasthan	C	90	25	0	0.0						0
		S	90	73	0	0.0						0
		P	180	98	1529	6.1	28998	27574	1581	0.0	-3.29	60
10	Uttar Pradesh	C	100	55	1210	9.4						70
	* @	S	100	15	N.P.							N.C.
		P	200	70	1210	9.4	27794	27494	1260	NR	-3.97	79
11	West Bengal	C	110	110	1274	4.0						42
		S	110	0	0	0.0						N.C.
		P	220	110	0	0.0	5030	4397	1077	0.9		0
For states covered			1420	642	1265	3.7	76212	70298	1385	0.2	-8.63	93

Note:· 1) ** = Combined estimates prepared due to low response

2) * = State sample estimates not prepared due to low response

3) @ = Both Central & State Estimates not prepared due to low response

4) Only combined estimates are prepared for Cotton crop

5) # =In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and consequent, categorization of crops, the data have been presented seasonwise instead of whole year.

6) N.P. = Not prepared, N.C.= Not Calculated, NR = Not reported

7) The CES figures though reported against pooled figures are based on the experiments analysed in totality by the State Govt.

8) NA = Not Applicable

9) NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

ESTIMATES OF YIELD RATE ACCORDING TO IRRIGATION AND SEED VARIETY UNDER ICS DURING 2019-20

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
PADDY																					
1	Andhra	C	Kh.	137	3639	5	2812	142	3610	3	2738	4	1982	7	0	140	3620	9	2443	149	3549
	Pradesh	S		136	3559	12	2518	148	3474	0	0	0	0	0	0	136	3559	12	2518	148	3474
		P		273	3599	17	2604	290	3541	3	0	4	0	7	0	276	3590	21	2486	297	3512
		C	Sum.	26	4102	0	0	26	4102	0	0	0	0	0	NC	26	4102	0	0	26	4102
		S		88	4261	0	0	88	4261	2	826	0	0	2	826	90	4184	0	0	90	4184
		P		114	8363	0	0	114	4225	2	826	0	NC	2	826	116	4166	0	NC	116	4166
2	Assam	C	Aut.	2	1680	2	136	4	908	8	2121	22	2090	30	2098	10	2033	24	1927	34	1958
		S		0	0	0	0	0	NC	4	2218	33	1735	37	1787	4	2218	33	1735	37	1787
		P		2	1680	2	136	4	NC	12	2153	55	1877	67	1926	14	2086	57	1815	71	1869
		C	Win.	0	0	18	2733	18	2733	0	0	100	2285	100	2285	0	0	118	2353	118	2353
		S		0	0	10	2301	10	2301	0	0	82	2199	82	2199	0	0	92	2210	92	2210
		P		0	NC	28	2578	28	2578	0	0	182	991	182	2246	0	NC	210	2140	210	2291
		C	Sum.	8	3185	4	3495	12	3289	6	3130	0	0	6	3130	14	3162	4	3495	18	3236
		S		14	2820	0	0	14	2820	6	3035	10	2875	16	2935	20	2884	10	2875	30	2881
		P		22	2952	4	3495	26	3036	12	3083	10	2875	22	2988	34	2998	14	3052	48	3014
3	Bihar	C	Bha.	0	0	4	1338	4	1338	12	1626	14	1898	26	1773	12	1626	18	1774	30	1715
		S		4	2688	0	0	4	2688	18	1850	12	1864	30	1856	22	2002	12	1864	34	1953
		P		4	2688	4	1338	8	2013	30	0	26	1883	56	1817	34	1869	30	1864	64	1842
		C	Agh.	69	2613	30	3078	99	2754	38	2295	28	1953	66	2150	107	2500	58	2018	165	2331
		S		56	2560	24	1772	80	2324	20	2307	38	3126	58	2843	76	2420	62	1989	138	2226
		P		125	2589	54	2498	179	2562	58	2299	66	2628	124	2474	183	2467	120	2003	303	2283
		C	Sum.	0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
		S		12	2539	0	0	12	2320	6	2185	0	0	6	2185	18	2421	0	0	18	2421
		P		12	2539	0	0	12	NC	6	2185	0	0	6	NC	18	2421	0	0	18	NC
4	Chhattis-	C	Kh.	40	2893	31	1910	71	2464	0	0	9	1454	9	1454	40	2893	40	1808	80	2350
	garh	S		40	2492	34	2140	74	2330	0	0	6	1359	6	1359	40	2492	40	2023	80	2257
		P		80	2692	65	2030	145	2396	0	0	15	1416	15	1416	80	2692	80	1915	160	2304
5	Gujarat	C	Kh.	35	2371	22	2060	57	2340	3	2540	0	0	3	2540	38	2385	22	2060	60	2265
		S		9	2486	11	1388	20	1882	21	1568	6	716	27	1379	30	1844	17	1151	47	1593
		P		44	2395	33	1836	77	2221	24	1690	6	716	30	1495	68	2146	39	1664	107	1970
6	Haryana	C	Kh.	90	3176	0	0	90	3176	0	0	0	0	0	0	90	3176	0	0	90	3176
		S		38	3151	0	0	38	3151	0	0	0	0	0	NC	38	3151	0	0	38	3151
		P		128	3169	0	0	128	3169	0	11219	0	0	0	NC	128	3169	0	0	128	3169
7	Himachal	C	Kh.	22	3209	11	1619	33	2679	14	2223	4	1507	18	1772	36	2826	15	1589	51	2462
	Pradesh	S		4	1398	2	2428	6	1741	13	1752	14	1526	27	1635	17	1669	16	1639	33	1654
		P		26	2931	13	1743	39	2535	27	1997	18	1522	45	1690	53	2455	31	1615	84	2145
8	Jammu	C	Kh.	18	1727	2	1540	20	1708	8	1790	2	1041	10	1640	26	1746	4	1290	30	1685
	&	S		12	3101	8	1764	20	2566	2	3134	0	0	2	3134	14	3106	8	1764	22	2618
	Kashmir	P		30	2276	10	1719	40	2137	10	2058	2	1041	12	1889	40	2222	12	1606	52	2080
9	Jhar-	C	Aut.	0	0	0	0	0	0	0	0	20	892	20	892	0	0	20	892	20	892
	khand	S		0	0	0	0	0	0	0	0	18	899	18	899	0	0	18	899	18	899
		P		0	0	0	0	0	0	0	0	38	896	38	896	0	0	38	896	38	896
9	Jhar-	C	Wint.	4	1489	31	2481	35	2368	5	1293	40	1925	45	1855	9	1380	71	2168	80	2079
	khand	S		0	0	10	1870	10	1870	0	0	44	1710	44	1710	0	0	54	1740	54	1740
		P		4	1489	41	2332	45	2257	5	1293	84	1813	89	1783	9	1380	125	1983	134	1942
10	Karna-	C	Kh.	58	3561	16	2401	74	3310	7	2154	13	2509	20	2385	65	3410	29	2449	94	3113
	taka	S		75	3194	35	2744	110	3051	4	2643	16	1690	20	1881	79	3166	51	2410	130	2869
		P		133	3354	51	2636	184	3155	11	2332	29	2057	40	2133	144	3276	80	5897	224	2972
		C	Sum.	4	2877	0	0	4	2877	3	2146	0	0	3	3550	7	2564	0	0	7	2564
		S		30	3228	2	3827	32	3265	0	0	0	0	0	3352	30	3228	2	3827	32	3265
		P		34	3187	2	2483	36	3222	3	3391	0	0	3	3391	37	3102	2	3827	39	3139
11	Kerala	C	Aut.	35	1915	50	1877	85	1892	2	2287	11	1979	13	2027	37	1935	61	1895	98	1910
		S		62	1835	14	1959	76	1858	5	1696	15	1691	20	1692	67	1825	29	1676	96	1780
		P		97	1864	64	1895	161	1876	7	1865	26	1813	33	1824	104	1864	90	1824	194	1846
		C	Win.	71	2444	3	2340	74	2440	4	2375	12	2722	16	2635	75	2441	15	2645	90	2475
		S		78	2538	6	1982	84	2499	3	2784	3	2021	6	2403	81	2548	9	1995	90	2492
		P		149	2494	9	2101	158	2471	7	2550	15	2582	22	2572	156	2496	24	2401	180	2484
		C	Sum.	29	2456	0	0	29	2456	0	0	2	195	2	195	29	2456	2	195	31	2310
		S		29	2497	0	0	29	2497	0	0	0	0	0	NC	29	2497	0	0	29	2497
		P		58	2477	0	2058	58	2477	0	NC	2	195	2	NC	58	2477	2	195	60	2400
12	Madhya	C	Kh.	34	3005	35	2314	69	2655	0	0	31	1740	31	1740	34	3005	66	2045	100	2371
	Pradesh	S		30	2690	27	1798	57	2267	0	0	29	1565	29	1565	30	2690	56	1678	86	2031
		P		64	2857	62	2090	126	2480	0	NC	60	1656	60	1656	64	2857	122	1876	186	2214

ANNEX- XV (Contd.....)

