



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 IMPROVEMENT OF CROP STATISTICS



2020-21

भारत सरकार

सांख्यिकी एवं कार्यक्रम

कार्यान्वयन मंत्रालय

राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय

(क्षेत्र संकार्य प्रभाग)

कृषि सांख्यिकी मुख्यालय

फरीदाबाद (हरियाणा)

GOVERNMENT OF INDIA

MINISTRY OF STATISTICS &

PROGRAMME IMPLEMENTATION

NATIONAL SAMPLE SURVEY OFFICE

(FIELD OPERATIONS DIVISION)

AGRICULTURAL STATISTICS HEADQUARTERS

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भारत में फसल सांख्यिकी सुधार योजना
के माध्यम से
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राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (क्षेत्र संकार्य प्रभाग)
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डॉ. बिभास चौधरी

महानिदेशक

DR. BIVAS CHAUDHURI

Director General



सत्यमेव जयते



संदेश

भारत सरकार
सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय
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कृषि सतत और समावेशी आर्थिक विकास एवं ग्रामीण विकास के लिए एक इंजन है जो कि भारतीय अर्थव्यवस्था का सबसे महत्वपूर्ण क्षेत्र रहा है और सकल घरेलू उत्पाद में महत्वपूर्ण योगदान देता है तथा यह क्षेत्र कुल श्रम बल के बहुधा को रोजगार प्रदान करता है। कृषि क्षेत्र में सुदृढ़ और समयबद्ध आंकड़ों का संग्रह समावेशी आर्थिक विकास की सुदृढ़ नीति निर्माण हेतु आवश्यक है।

- सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय देश में जारी किए जाने वाले आंकड़ों के व्यापक क्षेत्र एवं गुणवत्ता जैसे पहलुओं को अत्यधिक महत्व देता है। इस मंत्रालय के अंतर्गत राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (रा०प्र०स०का०) के क्षेत्र संकाय प्रभाग (क्ष०सं०प्र०) को फसल क्षेत्रफल और उपजदर को समय पर और विश्वसनीय अनुमान प्राप्त करने के लिए उपयुक्त सर्वेक्षण तकनीक विकसित करने, राज्यों को तकनीकी दिशा-निर्देश और अवधारणाओं, परिभाषाओं और प्रक्रियाओं की समरूपता सुनिश्चित करने की जिम्मेदारी सौंपी गई है। फसल सांख्यिकी सुधार योजना के माध्यम से यह मुख्यालय कृषि सांख्यिकी की गुणवत्ता पर अनवरत निगरानी रखता है।
- फसल सांख्यिकी सुधार योजना के निष्कर्षों के आधार पर कृषि सांख्यिकी मुख्यालय, रा०प्र०स०का० (क्ष०सं०प्र०) प्रतिवर्ष एक रिपोर्ट "भारत में फसल सांख्यिकी सुधार योजना के माध्यम से फसल सांख्यिकी प्रणाली का पुनरावलोकन" जारी करता है। यह रिपोर्ट शृंखला में 46वीं है जो कि अखिल भारतीय स्तर पर कृषि वर्ष 2020-21 के दौरान फसल सांख्यिकी सुधार योजना के निष्कर्षों को प्रस्तुत करती है। फसल सांख्यिकी के मुख्य दो घटक क्षेत्रफल और उपज इस प्रकाशन में शामिल किए जाते हैं। फसल सांख्यिकी सुधार योजना के अंतर्गत कटाई स्तर पर फसल कटाई प्रयोगों के पर्यवेक्षण के माध्यम से एकत्रित आंकड़े 44 विशिष्ट फसलों के उपज दर की गणना में भी उपयोग में लाये जाते हैं। फसल सांख्यिकी सुधार योजना के अंतर्गत तैयार किए गए त्वरित उपज दर अनुमानों को राज्य कृषि सांख्यिकी प्राधिकारों द्वारा प्रदत्त उपज दर अनुमानों की पुष्टि करने में कृषि एवं किसान कल्याण मंत्रालय द्वारा नियमित रूप से उपयोग किया जाता है। मैं इस रिपोर्ट को तैयार करने में श्रीमती नितिका गुप्ता, उप महानिदेशक, रा०प्र०स०का० (क्ष०सं०प्र०), कृषि सांख्यिकी मुख्यालय, फरीदाबाद व उनकी टीम के अधिकारियों के प्रयासों की सराहना करता हूँ जिनके प्रयासों से उपयोगी रिपोर्ट जारी की गयी है।
- मुझे विश्वास है कि यह रिपोर्ट प्रतिभागी राज्यों में कृषि के समग्र विकास के लिए नीति निर्माताओं, कृषिविदों, शोधकर्ताओं, सांख्यिकीविदों व योजनाकारों के लिए योगदान में बहुत उपयोगी साबित होगी।

(डॉ. बिभास चौधरी)

सितम्बर, 2023
नई दिल्ली

डॉ. बिभास चौधुरी

महानिदेशक

DR. BIVAS CHAUDHURI

Director General



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Message



Agriculture is an engine of sustainable and inclusive economic growth and rural development, which continues to be the most crucial sector of the Indian economy with significant contribution to the Gross Domestic Product (GDP) and providing employment to substantial work force. Collection of robust and timely statistics on Agriculture is essential for sound policy formulation for inclusive economic development.

2. The Ministry of Statistics and Programme Implementation attaches considerable importance to coverage and quality aspects of statistics released in the country. Field Operations Division (FOD) of National Sample Survey Office (NSSO) under this Ministry has the responsibility of guiding the States in developing suitable techniques for obtaining reliable and timely estimates of area and yield rates as also to ensure adoption of uniform concepts, definition and procedures in the collection of crop area and yield related statistics. It keeps a constant watch on the quality of Crop Statistics through the scheme for Improvement of Crop Statistics (ICS).
3. Based on the findings of ICS Scheme, Agricultural Statistics Hqrs., NSSO (FOD) brings out every year a publication entitled "**Review of Crop Statistics System in India through the scheme of Improvement of Crop Statistics**". This report is 46th in the series and deals with the findings of the ICS scheme during the Agricultural Year 2020-21 at all India level. Major components of crop statistics, viz. Area and Yield are covered in this publication. The data collected through the supervision of crop cutting experiments at harvest stage are also utilized to compute yield rate of 44 specified crops under ICS scheme. The quick estimates of yield rates generated under ICS scheme are regularly used by the Ministry of Agriculture & Farmers Welfare to validate the estimates provided by the State Agriculture Statistics Authorities (SASAs). I take this opportunity to convey my appreciation to Smt. Nitika Gupta, Deputy Director General and his team of officers of Agricultural Statistics Headquarters, Faridabad of NSSO (FOD) whose efforts have led to compilation of this useful publication.
4. I am sure that this publication will be of immense use to policy makers, agriculturalists, researchers, statisticians and planners for their contribution in overall development of agriculture in the participating States.

(Dr. Bivas Chaudhuri)

September, 2023
New Delhi

सुबाष चन्द्र मलिक
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09 OCT 2023

प्रस्तावना



राष्ट्रीय अर्थव्यवस्था में कृषि क्षेत्र की महत्वपूर्ण भूमिका को देखते हुए फसलों के अंतर्गत क्षेत्रफल और फसल उत्पादन पर समयबद्ध, विश्वसनीय तथा विस्तृत 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 आंकलन 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।

- 1952 के कैबिनेट प्रस्ताव जिसके अन्तर्गत खाद्य उत्पादन के अनुमान और बड़े पैमाने पर प्रतिदर्श सर्वेक्षण से संबंधित कार्य को भारतीय कृषि अनुसंधान परिषद से राष्ट्रीय प्रतिदर्श सर्वेक्षण को स्थानांतरित कर दिया गया था, के फलस्वरूप राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय के क्षेत्र संकार्य प्रभाग ने भारत में फसल आंकड़ों की सांख्यिकीय वास्तुकला विकसित करने के व्यवस्थित प्रयास का नेतृत्व किया। इसमें प्रमुख फसलों के अंतर्गत क्षेत्र की निगरानी, पूर्वानुमान और आंकलन तथा फसलवार उपज का आंकलन शामिल था। 1970 तक भूमि उपयोग सर्वेक्षण और फसल उपज सांख्यिकी नामक जुड़ाव सर्वेक्षणों ने फसल सांख्यिकी से संबंधित बड़े पैमाने पर प्रतिदर्श सर्वेक्षण में सांख्यिकीय तकनीकों के अनुप्रयोग को संस्थागत रूप दिया।
- विश्वसनीय फसल प्राक्कलन हेतु उचित सर्वेक्षण तकनीक विकसित करने के लिए राज्यों के कर्मचारियों को प्रशिक्षण देना, तकनीकी सहयोग एवं पर्यवेक्षण करना राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (रा. प्र. स. का.) सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय, भारत सरकार की समग्र जिम्मेदारी है। फसल सांख्यिकी सुधार योजना, जो कि 1973-74 से लागू है, का उद्देश्य राष्ट्रीय प्रतिदर्श सर्वेक्षण 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 सम्पादित 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 पर्यवेक्षण किया जाता है।
- 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 46 वां है जो कि अखिल भारतीय स्तर पर कृषि वर्ष 2020-21 के दौरान फसल सांख्यिकी सुधार योजना के निष्कर्षों को प्रस्तुत करता है।
- में इस प्रतिवेदन को तैयार करने में श्रीमती नितिका गुप्ता, उप महानिदेशक, रा.प्र.स.का. (क्षे.सं.प्र.), कृषि सांख्यिकी विंग, फरीदाबाद के मार्गदर्शन में अधिकारियों की टीम, जो इस कार्य में सम्मिलित रही है, की निष्ठा एवं अथक प्रयासों की सराहना करता हूँ। आंकड़ों के संग्रहण, संसाधन तथा सम्बन्धित अन्य कार्य सम्पन्न करने वाले सभी क्षेत्र 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 2020-21 में सफलतापूर्वक संचालित करने में सहयोग देते रहे हैं, उनका हृदय से आभार व्यक्त करता हूँ।
- प्रतिवेदन की विषयवस्तु व प्रस्तुतीकरण में सुधार हेतु सुझावों का स्वागत है।

एस. सी. मलिक

(एस. सी. मलिक)

अपर महानिदेशक

सितंबर, 2023

दिल्ली

सुबाष चन्द्र मलिक
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Ministry of Statistics & Programme Implementation
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National Sample Survey Office

09 OCT 2023

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.

3. Currently, NSSO (FOD) under Ministry of Statistics and Programme Implementation, Govt. of India 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 sixth in the series and deals with the findings of the ICS scheme during the agricultural year **2020-21** 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 Wing, 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 Agricultural Statistics Authorities and other State officials engaged in the field for the successful conduct of the ICS scheme during the year **2020-21**.

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

(S.C. Malik)
Addl. Director General

September, 2023
Delhi



प्रकाशन से जुड़े अधिकारीगण

1	श्रीमती नितिका गुप्ता	उप महानिदेशक
2	श्री सुधीर कुमार	संयुक्त 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

$$\begin{array}{r} \text{Weight of produce in Gms.} \quad 10000 \\ \text{-----} \quad \times \quad \text{-----} \\ \text{Plot size in Meters.} \quad 1000 \end{array}$$

3. Reference period

The reference period for a survey is the Agriculture Year (July to June) e.g. agriculture year 2020-21 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

$$\text{Cropping Intensity} = (\text{Gross Cropped Area} / \text{Net Area Sown}) \times 100$$

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.



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.



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 2020-21 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 2020-21 के लिए सम्पूर्ण भारत के स्तर पर योजना के निष्कर्षों की मुख्य बातें निम्न प्रकार हैं:

1. 17 राज्यों तथा जम्मू-कश्मीर एवं पुडुचेरी संघ शासित राज्यों 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 ईएआरएस राज्यों का अखिल भारतीय स्तर पर रिपोर्टिंग क्षेत्र लगभग 9 प्रतिशत है परंतु कुछ राज्यों (देश के कुल रिपोर्टिंग 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 2020-21 के दौरान फसल सांख्यिकी सुधार के अनुसार प्रति प्राथमिक कर्मों का औसत कार्य भार 8 गाँव है जिसमें प्रति गाँव औसतन भौगोलिक क्षेत्रफल 700 हेक्टेयर 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 ईएआरएस 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 2020-21 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. जी०सी०ई०एस० के अधीन यह देखा गया है कि कुछ राज्यों में कम क्षेत्रफल की फसलों को भी शामिल किया जाता है, जबकि अन्य राज्यों के अंतर्गत ज्यादा क्षेत्रफल रहने के बावजूद इन फसलों को शामिल नहीं किया जाता है। इस विषमता को दूर करने के लिए इन राज्यों में जी०सी० ई० एस० 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 (स्टैन्डर्ड 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 2020-21 के दौरान दो राज्यों/ संघ शासित राज्यों – हरियाणा, केरल और जम्मू-कश्मीर में उच्च स्तरीय समन्वय समिति (एच०एल०सी०सी०) की बैठक आयोजित करना सम्भव हो सका। एच०एल०सी०सी० / एस० टी० सी० की बैठकें नियमित अंतराल पर आयोजित किये जाने की आवश्यकता है। **(पैरा 4.1.3)**

8. **2020-21** के दौरान केंद्रीय प्रतिदर्श के लिए क्षेत्रफल परिगणना पर प्रतिदर्श जांच के लिए प्रत्युत्तर लगभग शत प्रतिशत दर्ज किया गया। कुछ राज्यों यथा- असम, बिहार, गुजरात, हरियाणा, झारखंड, उत्तर प्रदेश और पश्चिम बंगाल ने 70% से कम प्रतिक्रिया दर्ज की गयी। राज्य प्रतिदर्श के प्रत्युत्तर-दर में संकलित आँकड़ों की गुणवत्ता में सुधार हेतु संबंधित राज्यों को समुचित उपाय करने की आवश्यकता है। **(पैरा 8.1.1)**

9. **2020-21** के दौरान कुछ राज्यों में गिरदावरी की सामयिक संपूर्ति की गई परंतु कुछ राज्य जैसे कि आंध्र प्रदेश, असम, बिहार, गुजरात, हरियाणा, जम्मू-कश्मीर, झारखंड, कर्नाटक, महाराष्ट्र, पंजाब, तेलंगाना, उत्तर प्रदेश 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 44 प्रतिशत, खरीफ मौसम में 47 प्रतिशत, रबी में 43 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. **2020-21** के दौरान अखिल भारतीय स्तर पर विभिन्न मौसमों में गिरदावरी पूरी होने के बाद ही टी० आर० एस० विवरण प्रस्तुत करने की प्रवृत्ति 38 प्रतिशत से अधिक मामलों में देखी गई जिसके परिणामस्वरूप पूर्व खरीफ में 43 प्रतिशत प्रतिदर्श ग्रामों, खरीफ मौसम में **43** प्रतिशत प्रतिदर्श ग्रामों, रबी में **38** प्रतिशत प्रतिदर्श ग्रामों तथा ग्रीष्म में **27** प्रतिशत प्रतिदर्श ग्रामों में समय पर टी० आर० एस० विवरण प्रस्तुत किया गया। इसके साथ ही वर्ष 2020-21 के दौरान पूर्व खरीफ, खरीफ, रबी तथा ग्रीष्म में क्रमशः **3, 7, 7** तथा **2** प्रतिशत प्रतिदर्श ग्रामों में गिरदावरी किये बिना ही टी० आर० एस० विवरण प्रस्तुत किया गया। गिरदावरी-संपूर्ति के उपरान्त टी० आर० एस० 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। 66 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 रूप से अद्यतन होना आवश्यक है। (पैरा 8.1.4)

12. अखिल भारतीय स्तर पर 2020-21 के दौरान क्षेत्रफल परिगणना के समय फसल तथा फसल क्षेत्रफल को दर्ज करने में विभिन्न राज्यों में पूर्व खरीफ में 75 प्रतिशत, खरीफ में 83 प्रतिशत, रबी में 88 प्रतिशत तथा ग्रीष्म मौसम में 90 प्रतिशत सर्वेक्षण संख्याओं में सामंजस्य पाया गया। शेष 25 प्रतिशत, 17 प्रतिशत, 12 प्रतिशत, 5 प्रतिशत पूर्व खरीफ, खरीफ, रबी क्रमशः ग्रीष्म मौसम में विसंगतियाँ पाई गईं। इस तरह की विसंगतियाँ फसल क्षेत्रफल के आँकड़ों पर पर्याप्त असर डालती हैं।

(पैरा 8.1.6 से 8.1.8)

13. अखिल भारतीय स्तर पर समग्र रूप से वर्ष 2020-21 के दौरान कटाई स्तर पर फसल कटाई प्रयोगों का प्रत्युत्तर खरीफ मौसम के दौरान कुछ राज्यों यथा -असम, बिहार, गुजरात, हरियाणा, हिमाचल प्रदेश, जम्मू और कश्मीर, कर्नाटक, मध्य प्रदेश, महाराष्ट्र, उत्तर प्रदेश, और पश्चिम बंगाल को छोड़कर 80% से अधिक रहा और प्रत्युत्तर रबी एवं ग्रीष्म मौसम के दौरान कुछ राज्यों यथा -आंध्र प्रदेश, असम, बिहार, छत्तीसगढ़, हरियाणा, हिमाचल प्रदेश, जम्मू और कश्मीर, कर्नाटक, मध्य प्रदेश, महाराष्ट्र, ओड़ीशा, राजस्थान, उत्तर प्रदेश, और पश्चिम बंगाल को छोड़कर 80% से अधिक रहा, जिससे कारण यह प्रत्युत्तर पूर्व खरीफ में 67 प्रतिशत, खरीफ में 74 प्रतिशत, रबी में 69 प्रतिशत तथा गरमा में 62 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. 2020-21 के दौरान अखिल भारतीय स्तर पर 71 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।

(पैरा 8.2.3)

15. सहायक विवरणों को दर्ज करने में अत्यधिक त्रुटियाँ, विशेषकर जब ऐसी जानकारी स्तरीकरण उपरांत विश्लेषण के लिए आधार बनती हो, तो एक चिन्ता का विषय है।

(पैरा 8.2.3)

16. 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)

17. फसल कटाई प्रयोगों के संचालन में कनिष्ठ कर्मचारियों सहित अन्य को कार्य का प्रत्यायोजन वर्ष 2020-21 के दौरान उत्तर प्रदेश में अधिक रहा। बिहार, झारखंड व उत्तर प्रदेश में स्थिति और चिन्ताजनक हो जाती है जहां पर अप्रशिक्षित कर्मियों द्वारा प्रयोगों का अधिक संचालन किया गया।

(पैरा 8.2.5)

18. कुछ राज्यों में विभिन्न कारणों से फसल कटाई प्रयोगों के लिए चयनित गांवों / क्षेत्रों का प्रतिस्थापन किया गया। प्रयोगात्मक फसल की अनुपलब्धता के कारण मूल रूप से चयनित गांव का प्रतिस्थापन 2020-21 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)

19. आई° सी° एस° पर्यवेक्षक द्वारा की गयी रिपोर्टिंग पर आधारित तथा राज्य प्राथमिक कर्मचारियों द्वारा तदनुसूची (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)



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 2020-21, 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 2020-21 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 2020-21 at all India level was found to be 8 villages having 1300 survey numbers and 700 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 Chhattisgarh, 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 2020-21 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 Karnataka during 2020-21 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, Bihar, Gujarat, Haryana, Jharkhand, U.P. and West Bengal reported response below 70%**. 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 2020-21, **some states are reporting timely completion of Girdawari** but instances of non-completion of Girdawari in Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Karnataka, Maharashtra, Punjab, Telangana, Uttar Pradesh & West Bengal were alarmingly high resulting in timely completion of Girdawari in only **44%** sample villages during Early Kharif, **47%** during Late Kharif, **43%** during Rabi and **33%** during Summer of 2020-21. 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 2020-21, **At all India level, over the various seasons, the tendency of submitting TRS statements in time after completion of Girdawari was observed in more than 38% of the cases** result in **43%** sample villages during Early Kharif, **43%** during Late Kharif, **38%** during Rabi and **27%** during Summer season in particular. Further, the cases of submission of TRS statement without completion of Girdawari was of the order of **3%, 7%, 7% and 2%** 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 **66%** 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 2020-21, **consonance in recording crops and crop areas at the time of area enumeration were observed in 75% of the survey numbers during Early Kharif, 83% during Late Kharif, 88% during Rabi and 90% during Summer at all India level.** The errors were observed in remaining 25%, 17%, 12%, 5% 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, Uttar Pradesh and West Bengal) and above 80% in Rabi & Summer seasons for all States except Andhra Pradesh, Assam, Bihar, Chhattisgarh, Haryana, H.P., Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Uttar Pradesh and West Bengal that leads to the overall response at all India level (Pooled Sample) for crop cutting experiments at harvest stage during 2020-21 was **67%** for Autumn, **74%** for Winter, **69%** for Rabi and **62%** 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 2020-21, at all India level, the experiments were found to be conducted according to the prescribed procedures in **71%** cases. However, deficiencies noticed through the sample checks need to be emphasized in the training camps organised for Patwari workers in the States. **(Para-8.2.3)**

15. 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)**

16. 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)**

17. Delegation of work to others including juniors for conducting crop cutting experiments was found more frequent in **Rajasthan** during 2020-21. 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)**

18. 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 **9% to 11%** cases during 2020-21. 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)**

19. 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)**



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 lacklustre 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 2020-21. 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.

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, Telangana, 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
	Tamil Nadu	1972-73	Kharif, 1974-75
15.	Telangana	Kharif, 2015-16	Kharif, 2015-16
16.	Uttar Pradesh	Kharif, 1968-69	Rabi, 1973-74
17.	Uttarakhand	Rabi, 2001-02	Rabi, 2001-02
18.	Puducherry	Kharif, 1980-81	Kharif, 1980-81
19.	Kerala #	1975-76	Early Kharif, 1975-76
20.	Odisha #	1976-77	Kharif, 1974 -75****
21.	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 2020-21 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 Andhra Pradesh, Gujarat & Tamil Nadu to 23 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 3500 hectares in Andhra Pradesh.

Table - 2
Workload of Patwari during 2020-21

Sl.No.	State	No. of villages	Survey / Sub survey Nos. per village('000')	Geographical Area per village ('000' Ha.)
1	Andhra Pradesh	2	1.7	3.5
2	Assam	11	0.5	0.2
3	Bihar	17	1.4	0.3
4	Chhattisgarh	5	1.1	0.5
5	Gujarat	2	0.7	1.0
6	Haryana	5	3.4	0.9
7	Himachal Pradesh	11	0.9	0.2
8	Jammu & Kashmir	5	1.0	0.4
9	Jharkhand	23	1.1	0.3
10	Karnataka	4	0.7	1.0
11	Kerala	#	#	#
12	Madhya Pradesh	4	0.8	0.5
13	Maharashtra	4	0.5	0.8
14	Odisha	22	1.0	0.2
15	Punjab	7	2.5	0.7
16	Rajasthan	7	0.9	1.0
17	Tamil Nadu	2	2.5	0.8
18	Telangana	3	2.0	1.1
19	Uttar Pradesh	6	0.6	0.3
20	Uttarakhand	12	1.8	0.2
21	West Bengal	5	1.1	0.2
22	Puducherry	10	1.2	0.4
All India average		8	1.3	0.7

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 2020-21 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	Chhattisgarh
26.	Rape & Mustard	51	Chhattisgarh
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 2020-21.

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

Sl. No.	State	Crops for which pre-stratification is done according to		
		Both Seed	Irrigation & 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.

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 NSSO (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. 2020-21, two meetings of these committees were held in the States/UTs of Haryana and Karnataka. 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.

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 2020-21, 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
2020-21	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:

- Physical verification of the crop enumeration done by the village primary workers in a sample of about 10,000 villages in each season,
- Checking of the aggregation of crop-wise area in the Khasra register of these villages, and
- 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, weightment 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.

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.

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 2020-21 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 drilage 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.

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 2020-21. It is encouraging to note that response for the Central Sample was cent percent. Further, it is noteworthy to state that response for the State Sample was cent percent in the States/UTs like Andhra Pradesh, Chhattisgarh, Karnataka, Kerala and Puducherry for all the seasons covered. The response for the State Sample was below 70% in Assam (54% in Summer), Bihar (56% in Early Kharif, 52% in Late Kharif), Gujarat (69% in Kharif), Haryana (60% in Rabi), Jharkhand (63% in Summer), Uttar Pradesh (46% in Kharif, 42% in Rabi & 31% in Summer) and West Bengal (7% in Early Kharif, 12% in Late Kharif, 12% in Rabi & 2% in Summer). The concerned States 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 2020-21. A summary showing agency wise brief picture of the timeliness in completing area enumeration by primary workers is given below in **Table-6** for 2020-21 and 2019-20. 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 2020-21 are given in **Annex-II**. Some states like Chhattisgarh (95% in Kharif and 72% in Rabi), Himachal Pradesh (90% in Kharif and 96% in Rabi), Kerala (88% in Early Kharif, 97% in Late Kharif and 83% in Summer), Madhya Pradesh (97% in Kharif & 76% Rabi), Odisha (96% in Early Kharif, 91% in Late Kharif & 98% in Summer), Rajasthan (77% in Late Kharif), Uttarakhand (85% in Kharif, 95% in Rabi & 87% in Summer) and Puducherry (100% in Kharif and Rabi I & 94% in Rabi II) are

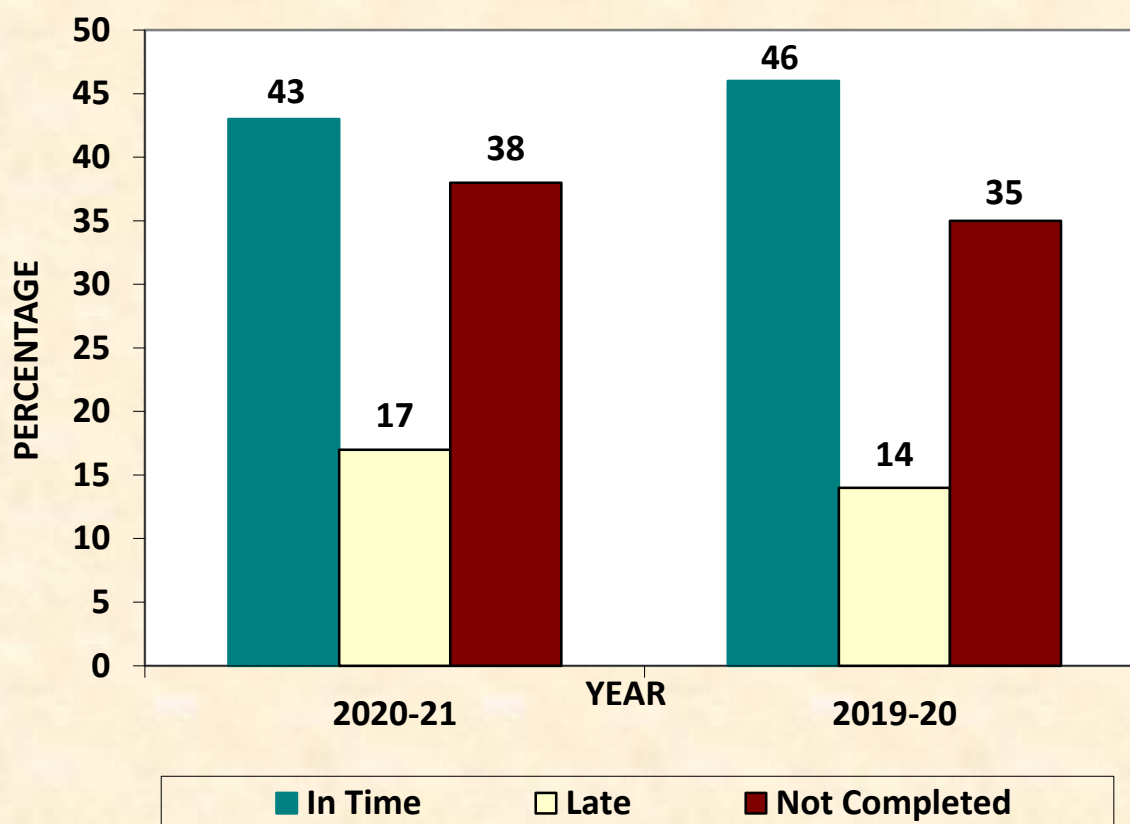
reporting timely completion of Girdawari. However, for all the States taken together on comparison of the position of timely completion of area enumeration work during 2020-21 with that of the last year, it is observed that, the timely completion of area enumeration was found to be of the order of 44% during Early Kharif, 47% during Late Kharif, 43% during Rabi and 33% during Summer of 2020-21 as against 49%, 50%, 45% and 33% during 2019-20. The position remains unsatisfactory for some of the States like Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Karnataka, Maharashtra, Punjab, Telangana, Uttar Pradesh 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 2020-21 and 2019-20

Status	Percentage of Villages					
	2020-21			2019-20		
	Central	State	Pooled	Central	State	Pooled
Early Kharif						
In time	40	50	44	40	60	49
Late	5	16	10	8	11	9
Not Completed	55	32	45	51	24	39
Late Kharif						
In time	46	49	47	48	52	50
Late	10	30	20	10	23	16
Not Completed	43	18	31	41	19	31
Rabi						
In time	37	51	43	37	57	45
Late	12	24	17	11	16	13
Not Completed	50	22	37	51	21	38
Summer						
In time	31	37	33	30	37	33
Late	8	21	14	7	28	17
Not Completed	61	34	49	35	24	30
All Seasons						
In time	40	47	43	41	52	46
Late	10	25	17	10	20	14
Not Completed	50	23	38	45	22	35

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 2020-21 & 2019-20.

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 2020-21 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 98% & Rabi 98%), Haryana (Kharif 75% & Rabi 68%), Himachal Pradesh (Kharif 76% & Rabi 82%), Jammu & Kashmir (Kharif 70%, Rabi 71%), Karnataka (Kharif 67% & Summer 66%), Kerala (Autumn 94%, Winter 96% & Summer 87%), Madhya Pradesh (Kharif 96% & Rabi 94%), Odisha (Autumn 96%, Winter 95% & Summer 95%), Punjab (Kharif 59%, Rabi 63%), Rajasthan (Kharif 96%, Rabi 79%), Tamil Nadu (Phase-I 92%, Phase-II 88%, Phase-III 94%), Uttar Pradesh (Kharif 57%, Rabi 61% & Summer 57%), Uttarakhand (Kharif 97%, Rabi 100% and Summer 100%) and Puducherry (Kharif 100%, Rabi I 100% & Rabi II 100%). Also, the matter of serious concern is 5% 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 48% & Rabi 50%), Jharkhand (Rabi 15%), and Telangana (Kharif 55%, Rabi 36%). It is reiterated that these State governments may take appropriate administrative measures to curb this recurring tendency. In 2020-21, TRS statements were submitted in time after completion of Girdawari only in 52% sample villages during Autumn, 59% during Winter, 58%

during Rabi and 43% during Summer. Further, the submission of TRS statement without completion of Girdawari was 3%, 7%, 7% and 2% 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 **2020-21** and **2019-20** is presented in **Table-7**.

Table – 7

Status of Submission of TRS/EARAS Statement during 2020-21 and 2019-20

Season	Percentage of villages for which TRS statement							Information about TRS not available
	Submitted					Not Submitted		
	Without completion of 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				
2020-21								
Early Kharif	1	2	43	9	4	0	38	0
Late Kharif	6	1	43	16	3	1	22	0
Rabi	6	1	38	20	2	1	26	0
Summer	1	1	27	16	6	0	44	0
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

*Note: - * Excluding percentages of TRS statements submitted but could not be compared with Girdawari completion (Item-8) of Annex - VI, State wise Status Report 2020-21 & 2019-20.*

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 2020-21. Information in respect of updation of the maps reveals that in 66 % 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 75 % in Early Kharif, 83% in Late Kharif, 88% in Rabi and 90% in Summer. The

8.1.7 The most predominant error observed was that of **not recording the crops actually sown in the field (e₁)**, which occurred mostly in Andhra Pradesh (Kharif 4% and Rabi 4%), Bihar (E. Kharif 4%), Haryana (E. Kharif 4%), Himachal Pradesh (Late Kharif 5% and 4% Rabi), Jharkhand (Early Kharif 51%, Late Kharif 64% & Rabi 17%), Karnataka (E. Kharif 7%, Rabi 6%), Madhya Pradesh (Kharif 6%, Rabi 7%) Maharashtra (Late Kharif 12% & Rabi 6%), Rajasthan (Kharif 4%, Rabi 7%), Tamil Nadu (Phase-I 16%, Phase II 11%, Phase III 11%), Telangana (Kharif 14%), Uttar Pradesh (Rabi 6% & Summer 14%), Uttarakhand (Summer 5%) and West Bengal (Early Kharif 4%, Rabi 4%). **Reporting of crops not actually sown (e₂)** was the least occurring of the three errors. It was found mostly in Haryana (Late Kharif 2% & Summer 10%), Himachal Pradesh (Kharif 5%), Karnataka (Kharif 5%, Rabi 5%), Madhya Pradesh (Kharif 4% & Rabi 3%), Maharashtra (Kharif 3%), Rajasthan (Kharif 3% & Rabi 2%), Tamil Nadu (Phase-I 2%, Phase-II 4% & Rabi 3%), Uttar Pradesh (Kharif 4%) and West Bengal (E. Kharif 5% & Rabi 3%). **The error of inaccurate assessment of area under crop (e₃)** was found dominant in Himachal Pradesh (Kharif 6% & Rabi 4%), Karnataka (Kharif 7% & Rabi 5%), Kerala (L. Kharif 4% & Summer 10%), Madhya Pradesh (Kharif 11% & Rabi 10%), Maharashtra (Kharif 29% & Rabi 12%), Rajasthan (Kharif 7% & Rabi 5%), Tamil Nadu (Phase-I 12%, Phase-II 9% & Rabi 9%), Uttar Pradesh (Kharif 12%, Rabi 10% & Summer 9%), West Bengal (E. Kharif 9%, Rabi 5% & Summer 6%) and Puducherry (Summer 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 Maharashtra (Sugarcane & Wheat), Tamil Nadu (Jowar Kharif & Jowar Rabi) and Uttar Pradesh (Bajra & Wheat).

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 2020-21, 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 92% of the survey numbers and in just 9% of the survey numbers there is mismatch. This percentage of mismatch found to be more than 20% in Jharkhand (E.Kharif 51%, L.Kharif 64). 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 89% 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 11% of the selected survey numbers. The seed variety differed in more than 25% of the selected survey numbers in Punjab (Rabi 36%). 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 2020-21. **The response achieved in respect of all the States was above 80%** except in Andhra Pradesh (Rabi 78%), Assam (Early Kharif 42%, Rabi 62% & Summer 34%), Bihar (Early Kharif 54%, Late Kharif 65% & Summer 15%), Chhattisgarh (Rabi 64%), Gujarat (Kharif 73%), Haryana (Kharif 78% & Rabi 79%), Himachal Pradesh (Kharif 76% & Rabi 51%), Jammu & Kashmir (Kharif 65% & Rabi 34%), Karnataka (Kharif 76%, Rabi 68% & Summer 52%), Madhya Pradesh (Kharif 74% & Rabi 64%), Maharashtra (Kharif 64% & Rabi 65%), Odisha (Summer 59%), Rajasthan (Rabi 75%), Uttar Pradesh (Kharif 49%, Rabi 55% & Summer 55%) and West Bengal (Early Kharif 49% & Late Kharif 49%, Rabi 47% & Summer 26%). The overall response at all India level (Pooled) was of the order of 67% for Early Kharif, 74% for Late Kharif, 69% for Rabi and 62% for Summer during 2020-21 as against 71% for Early Kharif, 70% for Late Kharif, 34% for Rabi and 48% for Summer in corresponding seasons during 2019-20.

II – Distribution of number of experiments conducted by important inputs

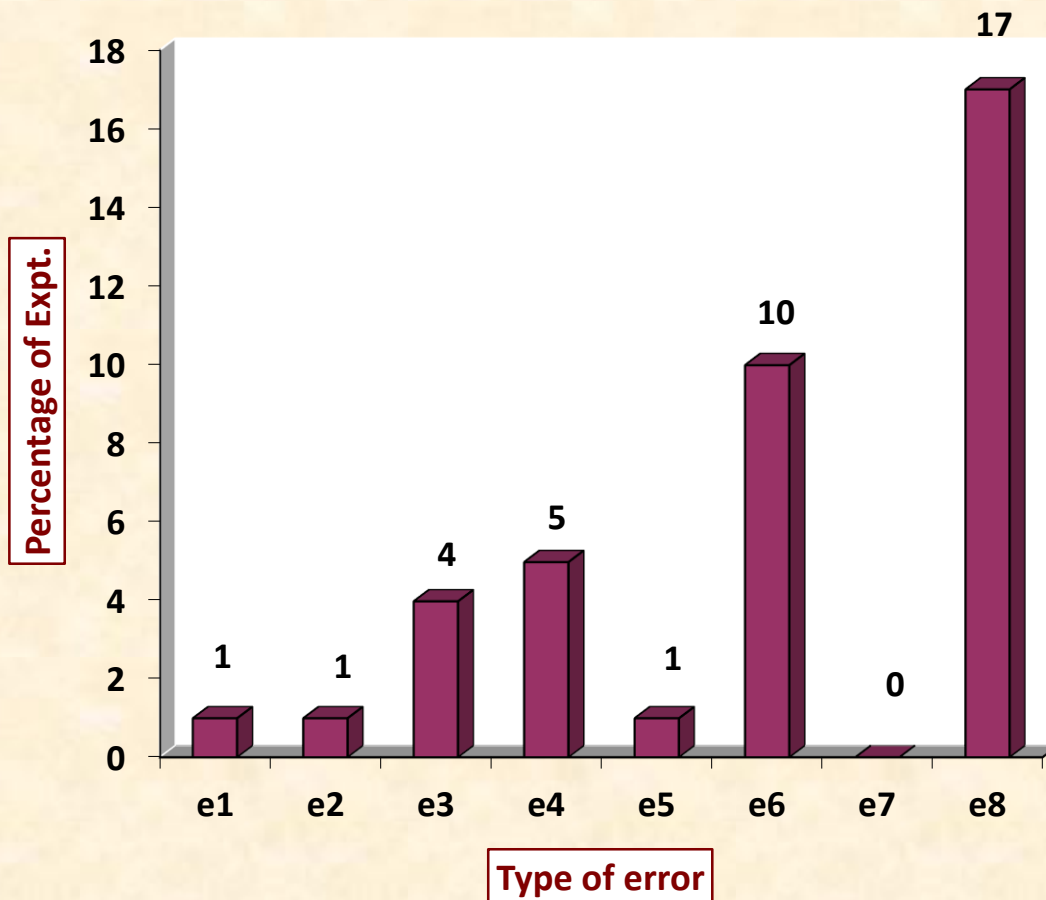
8.2.2 **Annex-VII** gives details of the crop-wise percentage distribution of experiments according to important inputs viz. Irrigation, High Yielding Varieties of Seeds and Fertilizers applied.