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
13	Mahara-	C	Kh.	14	1841	27	1407	41	1555	2	2063	8	1221	10	1389	16	1869	35	1365	51	1523
	shtra	S		8	2230	20	1429	28	1658	2	1203	8	667	10	774	10	2024	28	1211	38	1425
		P		22	1982	47	1417	69	1597	4	1633	16	944	20	1081	26	1929	63	1297	89	1481
14	Odisha	C	Aut.	15	1473	130	1534	145	1528	2	1855	70	1550	72	1558	17	1518	200	1540	217	1538
		S		15	2023	165	1522	180	1564	2	1367	23	1446	25	1440	17	1945	188	1354	205	1403
		P		30	1748	295	1528	325	1548	4	1611	93	1524	97	1528	34	1732	388	1450	422	1472
		C	Win.	64	2397	150	2140	214	2217	5	2670	41	2121	46	2180	69	2417	191	2136	260	2210
		S		70	741	173	1929	243	1587	0	0	11	1560	11	1560	70	741	184	1814	254	1519
		P		134	1532	323	2027	457	1882	5	2670	52	2002	57	2061	139	1573	375	1978	514	1869
		C	Sum.	11	2130	1	1756	12	2098	0	0	0	0	0	0	11	2130	1	1756	12	2098
		S		137	3001	0	0	137	3001	0	0	0	0	0	0	137	3001	0	0	137	3001
		P		148	2937	1	0	149	2929	0	0	0	0	0	0	148	2937	1	1589	149	2929
15	Punjab	C	Kh.	181	4697	1	3199	182	4689	5	4087	0	0	5	4087	186	4681	1	3199	187	4673
		S		119	4149	0	0	119	4149	3	5242	0	0	3	0	122	4176	0	0	122	4176
		P		300	4480	1	3199	301	4475	8	4520	0	0	8	2554	308	4481	1	3199	309	4477
16	Tamil	C	Phase	40	4512	0	0	40	0	0	0	0	0	0	0	40	4512	0	0	40	0
	Nadu	S	I	38	4337	0	0	38	0	0	0	0	0	0	0	38	4337	0	0	38	0
		P		78	0	0	0	78	0	0	0	0	0	0	0	78	0	0	0	78	0
		C	Phase	57	4393	1	1687	58	4346	0	0	0	0	0	NC	57	4393	1	1687	58	4346
		S	II	43	4856	4	2596	47	4664	1	1448	0	0	1	0	44	4779	4	2596	48	4597
		P		100	4592	5	2414	105	4488	1	3070	0	0	1	NC	101	4561	5	2414	106	4460
		C	Phase	17	4497	0	0	17	4497	0	0	0	0	0	0	17	4497	0	0	17	4497
		S	III	21	4066	0	0	21	4066	0	0	0	0	0	NC	21	4066	0	0	21	4066
		P		38	4258	0	0	38	4258	0	0	0	0	0	NC	38	4258	0	1	38	4258
17	Telangana	C	Kh.	58	3512	4	2917	62	3474	3	4333	0	0	3	4333	61	3553	4	2917	65	3514
		S		63	3678	4	2578	67	3612	2	2583	0	0	2	2583	65	3644	4	2578	69	3582
		P		121	3598	8	2747	129	3546	5	3633	0	NC	5	3633	126	3600	8	2747	134	3549
		C	Rabi	6	4280	0	0	6	4280	0	0	0	0	0	NC	6	4280	0	0	6	4280
		S		73	4849	0	0	73	4849	2	3646	0	0	2	3646	75	4816	0	0	75	4816
		P		79	3740	0	2900	79	4805	2	0	0	0	2	NC	81	3739	0	2900	81	4777
18	Uttar	C	Kh.	582	2777	28	3183	610	2796	47	2842	1	1115	48	2806	629	2782	29	3111	658	2796
	Pradesh	S		104	2804	8	1505	112	2711	9	2783	1	2130	10	2717	113	2803	9	1574	122	2712
		P		686	2781	36	2810	722	2783	56	2833	2	1622	58	2791	742	2785	38	2747	780	2783
19	Uttara-	C	Kh.	24	3607	0	0	24	3607	15	2365	8	1585	23	2093	39	3129	8	1585	47	2866
	khand	S		27	3318	0	0	27	3318	6	3244	17	991	23	1579	33	3304	17	991	50	2518
		P		51	3454	0	0	51	3454	21	2616	25	1181	46	1836	72	3209	25	1181	97	2687
20	West	C	Aut.	69	2745	21	1878	90	2542	6	2800	1	1379	7	2597	75	2749	22	1856	97	2546
	Bengal	S		4	2234	0	0	4	2234	0	0	0	0	0	0	4	2234	0	0	4	2234
		P		73	2717	21	1878	94	2529	6	2800	1	0	7	2597	79	2723	22	1856	101	2534
		C	Am.	88	3184	55	2436	143	2896	4	2736	13	1812	17	2030	92	3164	68	2317	160	2804
		S		9	3159	5	2818	14	3038	0	0	0	0	0	0	9	3159	5	2818	14	3038
		P		97	3181	60	2468	157	2909	4	2736	13	1812	17	2030	101	3164	73	2351	174	2823
		C	Sum.	10	3104	0	0	10	3104	0	0	0	0	0	NC	10	3104	0	0	10	3104
		S		0	0	0	0	0	NC	0	0	0	0	0	0	0	0	0	0	0	NC
		P		10	3104	0	0	10	NC	0	NC	0	0	0	NC	10	3104	0	0	10	NC
21	Pudu-	C	Kh.	10	2875	0	0	10	2875	0	0	0	0	0	0	10	2875	0	0	10	2875
	cherry	S		10	3138	0	0	10	3138	0	0	0	0	0	0	10	3138	0	0	10	3138
		P		20	3006	0	0	20	3006	0	0	0	0	0	0	20	3006	0	0	20	3006
		C	R-I	10	3162	0	0	10	3162	0	0	0	0	0	0	10	3162	0	0	10	3162
		S		10	2579	0	0	10	2579	0	0	0	0	0	0	10	2579	0	0	10	2579
		P		20	2658	0	0	20	2870	0	0	0	0	0	0	20	2870	0	0	20	2870
		C	R-II	10	3344	0	0	10	3344	0	0	0	0	0	0	10	3344	0	0	10	3344
		S		10	3139	0	0	10	3139	0	0	0	0	0	0	10	3139	0	0	10	3139
		P		20	3242	0	0	20	3242	0	0	0	0	0	0	20	3242	0	2873	20	3242
For States Covered		C		1884	3141	678	2102	2562	NC	202	2397	358	1778	653	NC	2083	3074	1132	1997	3215	NC
		S		1342	3085	578	1839	1912	NC	127	2185	404	1761	513	NC	1469	3003	982	1716	2451	NC
		P		3226	3118	1248	1994	4474	NC	326	2337	840	1605	1166	NC	3552	3044	2088	1890	5640	NC
JOWAR																					
1	Karna-	C	Kh.	6	3067	6	1293	12	2180	0	0	2	505	2	505	6	3067	8	1096	14	1941
	taka	S		13	2034	17	1549	30	1759	0	0	7	784	7	784	13	2034	24	1326	37	1575
		P		19	2360	23	1482	42	1879	0	0	9	722	9	722	19	2360	32	1269	51	1675
		C	Rabi	11	1418	20	933	31	1105	3	890	20	782	23	796	14	1305	40	857	54	973
		S		2	1635	36	1002	38	1035	6	1268	11	527	17	788	8	1360	47	890	55	959
		P		13	1452	56	977	69	1066	9	0	31	691	40	793	22	1325	87	875	109	966
2	Madhya	C	Kh.	0	0	26	1066	26	1066	0	0	66	1126	66	1126	0	0	92	1109	92	1109
	Pradesh	S		0	0	24	981	24	981	0	0	46	947	46	947	0	0	70	959	70	959
		P		0	0	50	1025	50	1025	0	0	112	1053	112	1053	0	0	162	1044	162	1044

ANNEX- XV (Contd.....)

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
3	Mahara-	C	Kh.	2	47	28	730	30	684	0	0	8	538	8	538	2	47	36	687	38	654
	shtra	S		0	0	42	549	42	549	0	0	12	331	12	1111	0	0	54	500	54	500
		P		2	47	70	621	72	605	0	0	20	414	20	1000	2	47	90	575	92	564
		C	Rabi	9	714	30	609	39	634	4	713	19	800	23	6396	13	714	49	683	62	690
		S		17	778	23	775	40	777	11	1190	35	741	46	849	28	940	58	755	86	815
		P		26	756	53	0	79	706	15	1063	54	0	69	2698	41	868	107	0	148	763
4	Raja-	C	Kh.	0	0	14	625	14	625	1	0	40	690	41	673	1	0	54	673	55	661
	sthan	S		0	0	12	647	12	647	0	0	30	304	30	304	0	0	42	402	42	402
		P		0	0	26	635	26	635	1	0	70	524	71	517	1	0	96	554	97	549
5	Tamil	C	**	8	1247	26	1310	34	1295	0	0	6	535	6	535	8	1247	32	1165	40	1181
	Nadu	S		2	386	21	959	23	910	0	0	6	827	6	827	2	386	27	930	29	892
		P		10	1075	47	1153	57	1139	0	0	12	681	12	681	10	1075	59	1057	69	1060
6	Telangana	C	Kh.	0	0	3	2065	3	2065	0	0	35	976	35	976	0	0	38	1062	38	1062
		S		0	0	8	1908	8	1908	0	0	28	1052	28	1052	0	0	36	1242	36	1242
		P		0	NC	11	1951	11	1951	0	0	63	1010	63	1010	0	0	74	1149	74	1149
		C	Rabi	0	0	0	0	0	NC	4	769	16	1167	20	1088	4	769	16	1167	20	1088
		S		8	1850	8	1354	16	1602	13	1972	5	1074	18	1722	21	1925	13	1246	34	1666
		P		8	1148	15	1394	16	NC	17	1340	21	1145	38	1388	25	1303	29	1212	54	1241
7	Uttar	C	Kh.	0	0	1	2816	1	2816	0	0	39	1436	39	1436	0	0	40	1470	40	1470
	Pradesh	S		0	0	0	0	0	0	0	0	12	849	12	849	0	0	12	849	12	849
		P		0	0	1	2816	1	2816	0	0	51	1297	51	1297	0	0	52	1327	52	1327
For States		C		36	6494	154	11446	190	NC	12	2372	251	8554	263	14068	48	7149	405	9969	453	1002
Covered		S		42	6684	191	9724	233	10167	30	4430	192	7435	222	9232	72	6645	383	9099	455	944
		P		78	NC	352	12054	423	NC	42	2403	443	7537	485	11158	120	6978	788	9062	908	973
BAJRA																					
1	Andhra	C	Kh.	0	0	20	2535	20	2535	2	851	12	1304	14	1239	2	851	32	2073	34	2001
	Pradesh	S		2	2122	12	1780	14	1829	0	0	22	1044	22	1044	2	2122	34	1304	36	1349
		P		2	2122	32	2252	34	2244	2	0	34	1135	36	1120	4	1486	66	1677	70	1666
2	Gujarat	C	Kh.	27	2126	64	1611	91	1764	0	0	0	0	0	NC	27	2126	64	1611	91	1764
		S		22	1744	40	2062	62	1949	0	0	1	382	1	382	22	1744	41	2021	63	1924
		P		49	1954	104	1784	153	1839	0	NC	1	382	1	NC	49	1954	105	1771	154	1829
3	Haryana	C	Kh.	73	1917	25	1850	98	1900	4	1974	0	0	4	1974	77	1920	25	1850	102	1903
		S		23	1836	8	876	31	1588	0	0	0	0	0	0	23	1836	8	876	31	1588
		P		96	1897	33	1614	129	1825	4	1974	0	0	4	1974	100	1900	33	1614	133	1829
4	Karna-	C	Kh.	4	1378	17	1159	21	1201	0	0	0	0	0	NC	4	1378	17	1159	21	1201
	taka	S		4	666	32	1018	36	979	2	2511	4	707	6	1308	6	1281	36	983	42	1026
		P		8	2044	49	1067	57	1061	2	2511	4	707	6	NC	10	1320	53	1039	63	1084
5	Mahara-	C	Kh.	2	1476	8	408	10	622	0	0	4	2439	4	2439	2	1476	12	1085	14	1141
	shtra	S		2	3712	10	989	12	1443	2	2228	16	572	18	756	4	2970	26	733	30	1031
		P		4	2594	18	731	22	1070	2	2228	20	946	22	1062	6	2472	38	844	44	1066
6	Raja-	C	Kh.	3	1352	34	1682	37	1655	0	0	20	1595	20	1595	3	1352	54	1649	57	1634
	sthan	S		5	1677	27	1215	32	1287	1	1667	11	620	12	707	6	1676	38	1043	44	1129
		P		8	1555	61	1475	69	1484	1	1667	31	1249	32	1262	9	1568	92	1399	101	1414
7	Tamil	C	**	6	5007	28	3819	34	4029	2	2782	4	3940	6	3554	8	4451	32	3834	40	3958
	Nadu	S		6	3677	21	2042	27	2405	0	0	2	1394	2	1394	6	3677	23	1985	29	2335
		P		12	4342	49	3057	61	3310	2	0	6	3091	8	3014	14	4119	55	3061	69	3276
8	Uttar	C	Kh.	54	2476	67	2344	121	2403	3	1451	13	1337	16	1358	57	2422	80	2180	137	2281
	Pradesh	S		12	2752	30	2034	42	2239	0	0	1	1738	1	1738	12	2752	31	2024	43	2227
		P		66	2526	97	2248	163	2361	3	1451	14	1366	17	1381	69	2479	111	2136	180	2268
For States		C		169	2211	263	2069	432	2124	11	1774	53	1706	64	NC	180	2184	316	2008	496	2072
Covered		S		76	2084	180	1611	256	1752	5	2229	57	819	62	932	81	2093	237	1420	318	1592
		P		245	2171	443	1883	688	1986	16	1916	110	1246	126	NC	261	2156	553	1756	814	1884
MAIZE																					
1	Bihar	C	Kh.	4	2223	4	2395	8	2309	7	2231	2	3458	9	2503	11	2228	6	2750	17	2412
		S		2	1226	0	0	2	1226	4	1816	8	2084	12	1995	6	1619	8	2084	14	1885
		P		6	1891	4	0	10	2092	11	2080	10	2359	21	2213	17	2013	14	2369	31	2174
2	Chattis-	C	Kh.	0	0	22	4962	22	4962	0	0	18	2342	18	2342	0	0	40	3783	40	3783
	garh	S		0	0	18	3944	18	3944	0	0	12	1917	12	1917	0	0	30	3133	30	3133
		P		0	NC	40	4504	40	4504	0	0	30	2172	30	2172	0	0	70	3505	70	3505
3	Gujarat	C	Kh.	0	0	14	1546	14	1546	0	0	12	1433	12	1433	0	0	26	1494	26	1494
		S		0	0	6	1787	6	1787	0	0	22	1558	22	1558	0	0	28	1607	28	1607
		P		0	NC	20	1618	20	1618	0	0	34	1514	34	1514	0	NC	54	1553	54	1553
4	Haryana	C	Kh.	10	3773	3	4580	13	3959	1	1914	2	2954	3	2607	11	3604	5	3929	16	3705
		S		8	3935	0	0	8	3935	0	0	0	0	0	NC	8	3935	0	0	8	3935
		P		18	3845	3	4580	21	3950	1	1914	2	2954	3	NC	19	3743	5	3929	24	3782
5	Himachal	C	Kh.	3	4728	17	3260	20	3480	6	1577	49	2829	55	2692	9	2627	66	2940	75	2902
	Pradesh	S		0	0	12	3267	12	3267	4	2426	54	2146	58	2165	4	2426	66	2350	70	2354
		P		3	4728	29	3263	32	3400	10	1917	103	2471	113	2422	13	2566	132	2645	145	2638

ANNEX- XV (Contd.....)

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
6	Jammu &	C	Kh.	1	3566	29	2247	30	2291	0	0	36	1823	36	1823	1	3566	65	2012	66	2035
	Kashmir	S		1	2163	3	1980	4	2026	0	0	8	2083	8	2083	1	2163	11	2055	12	2064
		P		2	5729	32	2222	34	2260	0	NC	44	1870	44	1870	2	2865	76	2018	78	2040
7	Jhar-	C	Kh.	1	5337	6	2341	7	7677	0	0	13	3024	13	3024	1	5337	19	2808	20	2935
	khand	S		0	0	0	0	0	0	0	0	12	2277	12	2277	0	0	12	2277	12	2277
		P		1	0	6	2341	7	7677	0	0	25	2665	25	2665	1	0	31	2603	32	2688
8	Karna-	C	Kh.	4	3363	18	3118	22	3163	0	0	0	0	0	NC	4	3363	18	3118	22	3163
	taka	S		10	3771	28	3173	38	3330	0	0	6	2465	6	2465	10	3771	34	3131	44	3276
		P		14	3654	46	3151	60	3269	0	0	6	2465	6	NC	14	3654	52	3126	66	3238
9	Madhya	C	Kh.	0	0	32	2087	32	2087	0	0	48	1173	48	1173	0	0	80	1539	80	1539
	Pradesh	S		0	0	25	2173	25	2173	0	0	41	1219	41	1219	0	0	66	1581	66	1581
		P		0	0	57	2125	57	2125	0	NC	89	1194	89	1194	0	NC	146	1558	146	1558
10	Odisha	C	Kh.	0	0	16	2630	16	2630	0	0	24	1828	24	1828	0	0	40	2149	40	2149
		S		0	0	19	2679	19	2679	0	0	21	1679	21	1679	0	0	40	2154	40	2154
		P		0	0	35	2656	35	2656	0	0	45	1759	45	1759	0	NC	80	2151	80	2151
11	Punjab	C	Kh.	23	4543	9	2954	32	4096	2	1938	0	0	2	1938	25	4335	9	2954	34	3969
		S		22	3434	0	0	22	3434	6	2599	4	1782	10	2272	28	3255	4	1782	32	3071
		P		45	4001	9	2954	54	3826	8	2434	4	1782	12	2217	53	3764	13	2593	66	3534
12	Raja-	C	Kh.	0	0	18	2531	18	2531	1	0	28	1328	29	1283	1	0	46	1799	47	1761
d	sthan	S		0	0	20	1477	20	1477	0	0	20	1089	20	1089	0	0	40	1283	40	1283
		P		0	0	38	1976	38	1976	1	0	48	1229	49	1204	1	0	86	1559	87	1541
13	Tamil	C	Kh.	14	9590	24	8293	38	8771	2	10353	0	0	2	0	16	9685	24	8293	40	8850
	Nadu	S		16	8361	18	8382	34	8372	0	0	0	0	0	0	16	8361	18	8382	34	8372
		P		30	8934	42	8331	72	8582	2	0	0	0	2	0	32	9023	42	8331	74	8630
14	Telanagana	C	Kh.	19	5541	29	4788	48	5086	0	0	2	1785	2	1785	19	5541	31	4594	50	4954
		S		19	6203	29	4354	48	5086	0	0	0	0	0	NC	19	6203	29	4354	48	5086
		P		38	5872	58	4571	96	5086	0	0	2	1785	2	NC	38	5872	60	4478	98	5018
15	Uttar	C	Kh.	78	3238	17	2070	95	3029	7	3765	58	1469	65	1716	85	3281	75	1605	160	2496
	Pradesh	S		18	3049	8	2057	26	2744	4	2352	12	993	16	1333	22	2922	20	1419	42	2206
		P		96	3202	25	2066	121	2968	11	3251	70	1387	81	1641	107	3208	95	2399	202	2436
For States		C		138	4163	229	3319	367	3636	26	2997	290	1856	316	1950	164	3978	519	2502	683	2856
Covered		S		77	4390	157	3298	234	3657	18	2332	220	1703	238	1751	95	4000	377	2375	472	2702
		P		215	4244	386	3311	601	3702	44	2725	510	1790	554	NC	259	3986	896	2448	1155	2793
RAGI																					
1	Karna-	C	Kh.	2	2397	13	1696	15	1789	1	4378	8	1875	9	2153	3	3057	21	1764	24	1926
	taka	S		4	1927	24	1232	28	1331	0	0	6	1997	6	1997	4	1927	30	1385	34	1449
		P		6	2084	37	1395	43	1491	1	4378	14	1927	15	2091	7	2411	51	1541	58	1646
2	Uttra-	C		0	0	0	0	0	0	0	0	39	1437	39	1437	0	0	39	1437	39	1437
	khand	S		0	0	0	0	0	0	0	0	40	1584	40	1584	0	0	40	1584	40	1584
		P		0	0	0	0	0	0	0	0	79	1512	79	1512	0	0	79	1512	79	1512
For States		C		2	2397	13	2065	15	4737	1	9171	47	2176	48	0	3	0	60	0	63	0
Covered		S		4	1927	24	1553	28	2691	0	0	46	2449	46	0	4	0	70	0	74	0
		P		6	2084	37	1733	43	3405	1	16877	93	2311	94	0	7	0	130	0	137	0
GROUNDNUT																					
1	Andhra	C	Kh.	5	3076	90	1330	95	1422	0	0	9	1000	9	1000	5	3076	99	1300	104	1386
	Pradesh	S		0	0	105	1423	105	1423	0	0	1	818	1	818	0	0	106	1417	106	1417
		P		5	3076	195	1380	200	1423	0	0	10	982	10	982	5	3076	205	1361	210	1402
2	Gujarat	C	Kh.	66	3180	43	2711	109	2995	11	2527	6	2609	17	2556	77	3087	49	2699	126	2936
		S		8	1902	9	1759	17	1826	22	3078	19	3540	41	3292	30	2764	28	2968	58	2862
		P		74	3042	52	2007	126	2837	33	2880	25	3316	58	3076	107	2740	77	2797	184	2913
3	Karna-	C	Kh.	2	2042	20	997	22	1453	4	1259	8	809	12	709	6	1520	28	944	34	1281
	taka	S		10	713	52	863	62	839	0	0	1	1466	1	1397	10	713	53	874	63	849
		P		12	922	72	900	84	9740	4	1259	9	993	13	1053	16	988	81	898	97	913
4	Madhya	C	Kh.	2	2059	8	980	10	1196	2	1068	28	934	30	943	4	1563	36	945	40	1006
	Pradesh	S		0	0	6	1406	6	1406	0	0	20	1360	20	1360	0	0	26	1371	26	1371
		P		2	0	14	1163	16	1275	2	1068	48	1112	50	1110	4	1563	62	1123	66	1150
5	Mahara-	C	Kh.	3	310	14	770	17	689	0	0	0	0	0	NC	3	310	14	770	17	689
	shtra	S		3	1214	5	839	8	980	6	833	6	686	12	759	9	960	11	755	20	847
		P		6	762	19	788	25	782	6	0	6	686	12	NC	12	798	25	764	37	775
6	Raja-	C	Kh.	22	2123	0	0	22	2123	6	2565	4	2538	10	2554	28	2218	4	2538	32	2258
	sthan	S		4	1720	0	0	4	1720	7	1739	9	1246	16	1461	11	1732	9	1246	20	1513
		P		26	2061	0	NC	26	2061	13	2120	13	1644	26	1882	39	2081	13	1644	52	1971
7	Tamil	C	**	6	2796	30	2972	36	2942	0	0	0	0	0	NC	6	2796	30	2972	36	2942
	Nadu	S		8	2639	21	2104	29	2252	0	0	2	3680	2	3680	8	2639	23	2241	31	2344
		P		14	2706	51	2614	65	2634	0	0	2	3680	2	NC	14	2706	53	2655	67	2665
8	Telangana	C	Kh.	27	2971	8	3118	35	3005	4	6074	1	2818	5	5423	31	3372	9	3085	40	3307
		S		25	2498	8	1751	33	2317	6	3952	1	2621	7	3762	31	2779	9	1848	40	2570
		P		52	2026	16	2435	68	2671	10	0	2	2720	12	4454	62	2026	18	2466	80	2938

ANNEX- XV (Contd.....)