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, 71% cases of the experiments (during Autumn, Winter, Rabi and Summer taken together) were conducted in accordance with the prescribed procedures during 2020-21. 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 **e₆ error** i.e. reporting of ancillary particulars like irrigation, high yielding varieties of seed, fertilizer and manure used during 2020-21 was found in 10% 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 2020-21



e₁
 = Error in selection of survey/sub survey numbers.

e₂ = Error in selection of field within survey/sub survey numbers.

e₃ = Error in measurement of field.

e₄ = Error in selection of random numbers, location & marking of plots.

e₅ = Error in weighing of produce.

e₆ = Error in reporting ancillary information.

e₇ = Inadequate arrangement for storing of produce for drying and incorrect reporting of constituents in crop mixtures.

e₈ = Others (Comparison not possible between Supervisor & Primary Worker entries)

IV - Supply and Use of Equipment

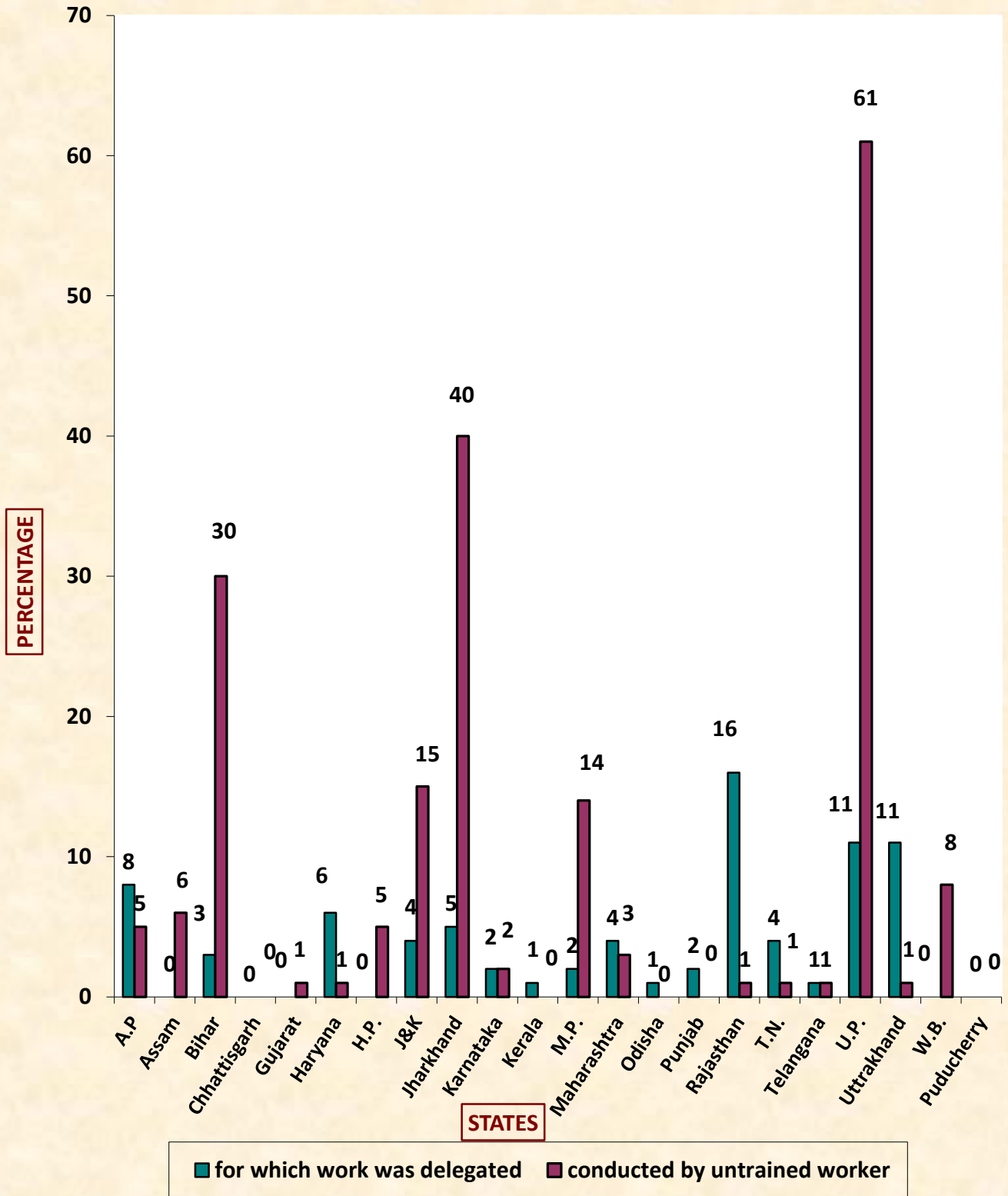
8.2.4 While an untrained or negligent worker cannot conduct the experiments properly, accuracy in their conduct also requires supply of essential equipment and their proper use. Information on these two latter aspects, collected during the sample checks of 2020-21, is presented in **Annex-IX**. It was 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 73%, 34%, 60% and 77% supervised experiments respectively during 2020-21 and not supplied with essential equipment in 27%, 66%, 40% and 23% of experiments during 2020-21 as against 24%, 65%, 35% and 24% during 2019-20.

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 15%, 8%, 15%, 12% during 2020-21 as against 14%, 8%, 14%, 12% during 2019-20 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 8%, Bihar 3%, Haryana 6%, Jammu & Kashmir 4%, Jharkhand 5%, Karnataka 2%, Kerala 1%, Madhya Pradesh 2%, Maharashtra 4%, Odisha 1%, Punjab 2%, Rajasthan 16%, Tamil Nadu 4%, Telangana 1%, Uttar Pradesh 11%, and Uttarakhand 11% during 2020-21. The percentage of experiments conducted by workers for all the seasons taken together without proper training was 5% in Andhra Pradesh, 6% in Assam, 30% in Bihar, 1% in Gujarat, 1% in Haryana, 5% in Himachal Pradesh, 15% in Jammu & Kashmir, 40% in Jharkhand, 2% in Karnataka, 14% in Madhya Pradesh, 3% in Maharashtra, 1% in Rajasthan, 1% in Tamil Nadu, 1% in Telangana, 61% in Uttar Pradesh, 1% in Uttarakhand and 8% in West Bengal during 2020-21. 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
2020-21**

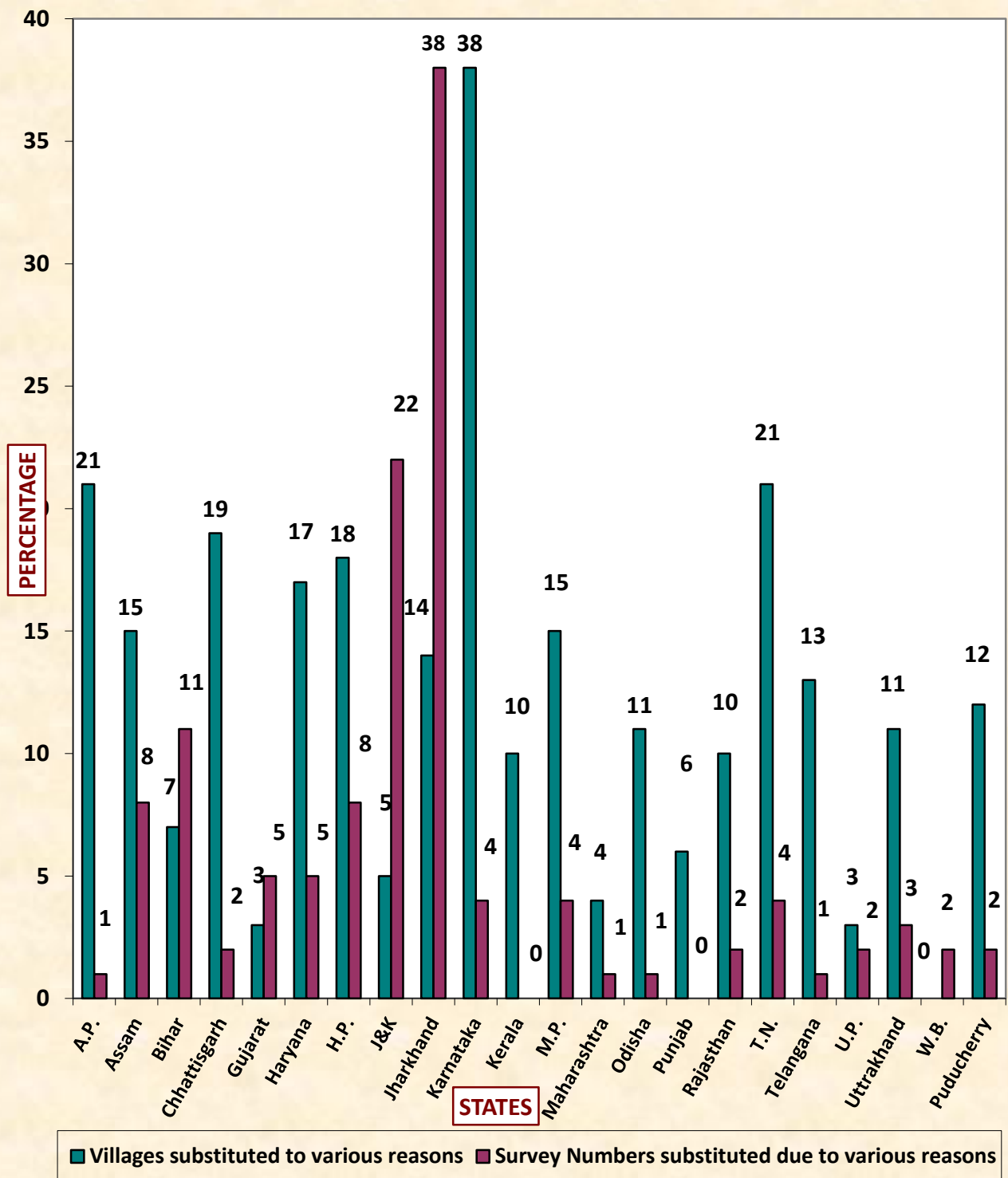


VI - Substitution of sampling units

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 Gujarat, Maharashtra, Punjab, Telangana, Uttar Pradesh and West Bengal during 2020-21. 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%, 10% and 9% during Early Kharif, Late Kharif, Rabi and Summer during 2020-21 respectively. It varied around 18% to 25% of the experiments conducted in Andhra Pradesh, 6% to 37% in Assam, 1% to 29% in Bihar, 12% to 28% in Chhattisgarh, 3% in Gujarat, 10% to 18% in Haryana, 13% to 20% in Himachal Pradesh, 4% in Jammu & Kashmir, 2% to 12% in Jharkhand, 31% to 35% in Karnataka, 14% to 30% in Kerala, 11% to 15% in Madhya Pradesh, 3% to 4% in Maharashtra, 7% to 16% in Odisha, 3% in Punjab, 10% in Rajasthan, 16% to 24% in Tamil Nadu, 4% in Telangana, 1% to 9% in Uttar Pradesh, 7% to 12% in Uttarakhand and 0% to 30% in Puducherry in various seasons of 2020-21. 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 2020-21



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:

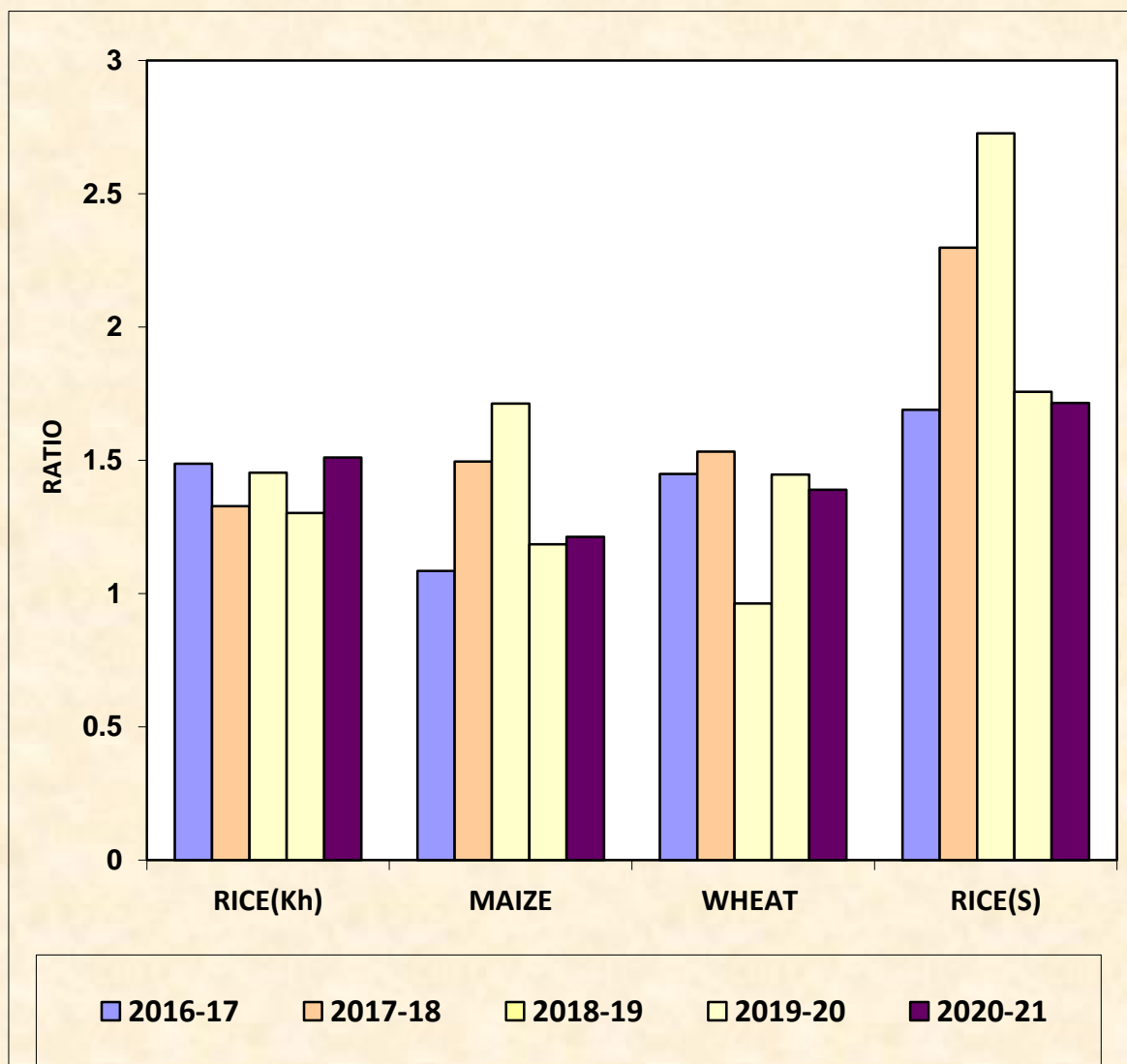
Table - 8
Ratio of Area Estimates (A-IV/A-III)

S. NO.	CROP	2020-21	2019-20	2018-19	2017-18	2016-17
1	Rice (Kh)	1.5103	1.3029	1.4539	1.3279	1.4875
2	Rice (Sum)	1.7151	1.7568	2.7242	2.2977	1.6896
3	Jowar (Kh)	1.2619	0.6901	0.9551	1.2485	1.3339
4	Jowar (R)	1.8464	1.7739	1.9360	2.4622	2.4125
5	Bajra	1.4141	1.0676	2.0017	1.3868	1.3113
6	Maize	1.2127	1.1854	1.7130	1.4962	1.0853
7	Ragi	0.9760	1.0155	0.9630	1.0721	1.1000
8	Cotton	1.6240	1.6969	1.4602	1.7712	1.7315
9	Groundnut	1.8578	1.8744	1.6185	2.3101	1.9809
10	Sugarcane	1.4167	1.3096	2.0148	1.8223	1.2769
11	Wheat	1.3897	1.4470	0.9638	1.5335	1.4493
12	Barley	1.0204	1.0394	1.0789	1.0556	1.1146
13	Gram	1.2548	1.4974	1.1721	1.3831	1.3367
14	R & M	0.9748	1.1880	1.2819	1.6108	1.4193

*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 2020-21. 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 2016-17 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.

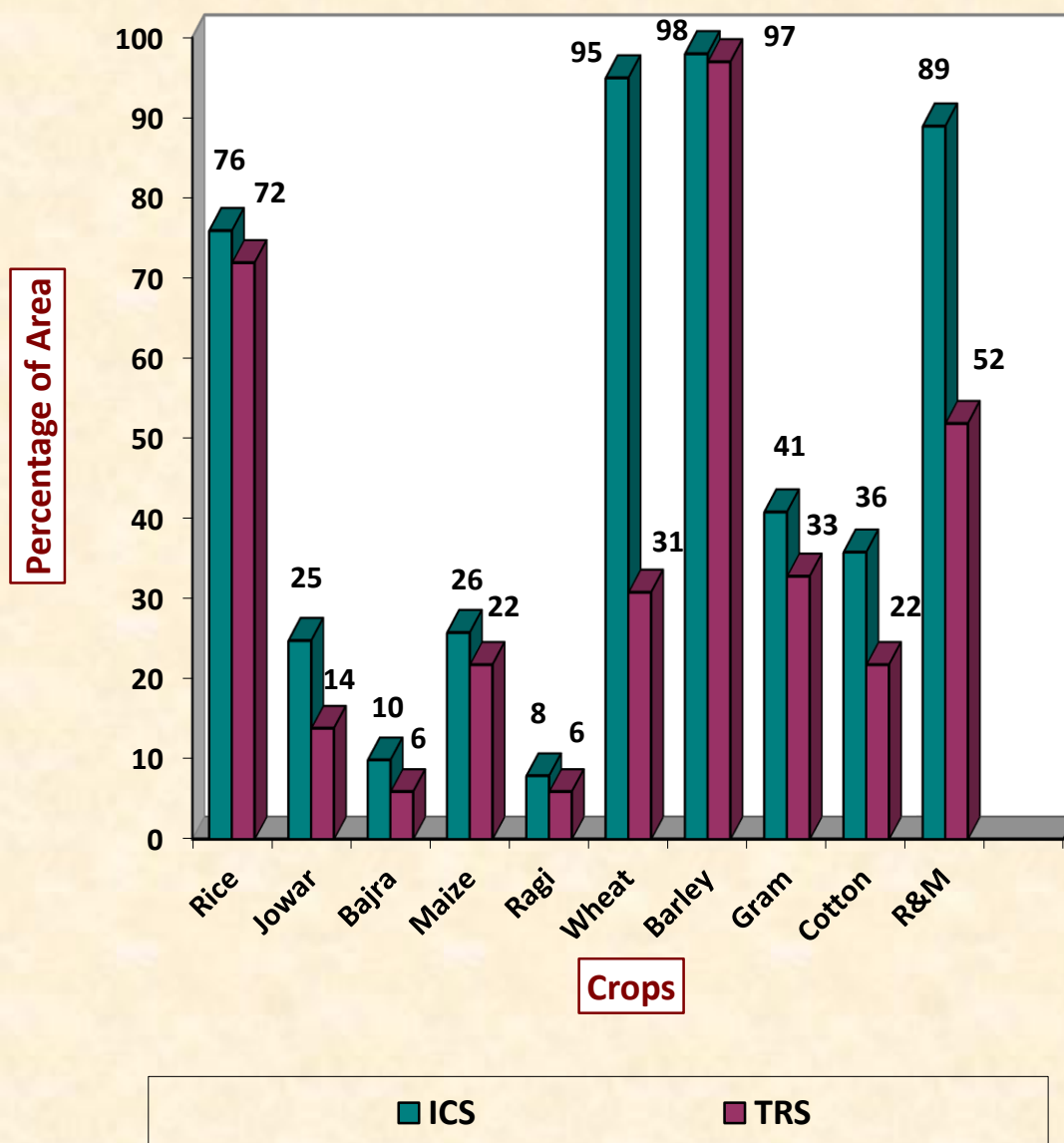
CHART-VI
RATIO OF AREA ESTIMATES (A-IV/A-III)



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
2020-21



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 0.7% (Wheat in Punjab) to 18.7% (Sugarcane in Maharashtra) for the year 2020-21. Ratio of estimates of yield rates under ICS and CES at all India level are given in **Table-9** for last five years since 2016-17. The yield rates under ICS Scheme are higher as compared to CES estimates in case of Maize, Barley and Gram and lower in the case of Rice (Kharif & Summer), Jowar (Kharif & Rabi), Wheat, Bajra, Ragi, Cotton, Rape & Mustard, Sugarcane and Groundnut crops during 2020-21.

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 (2016-17 to 2020-21) 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	2020-21	2019-20	2018-19	2017-18	2016-17
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Rice (Kh)	0.8517	0.7747	1.0585	0.9252	1.0804
2	Rice (S)	0.9460	0.6141	0.6753	0.9323	0.9177
3	Jowar (Kh)	0.9110	0.8993	1.1864	1.1801	0.7841
4	Jowar (R)	0.7142	0.9833	0.9284	1.1759	1.3944
5	Bajra	0.5741	0.8592	0.9430	0.8024	1.0280
6	Maize	1.0528	0.6979	0.8814	1.1754	0.8680
7	Ragi	0.9206	0.8957	0.7318	1.2466	0.2057
8	Cotton	0.6091	0.5119	0.4969	0.7148	0.6441
9	Groundnut	0.7453	0.8295	0.5975	1.5874	0.5247
10	Sugarcane	0.9904	1.0233	0.7263	1.1046	0.9027
11	Wheat	0.9336	0.8163	1.0039	0.9855	1.0901
12	Barley	1.0173	1.0167	1.0258	0.8393	0.9010
13	Gram	1.0445	1.1076	0.8369	1.0189	1.0632
14	R & M	0.9434	0.9137	1.0645	1.1124	1.1681

Note :- (1) CES data pertains to year 2020-21 in column 3.
 (2) CES data pertains to year 2019-20 in column 4.
 (3) CES data pertains to year 2018-19 in column 5.
 (4) CES data pertains to year 2017-18 in column 6.
 (5) CES data pertains to year 2016-17 in column 7.

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

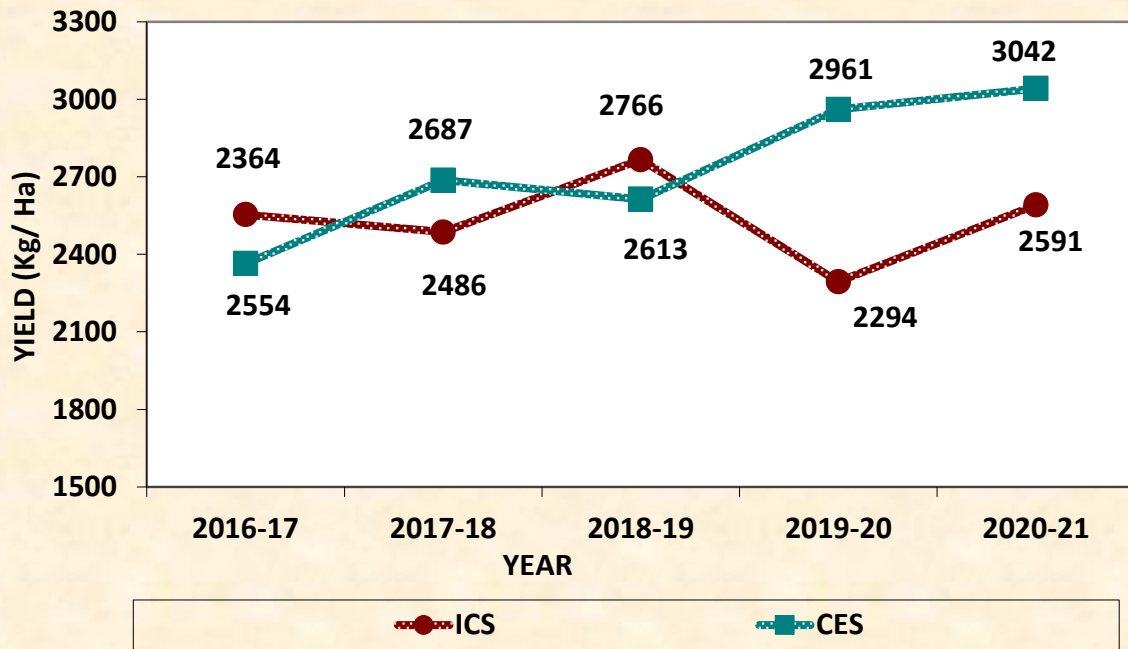


Chart - VIII (b)
Trend of yield rates under ICS & CES
Rice Summer

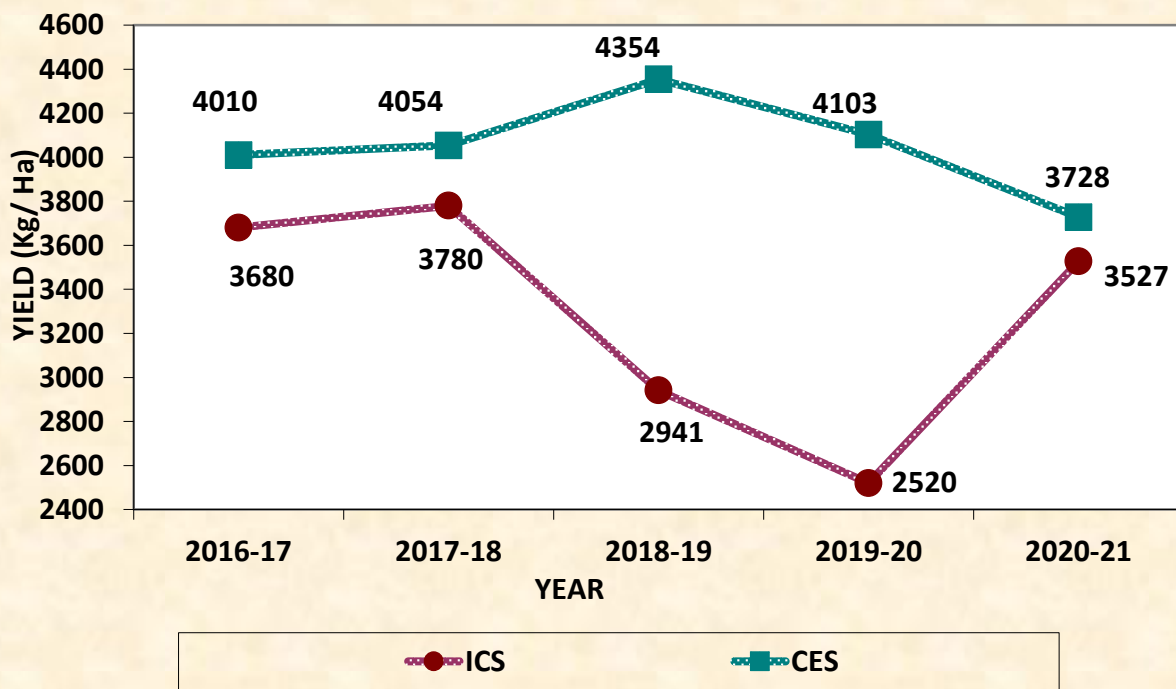


Chart-VIII(c)
Trend of yield rates under ICS & CES
Maize

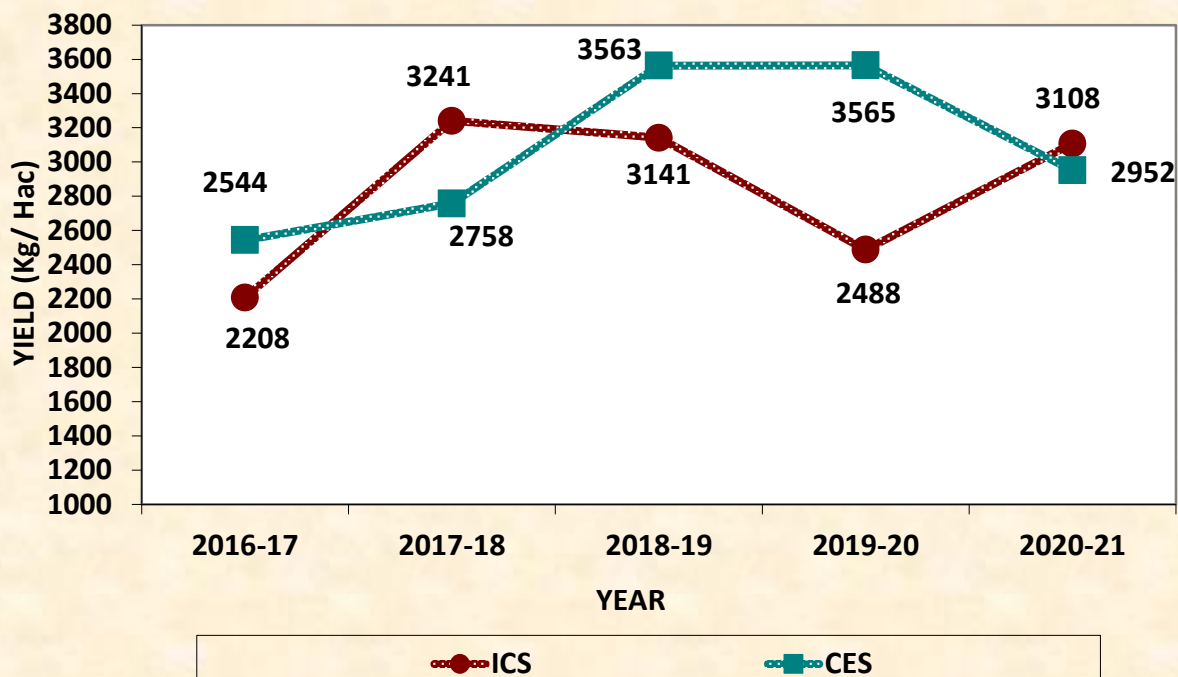


Chart - VIII (d)
Trend of yield rates under ICS & CES
Gram

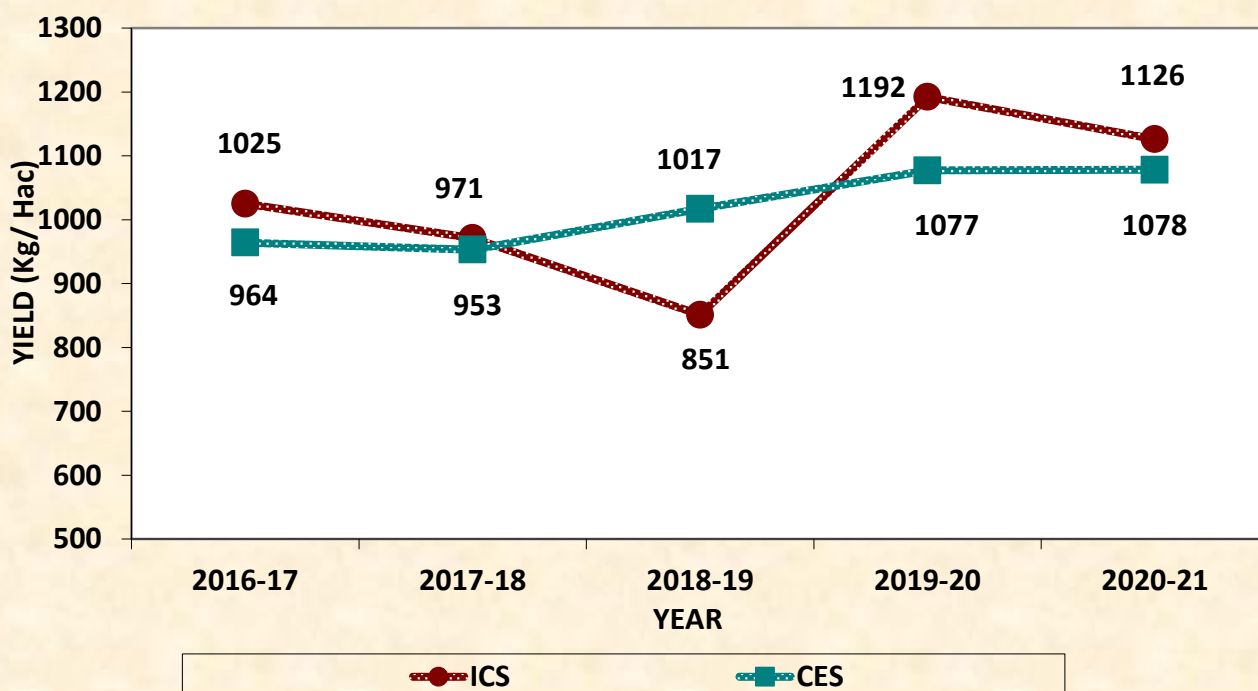
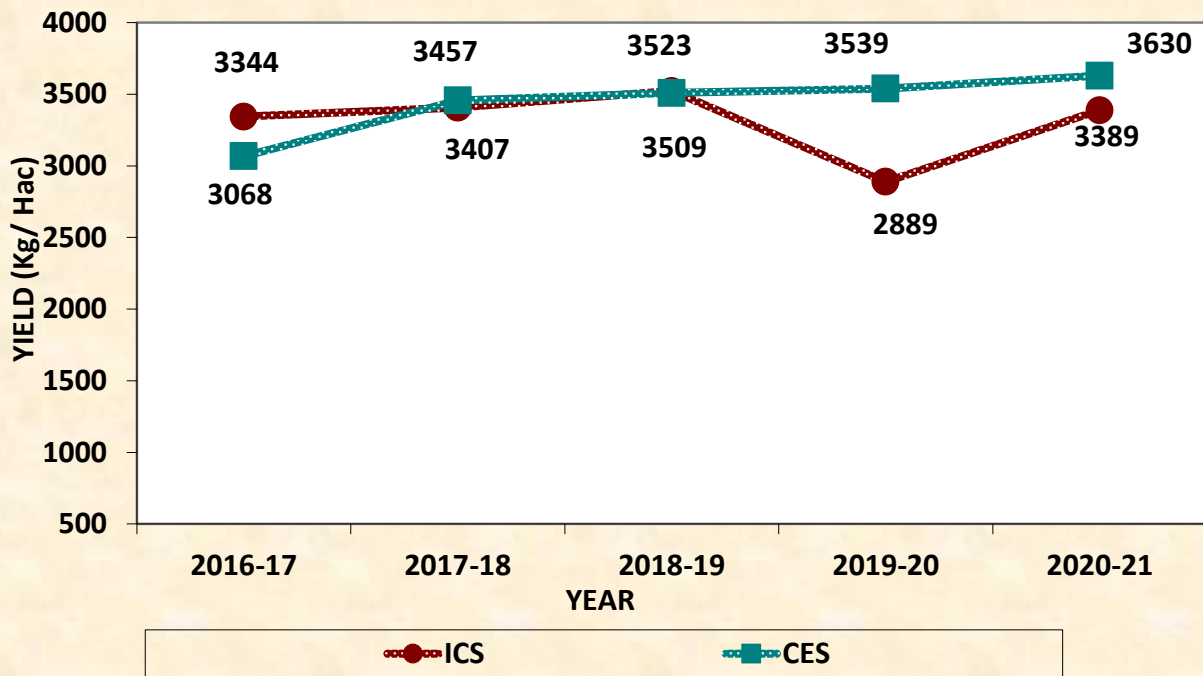


Chart - VIII (d)
Trend of Yield rate under ICS & CES
Wheat



10



Digitization of Agricultural Statistics (A.S.) Schedules

In order to ensure uniformity of concepts, definitions and procedures for smooth execution of the scheme and reducing the time lag in releasing findings of ICS scheme, a need was felt for digitization of ICS Scheme. At present, NSSO (FOD) has made transition from the system of paper based schedule to e-schedule for data collection on Sample Checks on Crop Cutting Experiments (CCEs) (Sch. AS 2.0). It has become necessary to shift to paperless functioning mode to reduce the manual intervention and time lag. Realizing the need to update the present system and keeping in view the technological development. Agriculture Statistics Headquarters, Faridabad is in the process of digitizing the two paper based schedules to enable the field supervisor under the ICS Scheme to collect data on tablets/ smart phones with geo-stamping and send data directly to this office of experimental plots selected for Sample Checks on Crop Cutting Experiments (CCEs), thereby rendering more credibility and timeliness to the process.

To start with, in-house data entry software has been developed for AS 2.0 with technical expertise available at NSSO. The in-house software developed by FOD Officers for filling schedule AS 2.0 was made available to all Regional offices/ State Governments in the month of March 2018 for use during Rabi and Summer seasons of Agriculture Year 2017-18. A modified version of AS 2.0 software/e-schedule was also sent to all ROs/SASAs in August 2018 for field data entry work for use in all the future agriculture years starting from 2018-19 onwards along with steps to install the new software, Instruction Manual, crop code list and Master list. The modified software is Window based application, user friendly and generic in nature and easy to use on desktops/laptops.

Agriculture Statistics Headquarters, Faridabad has also initiated the process of digitization of schedule AS 1.0. Once desktop based schedule entry/ submission is stabilized, switching over to android based platform and feasibility of development of agriculture statistics portal on lines of ASI in future can be explored.

Every year modified Master List of Planned crop cutting experiments will be sent to ROs/ SASAs for smooth functioning of digitization process.



PART-II

(ANNEXURES)

**RESPONSE IN SAMPLE CHECK ON AREA ENUMERATION
DURING 2020-21**

Sl. No.	State	A G E N C Y	Sample Size	Percentage Response			
				Kharif		Rabi	
				Early Kharif	Late Kharif	Rabi	Summer
1	2	3	4	5	6	7	8
1	Andhra Pradesh	C	220		100	100	
		S	350		100	100	
		P	570		100	100	
2	Assam	C	160	100	100	100	100
		S	160	71	74	70	54
		P	320	86	87	85	77
3	Bihar	C	240	100	100	100	100
		S	240	56	52	93	85
		P	480	78	76	96	93
4	Chhattisgarh	C	100		100	100	
		S	100		100	100	
		P	200		100	100	
5	Gujarat	C	340		100	100	100
		S	340		69	99	97
		P	680		85	100	98
6	Haryana @	C	200		100	100	100
		S	200		76	60	
		P	400		88	80	100
7	Himachal Pradesh	C	140		100	100	
		S	140		94	87	
		P	280		97	94	
8	Jammu & Kashmir	C	100		100	100	
		S	140		91	100	
		P	240		95	100	
9	Jharkhand	C	60	100	100	100	100
		S	60	72	90	78	63
		P	120	86	95	89	82
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 Pradesh	C	360		100	100	
		S	360		83	75	
		P	720		91	88	
13	Maharashtra	C	440		100	100	100
		S	440		95	75	88
		P	880		98	87	94
14	Odisha	C	220	100	100		100
		S	220	95	100		100
		P	440	98	100		100
15	Punjab	C	200		100	100	
		S	200		91	91	
		P	400		95	96	
16	Rajasthan	C	300		100	100	
		S	300		92	91	
		P	600		96	95	

Sl. No.	State	A G E N C Y	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	
		§	260	100	97	98	
		P	520	100	98	99	
18	Telangana	C	160		100	100	
		S	250		91	91	
		P	410		94	94	
19	Uttar Pradesh	C	690		100	100	100
		S	690		46	42	31
		P	1380		73	71	65
20	Uttarakhand	C	110		100	100	100
		S	110		95	100	100
		P	220		97	100	100
21	West Bengal	C	250	100	100	100	100
		S	400	7	12	12	2
		P	650	43	46	46	40
22	Puducherry	C	9		100	100	100
		S	9		100	100	100
		P	18		100	100	100
For States Covered		C	4939	100	100	100	100
		S	5349	68	80	76	64
		P	10288	83	90	87	82

Note:

1. @- The Field work was not carried out for State sample during Summer season.
1. §- For Tamil Nadu: Early Kharif, Late Kharif and Rabi indicate I, II, & III phases respectively.