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
For States Coverd		C		106	2810	205	1776	311	2154	23	2189	55	1226	78	NC	129	2699	260	1659	389	1913
		S		33	1636	198	1348	231	1389	35	2425	58	2059	93	2196	68	2042	256	1509	324	1621
		P		139	2531	403	1566	542	1828	58	2332	113	1654	171	NC	197	2472	516	1585	713	1780
SUGARCANE																					
1	Andhra	C	Kh.	31	95994	0	0	31	95994	26	77194	0	0	26	77194	57	87419	0	0	57	87419
	Pradesh	S		43	90118	2	72600	45	89339	3	90133	0	0	3	90133	46	90119	2	72600	48	89389
		P		74	92579	2	72600	76	92054	29	78532	0	NC	29	78532	103	88624	2	72600	105	88319
2	Assam	C	Kh.	0	0	0	0	0	NC	0	0	4	43255	4	43255	0	0	4	43255	4	43255
		S		0	0	0	0	0	0	0	0	16	28916	16	28916	0	0	16	28916	16	28916
		P		0	0	0	NC	0	NC	0	0	20	31784	20	31784	0	0	20	31784	20	31784
3	Bihar	C	Kh.	4	69940	0	0	4	69940	7	20103	22	69655	29	57694	11	38226	22	69655	33	59178
		S		8	54020	0	0	5	56960	6	62133	2	75410	8	65452	13	55151	6	62133	19	57356
		P		12	59327	0	NC	9	62729	13	39502	24	70134	37	59371	24	47393	28	68043	52	58512
4	Haryana	C	Kh.	33	74239	1	92000	34	74762	0	0	0	0	0	NC	33	74239	1	92000	34	74762
		S		20	73417	0	0	20	73417	0	0	0	0	0	0	20	73417	0	0	20	73417
		P		53	73929	1	92000	54	74264	0	NC	0	0	0	NC	53	73929	1	92000	54	74264
5	Karna-	C	Kh.	18	90901	0	0	18	90901	1	16080	0	0	1	16080	19	86963	0	0	19	86963
	taka	S		23	93035	1	165600	24	96059	0	0	7	43731	7	0	23	93035	8	58965	31	84243
		P		41	92098	1	0	42	89905	1	16080	7	0	8	2010	42	90288	8	58965	50	85276
6	Mahara-	C	Kh.	18	90977	0	0	18	90977	1	12000	0	0	1	12000	19	86820	0	0	19	86820
	shtra	S		21	88563	2	52620	23	85437	2	98600	2	140400	4	119500	23	89435	4	96510	27	90483
		P		39	89677	2	52620	41	87869	3	69733	2	140400	5	98000	42	88252	4	96510	46	88970
7	Punjab	C	Kh.	47	81578	0	0	47	81578	5	68080	0	0	5	68080	52	80280	0	0	52	80280
		S		31	83031	1	76000	32	82811	0	0	0	0	0	0	31	83031	1	76000	32	82811
		P		78	82155	1	0	79	82077	5	68080	0	0	5	68080	83	81307	1	0	84	81244
8	Raja-	C	Kh.	11	61475	0	0	11	61475	14	68874	0	0	14	68874	25	65619	0	0	25	65619
	sthan	S		15	78144	0	0	15	78144	10	66232	0	0	10	66232	25	73379	0	0	25	73379
		P		26	71092	0	NC	26	71092	24	67773	0	0	24	67773	50	69499	0	NC	50	69499
9	Tamil	C	**	27	106579	1	206800	28	110159	0	0	0	0	0	0	27	106579	1	206800	28	110159
	Nadu	S		28	94546	2	102500	30	95077	0	0	0	0	0	0	28	94546	2	102500	30	95077
		P		55	100453	3	0	58	102358	0	0	0	0	0	0	55	100453	3	0	58	102358
10	Uttar	C	Kh.	104	90278	3	94133	107	90386	74	80631	11	66815	85	78843	178	86268	14	72669	192	85276
	Pradesh	S		14	94400	0	0	14	0	0	0	0	0	0	0	14	94400	0	0	14	0
		P		118	90767	3	94133	121	79928	74	80631	11	0	85	78843	192	86860	14	0	206	79480
11	Uttara-	C	Kh.	26	72132	1	44000	27	71090	1	120600	0	0	1	120600	27	73927	1	44000	28	72858
	khand	S		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		P		26	72132	1	0	27	71090	1	120600	0	0	1	120600	27	73927	1	0	28	72858
For States Covered		C		319	86619	6	104200	325	NC	129	74169	37	65956	166	NC	448	83034	43	71293	491	82006
		S		203	86159	8	87130	208	80376	21	71558	27	44459	48	49937	223	84775	39	54344	262	75201
		P		522	86440	14	94446	533	NC	150	73803	64	56887	214	NC	671	83613	82	63232	753	79638
WHEAT																					
1	Assam	C	Rabi	0	0	0	0	0	0	0	0	0	0	0	NC	0	0	0	0	0	NC
		S		0	0	0	0	0	NC	0	0	2	1225	2	1225	0	0	2	1225	2	1225
		P		0	0	0	NC	0	NC	0	0	2	1225	2	NC	0	0	2	1225	2	NC
2	Bihar	C	Rabi	2	1736	0	0	2	1736	2	3676	0	0	2	3676	4	2706	0	0	4	2706
		S		41	2663	1	2200	42	2652	35	2404	3	808	38	2278	76	2544	4	1186	80	2476
		P		43	2620	1	2200	44	2610	37	2472	3	808	40	2348	80	2552	4	1186	84	2487
3	Chhattis-	C	Rabi	0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
	garh	S		0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
		P		0	NC	0	NC	0	NC	0	0	0	NC	0	NC	0	NC	0	NC	0	NC
4	Gujarat	C	Rabi	29	3452	4	1000	33	3154	5	3884	2	632	7	2955	34	3515	6	877	40	3120
		S		26	3240	0	0	26	3240	14	2962	0	0	14	2962	40	3142	0	0	40	3142
		P		55	3351	4	1000	59	3192	19	3205	2	632	21	2960	74	3314	6	877	80	3131
5	Haryana	C	Rabi	1	4839	0	0	1	4839	0	0	0	0	0	NC	1	4881	0	0	1	4881
		S		85	4858	0	0	85	4858	1	4440	0	0	1	0	86	4853	0	0	86	4853
		P		86	4858	0	0	86	4858	1	4440	0	0	1	NC	87	4853	0	0	87	4853
6	Himachal	C	Rabi	0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
	Pradesh	S		0	0	2	2391	2	2391	0	0	12	2433	12	2433	0	0	14	2427	14	2427
		P		0	NC	2	2391	2	NC	0	NC	12	2433	12	NC	0	NC	14	2427	14	NC
7	Jammu	C	Rabi	0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
	&	S		0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
	Kashmir	P		0	NC	0	NC	0	NC	0	NC	0	NC	0	NC	0	NC	0	NC	0	NC
8	Jhar-	C	Rabi	2	1852	0	0	2	1852	0	0	0	0	0	NC	2	1852	0	0	2	1852
	khand	S		4	641	0	0	4	0	4	1288	24	2219	28	2086	8	964	24	2219	32	1905
		P		6	1044	0	0	6	617	4	1288	24	2219	28	NC	10	1142	24	2219	34	1902
9	Karna-	C	Rabi	15	1581	6	1025	21	1422	7	1512	6	1197	13	1367	22	1559	12	1111	34	1401
	taka	S		17	1512	8	1298	25	1444	7	1730	8	426	15	1035	24	1576	16	862	40	1290
		P		32	1544	14	1181	46	1434	14	1621	14	756	28	1189	46	1568	28	969	74	1341

ANNEX- XV (Contd.....)

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
10	Madhya	C	Rabi	22	3939	0	0	22	3939	5	3056	10	1669	15	2132	27	3776	10	1669	37	3206
	Pradesh	S		63	3715	5	2800	68	3648	44	3245	46	2459	90	2843	107	3522	51	2492	158	3189
		P		85	3773	5	2800	90	3719	49	3226	56	2318	105	2741	134	3573	61	2357	195	3193
11	Mahara-	C	Rabi	33	1850	5	492	38	1671	1	1405	0	0	1	1405	34	1837	5	492	39	1664
	shtra	S		37	1629	2	903	39	1592	17	1464	2	1047	19	1420	54	1570	4	975	58	1529
		P		70	1733	7	609	77	1631	18	1461	2	1047	20	1419	88	1673	9	707	97	1584
12	Punjab	C	Rabi	4	4114	0	0	4	4114	0	0	0	0	0	NC	4	4114	0	0	4	4114
		S		96	5015	0	0	96	5015	9	4610	0	0	9	4610	105	4681	0	0	105	4681
		P		100	4979	0	NC	100	4979	9	4610	0	NC	9	NC	109	4660	0	NC	109	4660
13	Raja-	C	Rabi	4	2528	1	507	5	2124	2	3302	0	0	2	3302	6	2786	1	507	7	2461
	sthan	S		48	4143	0	0	48	4143	22	3037	0	0	22	3037	70	3795	0	0	70	3795
		P		52	4019	1	0	53	3952	24	3059	0	NC	24	3059	76	3716	1	507	77	3674
14	Uttar	C	Rabi	26	4019	0	0	26	4019	6	4192	0	0	6	4192	32	4052	0	0	32	4052
	Pradesh	S		71	3446	0	0	71	3446	6	3158	0	0	6	3158	77	3424	0	0	77	3424
		P		97	3600	0	NC	97	3600	12	3675	0	NC	12	3675	109	3608	0	NC	109	3608
15	Uttara-	C	Rabi	0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
	khand	S		19	3435	0	0	19	3435	11	2440	16	1737	27	2023	30	3070	16	0	46	2002
		P		19	3435	0	NC	19	NC	11	2440	16	1737	27	NC	30	3070	16	0	46	NC
16	West	C	Rabi	0	0	0	0	0	NC	0	0	0	0	0	0	0	0	0	0	0	NC
	Bengal	S		0	0	0	0	0	NC	0	0	0	0	0	0	0	0	0	0	0	NC
		P		0	NC	0	NC	0	NC	0	0	0	0	0	0	0	NC	0	NC	0	NC
For States Covered		C	Rabi	138	3004	16	820	154	NC	28	3064	18	1397	46	NC	166	3015	34	1125	200	NC
		S		507	3785	18	1843	525	NC	170	2759	113	2068	283	NC	677	3481	131	1826	808	NC
		P		645	3618	34	1361	679	NC	198	2802	131	1976	329	NC	843	3389	165	1682	1008	NC
BARLEY																					
1	Haryana	C	Rabi	0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
		S		16	4250	0	0	16	4250	0	0	0	0	0	0	16	4250	0	0	16	4250
		P		16	4250	0	NC	16	NC	0	NC	0	0	0	NC	16	4250	0	NC	16	NC
2	Himachal	C	Rabi	0	0	0	0	0	0	0	0	0	0	0	NC	0	0	0	0	0	NC
	Pradesh	S		0	0	0	0	0	NC	0	0	6	1813	6	1813	0	0	6	1813	6	1813
		P		0	0	0	NC	0	NC	0	NC	6	1813	6	NC	0	NC	6	1813	6	NC
3	Punjab	C	Rabi	26	4044	0	0	26	4044	4	3696	0	0	4	3696	30	3998	0	0	30	3998
		S		26	4301	0	0	26	4301	0	0	0	0	0	0	26	4301	0	0	26	4301
		P		52	4173	0	0	52	4173	4	3696	0	0	4	3696	56	4139	0	0	56	4139
4	Raja-	C	Rabi	8	3426	0	0	8	3426	3	2968	0	0	3	2968	11	3301	0	0	11	3301
	sthan	S		16	4050	1	1137	17	3879	39	3476	0	0	39	3476	55	3642	1	1137	56	3597
		P		24	3842	1	0	25	3734	42	3439	0	0	42	3439	66	3585	1	0	67	3549
For States Covered		C		34	3899	0	0	34	NC	7	3384	0	NC	7	NC	41	3811	0	NC	41	NC
		S		58	4218	1	0	59	NC	39	3476	6	1813	45	3254	97	3919	7	1716	104	3771
		P		92	4100	1	0	93	NC	46	3462	6	1813	52	NC	138	3887	7	1716	145	NC
GRAM																					
1	Andhra	C	Rabi	6	1413	49	1233	55	1253	0	0	2	1236	2	1236	6	1413	51	1233	57	1252
	Pradesh	S		0	0	58	1287	58	1287	0	0	0	0	0	0	0	0	58	1287	58	1287
		P		6	1413	107	1262	113	1270	0	0	2	0	2	0	6	1413	109	1262	115	1270
2	Bihar	C	Rabi	2	424	0	0	2	424	0	0	0	0	0	NC	2	424	0	0	2	424
		S		0	0	0	0	0	NC	2	625	17	842	19	819	2	625	17	842	19	819
		P		2	424	0	NC	2	NC	2	625	17	842	19	NC	4	524	17	842	21	782
3	Chhattis-	C	Rabi	2	87	0	0	2	87	0	0	0	0	0	NC	2	87	0	0	2	87
	garh	S		0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
		P		2	87	0	NC	2	NC	0	NC	0	NC	0	NC	2	87	0	NC	2	NC
4	Gujarat	C	Rabi	3	1650	8	1262	11	1368	4	1338	0	0	4	1338	7	1471	8	1262	15	1360
		S		2	1266	0	0	2	0	0	0	0	0	0	NC	2	1266	0	0	2	1266
		P		5	1496	8	1262	13	1157	4	1338	0	NC	4	NC	9	1426	8	1262	17	1349
5	Haryana	C	Rabi	0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
		S		16	1539	6	1232	22	1455	2	1003	0	0	2	1003	18	1480	6	1232	24	1418
		P		16	1539	6	1232	22	NC	2	1003	0	NC	2	NC	18	1480	6	1232	24	NC
6	Jhar-	C	Rabi	0	0	0	0	0	0	0	0	2	223	2	223	0	0	2	223	2	223
	khand	S		2	228	0	0	2	0	0	0	6	1398	6	1398	2	228	6	1398	8	1106
		P		2	0	0	0	2	0	0	NC	8	1104	8	1104	2	228	8	1104	10	929
7	Karna-	C	Rabi	3	745	6	726	9	733	4	653	16	629	20	634	7	693	22	656	29	665
	taka	S		7	845	22	882	29	873	1	631	10	664	11	661	8	819	32	813	40	814
		P		10	815	28	848	38	840	5	649	26	643	31	643	15	760	54	749	69	751
8	Madhya	C	Rabi	8	1801	1	2307	9	1857	14	1209	15	957	29	1079	22	1424	16	1042	38	1263
	Pradesh	S		16	1636	4	1219	20	1553	18	1494	40	1212	58	1300	34	1561	44	1213	78	1365
		P		24	1691	5	1436	29	1647	32	1369	55	1143	87	1226	56	1507	60	1167	116	1331
9	Mahara-	C	Rabi	17	1365	23	1329	40	1344	4	530	2	531	6	530	21	1206	25	1265	46	1238
	shtra	S		22	1319	10	793	32	1155	6	1147	8	834	14	968	28	1283	18	811	46	1098
		P		39	1339	33	1166	72	1260	10	900	10	773	20	837	49	1250	43	1075	92	1168

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
10	Punjab	C	Rabi	0	0	0	0	0	NC	0	0	0	0	0	NC	0	0	0	0	0	NC
		S		0	0	0	0	0	NC	0	0	0	0	0	0	0	0	0	0	0	NC
		P		0	NC	0	NC	0	NC	0	NC	0	NC	0	NC	0	NC	0	NC	0	NC
11	Raja-	C	Rabi	3	1456	3	787	6	1121	4	876	19	1038	23	1010	7	1124	22	1004	29	1033
	sthan	S		9	1446	0	0	9	1446	23	1492	32	1241	55	1346	32	1479	32	1241	64	1360
		P		12	1449	3	787	15	1316	27	1401	51	1165	78	1247	39	1415	54	1144	93	1258
12	Uttar	C	Rabi	0	0	2	911	2	911	0	0	0	0	0	NC	0	0	2	911	2	911
	Pradesh	S		0	0	4	990	4	990	0	0	0	0	0	NC	0	0	4	990	4	990
		P		0	NC	6	964	6	964	0	NC	0	NC	0	NC	0	NC	6	964	6	964
For States		C	Rabi	44	1333	92	1217	136	NC	30	1017	56	860	86	NC	74	1205	148	1081	222	1123
Covered		S		74	1375	104	1136	178	NC	52	1384	113	1099	165	NC	126	1379	217	1117	343	1213
		P		118	1359	196	1174	314	NC	82	1250	169	1020	251	NC	200	1314	365	1103	565	1178
RAPE & MUSTARD																					
1	Assam	C	Rabi	0	0	0	0	0	0	0	0	50	612	50	612	0	0	50	612	50	612
		S		0	0	0	0	0	0	2	698	31	675	33	677	2	698	31	675	33	677
		P		0	0	0	0	0	0	2	698	81	636	83	638	2	698	81	636	83	638
2	Bihar	C	Rabi	7	817	0	0	7	817	13	1140	3	810	16	1078	20	1027	3	810	23	999
		S		3	584	0	0	3	584	18	1096	0	0	18	1096	21	1023	0	0	21	1023
		P		10	747	0	0	10	747	31	1115	3	810	34	1088	41	1025	3	810	44	1010
3	Chattis-	C	Rabi	0	0	0	0	0	0	0	0	14	364	14	364	0	0	14	364	14	364
	garh	S		0	0	0	0	0	0	0	0	12	312	12	312	0	0	12	312	12	312
		P		0	0	0	0	0	0	0	NC	26	340	26	340	0	NC	26	340	26	340
4	Gujarat	C	Rabi	23	2036	2	1600	25	2001	0	0	0	0	0	NC	23	2036	2	1600	25	2001
		S		15	1907	0	0	15	1907	2	1700	0	0	2	1700	17	1882	0	0	17	1882
		P		38	1985	2	0	40	1966	2	1700	0	0	2	NC	40	1971	2	0	42	1953
5	Haryana	C	Rabi	2	2292	0	0	2	2292	0	0	0	0	0	NC	2	2292	0	0	2	2292
		S		41	1717	1	1545	42	1712	0	0	0	0	0	NC	41	1717	1	1545	42	1712
		P		43	1743	1	1545	44	1739	0	NC	0	0	0	NC	43	1743	1	1545	44	1739
6	Jhar-	C	Rabi	6	645	2	603	8	635	6	849	0	0	6	849	12	747	2	603	14	726
	khand	S		0	0	1	457	1	457	4	438	5	749	9	611	4	438	6	700	10	595
		P		6	645	3	554	9	615	10	685	5	749	15	706	16	670	8	700	24	672
7	Madhya	C	Rabi	20	1876	0	0	20	1876	8	1212	18	725	26	875	28	1686	18	725	46	1310
	Pradesh	S		6	1529	0	0	6	1529	4	1608	60	544	64	610	4	1608	60	544	64	610
		P		26	1796	0	0	26	1796	12	1344	78	586	90	687	32	1676	78	586	110	903
8	Punjab	C	Rabi	3	1766	0	0	3	1766	0	0	0	0	0	NC	3	1766	0	0	3	1766
		S		13	1700	3	1476	16	1658	0	0	0	0	0	NC	13	1700	3	1476	16	1658
		P		16	1713	3	1476	19	1675	0	NC	0	NC	0	NC	16	1713	3	1476	19	1675
9	Raja-	C	Rabi	19	1571	1	1379	20	1561	4	1633	1	762	5	1459	23	1582	2	1071	25	1541
	sthan	S		41	1569	3	1302	44	1551	26	1448	3	1124	29	1414	67	1522	6	1213	73	1497
		P		60	1569	4	1321	64	1554	30	1472	4	1034	34	1421	90	1537	8	1178	98	1508
10	Uttar	C	Rabi	51	1313	2	704	53	1290	0	0	2	640	2	640	51	1313	4	672	55	1266
	Pradesh	S		9	1686	4	1346	13	1581	2	1826	0	0	2	1826	11	1711	4	1346	15	1614
		P		60	1369	6	1132	66	1347	2	1826	2	640	4	1233	62	1383	8	1009	70	1341
11	West	C	Rabi	82	1344	11	1146	93	1321	8	894	9	746	17	815	90	1304	20	966	110	1243
	Bengal	S		0	0	0	0	0	NC	0	0	0	0	0	0	0	0	0	0	0	NC
		P		82	1344	11	1146	93	NC	8	894	9	746	17	815	90	1304	20	966	110	NC
For States		C		213	518	18	701	231	NC	39	183	97	69	136	102	252	466	115	168	367	1182
Covered		S		128	2428	12	1650	140	2362	58	746	111	540	169	NC	180	1967	123	648	303	NC
		P		341	1532	30	1184	371	NC	97	1209	208	598	305	NC	432	1459	238	672	670	NC

Note :-

1. ** = In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and consequent, categorization of crops, the data have been presented seasonwise instead of whole year.
2. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

ESTIMATES OF YIELD RATE ACCORDING TO USE OF FERTILISERS, MANURES AND UNMANURED UNDER ICS DURING 2019-20

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
PADDY													
1	Andhra	Kharif	C	81	3696	3	3076	63	3363	2	4155	149	3549
	Pradesh		S	78	3446	0	0	70	3506	0	0	148	3474
			P	159	3573	3	3076	133	3438	2	4155	297	3512
		Summer	C	10	4404	0	0	16	2913	0	0	26	3486
			S	55	4526	0	0	33	3820	2	826	90	4184
			P	65	4507	0	NC	49	3523	2	0	116	4028
2	Assam	Early	C	8	2064	8	1586	8	2141	10	2024	34	1958
		Kharif	S	10	1991	0	0	6	1448	21	1786	37	1787
			P	18	2024	8	1586	14	1844	31	1863	71	1869
		Late	C	52	2436	22	2386	10	2555	34	2146	118	2353
		Kharif	S	39	2289	13	2045	6	2334	34	2162	92	2210
			P	91	2373	35	2260	16	2472	68	2154	210	2291
		Summer	C	12	3350	4	2498	2	4030	0	0	18	3236
			S	24	2944	4	2639	0	0	2	2608	30	2881
			P	36	3079	8	2568	2	4030	2	2608	48	3014
3	Bihar	Bhadai	C	18	1576	6	1859	2	1747	4	2106	30	1715
			S	29	1815	0	0	4	2688	1	3048	34	1954
			P	47	1723	6	1859	6	2374	5	0	64	1842
		Aghani	C	118	2439	9	2119	34	2038	4	2096	165	2331
			S	120	2175	0	0	18	2569	0	0	138	2226
			P	238	2306	9	2600	52	2222	4	2096	303	2283
		Summer	C	0	0	0	0	0	0	0	0	0	NC
			S	14	2611	0	0	0	0	4	1756	18	2421
			P	14	2611	0	0	0	NC	4	0	18	NC
4	Chhattisgarh	Kharif	C	53	2427	4	2225	21	2254	1	379	79	2345
			S	64	2284	2	1125	8	2215	6	2411	80	2257
			P	117	2349	6	1858	29	2243	7	2121	159	2301
5	Gujarat	Kharif	C	25	2337	0	0	35	2215	0	0	60	2265
			S	15	2110	1	1660	29	1300	2	1937	47	1593
			P	40	2252	1	1660	64	1800	2	1937	107	1970
6	Haryana	Kharif	C	88	3158	0	0	2	3994	0	0	90	3176
			S	36	3087	0	0	0	0	2	4313	38	3151
			P	124	3137	0	0	2	3994	2	4313	128	3169
7	Himachal	Kharif	C	3	2811	7	2064	35	2422	6	2987	51	2462
	Pradesh		S	7	1451	12	1673	14	1741	0	0	33	1654
			P	10	1859	19	1817	49	2227	6	2987	84	2145
8	Jammu &	Kharif	C	9	1937	0	0	20	1593	1	1263	30	1685
	Kashmir		S	11	2008	0	0	11	3228	0	0	22	2618
			P	20	1976	0	NC	31	2173	1	0	52	2080
9	Jharkhand	Bhadai	C	0	0	11	806	1	1018	8	995	20	892
			S	2	1836	6	758	0	0	10	797	18	899
			P	2	1836	17	789	1	1018	18	885	38	896
		Aghani	C	27	2121	12	1179	40	2338	1	1399	80	2079
			S	20	1960	6	1657	12	1489	16	1685	54	1740
			P	47	2052	18	1338	52	2142	17	0	134	1943

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
10	Karnataka	Kharif	C	19	3204	5	2305	69	3156	1	2476	94	3113
			S	34	2816	8	2155	82	2909	6	3585	130	2870
			P	53	2955	13	2213	151	3022	7	3427	224	2972
		Summer	C	2	2610	0	0	5	2545	0	0	7	2563
			S	7	2770	0	0	21	3609	4	2331	32	3265
			P	9	2735	0	NC	26	3404	4	2331	39	3139
11	Kerala	Autumn	C	30	2052	21	2007	39	1745	8	1930	98	1910
			S	21	1956	14	1754	53	1792	8	1277	96	1780
			P	51	2013	35	1906	92	1772	16	1604	194	1846
		Winter	C	40	2222	14	2455	34	2765	2	2749	90	2475
			S	11	2184	7	2817	21	2301	51	2593	90	2492
			P	51	2213	21	2575	55	2588	53	2599	180	2484
		Summer	C	12	2455	0	0	17	2456	2	195	31	2310
			S	12	3340	0	0	17	1903	0	0	29	2497
			P	24	2898	0	NC	34	2179	2	195	60	2401
12	Madhya Pradesh	Kharif	C	48	2417	10	1940	28	1671	14	1924	100	2091
			S	56	2173	4	2503	10	2284	16	1257	86	2031
			P	104	2285	14	2101	38	1832	30	1568	186	2063
13	Mahara-shtra	Kharif	C	35	1286	0	0	12	2263	4	1371	51	1523
			S	25	1442	2	2078	9	1319	2	1050	38	1425
			P	60	1351	2	0	21	1858	6	0	89	1481
14	Odisha	Autumn	C	86	1275	18	1356	103	1821	7	976	214	1535
			S	89	1697	13	1429	91	2632	11	1006	204	2060
			P	175	1489	31	1387	194	2201	18	994	418	1791
		Winter	C	76	2113	5	1781	173	2291	6	1461	260	2210
			S	94	864	10	1944	138	1697	12	4235	254	1518
			P	170	1423	15	1890	311	2028	18	3310	514	1868
		Summer	C	0	0	2	2014	4	2570	6	1813	12	2098
			S	91	3253	6	1877	32	2718	8	2117	137	3001
			P	91	3253	8	4582	36	2701	14	1987	149	2929
15	Punjab	Kharif	C	164	4812	0	0	21	3731	1	3122	186	4681
			S	117	4191	0	0	3	4172	2	3264	122	4176
			P	281	4553	0	NC	24	3786	3	3216	308	4481
16	Tamil Nadu	Phase-I	C	9	3823	0	0	31	4712	0	0	40	4512
			S	3	4189	0	0	35	4349	0	0	38	4337
			P	12	3914	0	0	66	4520	0	0	78	4426
		Phase-II	C	6	3507	1	4932	51	4434	0	0	58	4346
			S	13	6529	1	791	34	3970	0	0	48	4597
			P	19	5574	2	0	85	4248	0	0	106	4460
		Phase-III	C	3	4151	0	0	14	4571	0	0	17	4497
			S	6	3515	0	0	15	4286	0	0	21	4066
			P	9	3727	0	NC	29	4423	0	0	38	4258
17	Telangana	Kharif	C	47	3581	0	0	18	3339	0	0	65	3514
			S	45	3528	1	4203	22	3670	1	3469	69	3582
			P	92	3555	1	0	40	3521	1	0	134	3549
		Rabi	C	3	4843	0	0	3	3717	0	0	6	4280
			S	48	4685	3	4106	20	5157	4	5227	75	4816
			P	51	4694	3	0	23	4969	4	0	81	4777