TIMELINESS IN COMPLETION OF GIRDAWARI DURING 2020-21

Sl. No.	State	A G E N C Y	Percentage of villages where Girdawari was completed during											
			Early Kharif			Late Kharif			Rabi			Summer		
			In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit	In time	Late	Not completed 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				39	49	12	75	7	18			
		P				24	30	46	46	4	50			
2	Assam	C	0	0	100	0	0	100	0	0	100	0	0	100
		S	0	0	100	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	100	0	0	100	0	0	100	0	0	100
		S	2	22	76	13	9	75	0	11	89	0	7	93
		P	1	10	89	6	4	88	0	5	95	0	3	97
4	Chhattisgarh	C				93	4	1	69	30	1			
		S				97	3	0	74	24	0			
		P				95	4	3	72	27	1			
5	Gujarat	C				0	0	100	0	0	100	0	0	0
		S				2	12	86	0	11	89	0	5	95
		P				1	6	93	0	5	94	0	2	84
6	Haryana	C				70	23	8	90	7	4	17	0	83
	@	S				21	79	0	25	75	0	0	0	0
		P				49	47	4	65	32	3	17	0	83
7	Himachal Pradesh	C				89	10	1	99	1	1			
		S				92	8	0	93	7	0			
		P				90	9	0	96	4	0			
8	Jammu & Kashmir	C				73	22	4	84	16	0			
		S				54	44	2	60	38	2			
		P				63	35	3	67	31	1			
9	Jharkhand	C	0	0	100	0	0	100	0	0	100	0	0	100
		S	12	27	27	28	34	36	4	38	51	8	21	68
		P	5	13	67	12	15	72	2	17	79	3	8	88
10	Karnataka	C				36	31	33	21	28	51	26	17	50
		S				70	30	0	75	25	0	78	22	0
		P				53	31	16	48	26	26	61	20	17
11	Kerala	C	88	3	10	94	3	4				95	4	1
		S	89	11	0	100	0	0				71	29	0
		P	88	7	5	97	1	2				83	16	1
12	Madhya Pradesh	C				100	0	0	88	11	0			
		S				93	4	0	54	40	0			
		P				97	1	0	76	22	0			
13	Maharashtra	C				11	8	79	3	1	94	0	0	0
		S				26	45	6	51	13	4	14	43	8
		P				19	26	43	25	7	49	14	43	8
14	Odisha	C	95	4	1	94	5	0				99	1	0
		S	97	3	0	88	12	0				97	2	0
		P	96	3	0	91	9	0				98	2	0
15	Punjab	C				41	57	3	37	57	7			
		S				27	73	0	1	1	0			
		P				34	64	1	37	59	3			

Sl. No.	State	A G E N C Y	Percentage of villages where Girdawari was completed during											
			Early Kharif			Late Kharif			Rabi			Summer		
			In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	Rajasthan	C				78	21	0	67	16	17			
		S				75	23	0	66	14	19			
		P				77	22	0	66	15	18			
17	Tamil Nadu \$	C	80	11	9	87	3	10	69	22	8			
		S	73	20	7	72	19	9	76	20	4			
		P	76	16	8	79	11	10	73	21	6			
18	Telangana	C	0	0	0	0	0	99	0	0	99			
		S	0	0	0	20	55	25	46	33	20			
		P	0	0	0	12	33	54	27	20	53			
19	Uttar Pradesh	C				48	9	38	40	17	43	36	19	44
		S				53	37	4	67	32	1	43	46	11
		P				50	18	27	48	21	31	37	25	37
20	Uttarakhand	C				90	9	1	97	3	0	94	6	0
		S				79	18	0	93	7	0	80	20	0
		P				85	13	0	95	5	0	87	13	0
21	West Bengal	C	5	8	87	23	7	70	16	14	70	21	9	70
		S	10	83	7	2	65	33	6	87	6	50	50	0
		P	6	16	78	19	17	64	14	26	60	21	11	68
22	Puducherry	C				100	0	0	100	0	0	100	0	0
		S				100	0	0	100	0	0	100	0	0
		P				100	0	0	100	0	0	100	0	0
For States covered		C	40	5	55	46	10	43	37	12	50	31	8	61
		S	50	16	32	49	30	18	51	24	22	37	21	34
		P	44	10	45	47	20	31	43	17	37	33	14	49

Note:

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

TIMELINESS IN SUBMISSION OF TRS/ EARAS STATEMENT DURING 2020-21

Sl. No.	State	S E A S O N	A G E N C Y	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 Pradesh	Kharif	C	100	0	0	0	0	0	0	0	0	
			S	13	1	79	6	0	0	0	0	0	
	Rabi	C	100	0	0	0	0	0	0	0	0	0	
		S	18	0	75	6	0	0	0	0	0	0	
		P	50	0	46	4	0	0	0	0	0	0	
2	Assam	E.Kh.	C	0	0	0	0	0	0	0	100	0	
			S	0	8	0	0	40	0	51	0	0	
			P	0	5	0	0	22	0	74	0	0	
		L.Kh.	C	0	0	0	0	0	0	100	0	0	0
			S	0	12	0	0	39	0	50	0	0	0
			P	0	5	0	0	16	0	79	0	0	0
	Rabi	C	0	0	0	0	0	0	100	0	0	0	
		S	3	14	0	0	41	0	42	0	0	0	
		P	1	6	0	0	16	1	77	0	0	0	
	Summer	C	0	0	0	0	0	0	100	0	0	0	
		S	0	5	0	0	43	0	52	0	0	0	
		P	0	2	0	0	15	0	83	0	0	0	
3	Bihar	Bhadhai	C	0	0	0	0	0	0	100	0	0	
			S	0	13	3	19	12	0	53	0	0	
			P	0	6	2	9	6	0	78	0	0	
		Aghani	C	0	0	0	0	0	0	100	0	0	0
			S	3	16	8	15	8	0	50	0	0	0
			P	1	8	4	7	4	0	76	0	0	0
	Rabi	C	0	0	0	0	0	0	100	0	0	0	
		S	0	6	0	11	0	0	83	0	0	0	
		P	0	3	0	5	0	0	92	0	0	0	
	Summer	C	0	0	0	0	0	0	100	0	0	0	
		S	0	4	0	7	0	0	88	0	0	0	
		P	0	2	0	3	0	0	95	0	0	0	
4	Chhattisgarh	Kharif	C	0	1	83	12	3	0	0	0	0	
			S	0	0	77	23	0	0	0	0	0	
			P	0	1	80	18	2	0	0	0	0	
		Rabi	C	0	0	78	20	0	0	1	0	0	0
			S	0	0	62	36	2	0	0	0	0	0
			P	0	0	70	28	1	0	1	0	0	0
5	Gujarat	Kharif	C	1	0	57	0	0	2	7	0	0	
			S	0	0	0	0	0	0	100	0	0	
			P	0	0	0	1	0	0	72	6	0	
		Rabi	C	0	0	0	1	0	0	84	4	0	0
			S	0	0	0	0	0	0	100	0	0	0
			P	5	0	0	1	0	0	84	0	0	0
		Summer	C	3	0	0	1	0	0	92	0	0	0
			S	0	0	0	0	0	0	100	0	0	0
			P	0	0	0	1	0	0	95	0	0	0

S. No.	State	S E A S O N	A G E N C Y	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	1	0	0	97	0
			S	0	0	36	63	1	0	0	0
			P	0	0	48	27	0	1	4	0
		Rabi	C	0	1	39	10	0	9	4	0
			S	0	0	3	96	1	0	0	0
			P	0	0	26	42	0	6	2	0
		Summer	C	0	0	2	0	0	0	83	0
S											
			P	0	0	2	0	0	0	83	1
7	Himachal Pradesh	Kharif	C	0	0	50	16	0	8	1	1
			S	0	0	73	15	1	6	0	0
			P	0	0	61	15	0	7	0	1
		Rabi	C	0	0	70	4	0	4	1	0
			S	0	0	66	25	1	1	0	0
			P	0	0	68	14	0	3	0	0
8	Jammu & Kashmir	Kharif	C	0	0	48	12	0	4	4	0
			S	0	0	45	33	1	2	2	1
			P	0	0	46	24	0	3	3	0
		Rabi	C	0	0	22	12	0	2	0	0
			S	0	0	24	62	0	0	2	0
			P	0	0	24	47	0	1	1	0
9	Jharkhand	Bhadhai	C	0	0	0	0	0	0	100	0
			S	0	10	0	31	24	0	24	0
			P	0	5	0	14	11	0	65	0
		Aghani	C	0	0	0	0	0	0	100	0
			S	0	4	0	62	0	0	32	0
			P	0	2	0	27	0	0	70	0
		Rabi	C	7	12	0	0	0	0	82	0
			S	0	11	0	34	2	0	32	15
			P	4	11	0	15	1	0	60	7
		Summer	C	0	2	0	0	0	0	98	0
S	0		16	0	21	0	0	29	29		
P	0		7	0	8	0	0	71	11		
10	Karnataka	Kharif	C	0	0	27	14	0	4	32	0
			S	0	0	57	37	2	0	0	0
			P	0	0	42	25	1	2	16	0
		Rabi	C	0	0	9	14	0	1	51	0
			S	0	0	62	26	0	1	8	0
			P	0	0	35	20	0	1	29	0
		Summer	C	0	0	11	11	5	3	51	0
S	0		0	64	24	0	0	7	0		
			P	0	0	46	20	2	1	21	0
11	Kerala	Autumn	C	9	0	69	20	1	1	0	0
			S	0	0	68	31	0	0	0	1
			P	4	0	68	26	1	1	0	1
		Winter	C	1	1	79	15	4	0	0	0
			S	0	0	98	1	0	1	0	0
			P	1	1	88	8	2	1	0	0
		Summer	C	3	0	71	15	5	1	0	1
			S	6	1	68	21	3	0	0	1
			P	4	1	69	18	4	1	0	1
12	Madhya Pradesh	Kharif	C	0	0	93	5	1	0	0	0
			S	1	0	84	9	5	0	0	0
			P	1	0	90	6	2	0	0	0
		Rabi	C	0	0	87	9	0	0	0	0
			S	0	0	63	29	8	0	0	0
			P	0	0	78	16	3	0	0	0

S. No.	State	S E A S O N	A G E N C Y	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-shtra	Kharif	C	0	0	8	2	1	0	79	0	
			S	0	0	33	31	28	0	6	0	
			P	0	0	20	16	14	0	43	0	
		Rabi	C	0	0	1	0	0	0	94	0	
			S	0	0	48	1	32	0	8	0	
			P	0	0	23	0	15	0	54	0	
		Summer	C	NC	NC	NC	NC	NC	NC	NC	NC	NC
			S	0	2	11	25	45	1	8	0	
P	0		2	11	25	45	1	8	0			
14	Odisha	Autumn	C	0	0	85	5	0	1	0	0	
			S	0	0	95	5	0	0	0	0	
			P	0	0	91	5	0	1	0	0	
		Winter	C	0	0	86	4	0	0	0	0	
			S	0	0	90	10	0	0	0	0	
			P	0	0	88	7	0	0	0	0	
		Summer	C	0	0	91	1	0	0	0	0	
			S	0	0	97	2	1	0	0	0	
P	0		0	94	1	0	0	0	0			
15	Punjab	Kharif	C	0	0	23	0	0	1	3	0	
			S	0	0	84	14	0	0	1	0	
			P	0	0	52	7	0	1	2	0	
		Rabi	C	0	0	17	13	0	0	7	0	
			S	0	0	23	77	0	0	0	0	
			P	0	0	20	43	0	0	3	0	
16	Rajasthan	Kharif	C	0	0	56	42	0	0	0	0	
			S	0	0	53	41	5	0	0	0	
			P	0	0	55	41	3	0	0	0	
		Rabi	C	0	0	53	30	0	0	17	0	
			S	0	0	39	36	5	0	20	0	
			P	0	0	46	33	2	0	18	0	
17	Tamil Nadu	Phase-I	C	2	0	88	3	0	0	7	0	
			S	6	0	80	14	0	0	1	0	
			P	4	0	84	8	0	0	4	0	
		Phase-II	C	9	0	81	8	0	0	2	0	
			S	4	0	42	44	0	0	9	0	
			P	6	0	62	26	0	0	5	0	
Phase-III	C	8	0	61	30	0	0	1	0			
	S	2	0	49	47	0	0	2	0			
	P	5	0	55	39	1	0	1	0			
18	Telangana	Kharif	C	100	0	0	0	0	0	0	0	
			S	5	21	35	36	0	0	0	0	
			P	42	13	21	22	0	0	0	0	
		Rabi	C	69	0	0	0	0	0	30	0	
			S	13	0	49	29	0	0	8	0	
			P	36	0	29	17	0	0	17	0	
19	Uttar Pradesh	Kharif	C	5	0	33	13	0	0	33	0	
			S	0	1	25	57	10	0	4	0	
			P	4	0	31	26	3	0	24	0	
		Rabi	C	1	0	21	24	0	1	41	0	
			S	0	0	28	69	0	0	2	0	
			P	1	0	23	38	0	1	30	0	
Summer	C	1	0	21	28	0	1	43	0			
	S	6	0	24	63	0	0	6	0			
	P	2	1	21	36	0	1	34	0			

S. No.	State	S E A S O N	A G E N C Y	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	Uttarakhand	Kharif	C	0	1	92	5	0	1	0	0
			S	0	0	72	25	2	0	0	0
			P	0	0	82	15	1	0	0	0
		Rabi	C	0	0	84	16	0	0	0	0
			S	0	0	62	38	0	0	0	0
			P	0	0	73	27	0	0	0	0
		Summer	C	0	0	78	22	0	0	0	0
			S	0	0	20	80	0	0	0	0
			P	0	0	49	51	0	0	0	0
21	West Bengal	E.Kharif	C	0	0	2	8	0	0	87	0
			S	0	17	7	66	3	0	7	0
			P	0	2	2	14	0	0	78	0
		L.Kharif	C	0	0	21	1	0	0	70	0
			S	0	10	14	39	2	2	33	0
			P	0	2	20	7	0	1	64	0
		Rabi	C	0	0	18	5	0	0	70	2
			S	0	9	19	30	0	13	6	0
			P	0	1	19	9	0	2	60	1
		Summer	C	0	0	16	6	0	0	70	0
			S	0	0	63	25	0	0	0	0
			P	0	0	17	6	0	0	68	0
22	Puducherry	Kharif	C	0	0	100	0	0	0	0	0
			S	0	0	89	11	0	0	0	0
			P	0	0	94	6	0	0	0	0
		Rabi-I	C	0	0	67	33	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	83	17	0	0	0	0
		Rabi-II	C	0	0	100	0	0	0	0	0
			S	0	0	89	11	0	0	0	0
			P	0	0	94	6	0	0	0	0
FOR STATES COVERED	Early Kharif	C	1	0	38	4	0	0	54	0	
		S	2	5	49	15	9	0	19	0	
		P	1	2	43	9	4	0	38	0	
	Late Kharif	C	9	0	35	7	0	1	37	0	
		S	2	1	46	26	6	0	14	0	
		P	6	1	43	16	3	1	22	0	
	Rabi	C	7	0	30	11	0	1	41	0	
		S	3	1	43	28	5	0	18	0	
		P	6	1	38	20	2	1	26	0	
	Summer	C	1	0	18	9	0	0	64	0	
		S	1	1	31	21	11	0	30	1	
		P	1	1	27	16	6	0	44	0	
All seasons	C	6	0	30	9	0	1	45	0		
	S	2	2	42	25	7	0	18	0		
	P	4	1	38	17	3	1	29	0		

Note:

1. @- The Field work was not carried out for State sample during Summer season.
2. NC- Not Comparable.

**INFORMATION REGARDING UPDATION OF VILLAGE
MAPS AND THEIR USABILITY DURING 2020-21**

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	93	1	6
2	Assam	87	90	5	5
3	Bihar	84	78	0	20
4	Chhattisgarh	54	98	0	3
5	Gujarat	36	71	16	13
6	Haryana	33	99	1	0
7	Himachal Pradesh	55	92	4	2
8	Jammu & Kashmir	66	74	17	7
9	Jharkhand	82	58	0	42
10	Karnataka	85	75	5	21
11	Kerala	86	99	1	1
12	Madhya Pradesh	43	97	2	1
13	Maharashtra	29	89	5	6
14	Odisha	85	87	0	0
15	Punjab	60	100	0	0
16	Rajasthan	59	99	0	1
17	Tamil Nadu	92	97	1	2
18	Telangana	62	50	12	38
19	Uttar Pradesh	89	96	3	1
20	Uttarakhand	91	95	4	0
21	West Bengal	92	92	0	1
22	Puducherry	100	100	0	0
For States Covered		66	88	4	7

**PERCENTAGE OF SURVEY NUMBERS IN WHICH ERRORS IN RECORDING CROP
AREA WERE OBSERVED DURING 2020-21**

Sl. No.	State	A G E N C Y	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	71	21	3	5				
		S					93	4	1	2	96	2	1	1				
		P					93	4	1	2	93	4	1	1				
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	95	4	0	1	99	0	0	1	99	0	0	0	100	0	0	0
		P	95	4	0	1	99	0	0	1	99	0	0	0	100	0	0	0
4	Chhattisgarh	C					90	3	1	6	92	5	1	3				
		S					99	0	0	0	99	0	0	0				
		P					95	2	0	3	95	3	0	2				
5	Gujarat	C#																
		S					98	0	0	1	99	0	0	0	100	0	0	0
		P					98	0	0	1	99	0	0	0	100	0	0	0
6	Haryana *	C					87	7	4	3	92	3	2	3	90	0	10	0
		S					100	0	0	0	100	0	0	0	0	0	0	0
		P					92	4	2	2	95	2	1	2	90	0	10	0
7	Himachal Pradesh	C					75	8	8	8	85	6	3	6				
		S					95	2	0	3	98	2	1	0				
		P					84	5	5	6	91	4	2	4				
8	Jammu & Kashmir	C					96	2	1	1	95	3	1	1				
		S					98	1	0	1	99	0	0	0				
		P					97	1	1	1	98	1	1	1				
9	Jharkhand @	C	0	100	0	0	0	100	0	0	0	0	0	0				
		S	82	18	0	0	80	20	0	0	83	17	0	0				
		P	49	51	0	0	36	64	0	0	83	17	0	0				
10	Karnataka	C					79	9	3	9	85	7	3	5	19	0	0	0
		S					83	6	6	5	84	5	6	5	93	4	1	2
		P					81	7	5	7	85	6	5	5	94	3	1	2
11	Kerala	C	97	1	1	1	95	1	1	3					96	0	0	4
		S	96	0	0	4	94	1	1	4					83	1	0	16
		P	97	0	0	3	95	1	1	4					90	1	0	10
12	Madhya Pradesh	C					67	9	7	17	69	10	5	16				
		S					98	0	0	1	99	0	0	0				
		P					79	6	4	11	80	7	3	10				
13	Maharashtra	C					43	17	3	38	47	17	1	35	0	0	0	0
		S					78	4	2	15	88	4	0	9	96	2	1	2
		P					56	12	3	29	82	6	0	12	96	2	1	2

Sl. No.	State	A G E N C Y	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					99	1	0	0
		S	100	0	0	0	99	0	0	1					99	0	0	0
		P	100	0	0	0	100	0	0	0					99	1	0	0
15	Punjab	C					94	4	1	1	96	2	0	2				
		S					99	0	0	0	100	0	0	0				
		P					97	2	1	1	98	1	0	1				
16	Rajasthan	C					76	7	5	12	79	10	3	7				
		S					96	1	1	2	97	1	0	1				
		P					85	4	3	7	86	7	2	5				
17	Tamil Nadu	C	69	15	1	15	68	14	1	16	65	11	3	21				
		S	71	17	2	10	80	9	6	6	83	11	3	3				
		P	70	16	2	12	76	11	4	9	77	11	3	9				
18	Telangana	C					NC	NC	NC	NC	NC	NC	NC	NC				
		S					85	14	0	0	99	0	0	1				
		P					85	14	0	0	99	0	0	1				
19	Uttar Pradesh	C					74	3	6	17	76	8	2	14	69	19	1	12
		S					92	2	2	4	93	3	1	4	94	4	0	3
		P					81	3	4	12	82	6	1	10	77	14	1	9
20	Uttarakhand	C					87	6	2	4	89	4	1	6	89	8	0	2
		S					96	1	1	2	98	1	0	1	96	1	0	3
		P					92	4	2	3	94	2	1	3	93	5	0	2
21	West Bengal	C	96	1	2	1	98	1	0	1	92	5	0	3	97	1	0	2
		S	56	10	10	23	92	1	1	5	78	2	9	11	26	0	0	74
		P	82	4	5	9	96	1	1	2	88	4	3	5	93	1	0	6
22	Puducherry	C					90	10	0	0	97	0	0	3	91	3	3	3
		S					94	2	0	4	98	0	0	2	98	0	0	2
		P					93	5	0	2	98	0	0	2	95	1	1	3
For States covered		C	72	16	1	11	74	9	4	14	80	7	3	10	92	4	0	5
		S	78	13	2	7	92	4	2	3	95	2	1	2	89	1	0	9
		P	75	15	1	9	83	6	3	8	88	4	2	6	90	2	0	3

Note:

1. e₀ = No error
2. e₁ = Not reporting the crop which is actually grown in the survey numbers .
3. e₂ = Recording a crop as sown in the field when actually no crop has been sown in the field.
4. e₃ = 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.

IMPACT OF ERRORS IN RECORDING CROP AREA DURING 2020-21

Sl. No.	State	A G E N C Y	Ratio of area based on Patwari's & Supervisor'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 Pradesh	C		NC	NC	NC	NC	0.0000	0.0000								0.0000	
		S		1.0015	1.0086	1.0086	0.0000	0.9584	0.0000	NA	0.9946	0.9845	1.0000				1.0264	
		P		1.0015	0.9964	0.9964	0.0000	0.9584	0.0000		0.9946	0.9845	1.0000				0.9112	
2	Assam @	C																
		S																
		P																
3	Bihar	C#	NR	NR	NR									NR		NR	NR	
		S	NC	0.9988										1.0000		1.0000	0.0000	
		P	NC	0.9988										1.0000		1.0000	0.0000	
4	Chhattisgarh	C		0.9653					1.0257					1.0048		1.0134	1.0015	
		S		1.0024					0.9662					0.9953		1.0000	1.0000	
		P		0.9832					0.9954					1.0009		1.0092	1.0010	
5	Gujarat	C#																
		S		0.9996				0.0000	0.9693		0.0000	0.0000		1.0164		1.0071		
		P		0.9996				0.0000	0.9693		0.0000	0.0000		1.0164		1.0071		
6	Haryana	C		0.9926				1.0464	0.0000		0.9881		0.9783	0.9983	1.0000	0.9945	0.9960	
		S		0.9996				1.0000	0.0000		1.0000		1.0000	1.0010	1.0000	1.0000	0.9950	
		P		0.9952				1.0242	0.9671		0.9937		0.9839	0.9994	1.0000	0.9968	0.9957	
7	Himachal Pradesh	C		1.0748					1.1628					1.0303	0.9659			
		S		1.0014					0.9728					0.9923	0.9522			
		P		1.0303					1.0722					1.0099	0.9592			
8	Jammu & Kashmir	C		0.9881					1.0003					NC				
		S		0.9897					1.0314					1.0330				
		P		0.9890					1.0216					1.0182				
9	Jharkhand @	C																
		S	1.0118	0.9998					0.9928									
		P	1.0118	0.9998					0.9928									
10	Karnataka	C		0.9967	NC	1.0194	1.0161	0.9514	0.9634	0.9327	0.9963	1.0024	0.8572	0.8920		0.9477		
		S		1.0213	1.0036	0.9510	0.9429	0.8565	1.0176	1.0158	1.0007	1.7375	0.9468	1.1357		1.1060		
		P		1.0094	1.0011	0.9801	0.9636	0.9088	0.9978	0.9908	0.9988	1.3232	0.9149	1.0776		1.0541		
11	Kerala	C	1.0000	0.9843	0.9999													
		S	1.0005	0.9996	0.9862													
		P	1.0003	0.9915	0.9942													
12	Madhya Pradesh	C		1.0849		0.8817			1.0734		0.9849	0.8913		1.2247		1.0697	0.9596	
		S		0.9884	1.0000				0.9959		0.9976	1.0000		0.9948		1.0064	0.9958	
		P		1.0392	0.9577				1.0343		0.9883	0.9236		1.1322		1.0466	0.9700	
13	Maharashtra	C		0.9368		0.8461	0.9867	1.5275			1.0760	1.0125	0.7561	0.7771		0.9550		
		S		0.9696		1.0186	0.9668	1.0051			0.9965	1.6397	0.9591	0.9119		0.9776		
		P		0.9543		0.9711	0.9671	1.0556			1.0221	1.4542	0.8861	0.8815		0.9733		
14	Odisha	C	0.9975	1.0000	NC				1.0000									
		S	0.9918	1.0004	1.0033					0.9978								
		P	0.9940	1.0002	0.9982					0.9989								
15	Punjab	C		0.9965					1.2887		0.9738		0.8469	0.9937			1.2067	
		S		1.0248						1.0000		1.0346		1.0181	0.9740	0.0001	0.0000	0.0000
		P		1.0102						1.1471		0.9944		0.9260	0.9842	1.0000	0.0000	1.2067
16	Rajasthan	C				1.0013		0.9894	0.9367		1.0247	0.0000	0.0000	0.8929	0.9583	1.1258	1.0154	
		S				0.7815		1.0955	0.8263		1.0007	0.0000	0.0000	1.0001	0.9674	0.9890	1.3204	
		P				0.8922		1.0417	0.8640		1.0117	0.0000	0.0000	0.9317	0.9612	1.0709	1.1911	

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

Sl. No.	State	A G E N C Y	Ratio of area based on Patwari's & Supervisor'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 Nadu	C	0.9064	1.0167	0.9634	0.9393	0.0000	0.9639	1.0170	0.0000	0.9924	0.9559	0.9559				
		S	0.9635	0.9824	0.8858	0.7323	0.7918	0.9856	0.8953	0.0000	0.8741	0.9108	0.9108				
		P	0.9334	1.0006	0.9190	0.8532	0.7703	0.9757	0.9717	0.0000	0.9337	0.9352	1.0693				
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	0.9974	0.0000	0.9677	1.0000	0.9928	0.0000	1.0000	0.0000	0.9813	1.0000	0.0000				
		P	0.9974	0.0000	0.9677	1.0000	0.9928	0.0000	1.0000	0.0000	0.9813	1.0000	0.0000				
19	Uttar Pradesh	C		2.3056		0.9395		0.7872	0.9543				0.9991	0.7415		1.0166	0.9657
		S		0.9945		1.0114		0.9766	0.9527				1.0099	0.9838		0.9793	0.9858
		P		1.7561		0.9572		0.8245	0.9538				1.0030	0.8145		1.0089	0.9711
20	Uttarakhand	C		0.9799						1.1024			0.0000	1.0124			
		S		1.2246						1.0000			1.8092	0.9899			
		P		1.1184						1.0492			1.4386	0.9991			
21	West Bengal	C	1.0141	1.0633	NC									NC			0.9975
		S	3.6571	0.9941	NC									#DIV/0!			1.0363
		P	1.0811	1.0442	NC									0.9918			1.0079
22	Puducherry *	C		NC	0.9990												
		S		0.9974	1.0000												
		P		0.9983	0.9997												
For states covered	C	0.9396	1.2693	0.9818	0.9504	1.0129	0.9755	1.0053	0.9362	1.0475	0.9852	0.9262	0.9688	0.5961	1.0102	0.9939	
	S	0.9893	1.0132	0.9970	0.9187	0.9588	1.0640	0.9880	1.0157	0.9941	1.0633	1.0384	0.9886	0.4492	1.0003	1.2314	
	P	0.9734	1.1346	0.9920	0.9322	0.9653	1.0201	0.9947	0.9916	1.0102	1.0483	0.9844	0.9701	0.9625	1.0039	1.1049	

Note:-

- @ - Observations are not given due to insufficient data.
- # - 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.
- NA = Data Not available
- NR= Data Not Reported
- NC- Not Comparable .

DISCREPANCIES IN RECORDING IRRIGATION PARTICULARS DURING 2020-21

Sl. No.	State	Season	A G E N C Y	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 Pradesh	Kharif	C	NR										
			S	54	40	94	2	3	1	6	1	1	4	6
			P	54	40	94	2	13	1	6	1	1	4	6
		Rabi	C	41	32	73	12	11	3	26	0	6	21	27
			S	66	30	96	1	1	1	3	1	1	2	4
			P	63	30	93	2	2	1	6	1	1	4	6
2	Assam @	Early Kharif	C											
			S											
			P											
		Late Kharif	C											
			S											
			P											
		Rabi	C											
			S											
			P											
		Summer	C											
			S											
			P											
3	Bihar #	Bhadai	C	NR										
			S	28	69	96	0	4	0	4	0	0	4	4
			P^	28	69	96	0	4	0	4	0	0	4	4
		Aghani	C	NR										
			S	85	15	100	0	0	0	0	0	0	0	0
			P^	85	15	100	0	0	0	0	0	0	0	0
		Rabi	C	NR										
			S	86	14	99	1	0	0	1	0	0	0	1
			P^	86	14	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
4	Chhattisgarh	Kharif	C	30	65	95	1	3	1	5	0	2	3	5
			S	22	77	99	0	0	0	1	0	0	0	1
			P	26	71	97	1	2	0	3	0	1	2	3
		Rabi	C	63	30	93	2	4	1	7	0	1	5	6
			S	49	50	99	1	0	0	1	0	0	0	1
			P	57	38	96	2	2	0	4	0	0	3	4
5	Gujarat	Kharif	C	NR										
			S	27	72	99	0	0	0	1	0	0	0	1
			P^	27	72	99	0	0	0	1	0	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	88	1	89	7	0	4	11	4	0	7	11
			S	94	6	100	0	0	0	0	0	0	0	0
			P	90	3	94	4	1	2	6	2	1	4	6
		Rabi	C	94	1	95	3	0	2	5	2	0	3	5
			S	99	0	100	0	0	0	0	0	0	0	0
			P	96	1	97	2	0	1	3	1	0	2	3
		Summer	C	90	0	90	0	0	10	10	10	0	0	10
			S	0	0	0	0	0	0	0	0	0	0	0
			P	90	0	90	0	0	10	10	10	0	0	10

S. No.	State	Season	A G E N C Y	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 Pradesh	Kharif	C	13	69	82	2	8	8	18	2	7	9	18	
			S	15	82	96	1	2	0	3	1	1	2	3	
			Rabi	P	14	75	89	1	5	5	11	1	5	6	11
				C	14	76	90	1	5	3	9	1	2	6	9
				S	15	82	97	1	2	1	3	0	1	2	3
				P	15	79	94	1	3	2	6	1	2	4	6
8	Jammu & Kashmir	Kharif	C	48	48	96	2	1	1	4	1	1	2	4	
			S	51	47	98	0	1	0	1	0	0	1	1	
			P	50	47	98	1	1	1	2	1	0	1	2	
		Rabi	C	44	51	95	4	0	1	5	1	1	3	4	
			S	38	61	99	0	1	0	1	0	0	0	1	
			P	40	58	98	1	0	0	2	0	0	1	2	
9	Jharkhand @	E. Kharif	C	0	0	0	11	89	0	100	0	0	100	100	
			S	1	80	82	0	18	0	18	0	0	18	18	
			P^	1	49	49	4	46	0	51	0	0	51	51	
		L. Kharif	C	0	0	0	28	71	0	100	0	0	100	100	
			S	1	79	80	2	19	0	20	0	0	20	20	
			P^	0	36	36	16	47	0	64	0	0	64	64	
		Rabi	C	NR											
			S	51	32	83	15	2	0	17	0	0	17	17	
			P^	51	32	83	15	2	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	28	58	86	3	7	3	13	2	3	9	13	
			S	33	53	86	2	5	6	13	2	5	6	13	
			P	31	55	86	3	6	5	13	2	4	7	13	
		Rabi	C	42	48	90	3	3	3	9	1	2	7	9	
			S	50	38	88	3	3	6	12	3	3	5	11	
			P	48	41	89	3	3	5	11	2	3	6	11	
		Summer	C	94	3	97	1	0	2	3	2	0	1	3	
			S	84	10	94	4	1	1	6	1	0	4	6	
			P	86	9	95	3	1	1	5	1	0	3	5	
11	Kerala	Autumn	C	28	61	89	1	1	1	2	1	0	1	2	
			S	27	68	94	0	0	0	0	1	0	0	1	
			P	27	65	92	0	1	0	1	1	0	0	1	
		Winter	C	47	36	82	1	0	1	3	1	1	1	3	
			S	52	32	85	1	1	1	3	1	1	1	3	
			P	50	34	84	1	1	1	3	1	1	1	3	
		Summer	C	18	66	85	0	0	0	0	0	0	0	1	
			S	20	64	84	0	0	0	1	0	0	1	1	
			P	19	65	84	0	0	0	1	0	0	0	1	
12	Madhya Pradesh	Kharif	C	13	69	82	2	9	7	17	1	7	9	17	
			S	22	77	99	0	1	0	1	0	1	0	1	
			P	17	72	89	2	6	4	11	1	4	6	11	
		Rabi	C	79	5	84	10	1	5	16	5	1	10	16	
			S	86	13	99	0	0	0	1	0	0	0	1	
			P	82	8	89	6	1	3	10	3	1	7	10	
13	Maharashtra	Kharif	C	19	59	78	7	11	3	21	1	4	17	21	
			S	22	71	92	1	3	2	7	0	2	4	7	
			P	20	63	83	5	8	3	16	1	3	12	16	
		Rabi	C	61	18	79	16	4	1	21	1	2	17	21	
			S	54	41	95	2	2	0	4	0	0	4	4	
			P	55	38	93	4	3	0	7	0	1	6	7	
		Summer	C	NR											
			S	90	6	96	1	1	1	3	1	1	2	3	
			P	90	6	96	1	1	1	3	1	1	2	3	

S. No.	State	Season	A G E N C Y	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	6	94	100	0	0	0	0	0	0	0	0	0
			S	8	91	99	0	1	0	1	1	0	0	0	1
			P	7	92	99	0	1	0	1	0	0	0	0	1
		Winter	C	31	68	99	0	1	0	1	1	0	0	0	1
			S	23	76	99	0	0	0	0	0	0	0	0	0
			P	27	72	99	0	0	0	0	0	0	0	0	1
		Summer	C	77	22	99	1	0	0	1	0	0	1	0	1
			S	74	25	99	0	0	0	0	0	0	0	0	0
			P	75	24	99	1	0	0	1	0	0	1	0	1
15	Punjab	Kharif	C	95	0	95	4	0	1	5	1	0	4	5	
			S	99	0	99	0	0	0	1	0	0	0	1	
			P	97	0	97	2	0	1	3	1	0	2	3	
		Rabi	C	98	0	98	2	0	0	2	0	0	2	2	
			S	100	0	100	0	0	0	0	0	0	0	0	
			P	99	0	99	1	0	0	1	0	0	1	1	
16	Rajasthan	Kharif	C	41	175	216	3	16	13	32	2	12	17	32	
			S	21	77	97	0	1	1	2	0	1	1	2	
			P	27	107	134	1	6	5	12	1	4	6	12	
		Rabi	C	78	8	86	10	1	3	14	3	1	10	14	
			S	84	13	98	2	0	0	2	1	1	1	2	
			P	81	10	91	6	1	2	9	2	1	7	9	
17	Tamil Nadu	Phase-I	C	46	33	79	4	12	1	16	2	1	15	18	
			S	47	29	75	7	10	2	19	3	2	17	22	
			P	46	31	77	5	11	2	18	2	2	16	20	
		Phase-II	C	64	18	82	11	4	1	17	1	2	14	17	
			S	54	29	83	6	4	6	16	4	2	9	15	
			P	58	25	83	8	4	4	16	3	2	11	16	
		Rabi	C	64	19	82	12	3	3	18	2	5	11	18	
			S	58	28	85	9	2	3	14	1	3	11	14	
			P	60	25	84	10	2	3	15	1	3	11	15	
18	Telangana	Kharif	C	0	0	0	0	0	0	0	0	0	0	0	
			S	43	42	85	10	5	0	15	0	0	14	15	
			P	43	42	85	10	5	0	15	0	0	14	15	
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0	
			S	92	7	99	1	0	0	1	0	0	0	1	
			P	92	7	99	1	0	0	1	0	0	0	1	
19	Uttar Pradesh	Kharif	C	64	18	81	8	4	5	18	4	2	12	18	
			S	84	12	96	1	1	2	4	1	0	2	4	
			P	71	16	87	6	3	4	13	3	1	8	13	
		Rabi	C	86	4	90	7	1	2	10	2	0	8	10	
			S	93	3	96	3	1	1	4	1	0	3	4	
			P	89	4	92	5	1	1	8	1	0	6	8	
		Summer	C	78	2	80	19	0	1	20	1	0	19	20	
			S	91	5	96	3	1	0	4	1	0	4	4	
			P	82	3	85	13	1	1	15	1	0	14	14	
20	Uttarakhand	Kharif	C	48	42	90	4	4	2	10	2	1	6	10	
			S	59	38	98	1	0	1	2	1	0	1	2	
			P	53	40	94	2	2	2	6	2	1	4	6	
		Rabi	C	66	29	94	4	1	1	5	1	1	4	5	
			S	63	36	99	1	0	0	1	0	0	1	1	
			P	64	32	97	2	0	1	3	0	1	2	3	
		Summer	C	82	10	92	8	0	0	8	0	0	8	8	
			S	99	0	99	1	0	0	1	0	0	1	1	
			P	91	5	95	5	0	0	5	1	1	5	5	

S. No.	State	Season	A G E N C Y	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	10	87	97	0	1	2	3	0	2	1	3	
			S	38	34	72	9	2	10	21	10	0	10	21	
			P	19	69	88	3	1	5	9	4	1	4	9	
		Late Kharif	C	8	91	99	0	1	0	1	0	0	0	1	1
			S	86	10	96	1	0	1	3	2	0	1	3	
			P	34	64	98	0	0	1	2	1	0	1	2	
		Rabi	C	69	25	94	0	5	0	6	0	0	5	6	
			S	86	3	88	2	0	9	11	9	0	2	11	
			P	74	19	93	1	3	3	7	3	0	4	7	
		Summer	C	99	0	99	1	0	0	1	0	0	1	1	
			S	74	15	90	3	0	0	3	0	3	0	3	
			P	98	1	99	1	0	0	1	0	0	1	1	
22	Puducherry	Kharif	C	57	17	74	0	10	0	10	0	0	10	10	
			S	69	25	94	2	0	0	2	0	0	2	2	
			P	64	21	85	1	4	0	5	0	0	5	5	
		Rabi-I	C	98	2	100	0	0	0	0	0	0	0	0	
			S	76	20	97	0	2	0	2	2	0	0	2	
			P	88	11	98	0	1	0	1	1	0	0	1	
		Rabi-II	C	88	6	94	3	0	3	6	3	0	3	6	
			S	73	23	96	0	0	0	0	2	0	0	2	
			P	79	16	95	1	0	1	3	3	0	1	4	
		FOR STATES COVERED	Early Kharif	C	36	43	79	3	13	1	17	1	1	16	19
				S	36	45	81	5	9	2	15	2	2	13	17
				P	36	44	80	4	11	1	16	2	1	15	18
Late Kharif	C			41	50	91	5	7	4	16	2	3	11	16	
	S			45	48	94	2	2	2	6	1	1	4	6	
	P			43	49	92	3	4	3	10	1	2	7	10	
Rabi	C			78	12	90	6	1	3	10	2	1	7	10	
	S			74	23	97	1	1	1	3	1	0	2	3	
	P			76	18	93	4	1	2	6	1	1	4	6	
Summer	C			46	41	87	4	0	0	5	0	0	4	5	
	S			54	36	90	2	1	1	3	0	0	2	3	
	P			50	38	88	3	0	0	4	0	0	3	4	
All seasons	C	53	36	89	5	5	3	13	2	2	9	13			
	S	55	39	94	2	2	1	5	1	1	3	5			
	P	54	38	92	3	3	2	9	1	1	6	9			

Note:

- @ - Observations are not given due to insufficient data.
- # - 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.
- * - The Field work was not carried out for State sample during Summer season.
- P^ - Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
- NR - Not Reported.
- NC - Not Comparable.