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
18	Uttar	Kharif	C	530	2792	0	0	125	2828	3	2356	658	2796
	Pradesh		S	118	2712	0	0	4	2725	0	0	122	2712
			P	648	2777	0	NC	129	2824	3	2356	780	2783
19	Uttarakhand	Kharif	C	20	3357	15	1960	12	3180	0	0	47	2866
			S	26	3333	17	1021	6	3464	1	1102	50	2518
			P	46	3343	32	1461	18	3275	1	1102	97	2687
20	West	Aus	C	65	2678	4	1609	28	2375	0	0	97	2546
	Bengal		S	4	2234	0	0	0	0	0	0	4	2234
			P	69	2652	4	1609	28	2375	0	NC	101	2534
		Aman	C	101	2756	0	0	59	2885	0	0	160	2804
			S	7	3254	0	0	7	2822	0	0	14	3038
			P	108	2789	0	NC	66	2879	0	NC	174	2823
		Summer	C	7	2996	0	0	3	3355	0	0	10	3104
			S	0	0	0	0	0	0	0	0	0	NC
			P	7	2996	0	0	3	3355	0	NC	10	NC
21	Puducherry	Kharif	C	0	0	0	0	10	2875	0	0	10	2875
			S	6	3591	0	0	4	2457	0	0	10	3138
			P	6	3591	0	0	14	2756	0	0	20	3006
		Rabi-I	C	1	3458	0	0	9	3332	0	0	30	1115
			S	9	3237	0	0	1	2260	0	0	10	3139
			P	10	3259	0	0	10	3225	0	0	40	1621
		Rabi-II	C	2	3904	0	0	8	2976	0	0	10	3162
			S	4	2782	2	2575	4	2378	0	0	10	2579
			P	6	3156	2	0	12	2777	0	0	20	2870
For states covered			C	1810	2840	181	1915	1165	2691	125	1921	3301	NC
			S	1370	2781	132	1821	840	2727	226	2196	2568	NC
			P	3180	2815	313	1875	2005	2706	351	2098	5869	NC
JOWAR													
1	Karnataka	Kharif	C	3	2205	3	551	8	2362	0	0	14	1941
			S	8	1270	2	459	16	1977	11	1410	37	1573
			P	11	1525	5	515	24	2105	11	1410	51	1674
		Rabi	C	22	747	7	1409	17	1005	8	1147	54	973
			S	8	1099	3	605	4	753	40	978	55	959
			P	30	841	10	1168	21	957	48	1006	109	966
2	Madhya	Kharif	C	43	1149	17	1491	14	637	18	1022	92	1109
	Pradesh		S	26	799	9	613	6	1542	29	1088	70	959
			P	69	1017	26	1187	20	908	47	1063	162	1044
3	Maha-	Kharif	C	30	683	0	0	4	24	2	735	36	612
	rashtra		S	41	548	0	0	9	432	4	164	54	500
			P	71	605	0	0	13	306	6	354	90	545
		Rabi	C	28	963	4	142	10	734	20	395	62	690
			S	57	876	2	772	1047	21	588	3234	1694	1165
			P	85	905	6	0	1057	28	608	3141	1756	1148
4	Rajasthan	Kharif	C	24	598	8	673	5	702	18	728	55	661
			S	20	439	4	551	0	0	18	327	42	402
			P	44	526	12	632	5	702	36	527	97	549
5	Tamil	@	C	1	554	19	1179	17	1354	3	421	40	1181
	Nadu		S	0	0	11	1113	3	1024	15	704	29	892
			P	1	554	30	1155	20	1305	18	657	69	1060

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
6	Telangana	Kharif	C	20	984	0	0	16	995	2	2376	38	1062
			S	18	1160	0	0	8	1102	10	1502	36	1242
			P	38	1067	0	0	24	1031	12	1648	74	1150
		Rabi	C	12	1259	3	1110	5	663	0	0	20	1088
			S	28	1823	0	0	2	986	4	905	34	1666
			P	40	1654	3	0	7	755	4	905	54	1452
7	Uttar	Kharif	C	6	2009	6	1507	0	0	28	1347	40	1470
	Pradesh		S	0	0	2	636	0	0	10	891	12	849
			P	6	2009	8	1289	0	0	38	1227	52	1327
For states covered			C	189	11150	67	8062	96	8475	99	8169	451	10786
			S	206	8015	33	4749	1095	7837	729	11204	2063	10207
			P	395	10702	100	5946	1191	8097	828	11937	2514	10914
BAJRA													
1	Andhra	Kharif	C	8	2507	3	1357	17	2118	6	1318	34	2001
	Pradesh		S	10	2053	11	999	4	2046	11	806	36	1349
			P	18	2255	14	1075	21	2105	17	987	70	1666
2	Gujarat	Kharif	C	53	1561	7	3456	25	1769	6	1554	91	1764
			S	26	1442	5	1356	23	2368	9	2497	63	1924
			P	79	1522	12	2581	48	2056	15	2119	154	1829
3	Haryana	Kharif	C	90	1952	4	1668	1	1498	7	1463	102	1903
			S	24	1614	1	1445	0	0	6	1511	31	1588
			P	114	1881	5	1623	1	1498	13	1485	133	1829
4	Karnataka	Kharif	C	5	971	6	1057	5	1701	5	1103	21	1201
			S	8	576	3	756	2	1629	29	1137	42	1026
			P	13	728	9	956	7	1680	34	1132	63	1084
5	Mahara-	Kharif	C	12	627	0	0	0	0	2	4224	14	1141
	shtra		S	10	686	0	0	8	1906	12	736	30	1031
			P	22	654	0	NC	8	1906	14	1234	44	1066
6	Rajasthan	Kharif	C	29	1795	2	1860	5	1807	21	1348	57	1634
			S	16	1406	4	2217	0	0	24	763	44	1129
			P	45	1657	6	2098	5	1807	45	1036	101	1414
7	Tamil	@	C	1	5716	22	3838	11	4000	6	4027	40	3958
	Nadu		S	1	2076	6	2129	12	3076	10	1596	29	2335
			P	2	3896	28	3472	23	3518	16	2508	69	3276
8	Uttar	Kharif	C	122	2189	2	3165	11	1993	15	1404	150	2109
	Pradesh		S	20	2299	0	0	0	0	2	2505	22	2317
			P	142	2204	2	3165	11	1993	17	1534	172	2136
For states covered			C	320	1924	46	2951	75	2203	68	1691	509	2027
			S	115	1555	30	1437	49	2409	103	1179	297	1554
			P	435	1826	76	2354	124	2284	171	1383	806	1852
MAIZE													
1	Bihar	Kharif	C	9	2396	4	2037	4	2822	0	0	17	2412
			S	8	1800	0	0	2	1226	4	2384	14	1885
			P	17	2116	4	4200	6	2290	4	2384	31	2174
2	Chhattisgarh	Kharif	C	16	5002	8	3424	2	7761	14	2028	40	3783
			S	14	3672	12	2262	2	5603	2	2121	30	3133
			P	30	4381	20	2727	4	6682	16	2040	70	3505

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
3	Gujarat	Kharif	C	5	1724	0	0	21	1439	0	0	26	1494
			S	3	1240	4	1663	21	1649	0	0	28	1607
			P	8	1543	4	0	42	1544	0	0	54	1553
4	Haryana	Kharif	C	6	3161	4	3556	6	4350	0	0	16	3705
			S	8	3935	0	0	0	0	0	0	8	3935
			P	14	3603	4	0	6	4350	0	NC	24	3782
5	Himachal	Kharif	C	3	3677	31	2442	40	3252	1	875	75	2902
	Pradesh		S	0	0	27	2494	42	2273	0	0	69	2360
			P	3	3677	58	2466	82	2750	1	875	144	2642
6	Jammu &	Kharif	C	8	1568	26	1682	32	2439	0	0	66	2035
	Kashmir		S	3	1988	4	2111	5	2071	0	0	12	2064
			P	11	1683	30	1739	37	2390	0	NC	78	2040
7	Jharkhand	Kharif	C	3	3816	3	2262	13	2845	1	3474	20	2935
			S	4	2453	0	0	0	0	8	2189	12	2277
			P	7	3037	3	2262	13	2845	9	2332	32	2688
8	Karnataka	Kharif	C	12	3335	2	3656	8	2780	0	0	22	3163
			S	10	4119	2	3423	20	3002	12	3006	44	3276
			P	22	3691	4	3539	28	2939	12	3006	66	3238
9	Madhya	Kharif	C	49	1632	14	1421	9	1017	8	1757	80	1538
	Pradesh		S	43	1751	8	1409	6	914	9	1363	66	1581
			P	92	1688	22	1417	15	976	17	1548	146	1558
10	Odisha	Kharif	C	8	2378	2	1299	16	2484	14	1756	40	2149
			S	11	2868	10	1705	7	2174	12	1862	40	2154
			P	19	2662	12	1637	23	2390	26	1805	80	2151
11	Punjab	Kharif	C	22	3643	2	9246	10	3631	0	0	34	3969
			S	31	3020	0	0	1	4639	0	0	32	3071
			P	53	3279	2	9246	11	3722	0	NC	66	3534
12	Rajastahan	Kharif	C	21	1604	2	360	14	2087	10	1913	47	1761
			S	24	1397	1	159	7	1808	8	623	40	1283
			P	45	1493	3	293	21	1994	18	1340	87	1541
13	Tamil Nadu	@	C	8	9557	8	8821	24	8624	0	0	40	8850
			S	3	9995	4	9622	27	8007	0	0	34	8372
			P	11	9677	12	9088	51	8297	0	NC	74	8630
14	Telangana	Kharif	C	35	4627	0	0	15	5718	0	0	50	4954
			S	36	5166	0	0	10	4660	2	5766	48	5086
			P	71	4900	0	NC	25	5295	2	5766	98	5018
15	Uttar	Kharif	C	137	2610	3	1911	16	1917	4	1335	160	2496
	Pradesh		S	32	2523	0	0	4	1855	6	751	42	2206
			P	169	2594	3	0	20	1904	10	985	202	2435
For states covered			C	342	2962	109	2764	230	3427	52	1843	733	2999
			S	230	2994	72	2547	154	3392	63	1952	519	2924
			P	572	2975	181	2678	384	3413	115	1903	1252	2968
RAGI													
1	Karnataka	Kharif	C	5	2652	2	1811	17	1726	0	0	24	1926
			S	14	1839	2	755	15	1135	3	1662	34	1449
			P	19	2053	4	1283	32	1449	3	1662	58	799
2	Tamil	@	C	4	1670	2	3290	29	3541	3	2074	38	3215
	Nadu		S	18	4541	8	2356	12	2087	2	275	40	3155
			P	22	4019	10	2543	41	3115	5	1354	78	3184

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
3	Uttarakhand	Kharif	C	0	0	35	1502	0	0	4	869	39	1437
			S	0	0	40	1584	0	0	0	0	40	1584
			P	0	0	75	1546	0	0	4		79	1512
For states covered			C	9	2215	39	1610	46	2870	7	0	101	2055
			S	32	3359	50	1675	27	1558	5	1107	114	1812
			P	41	3108	89	1646	73	2385	12	1269	215	1926
GROUNDNUT													
1	Andhra	Kharif	C	21	1479	27	1159	54	1460	2	1459	104	1386
	Pradesh		S	30	1477	19	1283	53	1447	4	1217	106	1417
			P	51	1478	46	1210	107	1453	6	1298	210	1402
2	Gujarat	Kharif	C	68	2912	6	2338	51	3011	1	4295	126	2936
			S	37	2497	0	0	18	3815	3	1656	58	2862
			P	105	2766	6	2338	69	3220	4	2316	184	2913
3	Karnataka	Kharif	C	11	720	2	1760	15	991	6	1539	34	1045
			S	20	831	5	763	13	1065	25	768	63	849
			P	31	791	7	1048	28	1025	31	917	97	918
4	Madhya	Kharif	C	14	1149	4	1133	12	791	10	1014	40	1006
	Pradesh		S	15	1365	0	0	2	1905	9	1262	26	1371
			P	29	1261	4	1133	14	950	19	1132	66	1150
5	Mahara-	Kharif	C	15	781	0	0	0	0	2	0	17	689
	shtra		S	13	826	2	525	2	1483	3	732	20	847
			P	28	802	2	525	2	1483	5	439	37	775
6	Rajasthan	Kharif	C	10	1985	3	2348	18	2438	1	1475	32	2258
			S	16	1574	0	0	0	0	4	1268	20	1513
			P	26	1732	3	0	18	2438	5	1310	52	1971
7	Tamil	Kharif	C	3	2377	16	3071	13	3028	4	2575	36	2942
	Nadu		S	6	2280	4	2184	16	2114	5	3284	31	2344
			P	9	4658	20	5255	29	5142	9	5859	67	2665
8	Telangana	Kharif	C	12	4092	3	2457	24	3119	1	964	40	3307
			S	17	2712	3	2457	19	2544	1	964	40	2570
			P	29	3283	6	2457	43	2865	2	964	80	2938
For States Covered			C	154	2214	61	1917	187	2218	27	1457	429	2126
			S	154	1750	33	1374	123	2017	54	1205	364	1725
			P	308	1982	94	1726	310	2139	81	1289	793	1942
SUGARCANE													
1	Andhra	Kharif	C	15	88581	4	80500	36	90332	2	40100	57	87419
	Pradesh		S	12	96468	2	61700	32	89779	2	68360	48	89389
			P	27	92087	6	74233	68	90072	4	54230	105	88319
2	Assam	Kharif	C	0	0	1	35524	1	34697	2	51400	4	43255
			S	0	0	10	27780	4	27914	2	36600	16	28916
			P	0	NC	11	28484	5	29271	4	44000	20	31784
3	Bihar	Kharif	C	25	68882	0	0	8	28855	0	0	33	59178
			S	15	55264	0	0	0	0	4	65200	19	57356
			P	40	63775	0	0	8	28855	4	65200	52	58512
4	Haryana	Kharif	C	17	72959	0	0	17	76564	0	0	34	74762
			S	13	70097	0	0	7	79583	0	0	20	73417
			P	30	71719	0	0	24	77444	0	0	54	74264

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
5	Karnataka	Kharif	C	10	75372	0	0	8	112082	1	19200	19	87872
			S	10	43446	0	0	14	118848	7	73314	31	84243
			P	20	59409	0	NC	22	116387	8	66550	50	85622
6	Mahara-	Kharif	C	8	87976	0	0	11	85980	0	0	19	86820
	shtra		S	12	70818	0	0	15	106216	0	0	27	90483
			P	20	77681	0	0	26	97655	0	0	46	88970
7	Punjab	Kharif	C	42	80275	0	0	8	81675	2	74800	52	80280
			S	32	82811	0	0	0	0	0	0	32	82811
			P	74	81372	0	NC	8	81675	2	74800	84	81244
8	Rajasthan	Kharif	C	14	73616	4	81560	3	32667	4	46400	25	65619
			S	14	78603	0	0	9	68226	2	60000	25	73379
			P	28	76110	4	81560	12	59336	6	50933	50	69499
9	Tamil	Kharif	C	5	119080	4	87000	19	112686	0	0	28	110159
	Nadu		S	3	109000	3	86867	24	94363	0	0	30	95077
			P	8	115300	7	86943	43	102459	0	0	58	102358
10	Uttar	Kharif	C	148	84718	0	0	48	87843	1	10200	197	85101
	Pradesh		S	14	94400	0	0	0	0	0	0	14	0
			P	162	85555	0	0	48	87843	1	0	211	79455
11	Uttarakhand	Kharif	C	19	73206	1	44000	8	75638	0	0	28	72858
			S	0	0	0	0	0	0	0	0	0	0
			P	19	73206	1	0	8	75638	0	0	28	72858
For States covered			C	303	81437	14	76840	187	76840	12	45633	496	82005
			S	125	76649	15	44120	219	44120	17	64936	262	75201
			P	428	80039	29	59916	401	59916	29	56949	758	79653
WHEAT													
1	Assam	Rabi	C	0	0	0	0	0	0	0	0	0	NC
			S	0	0	0	0	2	1225	0	0	2	1225
			P	0	NC	0	NC	2	1225	0	NC	2	NC
2	Bihar	Rabi	C	4	2706	0	0	0	0	0	0	4	2706
			S	75	2327	0	0	1	1745	22	3225	98	2523
			P	79	2346	0	NC	1	1745	22	3225	102	2530
3	Chattisgarh	Rabi	C	0	0	0	0	0	0	0	0	0	NC
			S	0	0	0	0	0	0	0	0	0	NC
			P	0	NC	0	NC	0	NC	0	NC	0	NC
4	Gujarat	Rabi	C	29	3141	0	0	11	3062	0	0	40	3120
			S	30	3107	0	0	10	3248	0	0	40	3142
			P	59	3124	0	NC	21	3151	0	NC	80	3131
5	Haryana	Rabi	C	1	4839	0	0	0	0	0	0	1	4839
			S	69	4896	1	4440	16	4694	0	0	86	4853
			P	70	4895	1	0	16	4694	0	0	87	4853
6	Himachal	Rabi	C	0	0	0	0	0	0	0	0	0	NC
	Pradesh		S	0	0	10	2478	4	2299	0	0	14	2427
			P	0	NC	10	2478	4	2299	0	NC	14	NC
7	Jammu &	Rabi	C	0	0	0	0	0	0	0	0	0	NC
	Kashmir		S	0	0	0	0	0	0	0	0	0	NC
			P^	0	NC	0	NC	0	NC	0	NC	0	NC
8	Jharkhand	Rabi	C	2	1852	0	0	0	0	0	0	2	1852
			S	8	2190	0	0	5	966	19	2032	32	1905
			P	10	2122	0	0	5	966	19	0	34	1902

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
9	Karnataka	Rabi	C	14	1536	0	0	12	1358	8	1228	34	1401
			S	3	1008	0	0	1	1689	36	1303	40	1290
			P	17	1443	0	NC	13	1383	44	1289	74	1341
10	Madhya	Rabi	C	32	3448	1	760	3	1978	1	1619	37	3207
	Pradesh		S	99	3335	6	1546	25	3961	28	2338	158	3189
			P	131	3363	7	1434	28	3748	29	2313	195	3193
11	Maha-	Rabi	C	23	1550	0	0	13	1831	3	1824	39	1664
	rashtra		S	52	1541	0	0	2	1378	4	1547	58	1536
			P	75	1544	0	NC	15	1770	7	1666	97	1587
12	Punjab	Rabi	C	4	4114	0	0	0	0	0	0	4	4114
			S	102	4980	1	5299	2	4846	0	0	105	4981
			P	106	4947	1	0	2	4846	0	0	109	4949
13	Rajasthan	Rabi	C	2	1229	0	0	5	2953	0	0	7	2461
			S	52	4039	2	3259	12	3189	4	2718	70	3795
			P	54	3935	2	3259	17	3120	4	2718	77	3674
14	Uttar	Rabi	C	25	4045	0	0	7	4077	0	0	32	4052
	Pradesh		S	53	3396	5	3573	1	3440	18	3464	77	3424
			P	78	3604	5	1974	8	3997	18	3464	109	3608
15	Uttarakhand	Rabi	C	0	0	0	0	0	0	0	0	0	NC
			S	8	3568	27	2023	11	3338	0	0	46	2606
			P	8	3568	27	2023	11	3338	0	NC	46	NC
16	West	Rabi	C	0	0	0	0	0	0	0	0	0	NC
	Bengal		S	0	0	0	0	0	0	0	0	0	NC
			P	0	NC	0	0	0	NC	0	0	0	NC
For states covered			C	136	2926	1	760	51	2412	12	1410	200	NC
			S	551	3562	52	2362	92	3450	131	2300	826	NC
			P	687	3436	53	2331	143	3080	143	2226	1026	NC
BARLEY													
1	Haryana	Rabi	C	0	0	0	0	0	0	0	0	0	NC
			S	16	4250	0	0	0	0	0	0	16	4250
			P	16	4250	0	0	0	0	0	0	16	NC
2	Himachal	Rabi	C	0	0	0	0	0	0	0	0	0	NC
	Pradesh		S	0	0	6	1813	0	0	0	0	6	1813
			P	0	0	6	1813	0	NC	0	NC	6	NC
3	Punjab	Rabi	C	0	0	0	0	0	0	0	0	0	NC
			S	10	4125	0	0	0	0	0	0	10	4125
			P	10	4125	0	0	0	NC	0	NC	10	NC
4	Rajasthan	Rabi	C	6	3589	1	2084	4	3173	0	0	11	3301
			S	33	3852	2	3480	11	3408	10	2988	56	3597
			P	39	3812	3	3015	15	3345	10	2988	67	3549
For states covered			C	6	3589	1	2084	4	3173	0	0	11	NC
			S	59	4006	8	2230	11	3408	10	2988	88	3654
			P	65	3968	9	2214	15	3345	10	2988	99	NC
GRAM													
1	Andhra	Rabi	C	32	1329	0	0	25	1153	0	0	57	1252
	Pradesh		S	40	1343	0	0	33	17	1165	1	1116	50
			P	72	1337	0	0	58	507	1165	1	1173	108

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
2	Bihar	Rabi	C	2	424	0	0	0	0	0	0	2	424
			S	9	712	0	0	0	0	10	916	19	819
			P	11	660	0	0	0	0	10	916	21	782
3	Chattisgarh	Rabi	C	2	87	0	0	0	0	0	0	2	87
			S	0	0	0	0	0	0	0	0	0	NC
			P	2	87	0	NC	0	NC	0	NC	2	NC
4	Gujarat	Rabi	C	8	1607	1	1918	1	825	5	959	15	1360
			S	0	0	0	0	2	1266	0	0	2	1266
			P	8	1607	1	1918	3	1119	5	959	17	1349
5	Haryana	Rabi	C	0	0	0	0	0	0	0	0	0	NC
			S	10	1485	0	0	4	937	10	1543	24	1418
			P	10	1485	0	NC	4	0	10	1543	24	NC
6	Jharkhand	Rabi	C	0	0	0	0	2	223	0	0	2	223
			S	0	0	0	0	2	228	6	1398	8	1106
			P	0	NC	0	NC	4	225	6	1398	10	929
7	Karnataka	Rabi	C	11	493	5	624	8	814	5	843	29	665
			S	6	890	0	0	4	535	30	837	40	814
			P	17	633	5	624	12	721	35	838	69	751
8	Madhya	Rabi	C	22	1240	0	0	8	1765	8	826	38	1263
	Pradesh		S	39	1379	2	1318	6	1134	31	1395	78	1365
			P	61	1328	2	1318	14	1494	39	1278	116	1331
9	Maha-	Rabi	C	31	1220	2	1401	11	1348	2	738	46	1238
	rashtra		S	24	1237	2	452	12	1174	8	729	46	1098
			P	55	1228	4	927	23	1257	10	730	92	1168
10	Punjab	Rabi	C	0	0	0	0	0	0	0	0	0	NC
			S	0	0	0	0	0	0	0	0	0	NC
			P	0	NC	0	0	0	0	0	NC	0	NC
11	Rajasthan	Rabi	C	16	1068	3	942	1	351	9	1076	29	1033
			S	31	1492	3	894	2	1351	28	1264	64	1360
			P	47	1348	6	918	3	1018	37	1218	93	1258
12	Uttar	Rabi	C	0	0	0	0	0	0	2	911	2	911
	Pradesh		S	4	990	0	0	0	0	0	0	4	990
			P	4	990	0	NC	0	NC	2	911	6	964
For states covered			C	124	1162	11	970	56	1177	31	923	222	NC
			S	163	1313	7	889	65	508	1288	112	1401	NC
			P	287	1247	18	938	121	818	1319	131	1623	NC
RAPE & MUSTARD													
1	Assam	Rabi	C	19	631	15	595	6	761	10	510	50	612
			S	22	710	4	532	4	676	3	626	33	677
			P	41	674	19	582	10	727	13	537	83	638
2	Bihar	Rabi	C	18	945	2	994	2	1465	1	1049	23	999
			S	21	1023	0	0	0	0	0	0	21	1023
			P	39	987	2	0	2	1465	1	1049	44	1010
3	Chattisgarh	Rabi	C	2	435	2	960	0	0	10	230	14	364
			S	0	0	0	0	0	0	12	312	12	312
			P	2	435	2	960	0	NC	22	275	26	340
4	Gujarat	Rabi	C	18	1966	0	0	5	2288	2	1600	25	2001
			S	10	1913	1	2080	5	1819	1	1696	17	1882
			P	28	1947	1	0	10	2054	3	1632	42	1953