DISCREPANCIES IN RECORDING SEED VARIETY PARTICULARS DURING 2020-21

Sl. No.	State	Season	A G E N C Y	Percentage of survey numbers in which particulars												
				Tallied			Not Tallied									
							Supervisor				Patwari					
				HY	L	Total	HY	L	NR	Total	HY	L	NR	Total		
5	6	7	8	9	10	11	12	13	14	15						
1	Andhra Pradesh	Kharif	C	NR												
			S	83	12	95	3	1	1	5	1	0	4	5		
			P	83	12	95	3	4	1	5	2	0	4	5		
		Rabi	C	71	5	76	17	3	3	24	1	2	21	24		
			S	84	12	96	2	0	1	3	1	0	2	3		
			P	83	11	94	3	1	1	6	1	0	4	6		
2	Assam @	Early Kharif	C													
			S													
			P													
		Late Kharif	C													
			S													
			P													
		Rabi	C													
			S													
			P													
		Summer	C													
			S													
			P													
3	Bihar #	Bhadai	C	NR												
			S	1	95	96	1	2	0	4	0	0	4	4		
			P^	1	95	96	1	2	0	4	0	0	4	4		
		Aghani	C	NR												
			S	73	27	100	0	0	0	0	0	0	0	0		
			P^	73	27	100	0	0	0	0	0	0	0	0		
		Rabi	C	NR												
			S	80	19	99	28	0	0	1	0	0	0	1		
			P^	80	19	99	28	0	0	1	0	0	0	1		
		Summer	C	NR												
			S	15	85	100	0	0	0	0	0	0	0	0		
			P^	15	85	100	0	0	0	0	0	0	0	0		
		4	Chhattisgarh	Kharif	C	70	22	92	3	4	1	8	1	3	3	8
					S	80	18	99	1	0	0	1	0	1	0	1
					P	75	20	95	2	2	0	5	1	2	2	5
				Rabi	C	51	40	91	4	4	1	9	1	2	5	9
					S	49	50	99	1	0	0	1	0	0	0	1
					P	50	44	94	2	3	1	5	1	1	3	5
5	Gujarat			Kharif	C	NR										
					S	60	39	99	0	0	0	0	0	0	0	0
					P^	60	39	99	0	0	0	0	0	0	0	0
		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	51	49	100	0	0	0	0	0	0	0	0				
	P^	51	49	100	0	0	0	0	0	0	0	0				
6	Haryana *	Kharif	C	89	1	90	7	0	4	10	4	0	7	10		
			S	97	3	100	0	0	0	0	0	0	0	0		
			P	92	2	94	4	1	2	6	2	0	4	6		
		Rabi	C	93	2	95	3	0	2	5	2	0	3	5		
			S	99	1	100	0	0	0	0	0	0	0	0		
			P	95	1	97	2	0	1	3	1	0	2	3		
		Summer	C	83	7	90	0	0	10	10	10	0	0	10		
			S	0	0	0	0	0	0	0	0	0	0	0		
			P	83	7	90	0	0	10	10	10	0	0	10		
7	Himachal Pradesh	Kharif	C	32	41	73	13	4	8	25	3	14	9	26		
			S	55	41	96	2	1	0	3	1	1	2	3		
			P	42	41	83	8	3	5	16	2	8	6	16		
		Rabi	C	41	41	83	8	4	3	15	1	9	6	16		
			S	61	36	97	0	1	1	2	0	0	2	2		
			P	51	39	90	4	3	2	9	0	5	4	9		
8	Jammu & Kashmir	Kharif	C	37	59	96	1	2	1	4	0	1	2	4		
			S	39	60	99	0	0	0	1	0	0	1	1		
			P	38	59	98	1	1	1	2	0	1	1	2		
		Rabi	C	90	6	96	1	2	1	4	1	0	3	4		
			S	65	35	99	0	0	0	1	0	0	0	1		
			P	73	26	98	1	1	1	2	0	0	1	2		

Sl. No.	State	Season	A G E N C Y	Percentage of survey numbers in which particulars													
				Tallied			Not Tallied										
							Supervisor				Patwari						
				HY	L	Total	HY	L	NR	Total	HY	L	NR	Total			
5	6	7	8	9	10	11	12	13	14	15							
9	Jharkhand @	Early Kharif	C	NR													
			S	1	81	82	0	18	0	18	0	0	18	18			
			P^	0	49	49	8	43	0	51	0	0	51	51			
		Late Kharif	C	NR													
			S	6	74	80	3	17	0	20	0	0	20	20			
			P^	3	33	36	24	40	0	64	0	0	64	64			
		Rabi	C	NR													
			S	8	75	83	15	2	0	17	0	0	17	17			
			P^	8	75	83	15	2	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	57	29	87	7	2	3	12	3	1	9	13			
			S	76	10	86	6	2	6	13	6	1	6	13			
			P	68	19	86	6	2	5	13	5	1	7	13			
		Rabi	C	52	39	90	6	1	3	9	2	1	7	9			
			S	73	15	87	5	1	6	12	5	1	5	12			
			P	67	22	88	5	1	5	11	4	1	6	11			
		Summer	C	91	5	97	1	0	2	3	2	0	1	3			
			S	83	11	94	4	0	1	5	1	0	4	5			
			P	85	10	95	3	0	1	5	2	0	3	5			
		11	Kerala	Autumn	C	34	60	95	1	1	1	2	0	1	1	2	
S	51				45	96	0	0	0	0	0	0	0	0			
P	43				53	95	0	0	0	1	1	1	0	1			
Winter	C			36	57	94	1	1	1	2	0	1	1	2			
	S			39	51	91	0	1	1	3	1	1	1	3			
	P			38	54	92	0	1	1	2	1	1	1	3			
Summer	C			5	93	98	0	0	0	0	0	0	0	0			
	S			4	94	98	0	1	0	1	0	0	1	1			
	P			5	93	98	0	0	0	1	0	0	0	1			
12	Madhya Pradesh			Kharif	C	44	38	82	5	7	7	18	3	6	9	18	
		S	55		43	98	0	1	0	2	1	1	0	2			
		P	48		40	88	3	4	4	12	2	4	6	12			
		Rabi	C	49	33	82	5	8	5	17	3	4	10	18			
			S	61	38	99	0	0	0	1	0	0	0	1			
			P	53	35	88	3	5	3	11	2	3	7	11			
13	Maharashtra	Kharif	C	69	10	80	14	3	3	20	3	1	17	21			
			S	76	14	91	6	1	2	9	2	2	4	9			
			P	72	12	84	11	2	3	16	3	2	12	16			
		Rabi	C	78	3	81	16	1	1	19	1	0	17	19			
			S	78	18	96	4	0	0	4	0	0	4	4			
			P	78	16	93	5	0	0	6	0	0	6	6			
		Summer	C	NR													
			S	81	10	92	2	0	1	3	2	0	2	4			
			P	81	10	92	2	0	1	3	2	0	2	4			
		14	Odisha	Autumn	C	78	21	99	0	0	0	1	0	0	0	1	
S	66				33	99	0	0	0	0	0	0	0	0			
P	71				28	99	0	0	0	0	0	0	0	1			
Winter	C			86	13	100	0	0	0	0	0	0	0	0			
	S			76	23	99	0	0	0	0	0	0	0	0			
	P			81	18	99	0	0	0	0	0	0	0	0			
Summer	C			66	32	98	1	0	0	1	0	0	1	1			
	S			59	40	99	0	0	0	0	0	0	0	0			
	P			62	37	99	1	0	0	1	0	0	1	1			
15	Punjab			Kharif	C	72	2	73	25	0	1	27	1	22	4	27	
		S	99		0	99	1	0	0	1	0	0	0	1			
		P	85		1	86	13	0	1	14	0	12	2	14			
		Rabi	C	40	4	44	55	0	0	56	0	54	2	56			
			S	84	0	84	16	0	0	16	0	15	0	16			
			P	62	2	64	36	1	0	36	0	35	1	36			
16	Rajasthan	Kharif	C	43	42	85	5	4	3	13	3	4	7	15			
			S	44	52	97	1	2	1	4	1	1	1	3			
			P	43	47	91	3	3	2	8	2	3	4	9			
		Rabi	C	61	24	84	8	3	3	15	2	2	10	15			
			S	74	24	98	1	0	0	2	0	1	1	2			
			P	66	24	90	5	2	2	10	1	2	7	10			

Sl. No.	State	Season	A G E N C Y	Percentage of survey numbers in which particulars													
				Tallied			Not Tallied										
				HY	L	Total	Supervisor			Patwari							
							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	56	14	70	14	10	1	25	2	10	15	28			
			S	64	13	76	10	6	2	18	3	1	17	21			
			P	60	14	73	12	8	2	22	3	6	16	24			
		Phase-II	C	54	9	63	32	3	1	37	1	21	14	37			
			S	78	6	85	8	1	6	15	3	2	9	15			
			P	70	7	77	17	2	4	23	3	9	11	23			
		Rabi	C	56	5	61	34	2	3	38	2	26	11	38			
			S	68	17	85	9	2	3	14	1	2	11	14			
			P	64	13	77	17	2	3	22	1	10	11	22			
18	Telangana	Kharif	C	NR													
			S	79	7	86	14	1	0	15	0	0	14	15			
			P	79	7	86	14	1	0	15	0	0	14	15			
		Rabi	C	NR													
			S	98	2	99	1	0	0	1	0	0	0	1			
			P	98	2	99	1	0	0	1	0	0	0	1			
		19	Uttar Pradesh	Kharif	C	73	9	82	10	2	5	18	5	1	12	18	
					S	90	7	96	2	1	2	4	1	0	2	4	
					P	79	8	87	7	2	4	13	4	1	8	13	
Rabi	C			84	6	90	7	1	2	10	2	0	8	10			
	S			93	3	96	3	0	1	4	1	0	3	4			
	P			87	5	92	5	1	1	7	1	0	6	7			
Zaid Rabi	C			71	7	78	17	3	1	21	1	1	19	21			
	S			93	4	96	3	1	0	4	0	0	4	4			
	P			79	6	84	12	2	1	15	1	1	14	15			
20	Uttarakhand	Kharif	C	46	45	91	3	3	2	9	2	1	6	9			
			S	54	44	98	1	0	1	2	1	1	1	2			
			P	50	44	94	2	2	2	6	1	1	4	6			
		Rabi	C	57	37	94	2	2	1	5	1	1	4	6			
			S	55	44	98	0	0	0	1	0	0	1	1			
			P	56	40	96	1	1	1	3	1	0	2	3			
		Summer	C	49	42	92	5	4	0	8	0	0	8	8			
			S	94	4	98	1	0	0	1	0	0	1	1			
			P	74	21	95	3	2	0	5	0	0	5	5			
21	West Bengal	Early Kharif	C	15	82	97	0	1	2	3	0	2	1	3			
			S	24	55	79	9	2	10	21	9	2	10	21			
			P	18	73	91	3	1	5	9	3	2	4	9			
		Late Kharif	C	22	77	99	0	1	0	1	0	0	1	1			
			S	89	8	97	1	0	1	3	1	0	1	3			
			P	44	54	98	0	0	1	2	0	0	1	2			
		Rabi	C	67	27	94	3	3	0	6	0	0	5	6			
			S	76	12	88	2	0	9	11	9	0	2	11			
			P	70	23	93	2	2	3	7	3	0	4	7			
Summer	C	99	0	99	1	0	0	1	0	0	1	1					
	S	28	67	95	3	3	0	5	0	3	0	3					
	P	95	4	99	1	0	0	1	0	0	1	1					
22	Puducherry	Kharif	C	79	2	81	5	0	0	5	0	0	10	10			
			S	71	21	92	2	0	0	2	0	0	2	2			
			P	74	13	87	3	0	0	3	0	0	5	5			
		Rabi-I	C	98	2	100	0	0	0	0	0	0	0	0			
			S	78	19	97	0	0	0	0	0	0	0	0			
			P	88	10	98	0	0	0	0	0	0	0	0			
		Rabi-II	C	94	0	94	3	0	3	6	3	0	3	6			
			S	71	23	94	0	0	0	0	2	0	0	2			
			P	80	14	94	1	0	1	3	3	0	1	4			
FOR STATES COVERED		Early Kharif	C	51	22	73	11	12	1	24	1	7	16	25			
			S	56	26	82	7	6	2	14	2	1	13	16			
			P	54	24	78	9	9	1	19	2	4	15	21			
		Late Kharif	C	59	24	83	9	4	4	16	3	4	10	17			
			S	72	22	94	3	1	2	6	1	1	4	6			
			P	66	23	89	6	2	2	11	2	2	7	11			
		Rabi	C	65	18	83	11	3	3	17	2	8	7	17			
			S	78	17	95	3	0	1	4	1	2	2	4			
			P	72	18	90	7	2	2	10	1	4	4	10			
Summer	C	36	58	93	5	1	0	6	0	2	4	6					
	S	43	52	95	2	1	1	3	1	0	2	3					
	P	40	55	94	3	1	0	4	1	1	3	4					
All seasons			C	59	25	83	10	4	3	16	2	5	9	16			
			S	71	23	94	3	1	1	6	1	1	3	6			
			P	65	24	89	6	2	2	11	2	3	6	11			

Note:

- @ - Observations are not given due to insufficient data.
- # - 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.
- * - The Field work was not carried out for State sample during Summer season.
- P^ - Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
- NR - Not Reported.
- NC- Not Comparable.

**RESPONSE IN SAMPLE CHECK ON CROP CUTTING EXPERIMENTS
DURING 2020-21 (At Harvest stage only)**

Sl. No.	State	A G E N C Y	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 Pradesh	C			460	94	220	79			680
		S			460	88	220	77			680
		P			920	91	440	78			1360
2	Assam	C	150	48	140	97	190	62	40	23	520
		S	150	36	140	79	190	62	40	45	520
		P	300	42	280	88	380	62	80	34	1040
3	Bihar	C	120	53	240	75	350	87	40	0	750
		S	120	55	240	56	350	77	40	30	750
		P	240	54	480	65	700	82	80	15	1500
4	Chhattisgarh	C			190	95	160	78			350
		S			190	81	160	51			350
		P			380	88	320	64			700
5	Gujarat	C			750	81	240	87			990
		S			750	66	240	73			990
		P			1500	73	480	80			1980
6	Haryana	C			378	97	322	72			700
		S			378	60	322	86			700
		P			756	78	644	79			1400
7	Himachal Pradesh	C			150	77	150	53			300
		S			150	75	150	49			300
		P			300	76	300	51			600
8	Jammu & Kashmir	C			160	100	120	42			280
		S			160	31	120	27			280
		P			320	65	240	34			560
9	Jharkhand	C	80	100	50	100	90	100			220
		S	80	73	50	80	90	71			220
		P	160	86	100	90	180	86			440
10	Karnataka	C			620	64	200	61	80	30	900
		S			620	87	200	76	80	74	900
		P			1240	76	400	68	160	52	1800
11	Kerala	C	100	100	100	100			320	96	520
		S	100	100	100	100			320	99	520
		P	200	100	200	100			640	98	1040
12	Madhya Pradesh	C			628	97	524	99			1152
		S			628	50	524	29			1152
		P			1256	74	1048	64			2304
13	Maharashtra	C			850	63	450	69			1300
		S			850	66	450	60			1300
		P			1700	64	900	65			2600
14	Odisha	C	260	67	390	89			180	19	830
		S	260	95	390	95			180	98	830
		P	520	81	780	92			360	59	1660
15	Punjab	C			352	90	348	91			700
		S			352	71	348	69			700
		P			704	81	696	80			1400
16	Rajasthan	C			520	90	420	77			940
		S			520	77	420	72			940
		P			1040	83	840	75			1880

Sl. No.	State	A G E N C Y	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	94	320	76	0	0	740
	#	S			420	90	320	89	0	0	740
		P			840	92	640	83	0	0	1480
18	Telangana	C			360	93	120	67			480
		S			360	85	120	93			480
		P			720	89	240	80			960
19	Uttar Pradesh	C			1380	97	840	100	80	98	2300
		S			1380	2	840	11	80	13	2300
		P			2760	49	1680	55	160	55	4600
20	Uttarakhand	C			130	100	60	83			190
		S			130	63	60	100			190
		P			260	82	120	92			380
21	West Bengal	C	180	98	160	96	220	95	190	49	750
		S	180	1	160	1	220	0	190	2	750
		P	360	49	320	49	440	47	380	26	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 covered		C	890	75	8438	87	5354	82	940	59	15622
		S	890	59	8438	60	5354	55	940	65	15622
		P	1780	67	16876	74	10708	69	1880	62	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 2020-21**

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 # Phase-I	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
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	93.51	100.00	98.05
		S		93.29	98.66	98.66
		P		93.40	99.34	98.35
		C	T	93.51	100.00	98.05
		S		93.29	98.66	98.66
		P		93.40	99.34	98.35

#= 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.

T= Total (Harvest+Missed+Lost) & H=Harvest (Harvest+Missed)

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	1.47	14.71	44.85
		S		0.00	0.00	0.00
		P		0.81	16.19	41.70
		C	T	1.43	14.29	43.57
		S		0.00	0.00	0.00
		P		0.80	15.94	41.04
3	Bihar	C	H	64.32	58.92	89.19
		S		60.11	56.28	92.35
		P		62.23	57.61	90.76
		C	T	49.58	45.42	68.75
		S		56.99	53.37	87.56
		P		52.89	48.96	77.14
4	Chhattisgarh	C	H	40.00	80.00	92.86
		S		40.00	100.00	91.43
		P		40.00	90.00	92.14
		C	T	40.00	80.00	92.86
		S		40.00	100.00	91.43
		P		40.00	90.00	92.14
5	Gujarat	C	H	63.08	78.46	96.92
		S		62.71	52.54	100.00
		P		62.90	66.13	98.39
		C	T	59.42	73.91	91.30
		S		62.71	52.54	100.00
		P		60.94	64.06	95.31
6	Haryana	C	H	95.83	100.00	95.83
		S		100.00	100.00	100.00
		P		97.52	100.00	97.52
		C	T	93.24	97.30	93.24
		S		100.00	100.00	100.00
		P		95.93	98.37	95.93
7	Himachal Pradesh	C	H	82.61	58.70	69.57
		S		47.62	9.52	57.14
		P		65.91	35.23	63.64
		C	T	63.33	45.00	53.33
		S		37.04	7.41	44.44
		P		50.88	27.19	49.12
8	Jammu & Kashmir	C	H	90.00	37.14	100.00
		S		88.00	60.00	100.00
		P		89.17	46.67	100.00
		C	T	90.00	37.14	100.00
		S		75.86	51.72	86.21
		P		83.59	43.75	93.75
9	Jharkhand	C	H	16.00	48.00	92.00
		S		16.00	28.00	64.00
		P		16.00	38.00	78.00
		C	T	16.00	48.00	92.00
		S		16.00	28.00	64.00
		P		16.00	38.00	78.00
10	Karnataka	C	H	67.16	73.13	92.54
		S		66.95	90.68	88.98
		P		67.06	81.35	90.87
		C	T	62.50	68.06	86.11
		S		66.95	90.68	88.98
		P		64.50	78.24	87.40

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	81.00	81.00	82.00
		S		70.00	75.00	86.00
		P		75.50	78.00	84.00
		C	T	81.00	81.00	82.00
		S		70.00	75.00	86.00
		P		75.50	78.00	84.00
12	Madhya Pradesh	C	H	33.33	77.08	86.46
		S		32.26	41.94	69.35
		P		32.91	63.29	79.75
		C	T	32.00	74.00	83.00
		S		32.26	41.94	69.35
		P		32.10	61.73	77.78
13	Maharashtra	C	H	30.56	95.83	95.83
		S		15.15	60.61	72.73
		P		23.19	78.99	84.78
		C	T	26.83	84.15	84.15
		S		13.51	54.05	64.86
		P		20.51	69.87	75.00
14	Odisha	C	H	24.14	88.36	93.10
		S		28.52	87.89	85.55
		P		26.43	88.11	89.14
		C	T	22.05	80.71	85.04
		S		28.52	87.89	85.55
		P		25.29	84.31	85.29
15	Punjab	C	H	100.00	99.38	100.00
		S		100.00	96.00	100.00
		P		100.00	97.76	100.00
		C	T	99.39	98.77	99.39
		S		100.00	96.00	100.00
		P		99.68	97.44	99.68
16	Tamil Nadu Phase-II	C	H	95.00	95.00	93.33
		S		96.30	100.00	100.00
		P		95.61	97.37	96.49
		C	T	95.00	95.00	93.33
		S		96.30	100.00	100.00
		P		95.61	97.37	96.49
17	Telangana	C	H	94.29	85.71	100.00
		S		87.10	100.00	91.94
		P		90.91	92.42	96.21
		C	T	94.29	85.71	100.00
		S		87.10	100.00	91.94
		P		90.91	92.42	96.21
18	Uttar Pradesh	C	H	96.67	93.18	100.00
		S		64.71	88.24	58.82
		P		95.86	93.06	98.97
		C	T	96.67	93.18	100.00
		S		61.11	83.33	55.56
		P		95.72	92.92	98.82
19	Uttarakhand	C	H	84.00	52.00	50.00
		S		78.26	63.04	56.52
		P		81.25	57.29	53.13
		C	T	84.00	52.00	50.00
		S		72.00	58.00	52.00
		P		78.00	55.00	51.00

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HVV	F
1	2	3	4	5	6	7
20	West Bengal	C	H	46.10	88.96	96.10
		S		50.00	100.00	100.00
		P		46.15	89.10	96.15
		C	T	44.94	86.71	93.67
		S		50.00	100.00	100.00
		P		45.00	86.88	93.75
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	99.14	98.28	97.41
		S		100.00	98.00	98.00
		P		99.54	98.15	97.69
		C	T	99.14	98.28	97.41
		S		100.00	98.00	98.00
		P		99.54	98.15	97.69
2	Assam	C	H	33.33	33.33	100.00
		S		88.89	55.56	88.89
		P		70.37	48.15	92.59
		C	T	7.50	7.50	22.50
		S		61.54	38.46	61.54
		P		28.79	19.70	37.88
3	Bihar	C	H	81.82	63.64	81.82
		S		66.67	66.67	100.00
		P		76.47	64.71	88.24
		C	T	45.00	35.00	45.00
		S		50.00	50.00	75.00
		P		46.43	39.29	53.57
4	Karnataka	C	H	94.44	66.67	0.00
		S		100.00	93.33	86.67
		P		96.97	78.79	39.39
		C	T	85.00	60.00	0.00
		S		88.24	82.35	76.47
		P		86.49	70.27	35.14
5	Kerala	C	H	96.94	96.94	93.88
		S		100.00	95.00	92.00
		P		98.48	95.96	92.93
		C	T	95.00	95.00	92.00
		S		100.00	95.00	92.00
		P		97.50	95.00	92.00
6	Odisha	C	H	100.00	100.00	100.00
		S		97.14	100.00	94.29
		P		97.22	100.00	94.44
		C	T	2.88	2.88	2.88
		S		97.14	100.00	94.29
		P		50.18	51.61	48.75
7	Tamil Nadu	C	H	100.00	100.00	96.67
		S		100.00	100.00	100.00
		P		100.00	100.00	98.39
		C	T	75.00	75.00	72.50
		S		100.00	100.00	100.00
		P		86.11	86.11	84.72

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	95.00	100.00
		S		100.00	100.00	100.00
		P		100.00	97.37	100.00
		C	T	100.00	95.00	100.00
		S		100.00	100.00	100.00
		P		100.00	97.37	100.00
9	Puducherry Rabi-I	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
	Rabi-II	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
10	West Bengal	C	H	97.62	95.24	97.62
		S		0.00	0.00	0.00
		P		97.62	95.24	97.62
		C	T	58.57	57.14	58.57
		S		0.00	0.00	0.00
		P		56.16	54.79	56.16
Jowar- Kharif						
1	Karnataka	C	H	42.86	85.71	75.00
		S		21.74	91.30	47.83
		P		29.73	89.19	58.11
		C	T	24.00	48.00	42.00
		S		20.83	87.50	45.83
		P		22.45	67.35	43.88
2	Madhya Pradesh	C	H	0.00	40.00	60.00
		S		0.00	55.56	53.70
		P		0.00	45.45	57.79
		C	T	0.00	40.00	60.00
		S		0.00	55.56	53.70
		P		0.00	45.45	57.79
3	Maharashtra	C	H	7.41	88.89	96.30
		S		0.00	79.17	54.17
		P		3.92	84.31	76.47
		C	T	5.00	60.00	65.00
		S		0.00	61.29	41.94
		P		2.82	60.56	54.93
4	Rajasthan	C	H	2.00	28.00	50.00
		S		0.00	25.00	50.00
		P		0.94	26.42	50.00
		C	T	1.67	23.33	41.67
		S		0.00	23.33	46.67
		P		0.83	23.33	44.17
5	Tamil Nadu	C	H	20.00	85.00	35.00
		S		12.50	75.00	31.25
		P		16.67	80.56	33.33
		C	T	20.00	85.00	35.00
		S		12.50	75.00	31.25
		P		16.67	80.56	33.33

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HVV	F
1	2	3	4	5	6	7
6	Telangana	C	H	0.00	12.50	90.00
		S		0.00	25.00	87.50
		P		0.00	18.06	88.89
		C	T	0.00	12.50	90.00
		S		0.00	25.00	87.50
		P		0.00	18.06	88.89
7	Uttar Pradesh	C	H	0.00	11.11	5.56
		S		0.00	0.00	0.00
		P		0.00	11.11	5.56
		C	T	0.00	11.11	5.56
		S		0.00	0.00	0.00
		P		0.00	11.11	5.56
Jowar-Rabi						
1	Karnataka	C	H	23.73	59.32	0.00
		S		13.33	63.33	23.33
		P		18.49	61.34	11.76
		C	T	20.00	50.00	0.00
		S		13.33	63.33	23.33
		P		16.92	56.15	10.77
2	Maharashtra	C	H	34.53	48.92	72.66
		S		47.86	48.72	47.01
		P		40.63	48.83	60.94
		C	T	32.00	45.33	67.33
		S		44.44	45.24	43.65
		P		37.68	45.29	56.52
3	Tamil Nadu	C	H	25.00	72.50	62.50
		S		31.25	75.00	50.00
		P		27.78	73.61	56.94
		C	T	25.00	72.50	62.50
		S		31.25	75.00	50.00
		P		27.78	73.61	56.94
4	Telangana	C	H	70.00	32.50	85.00
		S		50.00	42.50	80.00
		P		60.00	37.50	82.50
		C	T	70.00	32.50	85.00
		S		50.00	42.50	80.00
		P		60.00	37.50	82.50
BAJRA						
1	Andhra Pradesh	C	H	5.56	52.78	69.44
		S		0.00	42.86	64.29
		P		3.13	48.44	67.19
		C	T	5.00	47.50	62.50
		S		0.00	42.86	64.29
		P		2.94	45.59	63.24
2	Gujarat	C	H	37.50	96.59	82.95
		S		31.37	87.25	90.20
		P		34.21	91.58	86.84
		C	T	34.38	88.54	76.04
		S		31.37	87.25	90.20
		P		32.83	87.88	83.33
3	Haryana	C	H	73.21	97.32	91.07
		S		92.50	97.50	96.25
		P		81.25	97.40	93.23
		C	T	71.93	95.61	89.47
		S		92.50	97.50	96.25
		P		80.41	96.39	92.27
4	Karnataka	C	H	10.81	62.16	54.05
		S		16.00	80.00	28.00
		P		13.79	72.41	39.08
		C	T	8.00	46.00	40.00
		S		16.00	80.00	28.00
		P		12.00	63.00	34.00

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HVY	F
1	2	3	4	5	6	7
5	Maharashtra	C	H	27.66	87.23	72.34
		S		26.92	65.38	51.92
		P		27.27	75.76	61.62
		C	T	21.67	68.33	56.67
		S		25.00	60.71	48.21
		P		23.28	64.66	52.59
6	Rajasthan	C	H	6.90	62.07	51.72
		S		3.33	51.67	56.67
		P		5.08	56.78	54.24
		C	T	6.67	60.00	50.00
		S		3.33	51.67	56.67
		P		5.00	55.83	53.33
7	Tamil Nadu	C	H	20.00	85.00	15.00
		S		21.05	84.21	68.42
		P		20.51	84.62	41.03
		C	T	20.00	85.00	15.00
		S		21.05	84.21	68.42
		P		20.51	84.62	41.03
8	Uttar Pradesh	C	H	40.28	79.86	86.11
		S		0.00	0.00	0.00
		P		40.28	79.86	86.11
		C	T	39.73	78.77	84.93
		S		0.00	0.00	0.00
		P		39.73	78.77	84.93
Maize						
1	Bihar	C	H	83.33	83.33	91.67
		S		50.00	100.00	100.00
		P		68.18	90.91	95.45
		C	T	25.00	25.00	27.50
		S		16.67	33.33	33.33
		P		21.43	28.57	30.00
2	Chhattisgarh	C	H	0.00	40.00	65.00
		S		0.00	70.00	50.00
		P		0.00	55.00	57.50
		C	T	0.00	40.00	65.00
		S		0.00	70.00	50.00
		P		0.00	55.00	57.50
3	Gujarat	C	H	0.00	55.56	100.00
		S		0.00	32.35	100.00
		P		0.00	44.29	100.00
		C	T	0.00	55.56	100.00
		S		0.00	32.35	100.00
		P		0.00	44.29	100.00
4	Haryana	C	H	55.26	81.58	78.95
		S		57.14	71.43	64.29
		P		56.06	77.27	72.73
		C	T	52.50	77.50	75.00
		S		57.14	71.43	64.29
		P		54.41	75.00	70.59
5	Himachal Pradesh	C	H	5.48	34.25	72.60
		S		5.26	19.74	61.84
		P		5.37	26.85	67.11
		C	T	4.44	27.78	58.89
		S		5.13	19.23	60.26
		P		4.76	23.81	59.52

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	3.33	37.78	74.44
		S		8.06	35.48	83.87
		P		5.26	36.84	78.29
		C	T	3.33	37.78	74.44
		S		6.76	29.73	70.27
		P		4.88	34.15	72.56
7	Jharkhand	C	H	15.00	30.00	90.00
		S		10.00	0.00	45.00
		P		12.50	15.00	67.50
		C	T	15.00	30.00	90.00
		S		10.00	0.00	45.00
		P		12.50	15.00	67.50
8	Karnataka	C	H	16.67	80.95	95.24
		S		22.45	100.00	83.67
		P		19.78	91.21	89.01
		C	T	14.00	68.00	80.00
		S		22.45	100.00	83.67
		P		18.18	83.84	81.82
9	Madhya Pradesh	C	H	0.00	46.25	72.50
		S		0.00	42.59	77.78
		P		0.00	44.78	74.63
		C	T	0.00	46.25	72.50
		S		0.00	42.59	77.78
		P		0.00	44.78	74.63
10	Odisha	C	H	17.65	47.06	58.82
		S		0.00	77.50	75.00
		P		5.26	68.42	70.18
		C	T	7.50	20.00	25.00
		S		0.00	77.50	75.00
		P		3.75	48.75	50.00
11	Punjab	C	H	76.47	91.18	94.12
		S		100.00	80.00	100.00
		P		85.19	87.04	96.30
		C	T	72.22	86.11	88.89
		S		100.00	80.00	100.00
		P		82.14	83.93	92.86
12	Rajasthan	C	H	4.17	43.75	56.25
		S		11.76	44.12	58.82
		P		7.32	43.90	57.32
		C	T	4.00	42.00	54.00
		S		11.76	44.12	58.82
		P		7.14	42.86	55.95
13	Tamil Nadu	C	H	40.00	100.00	95.00
		S		42.11	100.00	89.47
		P		41.03	100.00	92.31
		C	T	40.00	100.00	95.00
		S		42.11	100.00	89.47
		P		41.03	100.00	92.31
14	Telangana	C	H	30.43	97.83	97.83
		S		48.98	100.00	100.00
		P		40.00	98.95	98.95
		C	T	28.00	90.00	90.00
		S		48.00	98.00	98.00
		P		38.00	94.00	94.00

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	58.24	80.59	97.06
		S		0.00	80.00	0.00
		P		56.57	80.57	94.29
		C	T	58.24	80.59	97.06
		S		0.00	80.00	0.00
		P		56.57	80.57	94.29
Ragi						
1	Karnataka	C	H	20.00	55.00	82.50
		S		17.65	100.00	85.29
		P		18.92	75.68	83.78
		C	T	20.00	55.00	82.50
		S		17.65	100.00	85.29
		P		18.92	75.68	83.78
2	Uttarakhand	C	H	0.00	0.00	2.50
		S		0.00	0.00	0.00
		P		0.00	0.00	1.32
		C	T	0.00	0.00	2.50
		S		0.00	0.00	0.00
		P		0.00	0.00	1.25
Cotton						
1	Andhra Pradesh	C	H	0.00	100.00	91.18
		S		14.71	94.12	94.12
		P		7.35	97.06	92.65
		C	T	0.00	100.00	91.18
		S		14.71	94.12	94.12
		P		7.35	97.06	92.65
2	Gujarat	C	H	36.92	95.38	95.38
		S		35.77	92.70	89.78
		P		36.45	94.28	93.07
		C	T	34.62	89.42	89.42
		S		35.51	92.03	89.13
		P		34.97	90.46	89.31
3	Haryana	C	H	100.00	97.14	98.57
		S		100.00	100.00	100.00
		P		100.00	98.25	99.12
		C	T	100.00	97.14	98.57
		S		100.00	100.00	100.00
		P		100.00	98.25	99.12
4	Karnataka	C	H	18.52	87.04	85.19
		S		23.08	100.00	0.00
		P		20.75	93.40	43.40
		C	T	17.86	83.93	82.14
		S		23.08	100.00	0.00
		P		20.37	91.67	42.59
5	Madhya Pradesh	C	H	68.75	100.00	93.75
		S		46.15	76.92	100.00
		P		60.81	91.89	95.95
		C	T	68.75	100.00	93.75
		S		46.15	76.92	100.00
		P		60.81	91.89	95.95

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	29.63	99.26	98.52
		S		29.82	98.25	96.49
		P		29.72	98.80	97.59
		C	T	28.99	97.10	96.38
		S		28.33	93.33	91.67
		P		28.68	95.35	94.19
7	Punjab	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
8	Rajasthan	C	H	100.00	100.00	100.00
		S		89.47	84.21	94.74
		P		94.29	91.43	97.14
		C	T	80.00	80.00	80.00
		S		89.47	84.21	94.74
		P		84.62	82.05	87.18
9	Tamil Nadu (Kharif)	C	H	20.00	100.00	80.00
		S		15.79	100.00	100.00
		P		17.95	100.00	89.74
		C	T	20.00	100.00	80.00
		S		15.79	100.00	100.00
		P		17.95	100.00	89.74
	Tamil Nadu (Rabi)	C	H	50.00	100.00	100.00
		S		52.63	100.00	94.74
		P		51.28	100.00	97.44
		C	T	50.00	100.00	100.00
		S		52.63	100.00	94.74
		P		51.28	100.00	97.44
10	Telangana	C	H	7.50	90.00	100.00
		S		0.00	100.00	87.50
		P		5.36	92.86	96.43
		C	T	7.50	90.00	100.00
		S		0.00	100.00	87.50
		P		5.36	92.86	96.43
Groundnut						
1	Andhra Pradesh (Rabi)	C	H	86.84	97.37	92.11
		S		100.00	100.00	93.55
		P		92.75	98.55	92.75
		C	T	86.84	97.37	92.11
		S		100.00	100.00	93.55
		P		92.75	98.55	92.75
2	Gujarat	C	H	58.02	96.18	96.18
		S		53.77	33.02	95.28
		P		56.12	67.93	95.78
		C	T	54.29	90.00	90.00
		S		52.29	32.11	92.66
		P		53.41	64.66	91.16
3	Karnataka (Rabi)	C	H	63.16	36.84	0.00
		S		64.71	76.47	38.24
		P		64.15	62.26	24.53
		C	T	30.00	17.50	0.00
		S		61.11	72.22	36.11
		P		44.74	43.42	17.11
4	Madhya Pradesh	C	H	2.50	25.00	45.00
		S		0.00	26.92	46.15
		P		1.52	25.76	45.45
		C	T	2.50	25.00	45.00
		S		0.00	26.92	46.15
		P		1.52	25.76	45.45

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	7.41	53.70	92.59
		S		16.00	66.00	68.00
		P		11.54	59.62	80.77
		C	T	6.67	48.33	83.33
		S		14.81	61.11	62.96
		P		10.53	54.39	73.68
6	Rajasthan	C	H	91.67	80.56	100.00
		S		69.23	46.15	84.62
		P		82.26	66.13	93.55
		C	T	82.50	72.50	90.00
		S		56.25	37.50	68.75
		P		70.83	56.94	80.56
7	Tamil Nadu (Kharif)	C	H	20.00	100.00	50.00
		S		22.22	100.00	77.78
		P		21.05	100.00	63.16
		C	T	20.00	100.00	50.00
		S		22.22	100.00	77.78
		P		21.05	100.00	63.16
	Tamil Nadu (Rabi)	C	H	78.13	87.50	71.88
		S		75.00	96.88	93.75
		P		76.56	92.19	82.81
		C	T	62.50	70.00	57.50
		S		75.00	96.88	93.75
		P		68.06	81.94	73.61
8	Telangana	C	H	70.00	100.00	95.00
		S		70.00	82.50	92.50
		P		70.00	91.25	93.75
		C	T	70.00	100.00	95.00
		S		70.00	82.50	92.50
		P		70.00	91.25	93.75
Sugarcane						
1	Andhra Pradesh	C	H	100.00	96.15	100.00
		S		100.00	100.00	100.00
		P		100.00	98.11	100.00
		C	T	89.66	86.21	89.66
		S		90.00	90.00	90.00
		P		89.83	88.14	89.83
2	Assam	C	H	0.00	0.00	16.67
		S		0.00	0.00	20.00
		P		0.00	0.00	18.18
		C	T	0.00	0.00	10.00
		S		0.00	0.00	18.18
		P		0.00	0.00	12.90
3	Bihar	C	H	68.00	16.00	100.00
		S		60.00	40.00	100.00
		P		63.64	29.09	100.00
		C	T	42.50	10.00	62.50
		S		56.25	37.50	93.75
		P		48.61	22.22	76.39
4	Haryana	C	H	100.00	98.72	98.72
		S		100.00	100.00	100.00
		P		100.00	99.09	99.09
		C	T	97.50	96.25	96.25
		S		100.00	100.00	100.00
		P		98.21	97.32	97.32
5	Karnataka	C	H	89.47	81.58	86.84
		S		85.00	85.00	65.00
		P		87.18	83.33	75.64
		C	T	85.00	77.50	82.50
		S		85.00	85.00	65.00
		P		85.00	81.25	73.75

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	100.00	62.26	100.00
		S		91.67	87.50	45.83
		P		96.04	74.26	74.26
		C	T	77.94	48.53	77.94
		S		91.67	87.50	45.83
		P		83.62	64.66	64.66
7	Punjab	C	H	100.00	98.28	96.55
		S		100.00	100.00	100.00
		P		100.00	98.94	97.87
		C	T	100.00	98.28	96.55
		S		100.00	100.00	100.00
		P		100.00	98.94	97.87
8	Rajasthan	C	H	100.00	64.86	56.76
		S		100.00	0.00	100.00
		P		100.00	40.68	72.88
		C	T	92.50	60.00	52.50
		S		100.00	0.00	100.00
		P		95.16	38.71	69.35
9	Tamil Nadu	C	H	100.00	95.00	100.00
		S		100.00	96.67	100.00
		P		100.00	95.71	100.00
		C	T	100.00	95.00	100.00
		S		100.00	96.67	100.00
		P		100.00	95.71	100.00
10	Uttar Pradesh	C	H	92.00	93.00	99.00
		S		0.00	0.00	0.00
		P		92.00	93.00	99.00
		C	T	92.00	93.00	99.00
		S		0.00	0.00	0.00
		P		92.00	93.00	99.00
11	Uttarakhand	C	H	95.00	90.00	90.00
		S		0.00	0.00	0.00
		P		95.00	90.00	90.00
		C	T	95.00	90.00	90.00
		S		0.00	0.00	0.00
		P		95.00	90.00	90.00
Wheat						
1	Assam	C	H	33.33	0.00	33.33
		S		20.00	10.00	65.00
		P		23.08	7.69	57.69
		C	T	4.00	0.00	4.00
		S		8.00	4.00	26.00
		P		6.00	2.00	15.00
2	Bihar	C	H	89.05	66.67	99.00
		S		87.78	63.33	94.44
		P		88.45	65.09	96.85
		C	T	81.36	60.91	90.45
		S		86.34	62.30	92.90
		P		83.62	61.54	91.56
3	Chhattisgarh	C	H	61.54	76.92	88.46
		S		83.33	66.67	66.67
		P		68.42	73.68	81.58
		C	T	40.00	50.00	57.50
		S		25.00	20.00	20.00
		P		32.50	35.00	38.75

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HVV	F
1	2	3	4	5	6	7
4	Gujarat	C	H	89.31	83.21	93.89
		S		86.55	57.14	94.96
		P		88.00	70.80	94.40
		C	T	89.31	83.21	93.89
		S		86.55	57.14	94.96
		P		88.00	70.80	94.40
5	Haryana	C	H	100.00	98.05	100.00
		S		98.33	100.00	98.33
		P		99.27	98.91	99.27
		C	T	93.90	92.07	93.90
		S		98.33	100.00	98.33
		P		95.77	95.42	95.77
6	Himachal Pradesh	C	H	13.64	25.76	84.85
		S		15.15	21.21	69.70
		P		14.39	23.48	77.27
		C	T	8.18	15.45	50.91
		S		11.36	15.91	52.27
		P		9.60	15.66	51.52
7	Jammu & Kashmir	C	H	40.00	78.00	88.00
		S		14.55	72.73	83.64
		P		22.50	74.38	85.00
		C	T	16.67	32.50	36.67
		S		13.79	68.97	79.31
		P		15.25	50.42	57.63
8	Jharkhand	C	H	84.00	24.00	100.00
		S		66.67	9.52	95.24
		P		76.09	17.39	97.83
		C	T	84.00	24.00	100.00
		S		66.67	9.52	95.24
		P		76.09	17.39	97.83
9	Karnataka	C	H	61.90	61.90	0.00
		S		56.52	54.35	8.70
		P		59.09	57.95	4.55
		C	T	52.00	52.00	0.00
		S		52.00	50.00	8.00
		P		52.00	51.00	4.00
10	Madhya Pradesh	C	H	73.77	46.31	88.93
		S		76.19	42.86	80.95
		P		74.39	45.43	86.89
		C	T	72.00	45.20	86.80
		S		74.42	41.86	79.07
		P		72.62	44.35	84.82
11	Maharashtra	C	H	89.47	90.23	96.99
		S		84.48	69.83	65.52
		P		87.15	80.72	82.33
		C	T	80.41	81.08	87.16
		S		81.67	67.50	63.33
		P		80.97	75.00	76.49
12	Punjab	C	H	100.00	98.99	99.50
		S		98.82	92.90	100.00
		P		99.46	96.20	99.73
		C	T	99.50	98.50	99.00
		S		98.82	92.90	100.00
		P		99.19	95.93	99.46

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HVY	F
1	2	3	4	5	6	7
13	Rajasthan	C	H	100.00	58.33	96.30
		S		97.87	67.02	84.04
		P		99.01	62.38	90.59
		C	T	83.08	48.46	80.00
		S		77.97	53.39	66.95
		P		80.65	50.81	73.79
14	Uttar Pradesh	C	H	98.95	91.93	99.30
		S		100.00	93.65	71.43
		P		99.05	92.10	96.52
		C	T	98.95	91.93	99.30
		S		100.00	93.65	71.43
		P		99.05	92.10	96.52
15	Uttarakhand	C	H	71.67	60.00	60.00
		S		63.33	60.00	60.00
		P		67.50	60.00	60.00
		C	T	71.67	60.00	60.00
		S		63.33	60.00	60.00
		P		67.50	60.00	60.00
16	West Bengal	C	H	100.00	94.23	100.00
		S		0.00	0.00	0.00
		P		100.00	94.23	100.00
		C	T	94.55	89.09	94.55
		S		0.00	0.00	0.00
		P		94.55	89.09	94.55
Barley						
1	Haryana	C	H	94.44	80.56	94.44
		S		90.00	95.00	97.50
		P		92.11	88.16	96.05
		C	T	85.00	72.50	85.00
		S		90.00	95.00	97.50
		P		87.50	83.75	91.25
2	Himachal Pradesh	C	H	28.57	0.00	64.29
		S		0.00	14.29	14.29
		P		14.29	7.14	39.29
		C	T	10.00	0.00	22.50
		S		0.00	8.33	8.33
		P		6.25	3.13	17.19
3	Punjab	C	H	100.00	83.33	100.00
		S		100.00	87.50	93.75
		P		100.00	85.29	97.06
		C	T	90.00	75.00	90.00
		S		100.00	87.50	93.75
		P		94.44	80.56	91.67
4	Rajasthan	C	H	100.00	61.76	91.18
		S		100.00	63.89	88.89
		P		100.00	62.86	90.00
		C	T	87.18	53.85	79.49
		S		92.31	58.97	82.05
		P		89.74	56.41	80.77
Gram						
1	Andhra Pradesh	C	H	0.00	100.00	93.33
		S		0.00	95.24	95.24
		P		0.00	98.04	94.12
		C	T	0.00	100.00	93.33
		S		0.00	95.24	95.24
		P		0.00	98.04	94.12

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	11.76	0.00	44.12
		S		22.22	0.00	38.89
		P		17.14	0.00	41.43
		C	T	11.76	0.00	44.12
		S		22.22	0.00	38.89
		P		17.14	0.00	41.43
3	Chhattisgarh	C	H	70.00	10.00	70.00
		S		57.69	0.00	57.69
		P		65.15	6.06	65.15
		C	T	70.00	10.00	70.00
		S		37.50	0.00	37.50
		P		53.75	5.00	53.75
4	Gujarat	C	H	47.37	78.95	65.79
		S		78.13	31.25	68.75
		P		61.43	57.14	67.14
		C	T	47.37	78.95	65.79
		S		78.13	31.25	68.75
		P		61.43	57.14	67.14
5	Haryana	C	H	66.67	59.52	54.76
		S		59.52	83.33	42.86
		P		63.10	71.43	48.81
		C	T	66.67	59.52	54.76
		S		59.52	83.33	42.86
		P		63.10	71.43	48.81
6	Jharkhand	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
7	Karnataka	C	H	20.59	32.35	0.00
		S		21.05	71.05	21.05
		P		20.83	52.78	11.11
		C	T	17.50	27.50	0.00
		S		21.05	71.05	21.05
		P		19.23	48.72	10.26
8	Madhya Pradesh	C	H	50.00	20.71	80.71
		S		58.33	29.17	58.33
		P		52.13	22.87	75.00
		C	T	50.00	20.71	80.71
		S		58.33	29.17	58.33
		P		52.13	22.87	75.00
9	Maharashtra	C	H	65.63	77.08	85.42
		S		56.18	51.69	62.92
		P		61.08	64.86	74.59
		C	T	63.00	74.00	82.00
		S		54.35	50.00	60.87
		P		58.85	62.50	71.88
10	Punjab	C	H	95.00	92.50	47.50
		S		0.00	0.00	0.00
		P		95.00	92.50	47.50
		C	T	95.00	92.50	47.50
		S		0.00	0.00	0.00
		P		95.00	92.50	47.50

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
11	Rajasthan	C	H	62.82	30.77	46.15
		S		60.98	41.46	34.15
		P		61.88	36.25	40.00
		C	T	40.83	20.00	30.00
		S		49.02	33.33	27.45
		P		44.59	26.13	28.83
12	Uttar Pradesh	C	H	66.00	16.00	66.00
		S		0.00	100.00	100.00
		P		61.11	22.22	68.52
		C	T	66.00	16.00	66.00
		S		0.00	100.00	100.00
		P		61.11	22.22	68.52
Rape & Mustard						
1	Assam	C	H	0.00	3.57	57.14
		S		13.64	0.00	63.64
		P		6.00	2.00	60.00
		C	T	0.00	3.33	53.33
		S		12.50	0.00	58.33
		P		5.56	1.85	55.56
2	Bihar	C	H	83.33	30.56	69.44
		S		90.00	20.00	90.00
		P		86.84	25.00	80.26
		C	T	78.95	28.95	65.79
		S		90.00	20.00	90.00
		P		84.62	24.36	78.21
3	Chhattisgarh	C	H	33.33	22.22	16.67
		S		0.00	0.00	22.22
		P		22.22	14.81	18.52
		C	T	30.00	20.00	15.00
		S		0.00	0.00	10.00
		P		15.00	10.00	12.50
4	Gujarat	C	H	92.86	97.62	95.24
		S		100.00	84.62	97.44
		P		96.30	91.36	96.30
		C	T	92.86	97.62	95.24
		S		100.00	84.62	97.44
		P		96.30	91.36	96.30
5	Haryana	C	H	100.00	97.30	94.59
		S		95.95	100.00	95.95
		P		97.97	98.65	95.27
		C	T	97.37	94.74	92.11
		S		95.95	100.00	95.95
		P		96.67	97.33	94.00
6	Jharkhand	C	H	62.50	47.50	75.00
		S		15.00	0.00	10.00
		P		38.75	23.75	42.50
		C	T	62.50	47.50	75.00
		S		15.00	0.00	10.00
		P		38.75	23.75	42.50
7	Madhya Pradesh	C	H	73.33	48.33	73.33
		S		37.50	50.00	37.50
		P		65.79	48.68	65.79
		C	T	73.33	48.33	73.33
		S		37.50	50.00	37.50
		P		65.79	48.68	65.79

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	97.50	87.50	90.00
		S		92.50	92.50	92.50
		P		95.00	90.00	91.25
		C	T	97.50	87.50	90.00
		S		92.50	92.50	92.50
		P		95.00	90.00	91.25
9	Rajasthan	C	H	94.59	66.22	91.89
		S		90.91	72.73	75.76
		P		92.86	69.29	84.29
		C	T	77.78	54.44	75.56
		S		76.92	61.54	64.10
		P		77.38	57.74	70.24
10	Uttar Pradesh	C	H	86.00	66.00	90.00
		S		69.23	84.62	84.62
		P		84.07	68.14	89.38
		C	T	86.00	66.00	90.00
		S		69.23	84.62	84.62
		P		84.07	68.14	89.38
11	West Bengal	C	H	94.23	84.62	100.00
		S		0.00	0.00	0.00
		P		94.23	84.62	100.00
		C	T	89.09	80.00	94.55
		S		0.00	0.00	0.00
		P		89.09	80.00	94.55

**INCIDENCE OF ERRORS IN CONDUCTING CROP CUTTING EXPERIMENTS
DURING 2020-21**

Sl. No.	State	Season	A G E N C Y	% 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 Pradesh	Kharif	C	79	0	1	3	4	0	7	0	10		
			S	85	0	0	0	0	0	6	0	9		
			P	82	0	0	2	2	0	7	0	10		
		Rabi	C	89	0	0	1	2	0	3	0	5		
			S	91	0	0	1	0	1	7	1	0		
			P	90	0	0	1	1	1	5	1	3		
2	Assam	Early Kharif	C	91	0	0	0	0	0	3	0	8		
			S	71	0	0	0	0	0	0	0	29		
			P	82	0	0	0	0	0	1	0	18		
		Late Kharif	C	93	0	0	1	1	0	2	0	4		
			S	60	0	0	0	0	0	0	0	40		
			P	79	0	0	0	0	0	1	0	20		
		Rabi	C	93	0	0	0	0	0	2	0	5		
			S	85	0	0	0	0	0	0	0	15		
			P	89	0	0	0	0	0	1	0	10		
		Summer	C	89	0	0	0	11	0	0	0	0		
			S	83	0	0	0	0	0	11	6	0		
			P	85	0	0	0	4	0	7	4	0		
		3	Bihar	Autumn (Bhadai)	C	62	0	0	2	2	0	3	0	34
					S	33	0	0	0	0	0	26	0	67
					P	46	0	0	1	1	0	15	0	52
Winter (Agahani)	C			87	1	1	1	1	1	5	0	9		
	S			25	0	0	0	0	0	4	1	75		
	P			56	1	1	0	0	0	5	0	42		
Rabi	C			85	0	0	0	1	0	4	0	11		
	S			31	0	0	0	0	0	13	0	66		
	P			58	0	0	0	1	0	8	0	38		
Summer	C			86	0	0	0	5	0	0	0	9		
	S			83	0	0	0	0	0	0	0	17		
	P			85	0	0	0	3	0	0	0	12		
4	Chhattisgarh			Kharif	C	80	2	2	1	9	11	6	2	3
					S	92	0	0	0	0	1	3	0	4
					P	86	1	1	1	4	6	5	1	4
		Rabi	C	84	0	0	1	2	0	11	0	10		
			S	99	0	0	0	0	0	1	0	0		
			P	90	0	0	0	1	0	7	0	6		
5	Gujarat	Kharif	C	71	0	0	1	1	3	9	0	18		
			S	44	0	0	0	1	1	11	0	51		
			P	58	0	0	1	1	2	10	0	33		
		Rabi	C	85	0	0	0	0	0	1	0	14		
			S	42	1	1	0	1	1	1	0	57		
			P	64	0	0	0	1	0	1	0	35		
6	Haryana	Kharif	C	85	0	0	3	1	1	9	0	2		
			S	76	0	0	1	2	0	6	0	15		
			P	82	0	0	2	1	1	8	0	7		
		Rabi	C	91	0	0	2	2	0	7	1	0		
			S	91	0	0	0	0	0	9	0	4		
			P	91	0	0	1	1	0	8	0	2		
7	Himachal Pradesh	Kharif	C	77	0	0	8	17	3	12	2	2		
			S	65	8	2	12	3	8	12	0	25		
			P	71	4	1	10	10	5	12	1	14		
		Rabi	C	81	0	3	4	11	0	11	0	8		
			S	53	5	4	11	3	10	11	0	38		
			P	67	3	3	8	7	5	11	0	23		

ANNEX VIII (Contd.....)

S. No.	State	Season	A G E N C Y	% 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 & Kashmir	Kharif	C	62	7	11	11	39	1	14	1	3
			S	30	2	2	21	5	0	1	1	63
			P	49	5	7	15	25	1	8	1	28
		Rabi	C	72	0	0	2	12	0	24	0	0
			S	55	5	5	25	2	0	4	0	37
			P ^A	61	3	4	18	5	0	10	0	26
9	Jharkhand	Early Kharif (Bhadai)	C	81	0	0	3	0	0	0	0	18
			S	100	0	0	0	0	0	0	0	0
			P	90	0	0	1	0	0	0	0	9
		Late Kharif (Agahani)	C	76	0	0	0	2	0	6	0	18
			S	100	0	0	0	0	0	0	0	0
			P	88	0	0	0	1	0	3	0	9
		Rabi	C	74	0	0	4	4	0	2	0	17
			S	99	0	0	0	0	0	1	0	0
			P	86	0	0	2	2	0	2	0	9
10	Karnataka	Kharif	C	72	0	2	3	6	0	13	0	22
			S	69	0	0	0	3	0	2	0	28
			P	70	0	1	2	5	0	7	0	25
		Rabi	C	71	0	1	1	4	1	8	0	22
			S	63	1	0	0	2	1	1	1	24
			P	67	0	0	0	3	1	5	0	23
		Summer	C	87	0	0	0	2	0	4	0	7
			S	61	0	0	0	0	0	0	0	39
			P	73	0	0	0	1	0	2	0	24
11	Kerala	Autumn	C	88	0	0	0	0	0	1	0	11
			S	98	0	0	0	0	0	1	0	1
			P	93	0	0	0	0	0	1	0	6
		Winter	C	88	0	0	0	1	0	5	1	5
			S	95	0	0	0	2	0	1	1	1
			P	92	0	0	0	2	0	3	1	3
		Summer	C	69	0	0	0	0	0	1	1	30
			S	80	0	0	0	0	0	0	0	22
			P	74	0	0	0	0	0	0	0	26
12	Madhya Pradesh	Kharif	C	88	1	0	1	3	2	4	1	4
			S	61	0	1	0	0	0	2	0	38
			P	78	0	1	0	2	1	4	1	16
		Rabi	C	82	2	0	1	2	1	12	0	4
			S	50	0	0	0	0	0	0	0	50
			P	74	1	0	1	1	0	9	0	15
13	Maharashtra	Kharif	C	60	2	3	11	31	0	22	3	14
			S	71	0	0	0	0	0	0	0	29
			P	65	1	1	6	16	0	12	2	21
		Rabi	C	61	3	4	12	25	0	20	0	14
			S	46	0	0	0	0	0	0	0	61
			P	54	1	2	6	13	0	11	0	35
14	Odisha	Autumn	C	88	0	0	2	1	1	1	0	8
			S	98	0	0	0	0	0	1	0	0
			P	94	0	0	1	0	0	1	0	3
		Winter	C	85	0	0	0	0	0	3	0	12
			S	94	0	0	0	0	0	4	1	1
			P	89	0	0	0	0	0	3	0	7
		Summer	C	94	0	0	3	0	0	3	0	0
			S	100	0	0	0	0	0	0	0	0
			P	99	0	0	0	0	0	0	0	0

S. No.	State	Season	A G E N C Y	% 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	73	0	0	3	5	0	12	0	15
			S	94	0	0	0	0	0	4	0	1
			P	82	0	0	2	3	0	9	0	9
		Rabi	C	83	0	1	4	4	0	8	0	5
			S	94	0	0	1	1	0	5	0	0
			P	88	0	0	3	3	0	6	0	3
16	Rajasthan	Kharif	C	64	2	2	3	3	1	28	0	9
			S	66	0	0	0	0	1	1	0	33
			P	65	1	1	2	1	1	15	0	21
		Rabi	C	76	1	2	4	5	0	13	0	9
			S	84	0	0	0	0	0	3	0	14
			P	80	0	1	2	2	0	8	0	11
17	Tamil Nadu #	Kharif	C	79	2	3	4	3	1	18	0	2
			S	81	0	0	3	1	1	7	1	8
			P	80	1	1	3	2	1	13	1	5
		Rabi	C	70	3	4	7	6	1	22	3	6
			S	90	0	0	1	1	0	3	3	3
			P	80	2	2	4	4	1	13	3	4
18	Telangana	Kharif	C	71	0	2	3	4	0	11	0	19
			S	67	1	1	12	3	0	8	0	15
			P	69	0	1	7	3	0	10	0	17
		Rabi	C	83	0	0	2	1	0	9	0	8
			S	84	0	0	4	0	0	4	0	11
			P	83	0	0	3	0	0	6	0	9
19	Uttar Pradesh	Kharif	C	54	2	1	17	25	0	29	0	13
			S	100	0	0	0	0	0	0	0	0
			P	55	2	1	16	25	0	28	0	12
		Rabi	C	55	1	1	17	21	0	33	0	9
			S	100	0	0	0	0	0	0	0	0
			P	60	1	1	15	19	0	30	0	8
	Zaid Rabi	C	74	0	1	9	9	0	15	1	1	
		S	Insufficient Data									
		P	74	0	1	8	8	0	15	1	3	
20	Uttarakhand	Kharif	C	52	2	1	2	2	0	50	0	5
			S	78	0	0	0	1	0	4	0	17
			P	62	1	0	1	2	0	32	0	9
		Rabi	C	73	3	3	0	0	5	20	0	3
			S	85	0	0	0	0	0	0	2	13
			P	79	2	2	0	0	3	10	1	8
21	West Bengal	Aus	C	77	0	0	1	1	2	3	0	18
			S	100	0	0	0	0	0	0	0	0
			P	77	0	0	1	1	2	3	0	18
		Aman	C	82	0	0	1	1	1	1	0	16
			S	100	0	0	0	0	0	0	0	0
			P	82	0	0	1	1	1	1	0	16
		Rabi	C	58	0	0	0	1	1	2	0	38
			S	NC	NC	NC	NC	NC	NC	NC	NC	NC
			P	58	0	0	0	1	1	2	0	38
	Summer	C	71	2	2	0	1	4	5	0	20	
		S	100	0	0	0	0	0	0	0	0	
		P	73	2	2	0	1	4	4	0	19	

ANNEX VIII (Contd.....)

S. No.	State	Season	A G E N C Y	% of Expts. where 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	80	0	0	0	0	0	20	0	0
			S	100	0	0	0	0	0	0	0	0
			P	90	0	0	0	0	10	0	0	
		Rabi-I	C	80	0	0	0	0	0	10	0	10
			S	100	0	0	0	0	0	0	0	0
			P	90	0	0	0	0	5	0	5	
		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	59	0	0	1	0	1	1	2	28	
			S	43	0	0	0	0	4	0	31	
			P	52	0	0	0	1	3	1	21	
		Late Kharif	C	71	1	1	6	10	1	15	1	11
			S	70	0	0	2	1	0	4	0	25
			P	71	1	1	4	7	1	11	1	17
	Rabi	C	74	1	1	6	8	0	14	0	9	
		S	72	0	0	2	1	0	4	0	25	
		P	73	1	1	4	5	0	10	0	16	
	Summer	C	74	0	0	1	2	1	3	0	20	
		S	84	0	0	0	0	0	1	0	16	
		P	79	0	0	1	1	0	2	0	18	
	All Seasons	C	72	1	1	5	9	1	14	1	12	
		S	70	0	0	1	1	0	4	0	25	
		P	71	1	1	4	5	1	10	0	17	

Note:

1. e₁= Error in selection of survey/sub-survey nos.
2. e₂= Error in selection of field within survey/sub-survey nos.
3. e₃= Error in measurement of field
4. e₄= Error in selection of random nos., location and marking of plots
5. e₅= Error in weighing of produce
6. e₆= Error in reporting ancillary information
7. e₇= Inadequate arrangements for storing of produce for drying and incorrect reporting of constituents in crop mixture.
8. e₈= 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.

**SUPPLY AND USE OF EQUIPMENT FOR CROP CUTTING
EXPERIMENTS DURING 2020-21**

Sl. No.	State	Season	A G E N C Y	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 Pradesh	Kharif	C	1	93	3	0	1	0	2	0	
			S	1	87	1	1	15	2	21	21	
			P	1	90	2	1	8	1	12	10	
		Rabi	C	1	96	1	0	1	0	1	1	
			S	0	90	1	1	15	0	21	22	
			P	1	93	1	1	7	0	10	10	
2	Assam	Early Kharif	C	26	92	32	23	4	0	20	11	
			S	6	65	19	19	0	16	0	3	
			P	17	79	26	21	2	7	11	7	
			Late Kharif	C	7	87	8	5	8	1	18	9
				S	0	51	0	0	14	18	13	13
				P	4	71	4	3	11	9	16	11
		Rabi	C	10	82	11	1	13	2	22	15	
			S	7	68	7	7	8	19	7	10	
			P	8	75	9	4	11	10	14	13	
		Summer	C	22	100	22	0	0	0	0	0	
			S	0	78	0	0	11	0	11	11	
			P	7	85	7	0	7	0	7	7	
3	Bihar	Autumn (Bhadai)	C	95	98	97	68	2	2	0	0	
			S	69	77	69	69	26	15	26	26	
			P	81	87	82	69	15	9	14	14	
			Winter (Aghani)	C	89	100	93	83	8	0	6	4
				S	36	39	36	36	48	26	48	48
				P	63	70	65	60	28	13	27	26
		Rabi	C	89	99	95	70	3	0	1	1	
			S	32	33	33	33	39	19	43	39	
			P	61	67	65	52	21	9	22	20	
		Summer	C	100	100	100	68	0	0	0	0	
			S	33	33	33	33	0	0	0	0	
			P	76	76	76	56	0	0	0	0	
4	Chhattisgarh	Kharif	C	9	90	54	25	27	4	19	13	
			S	0	22	17	17	0	1	13	13	
			P	5	57	36	21	14	2	16	13	
			Rabi	C	10	77	68	34	14	19	10	2
				S	0	32	20	35	0	7	10	12
				P	6	59	49	34	8	15	10	6
5	Gujarat	Kharif	C	9	86	16	1	24	2	25	17	
			S	1	28	2	1	14	4	18	12	
			P	5	59	10	1	19	3	22	15	
			Rabi	C	14	90	16	2	26	2	26	23
				S	1	24	1	0	7	0	7	3
				P	7	59	8	1	17	1	17	13
6	Haryana	Kharif	C	9	98	19	3	2	2	5	4	
			S	25	71	25	4	27	23	26	13	
			P	15	88	22	3	12	10	13	7	
			Rabi	C	12	98	23	11	5	0	0	0
				S	29	68	30	0	23	23	23	16
				P	20	84	26	6	13	11	11	8
7	Himachal Pradesh	Kharif	C	24	97	45	29	24	2	42	43	
			S	7	56	19	56	58	42	76	39	
			P	15	76	32	43	41	22	59	41	
			Rabi	C	28	83	40	39	46	18	48	48
				S	10	61	29	63	54	35	69	35
				P	19	72	34	51	50	26	58	41
8	Jammu & Kashmir	Kharif	C	100	100	100	95	0	0	0	1	
			S	71	93	75	66	21	0	18	18	
			P	88	97	90	83	9	0	7	8	
			Rabi	C	78	100	100	78	2	0	0	0
				S	69	95	69	69	25	0	25	25
				P*	72	96	79	72	18	0	18	18

S. No.	State	Season	A G E N C Y	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	98	78	0	0	0	0
			S	54	57	63	61	26	17	20	20
			P	76	80	81	70	12	8	9	9
		Late Kharif	C	96	100	96	92	4	0	4	0
			S	52	76	68	56	20	4	20	8
			P	74	88	82	74	12	2	12	4
		Rabi	C	100	100	100	80	0	0	0	0
			S	39	62	62	62	57	33	35	35
			P	71	82	82	72	27	16	17	17
10	Karnataka	Kharif	C	22	81	24	5	17	11	19	2
			S	34	54	32	20	36	25	36	38
			P	28	67	28	13	27	18	28	20
		Rabi	C	23	70	23	3	35	18	35	5
			S	27	54	26	26	38	20	32	31
			P	25	61	24	15	37	19	34	19
		Summer	C	7	56	13	4	38	24	38	15
			S	25	47	19	17	36	20	36	36
			P	17	51	16	11	37	22	37	26
11	Kerala & *	Autumn	C	2	38	2	0	0	12	4	2
			S	0	0	0	0	0	1	0	0
			P	1	19	1	0	0	7	2	1
		Winter	C	1	43	1	0	4	19	9	0
			S	0	0	0	0	0	4	4	4
			P	1	22	1	0	2	12	7	2
		Summer	C	2	18	6	3	1	5	3	1
			S	0	1	0	0	0	2	5	2
			P	1	9	3	1	1	3	4	1
12	Madhya Pradesh	Kharif	C	38	92	74	58	15	8	24	14
			S	0	17	17	18	35	15	23	21
			P	24	65	53	43	22	10	23	17
		Rabi	C	36	97	83	50	17	3	15	11
			S	0	10	0	10	23	27	39	21
			P	27	76	63	40	18	9	21	13
13	Maharashtra	Kharif	C	91	98	95	9	3	1	1	0
			S	61	56	63	51	26	17	26	26
			P	76	78	80	29	14	9	13	12
		Rabi	C	90	93	92	70	5	6	6	6
			S	45	38	47	37	49	31	48	48
			P	69	68	71	55	26	18	26	25
14	Odisha	Autumn	C	1	6	9	0	2	11	9	3
			S	0	0	0	0	0	0	0	0
			P	0	2	4	0	1	5	4	1
		Winter	C	0	3	3	0	2	5	3	3
			S	0	0	0	0	0	0	1	0
			P	0	1	1	0	1	2	2	2
		Summer	C	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	1	0	0
			P	0	0	0	0	0	1	0	0
15	Punjab	Kharif	C	57	98	89	41	4	1	3	0
			S	34	90	59	11	6	4	3	0
			P	47	95	76	28	5	2	3	0
		Rabi	C	54	99	97	49	8	0	1	0
			S	31	87	62	17	5	6	6	0
			P	44	94	81	35	7	3	3	0
16	Rajasthan	Kharif	C	84	95	95	32	8	3	2	2
			S	24	31	24	25	45	38	49	47
			P	56	65	62	28	26	21	24	24
		Rabi	C	87	95	94	47	3	5	0	0
			S	29	46	29	32	47	29	50	48
			P	59	71	62	40	24	17	24	24
17	Tamil Nadu #	Kharif	C	1	19	23	0	2	15	1	0
			S	0	1	7	0	19	11	12	12
			P	1	10	15	0	10	13	7	6
		Rabi	C	9	28	26	1	1	8	2	0
			S	0	0	2	0	21	22	23	22
			P	5	14	14	1	11	15	12	11

S. No.	State	Season	A G E N C Y	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	2	96	6	1	1	0	0	0	
			S	0	71	2	0	11	3	11	9	
			P	1	84	4	0	6	1	5	4	
		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 Pradesh	Kharif	C	35	91	82	52	15	1	5	3	
			S	0	0	4	0	92	88	92	92	
			P	35	89	81	51	16	2	6	5	
		Rabi	C	28	99	82	52	18	0	15	9	
			S	0	28	11	9	39	24	54	41	
			P	25	92	75	48	20	2	19	12	
		Summer	C	50	100	92	63	22	0	8	3	
			S	0	0	0	0	0	0	0	0	
			P	49	95	86	58	24	5	14	7	
20	Uttarakhand	Kharif	C	2	29	8	12	2	6	11	10	
			S	0	1	0	0	15	15	15	15	
			P	1	18	5	7	7	9	12	12	
		Rabi	C	7	37	5	5	0	7	23	3	
			S	0	0	0	0	2	0	0	0	
			P	3	18	3	3	1	3	12	2	
21	West Bengal @	Autumn	C	3	97	10	0	0	0	0	0	
			S	0	100	0	0	0	0	0	0	
			P	3	97	10	0	0	0	0	0	
		Winter	C	0	97	13	1	0	0	1	0	
			S	0	100	0	0	0	0	0	0	
			P	0	97	13	1	0	0	1	0	
		Rabi	C	0	97	0	0	0	0	0	0	
			S	NC	NC	NC	NC	NC	NC	NC	NC	
			P	0	172	0	0	0	0	0	0	
			Summer	C	0	89	0	0	0	1	1	0
				S	0	17	0	0	0	0	0	0
				P	0	85	0	0	0	1	1	0
22	Puducherry	Kharif	C	0	0	0	0	0	20	0	0	
			S	0	0	0	0	0	0	0	0	
			P	0	0	0	0	0	10	0	0	
		Rabi-I	C	0	20	0	0	0	0	0	0	
			S	0	0	0	0	40	0	0	40	
			P	0	10	0	0	20	0	0	20	
		Rabi-II	C	0	0	0	0	0	0	0	0	
			S	0	0	10	0	0	0	0	0	
			P	0	0	5	0	0	0	0	0	
For States Covered	Early Kharif	C	C	25	65	30	18	1	5	5	2	
			S	17	25	20	19	7	6	6	6	
			P	21	47	25	19	4	5	6	4	
		Late Kharif	C	34	83	52	25	10	4	9	5	
			S	19	43	23	17	23	14	23	21	
			P	28	67	40	21	15	8	15	12	
		Rabi	C	38	90	61	37	11	3	10	6	
			S	21	47	26	20	27	18	29	26	
			P	31	75	47	30	17	9	18	14	
		Summer	C	11	46	19	12	7	5	6	2	
			S	4	9	3	3	5	4	8	6	
			P	8	28	11	7	6	4	7	4	
All Seasons	C	34	83	52	28	9	4	9	5			
	S	18	41	22	17	22	14	23	21			
	P	27	66	40	23	15	8	15	12			

Note:

- @= ISI Equipments in place of Tape
- § In Kerala, whole year data 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 2017-18 and consequent categorization of crops, the data have been presented seasonwise instead of whole year.
- * Since data from one agency is available, the same data has been taken against pooled data for comparison purpose .
- NC- Not Comparable.

**DELEGATION OF WORK AND CONDUCT OF CROP CUTTING EXPERIMENTS BY
UNTRAINED WORKERS DURING 2020-21**

Sl. No.	State	A G E N C Y	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 Pradesh	C							2	0	7	1	92	1	1	0	23	13	111	9							
		S							0	0	1	0	100	0	1	0	0	0	99	0							
		P							1	0	4	0	96	1	1	0	13	7	106	5							
2	Assam	C	0	0	0	0	100	12	1	1	0	0	99	14	0	0	0	0	100	7	0	0	0	0	100	0	
		S	0	0	0	0	100	0	0	0	0	0	100	0	1	0	0	0	99	0	0	0	0	0	100	0	
		P	0	0	0	0	100	7	0	0	0	0	100	8	0	0	0	0	100	3	0	0	0	0	100	0	
3	Bihar	C	2	0	0	0	98	12	0	0	0	0	100	15	3	0	3	2	94	17	0	0	0	0	100	0	
		S	0	0	0	0	100	62	1	0	8	8	92	37	0	0	0	0	100	42	0	0	0	0	100	0	
		P	1	0	0	0	99	39	0	0	4	4	96	26	2	0	2	1	97	29	0	0	0	0	100	0	
4	Chhattisgarh	C							0	0	1	0	99	0	0	0	0	0	100	2							
		S							0	0	0	0	100	0	0	0	0	0	100	0							
		P							0	0	1	0	99	0	0	0	0	0	100	1							
5	Gujarat	C							0	0	0	0	100	1	0	0	0	0	100	2							
		S							1	0	0	0	99	0	1	0	1	0	99	1							
		P							0	0	0	0	100	1	0	0	0	0	100	1							
6	Haryana	C							0	0	3	2	96	2	0	0	5	0	95	0							
		S							1	0	2	0	97	0	1	0	13	0	86	0							
		P							0	0	3	1	97	1	0	0	9	0	91	0							
7	Himachal Pradesh	C							0	0	0	0	100	8	0	0	0	0	100	13							
		S							0	0	0	0	100	0	0	0	0	0	100	0							
		P							0	0	0	0	100	4	0	0	0	0	100	6							
8	Jammu & Kashmir	C							0	0	9	1	91	28	0	0	8	0	92	0							
		S							0	0	0	0	100	11	0	0	0	0	100	7							
		P							0	0	5	1	95	21	0	0	3	0	98	5							
9	Jharkhand	C	5	3	3	3	93	49	8	4	4	4	88	48	1	1	8	8	91	28							
		S	0	0	0	0	100	6	0	0	0	0	100	16	0	0	0	0	100	63							
		P	3	1	1	1	96	29	4	2	2	2	94	32	1	1	4	4	95	45							
10	Karnataka	C							2	0	1	0	97	3	1	0	1	1	98	3	5	0	0	0	95	11	
		S							1	0	0	0	99	0	1	0	0	0	99	0	0	0	0	0	100	0	
		P							2	0	0	0	98	1	1	0	0	0	98	1	3	0	0	0	97	5	
11	Kerala @	C	1	0	0	0	99	0	0	0	0	0	100	0							1	0	0	0	99	1	
		S	0	0	0	0	100	0	1	0	0	0	99	0							0	0	0	0	100	1	
		P	1	0	0	0	100	0	1	0	0	0	100	0							0	0	0	0	99	1	
12	Madhya Pradesh	C							0	0	1	1	98	1	1	0	2	0	96	0							
		S							0	0	0	0	100	42	0	0	0	0	100	44							
		P							0	0	1	1	99	16	1	0	2	0	97	11							
13	Maharashtra	C							2	0	1	1	97	5	1	0	2	1	97	5							
		S							2	0	2	0	96	0	1	0	3	0	96	0							
		P							2	0	2	0	96	2	1	0	2	0	96	3							
14	Odisha	C	1	0	0	0	99	0	0	0	0	0	97	0							0	0	0	0	100	0	
		S	0	0	0	0	100	0	1	0	0	0	99	1							0	0	0	0	100	0	
		P	1	0	0	0	99	0	1	0	0	0	98	0							0	0	0	0	100	0	

Sl. No.	State	A G E N C Y	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
			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							2	0	0	0	98	0	4	0	2	0	94	1						
		S							0	0	0	0	100	0	1	0	0	0	99	0						
		P							1	0	0	0	99	0	3	0	1	0	96	1						
16	Rajasthan	C							0	0	3	0	97	1	4	0	0	0	96	0						
		S							0	0	0	0	103	2	69	0	0	0	31	0						
		P							0	0	1	0	100	1	36	0	0	0	64	0						
17	Tamil Nadu	C							4	0	3	0	94	2	1	0	5	0	94	1						
		S							1	0	0	0	99	0	0	0	0	0	100	1						
	#	P							2	0	2	0	97	1	1	0	3	0	97	1						
18	Telangana	C							0	0	0	0	100	1	4	0	0	0	96	0						
		S							1	0	0	0	99	1	0	0	0	0	100	4						
		P							0	0	0	0	100	1	2	0	0	0	98	2						
19	Uttar Pradesh	C							1	0	11	10	88	50	0	0	10	9	90	59	0	0	0	14	86	31
		S							0	0	31	0	69	0	11	0	0	0	89	29	0	0	0	0	0	0
		P							1	0	11	10	88	49	1	0	9	8	90	56	0	0	0	13	88	34
20	Uttara-khand	C							0	0	3	0	97	2	7	0	23	0	70	0						
		S							0	0	0	0	100	1	22	0	0	0	78	0						
		P							0	0	2	0	98	1	14	0	12	0	74	0						
21	West Bengal	C	0	0	0	0	100	3	0	0	0	0	100	9	0	0	0	0	100	12	0	0	0	0	100	2
		S	0	0	0	0	100	0	0	0	0	0	100	0	NC	NC	NC	NC	NC	NC	0	0	0	0	100	67
		P	0	0	0	0	100	3	0	0	0	0	100	9	0	0	0	0	100	12	0	0	0	0	100	5
22	Puducherry	C							0	0	0	0	100	0	0	0	0	0	100	0	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
		P							0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0
For States Covered		C	1	0	0	0	99	9	1	0	3	2	96	12	1	0	5	3	96	14	1	0	2	2	97	6
		S	0	0	0	0	100	9	1	0	1	0	99	5	8	0	1	0	91	9	0	0	0	0	100	2
		P	1	0	0	0	99	9	1	0	2	1	97	9	4	0	3	1	94	12	0	0	1	1	99	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 consequent 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.