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
5	Haryana	Rabi	C	2	2292	0	0	0	0	0	0	2	2292
			S	36	1715	0	0	2	1748	4	1669	42	1712
			P	38	1746	0	0	2	1748	4	1669	44	1739
6	Jharkhand	Rabi	C	7	665	0	0	6	849	1	420	14	727
			S	2	484	2	393	0	0	6	700	10	595
			P	9	625	2	393	6	849	7	660	24	672
7	Madhya	Rabi	C	18	1766	6	467	10	1545	12	853	46	1310
	Pradesh		S	6	1529	2	1043	0	0	10	811	18	1076
			P	24	1707	8	611	10	1545	22	834	64	1244
8	Punjab	Rabi	C	3	1766	0	0	0	0	0	0	3	1766
			S	14	1666	0	0	0	0	2	1605	16	1658
			P	17	1684	0	NC	0	NC	2	1605	19	1675
9	Rajasthan	Rabi	C	21	1528	0	0	3	1635	24	1541	48	1541
			S	60	1474	0	0	9	1733	4	1300	73	1496
			P	81	1488	0	NC	12	1708	28	1507	121	1514
10	Uttar	Rabi	C	51	1283	0	0	4	1051	0	0	55	1266
	Pradesh		S	13	1581	2	1826	0	0	0	0	15	1614
			P	64	1343	2	1826	4	1051	0	NC	70	1341
11	West	Rabi	C	83	1216	0	0	27	1325	0	0	110	1243
	Bengal		S	0	0	0	0	0	0	0	0	0	NC
			P	83	1216	0	NC	27	1325	0	0	110	NC
For States Covered			C	242	1281	25	625	63	1339	60	988	390	1203
			S	184	1416	11	976	20	1545	42	827	257	1310
			P	426	1339	36	732	83	1389	102	922	647	NC

Note:

1. @ =In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and consequent, categorization of crops, the data have been presented seasonwise instead of whole year.
2. NC- Not Comparable due to cessation of field work for Central sample during Covid-19 Pandemic.

PART-III
(APPENDIX)

APPENDIX

Procedure for estimation of area and yield rate of different crops along with the standard errors

I - Estimation of Area

1. Observations found during sample check on Area Enumeration are recorded in schedule AS 1.0. The schedule gives two sets of area figures under various crops for the selected 20 survey numbers, one set of figures as observed by the Senior Statistical Officers of NSO/State Supervisors and the other set as copied from the corresponding entries of the Khasra Register prepared by Patwari. Two separate estimates based on the patwari's record and Senior Statistical Officers/State Supervisors observations are prepared for comparison purpose.

The estimated area under a crop in the i^{th} stratum is given by :

$$\hat{Y}_i = \frac{N_i}{n_i} \sum_{j=1}^{n_i} \left[\frac{H_{ij} \; X \; a_{ij}}{S_{ij}} \right]$$

where

$\hat{Y}_i$ = Estimated Area under a crop in the i^{th} stratum

a_{ij} = Total area under a crop in the selected clusters of survey numbers in j^{th} village of i^{th} stratum,

S_{ij} = Number of selected survey/serial numbers in the j^{th} sample in the i^{th} stratum,

H_{ij} = Highest survey/serial number in the j^{th} sample village in the i^{th} stratum,

n_i = Number of sample villages analysed in the i^{th} stratum and

N_i = Total number of revenue villages in the i^{th} stratum.

The estimates of area thus obtained for each stratum in a district are added to get the estimates of area at the district level (Y_d) and the total of the district level estimates gives the state level estimate of area.

However, for unsurveyed villages for which total geographical area of the village is not available and selection of plots has been done by method of selection of households in the village, the village level estimate will be obtained by using the inflation factor:

$$\frac{\text{(Total number of households in the village)}}{\text{Number of sample households}} \times a_{ij}$$

where

a_{ij} = Area under the crop in the plots belonging to selected households in the j^{th} sample village of i^{th} stratum.

The estimates of variance at district level is calculated from

$$V(Y_d) = \frac{N(N-n)}{n} \left[\frac{\sum_{i=1}^{K'} \sum_{j=1}^{n_i} Y_{ij}^2 - \left\{ \sum_{i=1}^{K'} \sum_{j=1}^{n_i} Y_{ij} \right\}^2 / n}{(n-1)} \right]$$

where,

y_{ij} = estimated area under the crop in the j^{th} sample village in i^{th} stratum in the district which is given by

$$Y_{ij} = \frac{H_{ij}}{S_{ij}} \times a_{ij}$$

K' = the number of strata in a district in which the estimates of area under the reference crop is not zero.

$$N = \sum_{i=1}^{K'} N_i \quad \text{and} \quad n = \sum_{i=1}^{K'} n_i$$

The variance at state level is the sum of the variance of district level estimate.

The percentage standard error of the estimate of area at state level is obtained as follows:

$$\textbf{\% Standard Error} = \frac{\text{SE of the Estimate}}{\text{Estimate}} \times 100$$

Where standard error is the square root of the state level variance which is the sum of variance of the district level estimates.

2. Estimates of area based on Sch. AS 1.1 data :

Patwari prepares crop abstracts on the basis of entries of area figures under different crops in the Khasra Register. Senior Statistical Officers of NSO/State Supervisor checks the page-wise totaling of area figures recorded under different crops under Khasra Register and records the corrected totals of area under crop alongwith the corresponding figures reported by Patwari in the crop abstract in schedule A.S.1.1. Based on these two sets of area figures under a crop in a village two estimates are prepared. The estimation procedure -for preparing these estimates is similar to that given at para 1 above.

3. Pooling of estimates:

The estimates of the Central and State samples at State level are pooled as under:

L e t

$\hat{Y}_C$ = estimates of area at state level for Central sample.

$\hat{Y}_S$ = estimates of area at state level for State sample.

$\hat{V}_C$ = estimates of variance at state level for central sample and

$\hat{V}_S$ = estimates of variance at state level for state sample.

Calculate $e_c = \frac{1}{\hat{V}_C}$ and $e_s = \frac{1}{\hat{V}_S}$

Then pooled estimate of area is given by

$$\hat{Y}_p = \frac{e_c \hat{Y}_c + e_s \hat{Y}_s}{e_c + e_s}$$

And an estimate of its variance by

$$\hat{V}(Y_p) == \frac{1}{e_c + e_s}$$

II - Estimate of Yield Rates

Sample check a crop cutting experiments is planned on two experiments in a crop in each of the selected villages. The experiments are conducted by the State primary workers in the presence of Senior Statistical Officers /State Supervisors who supervise the experiment and also correct the errors, if any, in the conduct of the experiments. The corrected yield rate as observed by the Senior Statistical Officers/State Supervisors is filled in the schedule AS 2.0. On the basis of this information the estimates of yield rates for the district and state are worked out.

Let ,

Y_{ijk} = plot yield in gms. in the k^{th} experimental plot of jlh sample village in the i^{th} district,

n_{ij} = number of experiments analysed in the j^{th} sample village of the i^{th} district,

n_i = number of experiments analysed in the i^{th} district,

a_i = area under the crop in the i^{th} district,

m_i = number of sample villages in which experiments are analysed in the i^{th} district,

E = mean square of yield between villages,

F = mean square of yield within villages and

d = number of districts in the State.

Then simple average of yield in the sample experiments under the crop in i^{th} districts given by:-

$$\bar{Y}_i = \frac{\sum_{j=1}^{m_i} \sum_{k=1}^{n_{ij}} Y_{ijk}}{n_i}$$

and the estimated average yield rate at state level is given by

$$\bar{Y} = \frac{\sum_{i=1}^{d} a_i \times \bar{Y}_i}{\sum_{i=1}^{d} a_i}$$

Average yield thus obtained is converted to dry grain yield in terms of Kg./Ha.

The estimated variance of estimated yield rate at state level is given by

$$V(\bar{Y}) = \frac{\left[F \sum_{i=1}^{d} \frac{a_i^2}{n_i} + (E - F) \sum_{i=1}^{d} \frac{a_i^2 \sum_{j=1}^{m_i} n_{ij}^2}{\lambda_i \, n_i^2} \right]}{\left[\sum_{i=1}^{d} a_i \right]^2}$$

Where

$V(\bar{Y})$ = Estimated variance of the estimate of average yield at state level

Where $\lambda_i = \frac{n_i^2 - \sum_{j=1}^{m_i} n_{ij}^2}{n_i (m_i - 1)}$

$$E = \frac{\sum_{i=1}^{d}\left[\sum_{j=1}^{m_i}\frac{\left(\sum_{k=1}^{n_{ij}} Y_{ijk}\right)^2}{n_{ij}} - \frac{\left(\sum_{j=1}^{m_i}\sum_{k=1}^{n_{ij}} Y_{ijk}\right)^2}{n_i}\right]}{\sum_{i=1}^{d}(m_i - 1)}$$

$$F = \frac{\sum_{i=1}^{d}\left[\sum_{j=1}^{m_i}\sum_{k=1}^{n_{ij}} Y_{ijk}^2 - \sum_{j=1}^{m_i}\frac{\left(\sum_{k=1}^{n_{ij}} Y_{ijk}\right)^2}{n_{ij}}\right]}{\sum_{i=1}^{d}(n_i - m_i)}$$

And percentage standard error is given by

$$\%\,SE(\bar{Y}) = \frac{\sqrt{V(\bar{y})}}{\bar{y}} \times 100$$

Abbreviations used in various Annexures

C = Central	S = State	P = Pooled
NA= Not Available	NC= Not Calculated	NR= Not Reported/Received
E.Kh.= Early Kharif	L.Kh. = Late Kharif	Wh.Year= Whole Year
R-I= Rabi-I	R-II= Rabi-II	Sum. = Summer
Ph-I=Phase-I	Ph-II=Phase-II	Ph-III=Phase-III
HYV= High Yielding Variety	F=Fertilisers	L= Local
Irr. = Irrigated	UI= Un-Irrigated	NP= Not prepared
Tra=Traditional		

State-wise seasons covered under ICS

Sl. No.	State	E. Kharif	L.Kharif	Rabi	Summer
1	Andhra Pradesh		Kharif	Rabi	
2	Assam	Early Kharif	Late Kharif	Rabi	Summer
3	Bihar	Bhadai	Aghani	Rabi	Summer
4	Chhattisgarh		Kharif	Rabi	
5	Gujarat		Kharif	Rabi	Summer
6	Haryana		Kharif	Rab i	
7	Himachal Pradesh		Kharif	Rabi	
8	Jammu & Kashmir		Kharif	Rabi	
9	Jharkhand	Bhadai	Aghani	Rabi	Summer
10	Karnataka		Kharif	Rabi	Summer
11	Kerala	Autumn	Winter		Summer/ Whole Year
12	Madhya Pradesh		Kharif	Rabi	
13	Maharashtra		Kharif	Rabi	Summer
14	Odisha	Autumn	Winter		Summer
15	Punjab		Kharif	Rabi	
16	Rajasthan		Kharif	Rabi	
17	Tamil Nadu	Phase-I	Phase-II	Phase-III	
18	Uttar Pradesh		Kharif	Rabi	Summer
19	Uttarakhand		Kharif	Rabi	Summer
20	West Bengal	Aus.	Aman	Rabi	Summer
21	Puducherry		Kharif	Rabi-I	Rabi-II