**SUBSTITUTION OF SAMPLING UNITS OBSERVED DURING SAMPLE CHECK ON CROP
CUTTING EXPERIMENTS UNDER ICS DURING 2020-21**

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	18	0	0	0	0	0	0	0
		Rabi	25	0	0	1	0	0	0	1
2	Assam	Early Kharif	15	0	0	0	0	1	0	10
		Late Kharif	6	6	0	0	1	1	1	0
		Rabi	22	0	0	0	3	1	0	7
		Summer	37	0	0	0	0	0	0	0
3	Bihar	Bhadai	1	0	0	0	0	0	0	17
		Aghani	1	1	0	1	0	0	0	2
		Rabi	6	1	1	2	1	2	0	12
		Summer	29	0	0	6	6	0	0	9
4	Chhattisgarh	Kharif	12	1	0	0	1	0	0	1
		Rabi	28	0	0	2	0	0	0	1
5	Gujarat	Kharif	3	0	0	1	3	0	0	3
		Rabi	0	0	0	0	1	0	0	3
6	Haryana	Kharif	10	1	0	1	3	0	0	2
		Rabi	18	3	0	2	0	2	0	3
7	Himachal Pradesh	Kharif	20	0	0	3	0	0	0	9
		Rabi	13	0	0	0	1	0	0	6
8	Jammu & Kashmir	Kharif	4	0	0	4	1	0	0	21
		Rabi	0	0	0	0	3	1	0	17
9	Jharkhand	Early Kharif	8	3	0	1	0	1	0	34
		Late Kharif	2	0	0	4	1	3	0	14
		Rabi	12	3	0	5	0	0	0	52
10	Karnataka	Kharif	31	2	0	5	1	1	0	2
		Rabi	33	1	0	1	0	0	0	1
		Summer	35	2	1	1	1	3	0	3
11	Kerala	Autumn	30	0	0	6	0	0	1	0
		Winter	14	0	0	0	0	0	0	0
		Summer@	0	0	0	0	0	0	0	0
12	Madhya Pradesh	Kharif	15	0	0	2	2	0	0	3
		Rabi	11	0	0	0	0	0	0	1
13	Maharashtra	Kharif	4	0	0	0	0	0	0	0
		Rabi	3	0	0	0	0	0	0	0
14	Odisha	Autumn	7	0	0	0	0	1	0	0
		Winter	11	0	0	0	0	1	0	0
		Summer	16	0	0	0	0	0	0	0
15	Punjab	Kharif	3	0	1	0	0	0	0	0
		Rabi	3	0	1	0	0	0	0	0
16	Rajasthan	Kharif	10	0	0	1	1	0	0	0
		Rabi	10	0	0	1	1	0	0	0
17	Tamil Nadu #	Kharif	24	0	0	1	0	0	0	1
		Rabi	16	0	0	0	0	0	0	1

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	4	0	0	0	0	0	0	0
		Rabi	4	0	0	0	0	0	0	0
19	Uttar Pradesh	Kharif	3	1	0	0	1	2	0	0
		Rabi	1	0	0	0	0	1	0	0
		Summer	9	5	0	5	1	2	0	0
20	Uttarakhand	Kharif	12	0	0	0	0	0	0	2
		Rabi	7	2	0	0	0	3	0	0
21	West Bengal	Aus	0	1	0	0	1	1	0	0
		Aman	0	0	0	0	1	1	0	0
		Rabi	0	0	0	0	0	1	0	0
		Summer	0	0	0	0	0	2	0	1
22	Puducherry	Kharif	30	0	0	0	0	0	0	0
		Rabi-I	0	0	0	0	0	5	0	0
		Rabi-II	10	0	0	0	0	0	0	0
For States covered	Early Kharif	10	1	0	1	0	1	0	7	
	Late Kharif	11	0	0	1	1	0	0	2	
	Rabi	10	0	0	1	1	1	0	3	
	Summer	9	0	0	1	1	1	0	1	
	All Seasons	11	0	0	1	1	1	0	3	

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 : 2020-21**

Sl No	State	A G E N C Y	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						
			4	5						
1	2	3	4	5	6	7	8	9	10	
RICE-KHARIF										
1	Andhra Pradesh	C	0	1938						
		S	2372	2366						
		P^	1456	2201	1596	1496	1.0668	0.9735	1.4711	
2	Assam	C	NR	331						
		S		136						
		*\$\$		P^	226	110	117	0.9438	0.0000	1.9357
		C		2071						
		Late Kharif *\$\$		S	1364					
		P^	1774	2227	1864	1.1948	0.0000	0.9520		
3	Bihar (Bhadai)	C	0	650						
		S	91	1226						
		\$\$	P	0	921	451	418	1.0791	0.0000	2.2032
		C	0	5154						
		(Aghani)	S	1290	5023					
		P	606	5092	2718	2539	1.0704	0.2388	2.0054	
4	Chhattisgarh	C	4420	4562						
		S	4158	4147						
		\$\$	P	4289	4354	3959	3791	1.0443	1.1313	1.1486
		C	0	893						
5	Gujarat	C	0	893						
		S	82	877						
		P^	40	885	144	837	0.1721	0.0480	1.0580	
6	Haryana	C	1353	1361						
		S	1078	1079						
		P	1235	1240	1532	1327	1.1543	0.9302	0.9341	
7	Himachal Pradesh	C	103	97						
		S	107	107						
		@	P^	105	102	71	68	1.0371	1.5298	1.4838
8	Jammu & Kashmir	C	218	225						
		S	218	221						
		\$\$	P	218	223	280	268	1.0464	0.8153	0.8318
9	Jharkhand (Bhadai)	C	NR	267						
		S	477	560						
		P^	219	402	85	75	1.1333	2.9241	5.3560	
		(Aghani)	C	NR	2313					
		\$\$	S	1274	2170					
		P^	560	2250	1038	1283	0.8090	0.4363	1.7538	
10	Karnataka	C	928	1143						
		S	1425	1456						
		P	1177	1299	971	954	1.0178	1.2333	1.3620	
11	Kerala (Autumn)	C	1	1						
		S	1	1						
		@@	P	1	1	Not Applicable	56	NA	0.0176	0.0176
		C	2	2						
		(Winter)	S	3	3					
		P	3	3	Not Applicable	87	NA	0.0292	0.0294	
12	Madhya Pradesh	C	4188	3992						
		S	2709	2802						
		P	3595	3515	3981	2080	1.9139	1.7283	1.6898	
13	Maharashtra	C	1032	1523						
		S	1242	1261						
		P	1134	1395	1472	1473	0.9996	0.7703	0.9475	
14	Odisha (Autumn)	C	470	470						
		S	439	450						
		@@	P	453	459	Not Applicable	432	NA	1.0487	1.0621
		C	2448	2448						
		(Winter)	S	3503	3511					
		P	2974	2978	Not Applicable	3258	NA	0.9130	0.9141	
15	Punjab	C	3328	3418						
		S	4114	4012						
		@	P	3704	3702		2928	0.0000	1.2650	1.2642
16	Tamil Nadu Phase-I	C	1277	1332						
		S	1159	1253						
		@	P	1218	1293		307	0.0000	3.9646	4.2074
		Phase-II	C	590	595					
		@	S	372	384					
		P	483	491		1318	0.0000	0.3662	0.3727	
17	Telangana	C	0	1658						
		S	1903	2276						
		\$\$	P	1160	2035	2144	1800	1.1911	0.6447	1.1303

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			A-III	A-IV			TRS/ Final	A-III/ Final	A-IV/ Final
			As per primary worker	As per supervisor					
			4	5					
18	Uttar Pradesh	C	4701	7159					
		S	3855	4067					
		P	4438	6198	5941	5652	1.0511	0.7852	1.0967
19	Uttar-akhand	C	252	258					
		S	260	251					
		P	256	255	239	238	1.0042	1.0754	1.0703
20	W.Bengal (Autumn)	C	105	158					
		S	2	1					
		P	94	142	Not Applicable	217	NA	0.4348	
		C	540	2009					
		S	188	278					
		P	483	1725	Not Applicable	4084	NA	0.1182	0.4224
21	Puducherry	C	12	12					
		S	7	7					
		P^	1	1	5	4	1.1574	0.2315	0.2315
For states covered			29902	45161	28964	38971	0.7432	0.7673	1.1588
RICE (RABI/ SUMMER)									
1	Andhra Pradesh	C	89	865					
		S	1358	1488					
		P	868	1248	977	828	1.1807	1.0489	1.5082
2	Assam	C	0	363					
		S	0	354					
		P^	0	359	418	380	1.0999	0.0000	0.9445
3	Bihar	C	0	50					
		S	0	273					
		P	0	152	83	59	1.4054	0.0000	2.5768
4	Karnataka	C	369	413					
		S	539	538					
		P	482	496	33	1038	0.0318	0.4642	0.4777
5	Kerala	C	2	2					
		S	1	1					
		P	2	2		48	0.0000	0.0334	0.0335
6	Odisha	C	286	286					
		S	619	619					
		P^	452	453		348	0.0000	1.2991	1.3006
7	Tamil Nadu	C	135	184					
		S	376	420					
		P	194	220	655	177	3.7094	1.0985	1.2433
8	Telangana	C	0	608					
		S	0	0					
		P	0	250	2088	1386	1.5061	0.0000	0.1805
9	West Bengal	C	823	1680					
		S	0	0					
		P	795	1625		1286	0.0000	0.6187	1.2637
10	Puducherry	C	19	20					
		S	10	10					
		P	14	15			0.0000	0.0000	0.0000
		C	6	6					
		S	4	4					
		P	5	5	10	10	1.0000	0.4920	0.4888
For states covered			2812	4823	4264	5559	0.7671	0.5059	0.8676
JOWAR(KHARIF)									
1	Karnataka	C	91	91					
		S	158	155					
		P	124	123	87	88	0.9886	1.4142	1.3948
2	Madhya Pradesh	C	93	110					
		S	115	115					
		P	102	112	184	112	1.6429	0.9078	1.0023
3	Maharashtra	C	108	324					
		S	321	318					
		P	212	321	379	379	1.0008	0.5604	0.8487
4	Rajasthan	C	133	142					
		S	265	303					
		P	196	219	560	560	1.0006	0.3508	0.3914
5	Tamil Nadu	C	257	294					
		S	147	187					
		P	202	241	316	212	1.4920	0.9535	1.1363

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			A-III	A-IV			TRS/ Final	A-III/ Final	A-IV/ Final
			As per primary worker	As per supervisor					
			4	5					
6	Telangana	C	0	28					
		S	39	44					
		P	24	38	38	43	0.8837	0.5505	0.8818
7	Uttar Pradesh	C	85	162					
		S	77	76					
		P	82	136	174	174	1.0000	0.4730	0.7797
For states covered			943	1190	1738	1567	1.1090	0.6014	0.7591
JOWAR(RABI)									
1	Karnataka	C	274	570					
		S	788	833					
		P	531	701	644	662	0.9728	0.8017	1.0592
2	Maharashtra	C	26	2101					
		S	2194	2335					
		P	1050	2211	1942	1700	1.1422	0.6174	1.3006
3	Tamil Nadu	C	0	4					
		S	28	28					
		P	14	16	96	194	0.4958	0.0730	0.0847
4	Telangana	C	0	40					
		S	2	2					
		P	1	18	48	48	1.0000	0.0248	0.3711
For states covered			1596	2947	2730	2604	1.0485	0.6128	1.1316
BAJRA									
1	Andhra Pradesh	C	0	57					
		S	72	73					
		P	44	67	24	31	0.7742	1.4283	2.1495
2	Gujarat	C	NR	235					
		S	0	309					
		P^	0	271	27	460	0.0587	0.0000	0.5896
3	Haryana	C	673	650					
		S	629	629					
		P	654	641	557	569	0.9786	1.1495	1.1267
4	Karnataka	C	168	247					
		S	175	212					
		P	172	229	210	222	0.9459	0.7733	1.0333
5	Maharashtra	C	97	1232					
		S	852	804					
		P	466	1023	687	688	0.9993	0.6776	1.4876
6	Rajasthan	C	878	866					
		S	1257	1241					
		P	1060	1046	4345	4348	0.9992	0.2437	0.2406
7	Tamil Nadu	C	48	32					
		S	70	117					
		P	36	37	55	67	0.8149	0.5393	0.5476
8	Uttar Pradesh	C	675	1182					
		S	257	259					
		P	545	896	908	907	1.0011	0.6006	0.9875
For states covered			2977	4210	6813	7293	0.9342	0.4082	0.5773
MAIZE									
1	Bihar	C	0	16					
		S	42	400					
		P	69	197	217	194	1.1208	0.3561	1.0164
2	Chhattisgarh	C	228	217					
		S	209	219					
		P	219	218	137	114	1.2029	1.9187	1.9135
3	Gujarat	C	NR	151					
		S	35	186					
		P^	195	168		287	0.0000	0.6801	0.5866
4	Haryana	C	1	1					
		S	24	26					
		P^	11	12	7	7	1.0558	1.5985	1.7840
5	Himachal Pradesh	C	373	339					
		S	233	240					
		P^	304	291	262	267	0.9798	1.1384	1.0871
6	Jammu & Kashmir	C	236	237					
		S	494	487					
		P	381	377	271	289	0.9371	1.3186	1.3054
7	Jharkhand	C	NR	273					
		S	262	997					
		P^	120	606	69	286	0.2414	0.4207	2.1191

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			A-III	A-IV			TRS/ Final	A-III/ Final	A-IV/ Final
			As per primary worker	As per supervisor					
			4	5					
8	Karnataka	C	865	1201					
		S	1300	1288					
		P	1082	1244	1526	1532	0.9961	0.7066	0.8123
9	Madhya Pradesh	C	1301	1218					
		S	1307	1315					
		P	1303	1257	1355	1383	0.9798	0.9424	0.9087
10	Odisha @@	C	35	35					
		S	49	49					
		P^	42	42		75	0.0000	0.5638	0.5639
11	Punjab @	C	128	174					
		S	38	38					
		P	85	109		108	0.0000	0.7879	1.0112
12	Rajasthan	C	142	153					
		S	236	349					
		P	187	247	958	976	0.9814	0.1920	0.2530
13	Tamil Nadu @ Phase-I	C	580	582					
		S	295	329					
		P	438	456		226	0.0000	1.9393	2.0189
14	Telangana	C	0	79					
		S	87	89					
		P	53	85	82	86	0.9535	0.6176	0.9908
15	Uttar Pradesh	C	280	560					
		S	250	253					
		P	271	465	708	709	0.9986	0.3820	0.6554
For states covered			4761	5774	5592	6538	0.0000	0.7282	0.8831
RAGI									
1	Karnataka	C	628	593					
		S	1194	1187					
		P	911	890	717	785	0.9134	1.1603	1.1339
2	Uttarakhand	C	102	97					
		S	81	81					
		P	92	89	89	89	1.0000	1.0309	1.0009
For states covered			1003	979	806	874	0.9222	1.1471	1.1204
COTTON									
1	Andhra Pradesh Pradesh	C	0	869					
		S	751	754					
		P	461	798	598	606	0.9868	0.7611	1.3174
2	Gujarat	C	0	2374					
		S	538	2503					
		P^	264	2438	374	2271	0.1647	0.1163	1.0736
3	Haryana	C	629	661					
		S	613	613					
		P	622	640	721	740	0.9749	0.8406	0.8658
4	Karnataka \$\$	C	615	827					
		S	784	793					
		P	699	810	548	820	0.6683	0.8530	0.9875
5	Madhya Pradesh	C	492	497					
		S	224	224					
		P	384	388	563	588	0.9575	0.6534	0.6591
6	Maharashtra \$\$	C	2217	3519					
		S	3970	4106					
		P	3074	3806	4545	4545	1.0001	0.6764	0.8375
7	Punjab @	C	210	208					
		S	135	130					
		P	174	171		252	0.0000	0.6932	0.6783
8	Rajasthan	C	196	194					
		S	195	196					
		P	196	195	807	808	0.9990	0.2422	0.2412
9	Tamil Nadu Phase-I	C	119	120					
		S	64	69					
		P	92	95	70	112	0.6247	0.8192	0.8454
	Tamil Nadu Rabi\$	C	15	18					
		S	26	26					
		P	21	22	11		NA	NA	NA
10	Telangana @	C	0	2040					
		S	1969	2030					
		P	1030	2034	2273	2358	0.9640	0.4366	0.8626
For states covered			7017	11396	10510	13098	0.8024	0.5357	0.8701

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			As per primary worker	As per supervisor					
			4	5					
GROUNDNUT									
1	Andhra Pradesh	C	0	693					
	Kharif	S	967	981					
		P^	594	870	778	746	1.0429	0.7957	1.1657
	Andhra Pradesh	C	0	137					
	Rabi	S	172	181					
		P^	152	164	122	124	0.9839	1.2269	1.3241
2	Gujarat	C	0	1369					
		S	584	1615					
		P^	306	1490	362	2101	0.1723	0.1458	0.7091
3	Karnataka	C	536	647					
	Kharif	S	335	354					
		P	435	500	508	499	1.0180	0.8724	1.0024
	Karnataka	C	0	76					
	Summer	S	56	53					
	\$\$	P^	54	61	229	222	1.0315	0.2426	0.2743
4	Madhya Pradesh	C	101	115					
		S	32	32					
		P	74	82	204	289	0.7059	0.2544	0.2831
5	Maharashtra	C	42	139					
		S	164	130					
		P	102	135	226	226	1.0000	0.4496	0.5961
6	Rajasthan	C	121	129					
		S	109	113					
		P	115	121	815	852	0.9564	0.1355	0.1421
7	Tamil Nadu	C	317	379					
	Phase-I	S	231	286					
		P	274	333	279	271	1.0293	1.0113	1.2268
8	Tamil Nadu	C	12	14					
	Rabi	S	14	14					
		P	13	14	117	138	0.8479	0.0957	0.1032
9	Telangana	C	0	15					
		S	17	17					
		P	10	16	15	15	1.0000	0.6845	1.0705
For states covered			1900	3530	3172	4985	0.6364	0.3812	0.7082
SUGARCANE									
1	Andhra Pradesh	C	0	33					
	Pradesh	S	46	46					
		P^	29	41	53	55	0.9636	0.5187	0.7505
2	Assam	C	0	0					
	*	S	0	2					
		P^	0	1	20	31	0.6557	0.0000	0.0357
3	Bihar	C	0	227					
		S	0	64					
		P^	0	151	228	221	1.0311	0.0000	0.6817
4	Haryana	C	100	101					
		S	39	39					
		P	74	75	93	99	0.9394	0.7437	0.7543
5	Karnataka	C	256	635					
	\$\$	S	742	751					
		P	499	693	444	443	1.0023	1.1255	1.5646
6	Maharashtra	C	405	1532					
	@	S	1088	1116					
		P	739	1329		1143	0.0000	0.6466	1.1627
7	Punjab	C	48	60					
	@	S	36	36					
		P	42	48		89	0.0000	0.4717	0.5407
8	Rajasthan	C	0	0					
		S	4	4					
		P^	1	1	6	5	1.2048	0.2008	0.2008
9	Tamil Nadu	C	234	272					
	Phase-I	S	90	89					
		P	162	181	103	128	0.8066	1.2703	1.4144
10	Uttar Pradesh	C	2188	2986					
		S	1653	1771					
		P	2021	2609	2180	2180	1.0000	0.9272	1.1967
11	Uttarakhand	C	73	71					
		S	147	88					
		P	109	79	91	46	1.9783	2.3739	1.7255
For states covered			3676	5208	3218	4439	0.7249	0.8280	1.1731

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			As per primary worker	As per supervisor					
			4	5					
WHEAT									
1	Assam	C	0	0					
		S	0	30					
		P^	0	12	4	9	0.0000	0.0000	1.3114
2	Bihar	C	NR	4621					
	*	S	1174	4926					
		P^	564	4768	2152	2223	0.9683	0.2538	2.1451
3	Chhattisgarh	C	216	213					
		S	190	192					
		P	203	203	147	160	0.9180	1.2676	1.2659
4	Gujarat	C	NR	458					
		S	33	741					
		P^	16	599	253	1017	0.2488	0.0160	0.5892
5	Haryana	C	2347	2355					
		S	2231	2231					
		P	2304	2308	2507	2564	0.9778	0.8985	0.9003
6	Himachal Pradesh	C	406	402					
		S	302	305					
		P^	357	356	334	333	1.0026	1.0711	1.0681
7	Jammu & Kashmir	C	343	333					
		S	282	283					
		P^	300	298	289	244	1.1856	1.2309	1.2221
8	Jharkhand	C	0	453					
	*\$\$	S	422	849					
		P^	186	627	55	233	0.2363	0.7970	2.6941
9	Karnataka	C	37	145					
	\$\$	S	171	159					
		P	104	152	211	203	1.0394	0.5112	0.7465
10	Madhya Pradesh	C	11724	9766					
		S	6155	6174					
		P	9679	8446	7239	6083	1.1900	1.5911	1.3885
11	Maharashtra	C	374	1764					
		S	1591	1842					
		P	949	1800	1126	1126	0.9998	0.8426	1.5987
12	Punjab	C	3562	3849					
	@	S	3742	3803					
		P	3648	3827		3530	0.0000	1.0333	1.0840
13	Rajasthan	C	844	1162					
		S	779	781					
		P	813	981	3223	3002	1.0736	0.2709	0.3267
14	Uttar Pradesh	C	5128	11150					
		S	4730	4920					
		P	5010	9302	9851	9852	0.9999	0.5085	0.9441
15	Uttarakhand	C	335	334					
		S	364	366					
		P	349	350	312	312	1.0000	1.1189	1.1218
16	West Bengal	C	34	37					
	@@	S	0	16					
		P	28	33		193	0.0000	0.1462	0.1729
For states covered			24509	34062	27703	31085	0.8912	0.7885	1.0958
BARLEY									
1	Haryana	C	5	5					
		S	7	7					
		P	6	6	11	9	1.1879	0.6561	0.6561
2	Himachal Pradesh	C	10	10					
		S	16	16					
		P^	13	13	16	20	0.7832	0.6124	0.6345
3	Punjab	C	0	0					
	@	S	0	0					
		P	0	0		6	0.0000	0.0185	0.0185
4	Rajasthan	C	73	75					
		S	85	86					
		P	79	80	225	270	0.8341	0.2929	0.2983
For states covered			98	100	252	305	0.8253	0.3200	0.3262
GRAM									
1	Andhra Pradesh	C	297	496					
		S	338	327					
		P^	322	393	404	469	0.8614	0.6867	0.8370
2	Bihar	C	NR	66					
		S	53	55					
		P	26	61	51	52	0.9844	0.4939	1.1727

Sl No	State	A G E N C Y	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					
			4	5					
3	Chhattisgarh	C	415	444					
		S	204	204					
		P	309	324	318	302	1.0544	1.0261	1.0748
4	Gujarat	C	NR	224					
		S	43	220					
		P^	21	222	137	816	0.1678	0.0261	0.2721
5	Haryana	C	50	50					
		S	29	29					
		P	42	42	27	36	0.7565	1.1724	1.1744
6	Jharkhand	C	0	19					
	* \$\$	S	30	42					
		P^	13	29	13	266	0.0489	0.0492	0.1096
7	Karnataka	C	230	522					
	\$\$	S	661	586					
		P	445	554	715	713	1.0028	0.6247	0.7764
8	Madhya Pradesh	C	2349	2220					
		S	1124	1119					
		P	1899	1816	1372	2160	0.6352	0.8791	0.8407
9	Maharashtra	C	552	2208					
		S	1979	2152					
		P	1226	2182	2231	2231	0.9999	0.5495	0.9778
10	Punjab*	C	0	0					
	@	S	0	0					
		P	0	0		2	0.0000	0.0000	0.0000
11	Rajasthan	C	590	386					
		S	616	620					
		P	602	497	2067	2113	0.9782	0.2850	0.2354
12	Uttar Pradesh	C	190	306					
		S	138	142					
		P	174	257	611	611	1.0000	0.2855	0.4211
For states covered			5081	6376	3	9771		0.5200	0.6526
RAPE & MUSTARD									
1	Assam	C	0	214					
	@	S	0	312					
		P^	0	254	151	286	0.5273	0.0000	0.8857
2	Bihar	C	0	230					
	@	S	32	155					
		P^	15	194		75	0.0000	0.2041	2.5792
3	Chhattisgarh	C	81	80					
		S	38	38					
		P	59	59	36	36	0.9939	1.6342	1.6326
4	Gujarat	C	0	0					
		S	0	61					
		P^	0	30	39	215	0.1817	0.0000	0.1406
5	Haryana	C	654	653					
		S	473	473					
		P	586	586	635	648	0.9807	0.9052	0.9045
6	Jharkhand	C	0	174					
	* \$\$	S	128	223					
		P^	56	195	4	431	0.0093	0.1303	0.4533
7	Madhya Pradesh	C	1024	1067					
		S	327	328					
		P	768	795	146	749	0.1949	1.0251	1.0621
8	Punjab	C	12	11					
	@	S	0	0					
		P	6	6		32	0.0000	0.2011	0.1750
9	Rajasthan	C	564	520					
		S	560	561					
		P	562	540	2741	2717	1.0089	0.2069	0.1986
10	Uttar Pradesh	C	868	1557					
	@	S	404	410					
		P	730	1217	703	701	1.0029	1.0420	1.7361
11	West Bengal	C	118	257					
	@@	S	41	67					
		P	106	227		593	0.0000	0.1780	0.3827
For states covered			2889	4102	4455	6482		0.4457	0.6329

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, Odisha 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) \$\$\$= TRS area is of 2019-20.
- 12) NC- Not Comparable

**COMPARISON OF PERCENTAGE OF AREA UNDER DIFFERENT INPUTS AS ESTIMATED
UNDER ICS & TRS : 2020-21**

Sl. No.	State	S E A S O N	Percentage of Area under different categories													T O T A L
			As per Sample check						T O T A L	As per T.R.S. @						
			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	93.09	1.28	94.37	4.75	0.88	5.63	100	0.00	0.00	96.43	0.00	0.00	3.57	100
		Rabi	99.05	0.44	99.49	0.25	0.26	0.51	100	0.00	0.00	100.00	0.00	0.00	0.00	100
2	Assam	E.Kharif	5.30	0.49	5.80	5.84	88.36	94.20	100	0.00	0.00	96.43	0.00	0.00	3.57	100
		L.Kharif	2.82	0.00	2.82	5.34	91.84	97.18	100	0.00	0.00	0.00	0.00	0.00	0.00	0
		Summer	27.93	24.30	52.24	17.34	30.43	47.76	100	0.00	0.00	96.43	0.00	0.00	3.57	100
3	Bihar	Bhadai	70.67	8.62	79.28	12.56	8.16	20.72	100	0.00	0.00	42.13	0.00	0.00	57.87	100
		Agahani	80.91	7.89	88.80	2.62	8.58	11.20	100	0.00	0.00	78.48	0.00	0.00	21.52	100
		Summer	0.00	0.00	0.00	0.00	100.00	100.00	100	0.00	0.00	98.36	0.00	0.00	1.64	100
4	Chattisgarh	Kharif	34.16	1.08	35.24	53.77	10.99	64.76	100	0.00	0.00	37.21	0.00	0.00	62.79	100
5	Gujarat	Kharif	68.98	13.13	82.11	9.31	8.58	17.89	100	0.00	0.00	79.86	0.00	0.00	20.14	100
6	Haryana	Kharif	98.80	0.00	98.80	-	-	-	100	0.00	0.00	100.00	0.00	0.00	0.00	100
7	Himachal Pradesh	Kharif	54.71	11.39	66.10	5.12	28.78	33.90	100	0.00	0.00	61.97	0.00	0.00	38.03	100
8	Jammu & Kashmir	Kharif	50.47	45.15	95.61	4.28	0.11	4.39	100	0.00	0.00	78.93	0.00	0.00	21.07	100
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	18.02	0.51	18.53	8.64	72.84	81.47	100	Data not available						
10	Karnataka	Kharif	74.23	2.67	76.89	15.45	7.65	23.11	100	0.00	0.00	76.73	0.00	0.00	23.27	100
		Summer	96.43	3.41	99.84	0.00	0.16	0.16	100	0.00	0.00	100.00	0.00	0.00	0.00	100
11	Kerala	Autumn	13.45	0.29	13.75	85.88	0.37	86.25	100	TRS NOT APPLICABLE						
		Winter	85.83	6.03	91.87	4.23	3.91	8.13	100	TRS NOT APPLICABLE						
		Summer	99.80	0.02	99.83	0.15	0.02	0.17	100	TRS NOT APPLICABLE						
12	Madhya Pradesh	Kharif	58.46	12.45	70.92	14.89	14.20	29.08	100	0.00	0.00	45.47	0.00	0.00	54.53	100
13	Maharashtra	Kharif	31.97	5.87	37.84	37.51	24.65	62.16	100	0.00	0.00	21.75	0.00	0.00	78.25	100
14	Odisha	Autumn	3.66	0.00	3.66	87.57	8.77	96.34	100	TRS NOT APPLICABLE						
		Winter	26.08	0.04	26.13	71.77	2.11	73.87	100	TRS NOT APPLICABLE						
		Summer	95.29	0.14	95.43	4.57	0.00	4.57	100	TRS NOT APPLICABLE						
15	Punjab	Kharif	99.88	0.12	100.00	0.00	0.00	0.00	100	Data not available						
16	Tamil Nadu	Phase I	87.27	5.32	92.59	6.98	0.43	7.41	100	0.00	0.00	92.49	0.00	0.00	7.51	100
		Phase II	99.86	0.05	99.91	0.00	0.09	0.09	100	Data not available						
		Rabi	99.27	0.00	99.27	0.00	0.73	0.73	100	0.00	0.00	93.44	0.00	0.00	6.56	100
17	Telangana	Kharif	98.84	0.01	98.85	0.98	0.17	1.15	100	0.00	0.00	98.83	0.00	0.00	1.17	100
		Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	100.00	0.00	0.00	0.00	100
18	Uttar Pradesh	Kharif	98.04	0.65	98.68	1.29	0.03	1.32	100	0.00	0.00	82.98	0.00	0.00	17.02	100
19	Uttara-khand	Kharif	69.33	6.42	75.75	1.82	22.43	24.25	100	0.00	0.00	72.38	0.00	0.00	27.62	100
20	West Bengal	Autumn	22.78	0.00	22.78	3.93	73.29	77.22	100	TRS NOT APPLICABLE						
		Winter	7.93	1.24	9.17	4.40	86.42	90.83	100	TRS NOT APPLICABLE						
		Summer	99.57	0.00	99.57	0.41	0.02	0.43	100	TRS NOT APPLICABLE						
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	0.00	0
TOTAL FOR STATES COVERED UNDER ICS SCHEME			74.78	3.49	78.27	12.04	9.70	21.73	100	0.00	0.00	67.82	0.00	0.00	32.18	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			78.38	4.24	82.62	8.97	8.41	17.38	100	0.00	0.00	72.82	0.00	0.00	27.18	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS Estimates not available													

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

Sl. No.	State	S E A S O N	Percentage of Area under different categories													
			As per Sample check						T O T A L	As per T.R.S. @						T O T A L
			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	9.43	0.38	9.81	80.13	10.05	90.19	100	0.00	0.00	19.54	0.00	0.00	80.46	100
		Rabi	13.36	1.63	14.99	50.46	34.55	85.01	100	0.00	0.00	12.11	0.00	0.00	87.89	100
2	Madhya Pradesh	Kharif	3.93	0.00	3.93	61.44	34.63	96.07	100	0.00	0.00	12.11	0.00	0.00	87.89	100
3	Maharashtra	Kharif	16.67	0.30	16.97	75.03	8.00	83.03	100	0.00	0.00	0.79	0.00	0.00	99.21	100
		Rabi	30.66	7.05	37.71	34.54	27.75	62.29	100	0.00	0.00	23.89	0.00	0.00	76.11	100
4	Rajasthan	Kharif	1.29	0.83	2.12	22.38	75.50	97.88	100	0.00	0.00	0.71	0.00	0.00	99.29	100
5	Tamil Nadu	Phase I	7.35	0.31	7.66	60.16	32.18	92.34	100	0.00	0.00	8.86	0.00	0.00	91.14	100
		Rabi	37.63	14.07	51.71	0.79	47.50	48.29	100	0.00	0.00	14.74	0.00	0.00	85.26	100
6	Telangana	Kharif	1.67	0.00	1.67	28.14	70.19	98.33	100	0.00	0.00	2.63	0.00	0.00	97.37	100
		Rabi	93.31	0.00	93.31	2.16	4.53	6.69	100	0.00	0.00	75.00	0.00	0.00	25.00	100
7	Uttar Pradesh	Kharif	40.63	2.09	42.72	15.09	42.19	57.28	100	0.00	0.00	2.30	0.00	0.00	97.70	100
TOTAL FOR COVERED UNDER ICS SCHEME			24.24	4.58	28.82	41.67	29.51	71.18	100	0.00	0.00	14.53	0.00	0.00	85.47	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			24.24	4.58	28.82	41.67	29.51	71.18	100	0.00	0.00	15.15	0.00	0.00	84.85	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS Estimates not available													
BAJRA																
1	Andhra Pradesh	Kharif	16.23	0.00	16.23	71.88	11.89	83.77	100	0.00	0.00	29.17	0.00	0.00	70.83	100
2	Gujarat	Kharif	11.94	0.23	12.17	72.20	15.62	87.83	100	Data not available						
3	Haryana	Kharif	84.91	0.10	85.02	14.98	0.00	14.98	100	0.00	0.00	54.41	0.00	0.00	45.59	100
4	Karnataka	Kharif	15.86	0.95	16.80	64.12	19.08	83.20	100	0.00	0.00	9.05	0.00	0.00	90.95	100
5	Maharashtra	Kharif	39.09	4.14	43.23	55.38	1.39	56.77	100	0.00	0.00	4.80	0.00	0.00	95.20	100
6	Rajasthan	Kharif	1.81	1.18	2.99	54.57	42.44	97.01	100	0.00	0.00	4.65	0.00	0.00	95.35	100
7	Tamil Nadu	Phase-I	34.39	0.00	34.39	65.61	0.00	65.61	100	0.00	0.00	12.73	0.00	0.00	87.27	100
8	Uttar Pradesh	Kharif	25.17	0.02	25.19	71.88	2.94	74.81	100	0.00	0.00	8.15	0.00	0.00	91.85	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			27.73	1.53	29.26	58.88	11.86	70.74	100	0.00	0.00	9.49	0.00	0.00	90.51	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			28.75	1.61	30.36	58.02	11.61	69.64	100	0.00	0.00	9.49	0.00	0.00	90.51	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS Estimates not available													

Sl. No.	State	S E A S O N	Percentage of Area under different categories													
			As per Sample check						T O T A L	As per T.R.S. @						T O T A L
			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	3.21	0.20	3.41	86.91	9.67	96.59	100	0.00	0.00	9.07	0.00	0.00	90.93	100
2	Uttarakhand	Kharif	0.00	0.31	0.31	0.00	99.69	99.69	100	0.00	0.00	0.00	0.00	0.00	100	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			3.10	0.20	3.30	83.89	12.80	96.70	100	0.00	0.00	8.06	0.00	0.00	91.94	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			3.10	0.20	3.30	83.89	12.80	96.70	100	0.00	0.00	9.07	0.00	0.00	90.93	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS Estimates not available													
MAIZE																
1	Bihar	Bhadai	45.46	9.73	55.19	1.70	43.11	44.81	100	Data not available						
2	Chattisgarh	Kharif	0.11	0.17	0.28	88.71	27.07	99.72	100	0.00	0.00	5.11	0.00	0.00	94.89	100
3	Gujarat	Kharif	23.20	0.14	23.34	18.89	57.77	76.66	100	Data not available						
4	Haryana	Kharif	60.98	0.00	60.98	0.00	39.02	39.02	100	0.00	0.00	42.86	0.00	0.00	57.14	100
5	Himachal Pradesh	Kharif	6.38	1.24	7.61	60.95	31.44	92.39	100	0.00	0.00	11.83	0.00	0.00	88.17	100
6	Jammu & Kashmir	Kharif	8.37	2.77	11.14	31.10	57.76	88.86	0	Data not available						
7	Jharkhand	Aut.	0.47	3.42	3.90	3.97	92.13	96.10	100	0.00	0.00	8.12	0.00	0.00	91.88	100
8	Karnataka	Kharif	20.86	1.37	22.23	71.98	5.78	77.77	100	0.00	0.00	28.37	0.00	0.00	71.63	100
9	Madhya Pradesh	Kharif	3.45	0.23	3.68	56.94	39.38	96.32	100	0.00	0.00	0.52	0.00	0.00	99.48	100
10	Odisha	Aut.	0.00	0.00	0.00	48.83	51.17	100.0	100	TRS Not applicable						
11	Punjab	Kharif	89.15	0.00	89.15	10.55	0.30	10.85	100	Data not available						
12	Rajasthan	Kharif	0.64	0.03	0.67	36.05	63.28	99.33	100	0.00	0.00	0.10	0.00	0.00	99.90	100
13	Tamil Nadu	Phase-I	15.80	2.35	18.16	66.28	15.56	81.84	100	Data not available						
14	Telangana	Kharif	36.07	0.00	36.07	37.33	26.60	63.93	100	0.00	0.00	40.24	0.00	0.00	59.76	100
15	Uttar Pradesh	Kharif	42.55	0.10	42.65	36.21	21.14	57.35	100	0.00	0.00	34.60	0.00	0.00	65.40	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			18.66	1.18	19.84	51.86	28.54	80.16	100	0.00	0.00	14.74	0.00	0.00	85.26	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			16.99	0.76	17.75	55.33	27.21	82.25	100	0.00	0.00	14.74	0.00	0.00	85.26	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS Estimates not available													

Sl. No.	State	S E A S O N	Percentage of Area under different categories													
			As per Sample check						T O T A L	As per T.R.S. @						T O T A L
			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	17.86	0.00	17.86	81.38	0.77	82.14	100	0.00	0.00	18.39	0.00	0.00	81.61	100
2	Gujarat	Kharif	74.35	0.53	74.88	22.20	2.93	25.12	100	0.00	0.00	70.93	0.00	0.00	29.07	100
3	Haryana	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	100.00	0.00	0.00	0.00	100
4	Karnataka	Kharif	19.79	2.62	22.41	51.74	25.85	77.59	100	0.00	0.00	20.00	0.00	0.00	80.00	100
5	Madhya Pradesh	Kharif	68.13	0.13	68.27	30.35	1.38	31.73	100	0.00	0.00	66.25	0.00	0.00	33.75	100
6	Maharashtra	Kharif	15.87	0.24	16.11	83.52	0.37	83.89	100	0.00	0.00	9.79	0.00	0.00	90.21	100
7	Punjab	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
8	Rajasthan	Kharif	89.93	8.24	98.17	1.60	0.23	1.83	100	0.00	0.00	97.52	0.00	0.00	2.48	100
9	Tamil Nadu	Phase-I	14.12	9.21	23.33	76.23	0.44	76.67	100	0.00	0.00	20.00	0.00	0.00	80.00	100
		Rabi	62.76	31.13	93.89	0.00	6.11	6.11	100	0.00	0.00	82.64	0.00	0.00	17.36	100
10	Telangana	Kharif	18.17	0.09	18.26	81.73	0.01	81.74	100	0.00	0.00	13.90	0.00	0.00	86.10	100
TOTAL FOR			35.52	0.69	36.21	61.16	2.62	63.79	100	0.00	0.00	31.69	0.00	0.00	68.31	100
STATES COVERED UNDER ICS SCHEME																
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			34.95	0.70	35.65	61.71	2.64	64.35	100	0.00	0.00	31.69	0.00	0.00	68.31	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS Estimates not available													
GROUNDNUT																
1	Andhra Pradesh	Kharif	4.81	0.93	5.74	82.22	12.04	94.26	100	0.00	0.00	6.17	0.00	0.00	93.83	100
		Rabi	98.02	0.14	98.17	1.83	0.00	1.83	100	0.00	0.00	100.00	0.00	0.00	0.00	100
2	Gujarat	Kharif	52.14	2.03	54.17	22.35	23.48	45.83	100	0.00	0.00	33.15	0.00	0.00	66.85	100
3	Karnataka	Kharif	3.13	1.26	4.39	89.31	6.29	95.61	100	0.00	0.00	7.68	0.00	0.00	92.32	100
		Summer	85.84	12.71	98.55	1.45	0.00	1.45	100	0.00	0.00	100.00	0.00	0.00	0.00	100
4	Madhya Pradesh	Kharif	0.06	0.00	0.06	48.20	51.74	99.94	100	0.00	0.00	0.00	0.00	0.00	100.00	100
5	Maharashtra	Kharif	29.29	1.15	30.44	67.80	1.76	69.56	100	0.00	0.00	7.52	0.00	0.00	92.48	100
6	Rajasthan	Kharif	58.65	26.90	85.55	5.29	9.17	14.45	100	0.00	0.00	87.48	0.00	0.00	12.52	100
7	Tamil Nadu	Phase-I	19.78	0.92	20.70	75.64	3.66	79.30	100	0.00	0.00	12.54	0.00	0.00	87.46	100
		Rabi	83.31	9.39	92.69	5.94	1.37	7.31	100	0.00	0.00	98.94	0.00	0.00	1.06	100
8	Telangana	Kharif	93.95	0.00	93.95	6.05	0.00	6.05	100	0.00	0.00	80.00	0.00	0.00	20.00	100
TOTAL FOR			34.79	2.39	37.18	48.07	14.75	62.82	100	0.00	0.00	39.96	0.00	0.00	60.04	100
STATES COVERED UNDER ICS SCHEME																
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			34.48	2.38	36.85	48.31	14.83	63.15	100	0.00	0.00	39.96	0.00	0.00	60.04	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS Estimates not available													

Sl. No.	State	S E A S O N	Percentage of Area under different categories													
			As per Sample check						T O T A L	As per T.R.S. @						T O T A L
			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	90.57	0.00	0.00	9.43	100
2	Assam	E.Kharif	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	100.00	100
3	Bihar	Bhadai	75.26	10.10	85.36	6.82	7.82	14.64	100	0.00	0.00	87.28	0.00	0.00	12.72	100
4	Haryana	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	100.00	0.00	0.00	0.00	100
5	Karnataka @	Kharif	87.55	9.29	96.84	1.88	1.28	3.16	100	0.00	0.00	100.00	0.00	0.00	0.00	100
6	Maharashtra	Kharif	82.46	8.24	90.70	6.05	3.25	9.30	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	99.35	0.00	99.35	0.00	0.65	0.65	100	0.00	0.00	100.00	0.00	0.00	0.00	100
9	Tamil Nadu	Phase I	87.62	12.10	99.72	0.09	0.19	0.28	100	0.00	0.00	100.00	0.00	0.00	0.00	100
10	Uttar Pradesh	Kharif	99.24	0.58	99.82	0.02	0.17	0.18	100	0.00	0.00	94.22	0.00	0.00	5.78	100
11	Uttarakhand	Kharif	98.00	1.97	99.98	0.00	0.02	0.02	100	0.00	0.00	0.00	0.00	0.00	100.00	100
TOTAL FOR			93.22	3.75	96.97	1.85	1.18	3.03	100	0.00	0.00	90.49	0.00	0.00	9.51	100
STATES COVERED UNDER ICS SCHEME																
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			96.93	2.21	99.13	0.40	0.46	0.87	100	0.00	0.00	91.64	0.00	0.00	8.36	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS estimates not available.													

Sl. No.	State	S E A S O N	Percentage of Area under different categories													
			As per Sample check						T O T A L	As per T.R.S. @						T O T A L
			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	39.54	0.00	39.54	0.00	60.46	60.46	100	0.00	0.00	0.00	0.00	0.00	100.00	100
2	Bihar	Rabi	82.05	12.61	94.65	1.23	4.12	5.35	100	0.00	0.00	95.07	0.00	0.00	4.93	100
3	Chhattisgarh	Rabi	86.92	3.19	90.11	9.89	0.00	9.89	100	0.00	0.00	90.48	0.00	0.00	9.52	100
4	Gujarat	Rabi	65.99	17.10	83.09	7.35	9.56	16.91	100	0.00	0.00	96.84	0.00	0.00	3.16	100
5	Haryana	Rabi	99.98	0.01	99.99	0.01	0.00	0.01	100	0.00	0.00	100.00	0.00	0.00	0.00	100
6	Himachal Pradesh	Rabi	33.79	6.66	40.45	28.01	31.54	59.55	100	0.00	0.00	27.84	0.00	0.00	72.16	100.00
7	Jammu & Kashmir	Rabi	40.39	1.23	41.62	41.03	17.36	58.38	100	0.00	0.00	27.68	0.00	0.00	72.32	100
8	Jharkhand	Rabi	15.75	58.35	74.09	8.97	16.93	25.91	100	Data not available						
9	Karnataka	Rabi	71.27	11.15	82.41	10.15	7.44	17.59	100	0.00	0.00	72.51	0.00	0.00	27.49	100
10	Madhya Pradesh	Rabi	71.18	25.16	96.34	0.53	3.13	3.66	100	0.00	0.00	94.58	0.00	0.00	5.42	100
11	Maharashtra	Rabi	85.99	2.81	88.80	7.89	3.31	11.20	100	0.00	0.00	69.89	0.00	0.00	30.11	100
12	Punjab	Rabi	98.63	1.32	99.95	0.05	0.00	0.05	100	Data not available						
13	Rajasthan	Rabi	79.97	9.91	89.88	0.85	9.27	10.12	100	0.00	0.00	99.72	0.00	0.00	0.28	100
14	Uttar Pradesh	Rabi	99.79	0.12	99.92	0.03	0.06	0.08	100	0.00	0.00	98.38	0.00	0.00	1.62	100.00
15	Uttarakhand	Rabi	58.10	6.32	64.42	2.40	33.18	35.58	100	0.00	0.00	65.71	0.00	0.00	34.29	100
16	West Bengal	Rabi	97.42	0.00	97.42	0.00	2.58	2.58	100	TRS not applicable						
TOTAL FOR			88.26	8.23	96.49	1.30	2.21	3.51	100	0.00	0.00	94.04	0.00	0.00	5.96	100
STATES COVERED UNDER ICS SCHEME																
TOTAL FOR			87.73	8.58	96.31	1.36	2.33	3.69	100	0.00	0.00	94.04	0.00	0.00	5.96	100
STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED																
TOTAL FOR			74.09	20.44	94.53	1.10	4.36	5.47	100	0.00	0.00	94.19	0.00	0.00	5.81	100
STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL																

Sl. No.	State	S E A S O N	Percentage of Area under different categories													
			As per Sample check						T O T A L	As per T.R.S. @						T O T A L
			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	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	81.82	0.00	0.00	18.18	100
2	Himachal Pradesh	Rabi	0.00	9.62	9.62	52.97	37.41	90.38	100	0.00	0.00	18.75	0.00	0.00	81.25	100
3	Punjab	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
4	Rajasthan	Rabi	47.33	16.76	64.09	1.17	34.74	35.91	100	0.00	0.00	98.22	0.00	0.00	1.78	100
TOTAL FOR			46.30	15.65	61.94	4.49	33.57	38.06	100	0.00	0.00	92.46	0.00	0.00	7.54	100
STATES COVERED UNDER ICS SCHEME																
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			46.25	15.66	61.91	4.49	33.60	38.09	100	0.00	0.00	92.46	0.00	0.00	7.54	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY-WISE TRS ESTIMATES NOT AVAILABLE													
GRAM																
1	Andhra Pradesh	Rabi	0.00	0.25	0.25	85.29	14.46	99.75	100	0.00	0.00	0.50	0.00	0.00	99.50	100
2	Bihar	Rabi	19.84	32.56	52.40	4.69	42.91	47.60	100	Data not available						
3	Chhattisgarh	Rabi	13.95	41.95	55.90	15.90	28.20	44.10	100	0.00	0.00	50.00	0.00	0.00	50.00	100
4	Gujarat	Rabi	58.52	12.65	71.17	13.33	15.50	28.83	100	0.00	0.00	80.29	0.00	0.00	19.71	100
5	Haryana	Rabi	100.0	0.00	100.0	0.00	0.00	0.00	100	0.00	0.00	55.56	0.00	0.00	44.44	100
6	Jharkhand	Rabi	26.11	21.89	48.00	2.78	49.21	52.00	100	0.00	0.00	100.0	0.00	0.00	0.00	100
7	Karnataka	Rabi	15.08	3.84	18.92	57.88	23.19	81.08	100	0.00	0.00	10.77	0.00	0.00	89.23	100
8	Madhya Pradesh	Rabi	29.71	50.80	80.51	2.09	17.40	19.49	100	0.00	0.00	82.80	0.00	0.00	17.20	100
9	Maharashtra	Rabi	45.12	3.44	48.56	40.68	10.76	51.44	100	0.00	0.00	32.05	0.00	0.00	67.95	100
10	Punjab	Rabi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Data not available						
11	Rajasthan	Rabi	37.52	19.38	56.91	4.35	38.74	43.09	100	0.00	0.00	64.83	0.00	0.00	35.17	100
12	Uttar Pradesh	Rabi	24.60	16.80	41.40	26.87	31.74	58.60	100	0.00	0.00	17.68	0.00	0.00	82.32	100
TOTAL FOR			34.77	17.98	52.75	29.85	17.39	47.25	100	0.00	0.00	46.47	0.00	0.00	53.53	100
STATES COVERED UNDER ICS SCHEME																
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			34.87	17.88	52.76	30.02	17.22	47.24	100	0.00	0.00	46.47	0.00	0.00	53.53	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY WISE TRS ESTIMATES NOT AVAILABLE													

Sl. No.	State	S E A S O N	Percentage of Area under different categories													
			As per Sample check						T O T A L	As per T.R.S. @						T O T A L
			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	4.25	0.15	4.40	5.32	90.28	95.60	100	0	0	3	0	0	97	100
2	Bihar	Rabi	52.34	8.25	60.58	2.58	36.84	39.42	100	Data Not available						
3	Chattisgarh	Rabi	26.82	1.10	27.92	42.31	29.77	72.08	100	0	0	100	0	0	0	100
4	Gujarat	Rabi	27.25	50.65	77.90	22.10	0.00	22.10	100	0.00	0.00	99.29	0.00	0.00	0.71	100
5	Haryana @	Rabi	99.82	0.00	99.82	0.18	0.00	0.18	100	0.00	0.00	0.00	0.00	0.00	0.00	0
6	Jharkhand	Rabi	15.00	17.37	32.37	13.98	53.65	67.63	100	0.00	0.00	0.00	0.00	0.00	0.00	0
7	Madhya Pradesh	Rabi	73.79	14.22	88.02	2.94	9.04	11.98	100	0	0	49	0	0	51	100
8	Punjab	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	Data Not available						
9	Rajasthan	Rabi	70.30	20.59	90.89	7.25	1.86	9.11	100	0	0	95	0	0	5	100
10	Uttar Pradesh	Rabi	83.22	8.21	91.43	5.13	3.44	8.57	100	0.00	0.00	0.00	0.00	0.00	0.00	0
11	West Bengal	Rabi	96.48	0.00	96.48	3.52	0.00	3.52	100	TRS Not applicable						
TOTAL FOR			76.83	10.22	87.05	4.87	8.08	12.95	100	0.00	0.00	89.83	0.00	0.00	10.17	100
STATES COVERED UNDER																
ICS SCHEME																
TOTAL FOR			64.20	16.13	80.33	5.86	13.80	19.67	100	0.00	0.00	91.63	0.00	0.00	8.37	100
STATES WHERE TRS ESTIMATES AVAILABLE FOR																
IRRIGATED AND UNIRRIGATED																
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY-WISE TRS ESTIMATES NOT AVAILABLE													

1. @ -Data for oilseeds used

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 2020-21**

Sl. No.	State	A G E N C Y	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 Pradesh	C	160	151	2869	3.3							40
		S	160	148	2796	4.0							N.C.
		P	320	299	2839	2.5	3804	3795	4224	0.6	-32.79		44
2	Assam (Aut)	C	70	22	NP								0
		S	70	16	NP								0
		P	140	38	1556	9.5	1500	654	1584	1.1	-1.77		59
	Assam (Wint)	C	140	136	2215	3.5							41
		S	140	111	2149	4.4							46
		P	280	247	2188	2.7	3000	2881	2157	0.6	1.44		43
3	Bihar (Aut/ Bhadai)	C	40	28	1610	16.1							85
		S	40	34	1551	4							N.C.
		P	80	62	1555	4.1	924	616	2333	NR	-33.35		32
	Bihar (Wint/Winter)	C	240	179	2717	3.5							46
		S	240	135	2497	3.4							N.C.
		P	480	314	2595	2.4	41265	39805	3898	0.0	-33.43		43
4	Chhattisgarh	C	70	70	2275	5.0							42
		S	70	66	2045	5.7							46
		P	140	136	2163	3.8	3058	2672	2242	0.8	-3.52		44
5	Gujarat *	C	80	65	2161	8.2							66
		S	80	59	N.P.								N.C.
		P	160	124	2004	6.3	13121	11894	3268	2.0	-38.68		70
6	Haryana @	C	74	72	3783	3.8							32
		S	74	49	N.P.								0
		P	148	121	N.P.		21492	18245	3691	0.0	NC		0
7	Himachal Pradesh	C	60	46	2571	8.4							57
		S	60	40	1917	9.8							N.C.
		P	120	86	2201	6.4	1626	918	2023	2.7	8.80		60
8	Jammu & Kashmir	C	70	70	2355	5.2							43
		S	70	28	N.P.								N.C.
		P	140	98	2280	6.5	1258	890	2173	2.7	4.92		65
9	Jharkhand (Aut/E. Kharif)	C	40	40	1374	10.2							65
		S	40	26	1463	5.5							N.C.
		P	80	66	1398	8.5	570	348	1698	0.0	-17.67		69
	Jharkhand (Wint/L. Kharif) * @	C	50	50	1732	8.5							60
		S	50	40	N.P.								N.C.
		P	100	90	1778	5.5	17520	14869	2614	0.0	-31.98		52
10	Karnataka **	C	144	107	2966	5.6							58
		S	144	114	3089	6.1							66
		P	288	221	3020	4.1	13010	11596	3381	1.4	-10.68		62
11	Kerala (Aut)	C	100	100	2244	11.3							113
		S	100	100	2511	10.8							108
		P	200	200	2368	7.8	2436	2436	2643	2.6	-10.40		110
	Kerala (Wint)	C	100	90	3069	7.6							72
		S	100	90	2211	26.7							253
		P	200	180	2953	7.4	3144	3140	3058	1.3	-3.43		99
12	Madhya Pradesh *	C	100	96	2118	7.3							71
		S	100	56	2083	6.8							51
		P	200	152	2099	5.0	3263	3263	3165	1.4	-33.68		62
13	Maharashtra *	C	82	65	1426	10.4							84
		S	82	56	N.P.								N.C.
		P	164	121	1543	6.5	8834	7704	2056	1.0	-24.95		71
14	Odisha (Aut) **	C	220	156	1866	6.4							79
		S	220	207	1889	4.4							64
		P	440	363	1667	3.5	5626	5626	2001	1.0	-16.69		67
	Odisha (Wint) @	C	270	232	2342	2.9							45
		S	270	256	N.P.								45
		P	540	488	2384	2.0	27570	27570	2713	0.3	-12.13		45
15	Punjab @	C	184	162	4606	1.5							19
		S	184	150	N.P.								24
		P	368	312	4515	1.2	1982	1976	4132	NR	9.27		21
16	Tamil Nadu (Phase-I)	C	40	36	4365	2.8							17
		S	40	40	4334	4.3							27
		P	80	76	4356	2.3	428	428	4358	1.0	-0.05		20
	Tamil Nadu (Phase-II)	C	60	60	3133	3.7							29
		S	60	54	2781	8.8							64
		P	120	114	3068	3.4	1260	1260	2920	1.0	5.07		36
17	Telangana	C	70	65	3133	5.6							45
		S	70	62	3165	6.3							50
		P	140	127	3147	4.2	2672	2672	3022	0.6	4.14		47

Sl. No.	State	A G E N C Y	ICS				C.E.S.				% Diff. (Col.6-Col.10/Col.10 x 100)	Coefficient of Variation
			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 Pradesh	C	660	656	2835	1.6						40
		S	660	17	N.P.							N.C.
		P	1320	673	2835	1.6	190995	190522	2884	NR	-1.70	41
19	Uttarakhand	C	50	50	2755	9.8						69
		S	50	46	3897	6.5						N.C.
		P	100	96	3364	5.5	2700	2699	2414	0.9	39.35	54
20	West Bengal	C	100	100	2718	3.6						36
	E. Kharif *@	S	100	0	N.P.							0
		P	200	100	2718	3.6	2073	1877	2518	1.7	7.94	36
	L. Kharif *@	C	160	154	2899	1.9						24
		S	160	2	N.P.							0
		P	320	156	2899	1.9	12988	12793	2833	0.4	2.33	24
21	Puducherry (Kh.)	C	10	10	2122	7.5						24
		S	10	10	2228	8.8						28
		P	20	20	2164	5.7	98	98	3232	3.6	-33.04	26
For states covered			6888	5080	2591	0.9	388217	373247	3042	0.1	-14.83	64
RICE (SUMMER)												
1	Andhra Pradesh	C	120	86	4411	3.9						36
		S	120	99	4155	7.0						70
		P	240	185	4343	3.4	2976	2964	4436	0.5	-2.10	46
2	Assam *	C	40	9	2232	14.2						43
		S	40	18	N.P.							N.C.
		P	80	27	2448	9.0	2000	910	2820	0.7	-13.19	47
3	Bihar **	C	40	18	N.P.							0
		S	40	12	N.P.							N.C.
		P	80	30	2062	7.6	440	380	2307	NR	-10.62	42
4	Karnataka **	C	40	7	N.P.							0
		S	40	28	N.P.							0
		P	80	35	2989	11.1	3380	2770	3007	3.2	-0.60	66
5	Kerala	C	100	31	2259	23.5						131
		S	100	29	3242	10.4						56
		P	200	60	2958	9.7	1486	1436	3464	2.3	-14.61	75
6	Odisha **	C	140	4	N.P.							0
		S	140	140	N.P.							0
		P	280	144	3172	3.6	6756	6756	3817	0.6	-16.90	44
7	Tamil Nadu	C	40	19	4374	5.4						24
		S	40	30	4033	7.0						39
		P	80	49	4234	4.3	300	300	4120	2.2	2.77	30
8	Telangana	C	80	42	4066	6.7						43
		S	80	72	3931	3.9						33
		P	160	114	3949	3.4	2218	2218	3893	0.5	1.44	36
9	West Bengal *	C	140	78	3390	2.4						22
		S	140	0	N.P.							0
		P	280	78	3390	2.4	11674	10891	3379	0.7	0.33	21
10	Puducherry (Rabi-I)	C	10	10	2554	9.0						29
		S	10	10	2245	8.4						N.C.
		P	20	20	2368	6.2	140	140	2012	3.5	17.69	28
	Puducherry (Rabi-II)	C	10	10	3137	7.1						23
		S	10	10	3181	10.3						33
		P	20	20	3151	5.9	70	70	3027	3.3	4.10	26
For states covered			1520	762	3527	1.8	31440	28835	3728	0.3	-5.41	49
JOWAR (KHARIF)												
1	Karnataka **	C	50	10	N.P.							0
		S	50	46	N.P.							0
		P	100	56	843	16.9	3590	1903	1930	5.4	-56.32	126
2	Madhya Pradesh*	C	100	100	1390	9.5						95
		S	100	54	1491	10.5						77
		P	200	154	1432	7.1	1746	1378	1491	2.2	-3.96	87
3	Maharashtra *@	C	80	40	874	23.6						149
		S	80	40	N.P.							N.C.
		P	160	80	912	14.8	5402	3179	1007	1.3	-9.43	132
4	Rajasthan	C	60	50	1091	16.5						117
		S	60	45	549	10.2						68
		P	120	95	597	8.9	10388	9610	1055	0.0	-43.41	87
5	Tamil Nadu #	C	40	40	1262	11.6						73
		S	40	29	1000	15.2						82
		P	80	69	1136	9.3	440	440	1193	2.9	-4.79	77
6	Telangana	C	40	39	761	15.3						96
		S	40	30	996	20.8						114
		P	80	69	818	12.4	444	444	931	2.9	0.00	103
7	Uttar Pradesh @	C	40	36	2206	13.9						83
		S	40	0	N.P.							N.C.
		P	80	36	2206	13.9	6160	5660	1578	NR	39.80	83
For states covered			820	559	1086	5.4	28170	22614	1192	0.7	-8.88	127

Sl. No.	State	A G E N C Y	ICS				C.E.S.				% Diff. 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	55	N.P.							0
		S	70	53	N.P.							0
		P	140	108	927	11.4	10344	8782	1023	1.9	-9.38	118
2	Maharashtra @	C	150	62	695	26.1						206
		S	150	86	N.P.							N.C.
		P	300	148	622	15.8	9748	8659	930	0.0	-33.08	192
3	Tamil Nadu	C	40	38	760	15.2						94
		S	40	32	630	19.0						N.C.
		P	80	70	697	11.9	640	640	965	3.0	-27.77	100
4	Telangana @	C	40	38	900	14.0						86
		S	40	40	840	10.4						66
		P	80	78	860	8.4	354	354	2516	3.8	0.00	74
For states covered			600	404	700	11.2	21086	18435	980	0.5	-28.53	225
BAJRA												
1	Andhra Pradesh	C	40	36	2732	14.1						85
		S	40	28	1175	11.5						61
		P	80	64	1345	9.5	518	478	2303	4.7	-41.60	76
2	Gujarat @	C	110	82	1397	9.0						81
		S	110	98	1585	7.0						N.C.
		P	220	180	1503	5.5	2232	2002	1738	0.0	-13.52	74
3	Haryana * @	C	114	112	3834	13.1						139
		S	114	74	N.P.							0
		P	228	186	N.P.		15832	12656	2372	0.0	NC	0
4	Karnataka **	C	50	26	N.P.							0
		S	50	45	N.P.							0
		P	100	71	1720	8.3	3936	2714	1424	3.0	20.79	70
5	Maharashtra *	C	60	28	1859	6.7						77
		S	60	48	N.P.							N.C.
		P	120	76	1885	6.1	5534	4359	762	NR	59.27	73
6	Rajasthan	C	60	58	1490	9.0						68
		S	60	52	1030	16.4						118
		P	120	110	1313	8.0	25968	25706	1334	0.0	-1.57	84
7	Tamil Nadu #	C	40	40	3241	5.6						35
		S	40	38	3635	5.8						35
		P	80	78	3410	4.0	240	240	2635	5.9	29.41	35
8	Uttar Pradesh @	C	150	142	2624	3.8						46
		S	150	0	N.P.							N.C.
		P	300	142	2624	3.8	4388	4386	2389	NR	9.84	46
For states covered			1248	907	863	4.3	58648	52541	1503	0.1	-42.62	129
MAIZE												
2	Bihar **	C	40	12	N.P.							0
		S	40	2	N.P.							N.C.
		P	80	14	N.P.		41265	12483	1163	NR	NC	0
3	Chhattisgarh	C	40	36	3635	11.8						71
		S	40	24	3300	17.9						88
		P	80	60	3519	9.9	556	414	2996	2.3	17.46	77
4	Gujarat * @	C	40	36	N.P.							0
		S	40	34	N.P.							N.C.
		P	80	70	1406	6.2	2040	1876	1497	0.0	-6.08	52
5	Haryana * @	C	40	36	3834	13						79
		S	40	28	N.P.							0
		P	80	64	N.P.		6252	1615	3026	0.0	NC	0
6	Himachal Pradesh	C	90	69	3185	6.3						52
		S	90	72	3277	8.8						75
		P	180	141	3215	5.1	2628	2128	2711	1.4	18.59	61
7	Jammu & Kashmir	C	90	90	1859	6.7						57
		S	90	21	N.P.							54
		P	180	111	1885	6.1	1288	836	1759	2.7	7.16	64
8	Jharkhand * @	C	40	40	2920	11.7						74
		S	40	32	N.P.							55
		P	80	72	2653	7.5	7830	5888	2300	0.0	15.35	63
9	Karnatka	C	50	34	3765	6.5						38
		S	50	49	3641	7.4						52
		P	100	83	3709	4.9	12950	11603	3658	1.5	1.39	44
10	Madhya Pradesh	C	80	80	2611	8.5						76
		S	80	50	2019	12.0						85
		P	160	130	2339	7.0	1928	1768	2308	1.7	1.34	80
11	Odisha	C	40	17	1952	11.6						48
		S	40	40	2895	4.6						29
		P	80	57	2654	4.3	3023	3023	2919	1.5	-9.08	32
12	Punjab	C	40	34	4750	7.4						43
		S	40	20	N.P.							0
		P	80	54	N.P.		362	361	3665	NR	NC	0
13	Rajasthan	C	50	48	2341	9.4						65
		S	50	34	2583	12.4						72
		P	100	82	2419	7.5	11148	11112	2754	0.0	-12.16	68

Sl. No.	State	A G E N C Y	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	8704	7.6						48
		S	40	38	8140	7.2						44
		P	80	78	8387	5.2	256	256	7276	3.7	15.27	46
15	Telangana	C	50	45	4366	14.9						100
		S	50	47	4764	9.8						67
		P	100	92	4630	8.2	2054	2054	3105	1.9	0.00	78
16	Uttar Pradesh	C	170	162	2591	5.7						72
		S	170	5	N.P.							N.C.
		P	340	167	2591	5.7	27360	26853	2309	NR	12.21	73
For states covered			1800	1275	3108	2.6	120940	82270	2952	0.7	5.28	91
RAGI												
1	Karnataka	C	40	32	N.P.							0
		S	40	34	N.P.							0
		P	80	66	1611	20.9	8242	7345	1740	1.7	-7.41	170
3	Uttarakhand	C	40	40	1144	14.3						90
		S	40	36	1402	13.7						N.C.
		P	80	76	1252	10.0	1120	1118	1514	1.3	-17.31	87
For states covered			160	142	1578	19.4	9362	8463	1714	1.5	-7.91	231
COTTON												
1	Andhra Pradesh	C	40	34								
		S	40	34								
		P	80	68	355	6.3	952	926	483	2.4	-26.50	52
2	Gujarat	C	220	193								
		S	220	134								
		P	440	327	560	5.9	29328	27077	1598	0.9	0.00	107
3	Haryana	C	70	70								
		S	70	44								
		P	140	114	227	4.7	14569	11502	419	0.0	-45.84	50
4	Karnataka	C	56	42								
		S	56	52								
		P	112	94	448	8.0	3660	3138	462	3.2	-3.03	78
5	Madhya Pradesh	C	48	48								
		S	48	20								
		P	96	68	1207	6.1	962	819	1227	2.1	-1.63	50
6	Maharashtra	C	140	131								
		S	140	101								
		P	280	232	596	4.4	13744	12956	378	0.3	57.67	67
7	Punjab	C	64	64								
		S	64	44								
		P	128	108	793	2.6	668	664	776	NR	2.19	27
8	Rajasthan	C	40	32								
		S	40	36								
		P	80	68	629	5.3	8228	7823	675	0.0	-6.81	44
9	Tamil Nadu (Kharif)	C	40	40								
		S	40	38								
		P	80	78	462	6.3	564	564	331	2.2	39.58	56
9	Tamil Nadu (Rabi)	C	40	38								
		S	40	38								
		P	80	76	390	8.8	256	256	411	3.5	0.00	77
10	Telangana	C	70	65								
		S	70	62								
		P	140	127	427	9.6	1420	1420	1407	1.0	-69.65	108
For states covered			1656	1360	533	2.6	74351	67145	875	0.5	-39.10	97
GROUNDNUT												
1	Andhra Pradesh	C	110	110	654	12.7						133
		S	110	98	759	15.0						148
		P	220	208	691	9.7	2624	2616	724	2.1	-4.56	140
2	Gujarat * @	C	150	127	N.P.							0
		S	150	67	N.P.							0
		P	300	194	1787	4.5	3498	3352	2764	0.0	-35.35	63
3	Karnataka **	C	70	44	1033	17						115
		S	70	62	1071	9.4						74
		P	140	106	1062	8.3	8358	6917	840	2.4	26.43	85
4	Madhya Pradesh	C	40	40	1771	13.9						88
		S	40	22	1136	12.3						58
		P	80	62	1290	9.4	954	792	1141	3.2	13.06	74
5	Maharashtra *	C	60	43	1490	16.7						110
		S	60	42	967	11.4						N.C.
		P	120	85	1053	9.6	3418	2531	1197	0.8	-12.03	88
6	Rajasthan	C	40	36	2307	10.7						64
		S	40	26	2091	14.5						74
		P	80	62	2221	8.6	7760	6103	2260	0.0	-1.73	68
7	Tamil Nadu (Kharif)	C	40	40	2589	8.2						52
		S	40	36	2053	12.7						76
		P	80	76	2376	6.9	700	700	2132	1.9	11.44	60

Sl. No.	State	A G E N C Y	ICS				C.E.S.				% Diff. (Col.6- Col.10/ Col.10 x 100)	Coefficient of Variation
			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	26	3175	6.7						34
		S	40	32	2898	12.7						72
		P	80	58	3106	5.9	460	460	3227	2.7	-3.75	45
8	Telangana	C	40	39	0	0.0						0
		S	40	30	N.P.							0
		P	80	69	1574	14.0	198	198	1579	4.8	0.00	116
For states covered			1180	920	1452	3.0	27970	23669	1948	0.3	-25.47	90
SUGARCANE												
1	Andhra Pradesh	C	60	52	80291	5.9						43
		S	60	54	82332	3.2						24
		P	120	106	81848	2.8	1622	1380	74495	1.2	9.87	29
2	Assam * @	C	40	24	35055	10.3						50
		S	40	20	35888	11.9						N.C.
		P	80	44	35404	7.8	700	430	35845	0.1	-1.23	52
3	Bihar * @	C	40	23	46474	16.2						78
		S	40	30	55764	10.2						N.C.
		P	80	53	52378	8.7	800	715	54766	NR	-4.36	63
4	Haryana * @	C	80	76	91771	3.2						28
		S	80	32	N.P.							0
		P	160	108	N.P.							
5	Karnataka **	C	40	35	101065	15						86
		S	40	38	N.P.							0
		P	80	73	95617	13.4	1100	1069	102195	5.2	-6.44	114
6	Maharashtra * @	C	68	41	N.P.							0
		S	68	31	N.P.							N.C.
		P	136	72	78924	18.7	5008	2865	97700	1.2	-19.22	159
7	Punjab * @	C	64	58	96001	5.9						45
		S	64	36	N.P.							0
		P	128	94	N.P.		698	683	83841	NR	NC	0
8	Rajasthan	C	40	35	101400	10.8						64
		S	40	22	63829	13.8						65
		P	80	57	78648	8.7	450	412	79111	0.0	-0.59	66
9	Tamil Nadu	C	40	40	119599	4.6						29
		S	40	30	108902	2.3						13
		P	80	70	110762	2.1	468	468	104030	1.3	6.47	17
10	Uttar Pradesh * @	C	200	200	91588	3.2						46
		S	200	0	N.P.							N.C.
		P	400	200	91588	3.2	8308	7705	81807	NR	11.96	46
11	Uttarakhand * @	C	40	40	92224	9.6	0					61
		S	40	0	N.P.		0					N.C.
		P	80	40	9224	9.6	0	0	0	0	0	61
For states covered			1424	917	84275	5.2	19154	15727	85086	0.6	0.00	158
WHEAT												
1	Assam * @	C	50	6	N.P.							0
		S	50	20	N.P.							N.C.
		P	100	26	1351	6.1	700	286	1379	1.7	-2.03	31
2	Bihar	C	230	201	2913	2.5						35
		S	230	162	2972	3.3						N.C.
		P	460	363	2934	2.0	41265	40988	2985	NR	-1.71	38
3	Chhattisgarh @	C	40	26	1004	11.7						60
		S	40	12	1048	8.5						29
		P	80	38	1032	6.9	924	552	1550	2.9	-33.42	42
4	Gujarat * @	C	150	129	3062	3.3						37
		S	150	115	N.P.							N.C.
		P	300	244	2896	2.4	6305	6273	3268	0.0	-11.38	38
5	Haryana	C	164	126	4827	1.6						18
		S	164	120	N.P.							0
		P	328	246	4863	2.1	27165	22974	4834	0.0	0.60	33
6	Himachal Pradesh	C	110	66	1857	8.2						66
		S	110	60	N.P.							0
		P	220	126	1703	6.3	2794	2140	1728	1.5	-1.45	71
7	Jammu & Kashmir	C	120	50	N.P.							0
		S	120	32	N.P.							0
		P	240	82	1929	8.2	1834	1704	1985	2.7	-2.82	74
8	Jharkhand *	C	50	50	2157	5.9						42
		S	50	34	N.P.							N.C.
		P	100	84	2078	3.0	17520	11902	2103	0.0	-1.19	27
9	Karnataka *	C	50	34	N.P.							0
		S	50	40	N.P.							0
		P	100	74	1214	12.4	3888	2941	1313	3.6	-7.54	107
10	Madhya Pradesh	C	250	244	3003	2.8						44
		S	250	74	1214	12.4						42
		P	500	318	3003	2.8	5830	5146	2896	0.6	3.69	50

ANNEX XIV (Contd.....)

Sl. No.	State	A G E N C Y	ICS				C.E.S.				% Diff. (Col.6- Col.10/ Col.10 x 100)	Coefficient of Variation	
			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	8870	7715	1839	0.0	-15.78	86	
12	Punjab	C	216	199	4759	1.1						15	
		S	216	169	4817	1.0						12	
		P	432	368	4791	0.7	2342	2338	4868	NR	-1.58	14	
13	Rajasthan	C	130	7	N.P.							0	
		S	130	70	N.P.							0	
		P	260	77	3977	4.2	39100	32304	3885	0.0	2.36	36	
14	Uttar Pradesh	C	570	568	3652	1.2						28	
	* @	S	570	61	N.P.							N.C.	
		P	1140	629	3652	1.2	228214	227822	3804	NR	-4.00	29	
15	Uttarakhand* @	C	60	50	3222	4.0						28	
		S	60	60	N.P.							N.C.	
		P	120	110	3222	4.0	2700	2700	3062	1.0	5.23	42	
16	West Bengal	C	110	104	3118	3.1						32	
		S	110	0	N.P.							0	
		P	220	104	3118	3.1	1206	488	2708	7.0	15.14	32	
For states covered			4900	2986	3389	0.8	390657	368273	3630	0.1	-6.64	45	
BARLEY													
1	Haryana	C	40	28	2736	10.0						53	
		S	40	40	3305	5.6						35	
		P	80	68	3128	4.9	9753	2985	3343	0.0	-6.43	40	
2	Himachal Pradesh	C	40	14	N.P.							0	
		S	40	14	N.P.							0	
		P	80	28	2131	16.7	1258	712	1412	3.0	50.92	88	
3	Punjab	C	40	36	3721	5.6						33	
		S	40	32	3977	7.3						41	
		P	80	68	3808	4.4	252	251	3771	NR	0.98	37	
4	Rajasthan	C	80	11	N.P.							0	
		S	80	56	N.P.							0	
		P	160	67	3585	3.8	4932	4531	3469	0.0	3.34	31	
For states covered			400	231	3392	3.3	16195	8479	3334	0.1	1.75	50	
GRAM													
1	Andhra Pradesh	C	60	58	1381	7.0						53	
	*	S	60	41	1469	10.7						N.C.	
		P	120	99	1405	5.9	1354	1352	1136	1.4	23.68	58	
2	Bihar	C	40	34	940	10.1						59	
		S	40	36	897	11.9						N.C.	
		P	80	70	921	7.7	800	792	1052	0.0	-12.45	64	
3	Chhattisgarh	C	40	40	827	15.7						99	
		S	40	26	550	19.7						100	
		P	80	66	664	12.5	594	452	887	4.3	-25.14	102	
4	Gujarat	C	40	38	1391	7.3						45	
	* @	S	40	26	N.P.							N.C.	
		P	80	64	1340	4.8	2385	2320	1568	0.0	-14.55	38	
5	Haryana	C	42	26	932	20.6						105	
	*	S	42	42	1115	15.2						99	
		P	84	68	1035	12.3	7307	1956	1005	0.0	2.99	101	
6	Jharkhand	C										0	
	*	S	Not Planned										N.C.
		P					0	0	0	NR	0.00	0	
7	Karnataka	C	40	31	608	12.3						68	
	*	S	40	38	N.P.							80	
		P	80	69	665	9.0	9358	7377	609	2.1	9.20	75	
8	Madhya Pradesh	C	140	140	1017	6.4						75	
	*	S	140	44	1180	6.6						44	
		P	280	184	1083	4.6	5330	4306	1115	0.8	-2.87	62	
9	Maharashtra	C	100	46	1359	7.9						54	
	* @	S	100	46	N.P.							N.C.	
		P	200	92	1265	5.8	7822	7718	1074	0.0	17.74	56	
10	Punjab	C	40	40	1305	0.0						0	
	*	S	40	0	N.P.							0	
		P	80	40	1305	0.0	94	94	1322	NR	-1.29	0	
11	Rajasthan	C	120	29	0	0.0						0	
		S	120	64	0	0.0						0	
		P	240	93	1314	9.0	19132	13174	1072	0.0	22.57	86	
12	Uttar Pradesh	C	50	50	1210	7.5						53	
	* @	S	50	4	N.P.							N.C.	
		P	100	54	1210	7.5	12308	12175	1293	NR	-6.42	55	
13	West Bengal	C										N.C.	
	**	S	Not Planned										N.C.
		P					1113	514	1313	5.7	N.C.	N.C.	
For states covered			1424	899	1126	2.8	67597	52230	1078	0.3	4.51	84	

Sl. No.	State	A G E N C Y	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	60	56	755	10.1						76
	*	S	60	44	674	5						N.C.
		P	120	100	688	4.7	1250	1029	647	1.0	6.34	47
2	Bihar	C	40	36	1185	12.3						74
		S	40	40	1103	10.4						N.C.
		P	80	76	1134	8.0	1064	1064	1271	NR	-10.78	69
3	Chhattisgarh	C	40	36	599	6.7						40
		S	40	18	511	9.5						40
		P	80	54	563	5.5	384	146	517	5.7	8.90	40
4	Gujarat	C	50	42	1894	4.7						31
	* @	S	50	35	1928	2						N.C.
		P	100	77	1922	1.9	1206	1143	1932	0.0	-0.53	16
5	Haryana	C	76	53	1844	3.2						23
	*	S	76	74	1764	3.2						27
		P	152	127	1802	2.3	17988	15585	2028	0.0	-11.14	25
6	Jharkhand	C	40	40	621	9.7						61
		S	40	30	1450	11.2						N.C.
		P	80	70	721	7.8	7290	4570	1086	NR	-33.61	65
7	Madhya Pradesh	C	60	60	1480	4.3						33
	*	S	60	16	986	14.7						59
		P	120	76	1401	4.1	1116	996	1178	2.0	18.93	36
8	Punjab	C	52	40	1572	6.5						41
	*	S	52	40	1510	7.8						49
		P	104	80	1545	5.0	574	573	1595	NR	-3.13	45
9	Rajasthan	C	90	25	N.P.							0
		S	90	73	N.P.							0
		P	180	98	1529	6.1	29236	22073	1711	0.0	-10.63	60
10	Uttar Pradesh	C	100	100	1609	5.2						52
	* @	S	100	13	N.P.							N.C.
		P	200	113	1609	5.2	28042	27655	1438	NR	11.89	55
11	West Bengal	C	110	104	1312	3.4						35
		S	110	0	N.P.							N.C.
		P	220	104	1312	3.4	5369	4876	1167	0.9		35
For states covered			1436	975	1435	2.2	93519	79710	1521	0.2	-5.70	67

- 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.

ESTIMATES OF YIELD RATE ACCORDING TO IRRIGATION
AND SEED VARIETY UNDER ICS DURING 2020-21

Sl. No.	State	A G E A N C Y	S E A S O N	High Yield Varieties						Other Varieties						Both HVV & 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 Pradesh	C	Kh.	141	2912	10	1706	151	2832	0	0	0	0	0	0	141	2912	10	1706	151	2832
				136	2832	10	1754	146	2758	2	2104	0	0	2	2104	138	2821	10	1754	148	2749
		S	Rabi	277	2873	20	1730	297	2796	2	2104	0	0	2	2104	279	2867	20	1730	299	2791
				84	3967	1	1377	85	3937	1	2536	0	0	1	2536	85	3950	1	1377	86	3920
2	Assam	C	Aut.	97	3960	0	0	97	3960	2	2479	0	0	2	2479	99	3930	0	0	99	3930
				181	3963	1	1377	182	3949	3	2498	0	0	3	2498	184	3939	1	1377	185	3925
		S	Win.	2	2859	0	0	2	2859	0	0	20	1624	20	1624	2	2859	20	1624	22	1736
				4	1268	0	0	4	1268	0	0	12	1348	12	1348	4	1268	12	1348	16	1328
3	Bihar	C	Bha.	6	1799	0	0	6	1799	0	0	32	1521	32	1521	6	1799	32	1521	38	1564
				2	2229	18	2079	20	2094	0	0	116	2186	116	2186	2	2229	134	2172	136	2173
		S	Sum.	0	0	20	2440	20	2440	0	0	91	2196	91	2196	0	0	111	2240	111	2240
				2	2229	38	2269	40	2267	0	0	207	2190	207	2190	2	2229	245	2203	247	2203
4	Chhattisgarh	C	Kh.	3	3343	0	0	3	3343	0	0	6	3916	6	3916	3	3343	6	3916	9	3725
				8	3221	2	3478	10	3273	8	2838	0	0	8	2838	16	3030	2	3478	18	3080
		S	Agh.	11	3255	2	3478	13	3289	8	2838	6	3916	14	3300	19	3079	8	3806	27	3295
				2	1270	8	1398	10	1372	8	2483	10	1756	18	2079	10	2240	18	1597	28	1826
5	Gujarat	C	Kh.	8	2063	2	1989	10	2048	12	1606	12	1665	24	1636	20	1789	14	1711	34	1757
				10	1904	10	1516	20	1710	20	1957	22	1706	42	1826	30	1939	32	1647	62	1788
		S	Sum.	76	2800	32	1847	108	2518	43	2496	28	1813	71	2227	119	2690	60	1831	179	2402
				55	2563	22	1600	77	2288	27	2650	31	2105	58	2358	82	2591	53	1895	135	2318
6	Haryana	C	Kh.	131	2701	54	1747	185	2422	70	2555	59	1966	129	2286	201	2650	113	1861	314	2366
				10	2028	2	1816	12	1993	6	1998	0	0	6	1998	16	2017	2	1816	18	1995
		S	Sum.	8	2819	0	0	8	2819	0	0	4	2219	4	2219	8	2819	4	2219	12	2619
				18	2380	2	1816	20	2323	6	1998	4	2219	10	2086	24	2284	6	2084	30	2244
7	Himachal Pradesh	C	Kh.	28	2789	28	1968	56	2379	0	0	14	2080	14	2080	28	2789	42	2006	70	2319
				26	2353	40	1875	66	2063	0	0	0	0	0	26	2353	40	1875	66	2063	
		S	Sum.	54	2579	68	1914	122	2208	0	0	14	2080	14	2080	54	2579	82	1942	136	2195
				35	2359	16	1586	51	2116	6	1887	8	1148	14	1464	41	2290	24	1440	65	1976
8	Jammu & Kashmir	C	Kh.	18	2329	13	1041	31	1789	19	1696	9	685	28	1371	37	2004	22	895	59	1591
				53	2349	29	1342	82	1993	25	1742	17	903	42	1402	78	2154	46	1179	124	1793
		S	Sum.	69	3753	3	2783	72	3713	0	0	0	0	0	69	3753	3	2783	72	3713	
				49	3734	0	0	49	3734	0	0	0	0	0	49	3734	0	0	49	3734	
9	Himachal Pradesh	C	Kh.	118	3745	3	2783	121	3721	0	0	0	0	0	118	3745	3	2783	121	3721	
				23	3388	4	1648	27	3130	15	2088	4	1964	19	2062	38	2875	8	1806	46	2689
		S	Sum.	2	3311	2	1942	4	2627	16	1943	20	1357	36	1617	18	2095	22	1410	40	1718
				25	3382	6	1746	31	3065	31	2013	24	1458	55	1771	56	2624	30	1516	86	2237
10	Karnataka	C	Kh.	19	1972	7	1258	26	1780	44	2676	0	0	44	2676	63	2464	7	1258	70	2343
				10	2457	6	1815	16	2216	12	2533	0	0	12	2533	22	2498	6	1815	28	2352
		S	Sum.	29	2139	13	1515	42	1946	56	2645	0	0	56	2645	85	2473	13	1515	98	2346
				0	0	2	3524	2	3524	0	0	38	1106	38	1106	0	0	40	1227	40	1227
11	Kerala	C	Aut.	0	0	0	0	0	0	0	0	26	966	26	966	0	0	26	966	26	966
				0	0	2	3524	2	3524	0	0	64	1049	64	1049	0	0	66	1124	66	1124
		S	Win.	4	1891	20	2763	24	2618	4	1697	22	1614	26	1627	8	1794	42	2161	50	2102
				4	3015	10	2324	14	2522	4	1890	22	1718	26	1745	8	2452	32	1908	40	2017
12	Madhya Pradesh	C	Kh.	8	2453	30	2617	38	2582	8	1794	44	1666	52	1686	16	2123	74	2052	90	2064
				50	3171	26	2581	76	2969	15	3010	16	2006	31	2492	65	3134	42	2362	107	2831
		S	Sum.	75	3278	28	2885	103	3171	2	2389	9	2038	11	2102	77	3255	37	2679	114	3068
				125	3235	54	2739	179	3086	17	2937	25	2017	42	2390	142	3200	79	2511	221	2953
13	Madhya Pradesh	C	Kh.	4	2899	0	0	4	2899	3	2162	0	0	3	2162	7	2583	0	0	7	2583
				28	3155	0	0	28	3155	0	0	0	0	0	28	3155	0	0	28	3155	
		S	Sum.	32	3123	0	0	32	3123	3	2162	0	0	3	2162	35	3041	0	0	35	3041
				32	3123	0	0	32	3123	3	2162	0	0	3	2162	35	3041	0	0	35	3041
14	Madhya Pradesh	C	Aut.	32	2006	56	2264	88	2170	7	1257	5	1202	12	1234	39	1872	61	2177	100	2058
				38	2439	53	2271	91	2341	0	0	9	1183	9	1183	38	2439	62	2113	100	2237
		S	Win.	70	2241	109	2267	179	2257	7	1257	14	1189	21	1212	77	2151	123	2144	200	2147
				72	2860	9	2341	81	2802	9	1463	10	1290	19	1372	81	2705	19	1788	100	2530
15	Madhya Pradesh	C	Kh.	63	2771	12	2472	75	2723	7	1917	18	1247	25	1434	70	2686	30	1737	100	2401
				135	2818	21	2416	156	2764	16	1662	28	1262	44	1407	151	2696	49	1757	200	2466
		S	Sum.	81	2792	3	2473	84	2781	3	1653	0	0	3	1653	84	2752	3	2473	87	2742
				94	2675	0	0	94	2675	5	957	0	0	5	957	99	2588	0	0	99	2588
16	Madhya Pradesh	C	Kh.	175	2729	3	2473	178	2725	8	1218	0	0	8	1218	183	2663	3	2473	186	2660
				32	2688	42	2258	74	2444	0	0	22	1294	22	1294	32	2688	64	1926	96	2180
		S	Sum.	16	2976	8	1690	24	2547	4	2679	28	1490	32	1639	20	2917	36	1535	56	2028
				48	2784	50	2167	98	2469	4	2679	50	1404	54	1498	52	2776	100	1785	152	2124

Sl. No.	State	A G E N C Y	S E A S O N	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	Maharashtra	C	Kh.	19	1936	43	1281	62	1482	0	0	3	733	3	733	19	1936	46	1245	65	1447	
				4	2609	30	1497	34	1628	4	2725	18	1410	22	1649	8	2667	48	1465	56	1636	
				23	2053	73	1370	96	1534	4	2725	21	1314	25	1539	27	2153	94	1357	121	1535	
14	Odisha	C	Aut.	3	3238	5	2211	8	2596	0	0	9	1781	9	1781	3	3238	14	1934	17	2164	
				0	0	31	2913	31	2913	0	0	9	1870	9	1870	0	0	40	2678	40	2678	
				3	3238	36	2815	39	2848	0	0	18	1825	18	1825	3	3238	54	2485	57	2525	
		C	Win.	53	2310	152	2364	205	2350	3	2609	24	2209	27	2253	56	2326	176	2343	232	2339	
				69	2690	156	2293	225	2415	4	4262	27	2264	31	2521	73	2776	183	2289	256	2428	
				122	2525	308	2328	430	2384	7	3553	51	2238	58	2397	129	2581	359	2315	488	2385	
		C	Sum.	4	2718	0	0	4	2718	0	0	0	0	0	0	0	4	2718	0	0	4	2718
				136	3184	4	3089	140	3181	0	0	0	0	0	0	136	3184	4	3089	140	3181	
				140	3170	4	3089	144	3168	0	0	0	0	0	0	140	3170	4	3089	144	3168	
15	Punjab	C	Kh.	161	4825	0	0	161	4825	1	5549	0	0	1	5549	162	4830	0	0	162	4830	
				144	4750	0	0	144	4750	6	4995	0	0	6	4995	150	4760	0	0	150	4760	
				305	4790	0	0	305	4790	7	5074	0	0	7	5074	312	4796	0	0	312	4796	
16	Tamil Nadu	C	Early	36	4645	0	0	36	4645	36	0	0	0	36	0	72	2323	0	0	72	2323	
				40	4347	0	0	40	4347	0	0	0	0	0	0	40	4347	0	0	40	4347	
				76	4488	0	0	76	4488	36	0	0	0	36	0	112	3045	0	0	112	3045	
		C	Late	56	3441	1	2040	57	3416	1	4007	2	3181	3	3456	57	3451	3	2801	60	3418	
				52	3059	2	3427	54	3072	0	0	0	0	0	0	52	3059	2	3427	54	3072	
				108	3257	3	2965	111	3249	1	4007	2	3181	3	3456	109	3264	5	3051	114	3254	
		C	Rabi	19	3992	0	0	19	3992	0	0	0	0	0	0	19	3992	0	0	19	3992	
				30	4098	0	0	30	4098	0	0	0	0	0	0	30	4098	0	0	30	4098	
				49	4057	0	0	49	4057	0	0	0	0	0	0	49	4057	0	0	49	4057	
17	Telangana	C	Kh.	54	3171	1	1293	55	3136	7	2708	3	1582	10	2370	61	3117	4	1510	65	3019	
				54	3146	8	2616	62	3078	0	0	0	0	54	3146	8	2616	62	3078			
				108	3158	9	2469	117	3105	7	2708	3	1582	10	2370	115	3131	12	2248	127	3047	
		C	Rabi	41	3851	0	0	41	3851	1	3070	0	0	1	3070	42	3833	0	0	42	3833	
				72	4006	0	0	72	4006	0	0	0	0	0	0	72	4006	0	0	72	4006	
				113	3950	0	0	113	3950	1	3070	0	0	1	3070	114	3942	0	0	114	3942	
18	Uttar Pradesh	C	Kh.	595	2812	16	3105	611	2819	39	2641	6	2428	45	2613	634	2801	22	2920	656	2805	
				9	2955	6	2752	15	2874	2	2760	0	0	2	2760	11	2919	6	2752	17	2860	
				604	2814	22	3009	626	2821	41	2647	6	2428	47	2619	645	2803	28	2884	673	2807	
19	Uttarakhand	C	Kh.	26	3570	0	0	26	3570	16	2386	8	1340	24	2038	42	3119	8	1340	50	2834	
				29	3112	0	0	29	3112	7	1235	10	995	17	1094	36	2747	10	995	46	2366	
				55	3328	0	0	55	3328	23	2036	18	1148	41	1646	78	2947	18	1148	96	2610	
		C	Aut.	55	2946	36	2277	91	2681	6	2326	3	1360	9	2004	61	2885	39	2207	100	2620	
				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				55	2946	36	2277	91	2681	6	2326	3	1360	9	2004	61	2885	39	2207	100	2620	
20	West Bengal	C	Am.	65	3089	72	2831	137	2953	6	2602	11	2374	17	2454	71	3048	83	2770	154	2898	
				1	3395	1	3323	2	3359	0	0	0	0	1	3395	1	3323	2	3359			
				66	3094	73	2837	139	2959	6	2602	11	2374	17	2454	72	3053	84	2777	156	2904	
		C	Sum.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Puducherry	C	Kh.	10	3031	0	0	10	3031	0	0	0	0	0	0	10	3031	0	0	10	3031	
				10	3069	0	0	10	3069	0	0	0	0	0	0	10	3069	0	0	10	3069	
				20	3050	0	0	20	3050	0	0	0	0	0	0	20	3050	0	0	20	3050	
		C	R-I	10	2604	0	0	10	2604	0	0	0	0	0	0	10	2604	0	0	10	2604	
				10	2300	0	0	10	2300	0	0	0	0	0	0	10	2300	0	0	10	2300	
				20	2452	0	0	20	2452	0	0	0	0	0	0	20	2452	0	0	20	2452	
		C	R-II	10	3137	0	0	10	3137	0	0	0	0	0	0	10	3137	0	0	10	3137	
				10	3182	0	0	10	3182	0	0	0	0	0	0	10	3182	0	0	10	3182	
				20	3160	0	0	20	3160	0	0	0	0	0	0	20	3160	0	0	20	3160	
For States Covered	C	S	1986	3138	613	2248	2599	2928	280	2134	388	1199	668	1980	2266	3014	1001	2095	3267	2732		
			1409	3295	466	2224	1875	3029	143	2306	355	1726	498	1892	1552	3204	821	2009	2373	2790		
			3395	3203	1079	2237	4474	2970	423	2192	743	1451	1166	1942	3818	3091	1822	2056	5640	2757		
JOWAR																						
1	Karnataka	C	Kh.	6	1569	2	2920	8	1907	0	0	2	465	2	465	6	1569	4	1693	10	1618	
				10	3982	32	1922	42	2412	0	0	4	825	4	825	10	3982	36	1800	46	2274	
				16	3077	34	1980	50	2331	0	0	6	705	6	705	16	3077	40	1789	56	2157	
		C	Rabi	11	1400	22	960	33	1107	3	879	19	849	22	853	14	1288	41	909	55	1005	
				2	1614	33	978	35	1014	6	1251	12	509	18	756	8	1342	45	853	53	926	
2	Madhya Pradesh	C	Kh.	0	0	40	1427	40	1427	0	0	60	1141	60	1141	0	0	100	1255	100	1255	
				0	0	30	1385	30	1385	0	0	24	917	24	917	0	0	54	1177	54	1177	
				0	0	70	1409	70	1409	0	0	84	1077	84	1077	0	0	154	1228	154	1228	

Sl. No.	State	A G E N C Y	S E A S O N	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	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha			
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22											
3	Maharashtra	C	Kh.	2	2288	34	1132	36	1196	0	0	4	313	4	313	2	2288	38	1046	40	1108									
				S	0	0	32	1020	32	1020	0	0	8	643	8	643	0	0	40	945	40	945								
				P	2	2288	66	1078	68	1113	0	0	12	533	12	533	2	2288	78	994	80	1026								
				C	Rabi	19	1579	31	809	50	1102	20	1200	36	706	56	882	39	1384	67	754	106	986							
				S	26	1201	20	935	46	1085	16	1367	34	955	50	1087	42	1264	54	947	96	1086								
4	Rajasthan	C	Kh.	45	1361	51	859	96	1094	36	1274	70	827	106	979	81	1322	121	840	202	1033									
				S	1	1393	13	1624	14	1607	0	0	36	956	36	956	1	1393	49	1133	50	1138								
				P	0	0	9	667	9	667	0	0	36	537	36	537	0	0	45	563	45	563								
				C	1	1393	22	1232	23	1239	0	0	72	747	72	747	1	1393	94	860	95	866								
				S	6	1601	28	1106	34	1193	2	1369	4	1032	6	1144	8	1543	32	1097	40	1186								
5	Tamil Nadu	C	Kh.	4	1108	20	917	24	949	0	0	8	1007	8	1007	4	1108	28	943	32	963									
				S	10	1404	48	1027	58	1092	2	1369	12	1015	14	1066	12	1398	60	1025	72	1087								
				P	8	1477	21	1453	29	1460	0	0	9	936	9	936	8	1477	30	1298	38	1336								
				C	10	1685	14	749	24	1139	0	0	8	607	8	607	10	1685	22	698	32	1006								
				S	18	1592	35	1172	53	1315	0	0	17	781	17	781	18	1592	52	1044	70	1185								
6	Telangana	C	Kh.	0	0	5	1094	5	1094	0	0	34	790	34	790	0	0	39	829	39	829									
				S	0	0	8	1494	8	1494	0	0	22	641	22	641	0	0	30	869	30	869								
				P	0	0	13	1340	13	1340	0	0	56	732	56	732	0	0	69	846	69	846								
				C	Rabi	9	3851	2	602	11	3260	17	2275	10	1164	27	1864	26	2821	12	1070	38	2268							
				S	13	4012	4	2595	17	3678	7	2508	16	1447	23	1770	20	3485	20	1677	40	2581								
7	Uttar Pradesh	C	Kh.	0	0	4	3196	4	3196	0	0	32	1913	32	1913	0	0	36	2055	36	2055									
				S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
				P	0	0	4	3196	4	3196	0	0	32	1913	32	1913	0	0	36	2055	36	2055								
				C	62	13680	202	14870	264	17089	42	5722	246	9327	288	10320	104	12285	448	11840	552	1256								
				S	65	11917	202	11911	267	13704	29	5126	172	7481	201	8183	94	11182	374	9773	468	1233								
For States Covered		P		127	14901	404	15022	531	17388	71	6112	418	9603	489	10379	198	13895	822	11966	1020	1245									
				BAJRA																										
				1	Andhra Pradesh	C	Kh.	0	0	19	3258	19	3258	2	892	15	794	17	805	2	892	34	2171	36	2100					
2	Gujarat	C	Kh.	0	0	12	1413	12	1413	0	0	16	973	16	973	0	0	28	1161	28	1161									
				S	0	0	31	2544	31	2544	2	892	31	886	33	886	2	892	62	1715	64	1689								
				P	31	1619	48	1409	79	1491	0	0	3	876	3	876	31	1619	51	1377	82	1469								
3	Haryana	C	Kh.	30	1770	55	1627	85	1678	0	0	13	1210	13	1210	30	1770	68	1548	98	1616									
				S	61	1693	103	1525	164	1588	0	0	16	1147	16	1147	61	1693	119	1475	180	1549								
				P	79	2217	30	2198	109	2212	3	1881	0	0	3	1881	82	2204	30	2198	112	2203								
4	Karnataka	C	Kh.	66	2207	6	1914	72	2183	2	1351	0	0	2	1351	68	2182	6	1914	74	2160									
				S	145	2212	36	2151	181	2200	5	1669	0	0	5	1669	150	2194	36	2151	186	2186								
				P	4	1218	12	1900	16	1730	0	0	10	1176	10	1176	4	1218	22	1571	26	1517								
5	Maharashtra	C	Kh.	2	713	33	1082	35	1060	2	2455	8	1020	10	1307	4	1584	41	1069	45	1115									
				S	6	1049	45	1300	51	1270	2	2455	18	1106	20	1241	8	1401	63	1245	71	1262								
				P	5	1242	21	1119	26	1143	0	0	2	2122	2	2122	5	1242	23	1206	28	1213								
6	Rajasthan	C	Kh.	10	931	24	1598	34	1402	4	884	10	546	14	643	14	918	34	1288	48	1180									
				S	15	1035	45	1374	60	1289	4	884	12	809	16	827	19	1003	57	1255	76	1192								
				P	3	2545	33	2185	36	2215	1	2644	21	1250	22	1314	4	2569	54	1821	58	1873								
7	Tamil Nadu	C	Kh.	2	721	21	1190	23	1149	0	0	29	1132	29	1132	2	721	50	1156	52	1139									
				S	5	1815	54	1798	59	1799	1	2644	50	1181	51	1210	6	1953	104	1502	110	1526								
				P	8	4552	26	3155	34	3484	0	0	6	2416	6	2416	8	4552	32	3017	40	3324								
8	Uttar Pradesh	C	Kh.	8	4443	24	4061	32	4157	0	0	6	1733	6	1733	8	4443	30	3596	38	3774									
				S	16	4497	50	3590	66	3810	0	0	12	2074	12	2074	16	4497	62	3297	78	3543								
				P	55	2867	58	2391	113	2623	1	1346	28	1777	29	1762	56	2840	86	2191	142	2447								
For States Covered		P		55	2867	58	2391	113	2623	1	1346	28	1777	29	1762	56	2840	86	2191	142	2447									
				C	185	2368	247	2164	432	2252	7	1631	85	1424	92	1440	192	2341	332	1975	524	2109								
				S	118	2089	175	1797	293	1914	8	1394	82	1075	90	1103	126	2045	257	1566	383	1724								
9	Bihar	C	Kh.	303	2259	422	2012	725	2115	15	1504	167	1252	182	1273	318	2224	589	1797	907	1946									
				MAIZE																										
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20							
1	Bihar	C	Kh.	8	746	2	3711	10	1339	2	1757	0	0	2	1757	10	948	2	3711	12	1409									
				S	2	1535	0	0	2	1535	2	0	0	0	0	0	2	1535	0	0	2	1535								
				P	10	904	2	3711	12	1372	2	1757	0	0	2	1757	12	1046	2	3711	14	1427								
2	Chhattisgarh	C	Kh.	0	0	16	4364	16	4364	0	0	20	2797	20	2797	0	0	36	3493	36	3493									
				S	0	0	18	3586	18	3586	0	0	6	2562	6	2562	0	0	24	3330	24	3330								
				P	0	0	34	3952	34	3952	0	0	26	2742	26	2742	0	0	60	3428	60	3428								
3	Gujarat	C	Kh.	0	0	20	1475	20	1475	0	0	16	1520	16	1520	0	0	36	1495	36	1495									
				S	0	0	11	1366	11	1366	0	0	23	1202	23	1202	0	0	34	1255	34	1255								
				P	0	0	31	1436	31	1436	0	0	39	1332	39	1332	0	0	70	1378	70	1378								
4	Haryana	C	Kh.	21	4229	10	7318	31	5226	0	0	5	1721	5	1721	21	4229	15	5453	36	4739									
				S	16	2609	4	3291	20	2745	0	0	8	1962	8	1962	16	2609	12	2405	28	2522								
				P	37	3529	14	6168	51	4253	0	0	13	1869	13	1869	37	3529	27	4098	64</									

Sl. No.	State	A G E N C Y	S E A S O N	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
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
6	Jammu & Kashmir	C S	Kh.	0	0	34	2694	34	2694	3	683	53	1368	56	1331	3	683	87	1886	90	1846
		P		3	2612	5	2127	8	2309	2	2641	11	1378	13	1572	5	2624	16	1612	21	1853
				3	2612	39	2622	42	2621	5	1466	64	1369	69	1376	8	1896	103	1843	111	1847
7	Jharkhand	C S	Kh.	6	4463	6	4887	12	4675	0	0	28	2468	28	2468	6	4463	34	2895	40	3130
		P		0	0	0	0	0	0	2	2369	30	2930	32	2894	2	2369	30	2930	32	2894
				6	4463	6	4887	12	4675	2	2369	58	2707	60	2695	8	3939	64	2911	72	3025
8	Karnataka	C S	Kh.	2	2511	24	4085	26	3964	0	0	8	1764	8	1764	2	2511	32	3505	34	3446
		P		11	4322	38	3276	49	3510	0	0	0	0	0	0	11	4322	38	3276	49	3510
				13	4043	62	3589	75	3668	0	0	8	1764	8	1764	13	4043	70	3380	83	3484
9	Madhya Pradesh	C S	Kh.	0	0	37	2866	37	2866	0	0	43	1311	43	1311	0	0	80	2030	80	2030
		P		0	0	19	2460	19	2460	0	0	31	1541	31	1541	0	0	50	1890	50	1890
				0	0	56	2728	56	2728	0	0	74	1408	74	1408	0	0	130	1977	130	1977
10	Odisha	C S	Kh.	3	3238	5	2211	8	2596	0	0	9	1781	9	1781	3	3238	14	1934	17	2164
		P		0	0	31	2913	31	2913	0	0	9	1870	9	1870	0	0	40	2678	40	2678
				3	3238	36	2815	39	2848	0	0	18	1825	18	1825	3	3238	54	2485	57	2525
11	Punjab	C S	Kh.	24	5018	7	4336	31	4864	2	2799	1	3463	3	3020	26	4847	8	4227	34	4701
		P		16	3823	0	0	16	3823	4	3076	0	0	4	3076	20	3674	0	0	20	3674
				40	4540	7	4336	47	4509	6	2984	1	3463	7	3052	46	4337	8	4227	54	4321
12	Rajasthan	C S	Kh.	2	3326	19	16305	21	15069	0	0	27	2315	27	2315	2	3326	46	8093	48	7895
		P		0	0	15	2168	15	2168	4	1816	15	2250	19	2158	4	1816	30	2209	34	2163
				2	3326	34	10068	36	9693	4	1816	42	2292	46	2250	6	2319	76	5771	82	5518
13	Tamil Nadu	C S	Kh.	16	9658	24	8689	40	9076	0	0	0	0	0	0	16	9658	24	8689	40	9076
		P		16	9253	22	7113	38	8014	0	0	0	0	0	0	16	9253	22	7113	38	8014
				32	9456	46	7935	78	8559	0	0	0	0	0	0	32	9456	46	7935	78	8559
14	Telangan	C S	Kh.	13	6396	31	3676	44	4480	1	4757	0	0	1	4757	14	6279	31	3676	45	4486
		P		22	5508	25	4289	47	4860	0	0	0	0	0	0	22	5508	25	4289	47	4860
				35	5838	56	3950	91	4676	1	4757	0	0	1	4757	36	5808	56	3950	92	4677
15	Uttar Pradesh	C S	Kh.	91	3767	38	1708	129	3161	0	0	33	1282	33	1282	91	3767	71	1510	162	2778
		P		0	0	4	1419	4	1419	0	0	1	1207	1	1207	0	0	5	1376	5	1376
				91	3767	42	1681	133	3108	0	0	34	1280	34	1280	91	3767	76	1501	167	2736
For States Covered		C S		188	4542	294	4514	482	4525	10	2138	287	1887	297	1896	198	4420	581	3217	779	3523
		P		88	4938	205	3520	293	3946	14	2456	189	2337	203	2345	102	4597	394	2953	496	3291
				276	4668	499	4106	775	4306	24	2324	476	2066	500	2078	300	4481	975	3110	1275	3433
RAGI																					
1	Karnataka	C S	Kh.	4	2529	15	1570	19	1772	2	3507	11	1602	13	1895	6	2855	26	1584	32	1822
		P		6	2409	28	1857	34	1955	0	0	0	0	0	6	2409	28	1857	34	1955	
				10	2457	43	1757	53	1889	2	3507	11	1602	13	1895	12	2632	54	1726	66	1890
2	Uttarakhand	C S	Kh.	0	0	0	0	0	0	0	0	40	1299	40	1299	0	0	40	1299	40	1299
		P		0	0	0	0	0	0	0	0	36	1563	36	1563	0	0	36	1563	36	1563
				0	0	0	0	0	0	0	0	76	1424	76	1424	0	0	76	1424	76	1424
For States Covered		C S		4	2529	15	2244	19	3663	2	8565	51	2162	53	0	6	0	66	0	72	0
		P		6	2409	28	2374	34	1655	0	0	36	3409	36	0	6	0	64	0	70	0
				10	2457	43	2328	53	2375	2	15792	87	2678	89	0	12	0	130	0	142	0
GROUNDNUT																					
1	Andhra Pradesh	C S	Kh.	0	0	104	837	104	837	0	0	6	1434	6	1434	0	0	110	869	110	869
		P		1	362	81	1110	82	1101	0	0	16	1003	16	1003	1	362	97	1092	98	1085
				1	362	185	956	186	953	0	0	22	1121	22	1121	1	362	207	974	208	971
		C S	Rabi	27	2915	2	3789	29	2975	1	2316	0	0	1	2316	28	2893	2	3789	30	2953
		P		29	2955	0	0	29	2955	0	0	0	0	0	29	2955	0	0	29	2955	
				56	2936	2	3789	58	2965	1	2316	0	0	1	2316	57	2925	2	3789	59	2954
2	Gujarat	C S	Kh.	73	2035	49	1654	122	1882	1	1648	4	571	5	787	74	2030	53	1572	127	1839
		P		15	1798	20	1509	35	1633	18	1443	14	1241	32	1354	33	1604	34	1399	67	1500
				88	1995	69	1612	157	1826	19	1453	18	1092	37	1278	107	1899	87	1504	194	1722
3	Karnataka	C S	Kh.	6	508	17	1252	23	1058	0	0	21	932	21	932	6	508	38	1076	44	998
		P		10	935	50	1036	60	1019	0	0	2	1156	2	1156	10	935	52	1040	62	1023
				16	775	67	1091	83	1030	0	0	23	952	23	952	16	775	90	1055	106	1013
		C S	Sum.	4	1204	3	1722	7	1426	8	1638	2	1622	10	1635	12	1493	5	1682	17	1549
		P		18	1156	6	1337	24	1201	4	1143	3	2160	7	1578	22	1154	9	1611	31	1286
				22	1165	9	1465	31	1252	12	1473	5	1945	17	1612	34	1274	14	1636	48	1379
4	Madhya Pradesh	C S	Kh.	1	2166	9	2216	10	2211	0	0	30	1182	30	1182	1	2166	39	1420	40	1439
		P		0	0	7	1123	7	1123	0	0	15	1406	15	1406	0	0	22	1316	22	1316
				1	2166	16	1738	17	1763	0	0	45	1256	45	1256	1	2166	61	1383	62	1395
5	Maharashtra	C S	Kh.	2	1413	19	1204	21	1224	1	372	21	1618	22	1561	3	1066	40	1421	43	1397
		P		8	900	25	875	33	881	0	0	9	744	9	744	8	900	34	840	42	852
				10	1002	44	1017	54	1015	1	372	30	1355	31	1324	11	945	74	1154	85	1127
6	Rajasthan	C S	Kh.	26	2084	3	1018	29	1974</												

Sl. No.	State	A G E N C Y	S E A S O N	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	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	
				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	28	29	30	31	32	
7	Tamil Nadu	C	Kh.	8	3475	32	2544	40	2730	0	0	0	0	0	0	8	3475	32	2544	40	2730	0	0	0	0	0	0	8	3475	32	2544	40	2730	
				S	8	2852	28	2061	36	2237	0	0	0	0	0	0	0	8	2852	28	2061	36	2237	0	0	0	0	8	2852	28	2061	36	2237	
				P	16	3163	60	2319	76	2497	0	0	0	0	0	0	0	16	3163	60	2319	76	2497	0	0	0	0	16	3163	60	2319	76	2497	
				C	Rabi	15	3783	7	1356	22	3011	4	2559	0	0	4	2559	19	3526	7	1356	26	2941	0	0	0	0	0	19	3526	7	1356	26	2941
				S	23	3366	8	1246	31	2819	1	3899	0	0	1	3899	24	3388	8	1246	32	2852	0	0	0	0	0	24	3388	8	1246	32	2852	
8	Telangana	C	Kh.	27	1481	12	1300	39	1426	0	0	0	0	0	0	27	1481	12	1300	39	1426	0	0	0	0	0	27	1481	12	1300	39	1426		
				S	21	1525	12	1366	33	1467	7	1729	0	0	7	1729	28	1576	12	1366	40	1513	0	0	0	0	0	28	1576	12	1366	40	1513	
				P	48	1500	24	1333	72	1445	7	1729	0	0	7	1729	55	1530	24	1333	79	1470	0	0	0	0	0	55	1530	24	1333	79	1470	
				C	189	2216	257	1379	446	1734	22	2182	84	1228	106	1426	211	2213	341	1342	552	1548	0	0	0	0	0	211	2213	341	1342	552	1548	
				S	143	2113	239	1239	382	1566	38	1682	65	1323	103	1455	181	2022	304	1257	485	1542	0	0	0	0	0	181	2022	304	1257	485	1542	
For States Covered		C	Kh.	246	2093	457	1311	703	1584	48	1785	149	1269	197	1395	294	2042	606	1301	900	1465	0	0	0	0	0	294	2042	606	1301	900	1465		
				S	189	2216	257	1379	446	1734	22	2182	84	1228	106	1426	211	2213	341	1342	552	1548	0	0	0	0	0	211	2213	341	1342	552	1548	
				P	143	2113	239	1239	382	1566	38	1682	65	1323	103	1455	181	2022	304	1257	485	1542	0	0	0	0	0	181	2022	304	1257	485	1542	
				C	189	2216	257	1379	446	1734	22	2182	84	1228	106	1426	211	2213	341	1342	552	1548	0	0	0	0	0	211	2213	341	1342	552	1548	
				S	143	2113	239	1239	382	1566	38	1682	65	1323	103	1455	181	2022	304	1257	485	1542	0	0	0	0	0	181	2022	304	1257	485	1542	
1	Andhra Pradesh	C	Kh.	50	81102	0	0	50	81102	2	64480	0	0	2	64480	52	80462	0	0	52	80462	0	0	0	0	0	52	80462	0	0	52	80462		
				S	54	83138	0	0	54	83138	0	0	0	0	0	0	54	83138	0	0	54	83138	0	0	0	0	0	54	83138	0	0	54	83138	
				P	104	82159	0	0	104	82159	2	64480	0	0	2	64480	106	81825	0	0	106	81825	0	0	0	0	0	106	81825	0	0	106	81825	
				C	Rabi	0	0	0	0	0	0	0	0	24	37213	24	37213	0	0	24	37213	24	37213	0	0	0	0	0	24	37213	24	37213	24	37213
				S	0	0	0	0	0	0	0	0	0	20	36430	20	36430	0	0	20	36430	20	36430	0	0	0	0	0	20	36430	20	36430	20	36430
2	Assam	C	Kh.	0	0	0	0	0	0	0	0	0	24	37213	24	37213	0	0	24	37213	24	37213	0	0	0	0	0	24	37213	24	37213	24	37213	
				S	0	0	0	0	0	0	0	0	0	44	36857	44	36857	0	0	44	36857	44	36857	0	0	0	0	44	36857	44	36857	44	36857	
				P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				C	Rabi	2	70140	2	59800	4	64970	13	41132	6	62573	19	47903	15	45000	8	61880	23	50871	0	0	0	0	0	15	45000	8	61880	23	50871
				S	10	59516	2	22800	12	53397	8	47200	10	44408	18	45649	18	54042	12	40807	30	48748	0	0	0	0	0	18	45649	18	54042	12	40807	30
3	Bihar	C	Kh.	12	61287	4	41300	16	56290	21	43444	16	51220	37	46806	33	49932	20	49236	53	49669	0	0	0	0	0	33	49932	20	49236	53	49669		
				S	75	85919	0	0	75	85919	1	86000	0	0	1	86000	76	85920	0	0	76	85920	0	0	0	0	0	76	85920	0	0	76	85920	
				P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				C	Rabi	2	70140	2	59800	4	64970	13	41132	6	62573	19	47903	15	45000	8	61880	23	50871	0	0	0	0	0	15	45000	8	61880	23	50871
				S	10	59516	2	22800	12	53397	8	47200	10	44408	18	45649	18	54042	12	40807	30	48748	0	0	0	0	0	18	45649	18	54042	12	40807	30
4	Haryana	C	Kh.	27	11855	1	119300	28	112121	4	32340	3	62540	7	45283	31	101595	4	76730	35	98753	0	0	0	0	0	31	101595	4	76730	35	98753		
				S	30	90412	4	88500	34	90187	2	130920	2	72280	4	101600	32	92944	6	83093	38	91389	0	0	0	0	0	32	92944	6	83093	38	91389	
				P	57	100569	5	94660	62	100093	6	65200	5	66436	11	65762	63	97201	10	80548	73	94920	0	0	0	0	0	63	97201	10	80548	73	94920	
				C	Rabi	27	87986	0	0	27	87986	14	124214	0	0	14	124214	41	100356	0	0	41	100356	0	0	0	0	0	41	100356	0	0	41	100356
				S	24	84642	4	80200	28	84007	3	124307	0	0	3	124307	27	89049	4	80200	31	87907	0	0	0	0	0	27	89049	4	80200	31	87907	
5	Karnataka	C	Kh.	51	86412	4	80200	55	85960	17	124231	0	0	17	124231	68	95867	4	80200	72	94996	0	0	0	0	0	68	95867	4	80200	72	94996		
				S	57	91944	0	0	57	91944	1	60800	0	0	1	60800	58	91407	0	0	58	91407	0	0	0	0	0	58	91407	0	0	58	91407	
				P	36	77673	0	0	36	77673	0	0	0	0	0	0	36	77673	0	0	36	77673	0	0	0	0	0	36	77673	0	0	36	77673	
				C	Rabi	22	99498	0	0	22	99498	13	76866	0	0	13	76866	35	91092	0	0	35	91092	0	0	0	0	0	35	91092	0	0	35	91092
				S	0	0	0	0	0	0	0	22	71210	0	0	22	71210	22	71210	0	0	22	71210	0	0	0	0	0	22	71210	0	0	22	71210
6	Maharashtra	C	Kh.	22	99498	0	0	22	99498	35	73311	0	0	35	73311	57	83418	0	0	57	83418	0	0	0	0	0	57	83418	0	0	57	83418		
				S	38	113674	0	0	38	113674	2	84400	0	0	2	84400	40	112210	0	0	40	112210	0	0	0	0	0	40	112210	0	0	40	112210	
				P	29	107812	0	0	29	107812	1	138000	0	0	1	138000	30	108818	0	0	30	108818	0	0										

Sl. No.	State	A G E N C Y	S E A S O N	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	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
				3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22								
8	Jharkhand	C	Rabi	12	2933	0	0	12	2933	30	2008	8	1402	38	1880	42	2272	8	1402	50	2133										
			S	4	1540	0	0	4	1540	18	1934	12	2096	30	1999	22	1862	12	2096	34	1945										
			P	16	2585	0	0	16	2585	48	1980	20	1818	68	1933	64	2131	20	1818	84	2057										
9	Karnataka	C	Rabi	15	1578	6	1023	21	1419	7	1509	6	1195	13	1364	22	1556	12	1109	34	1398										
			S	17	1510	8	1295	25	1441	7	1728	8	425	15	1033	24	1573	16	860	40	1288										
			P	32	1542	14	1179	46	1431	14	1618	14	755	28	1187	46	1565	28	967	74	1339										
10	Madhya Pradesh	C	Rabi	108	3145	5	2249	113	3105	72	2902	59	1615	131	2322	180	3048	64	1665	244	2685										
			S	32	3182	0	0	32	3182	26	2903	16	2417	42	2718	58	3057	16	2417	74	2918										
			P	140	3153	5	2249	145	3122	98	2902	75	1786	173	2418	238	3050	80	1815	318	2739										
11	Maharashtra	C	Rabi	95	2178	10	1341	105	2098	9	1582	2	934	11	1464	104	2126	12	1273	116	2038										
			S	67	2100	2	753	69	2060	18	2135	10	1009	28	1733	85	2107	12	967	97	1966										
			P	162	2145	12	1243	174	2083	27	1951	12	997	39	1657	189	2117	24	1120	213	2005										
12	Punjab	C	Rabi	197	4914	0	0	197	4914	2	4432	0	0	2	4432	199	4909	0	0	199	4909										
			S	155	4940	2	2653	157	4911	12	4962	0	0	12	4962	167	4941	2	2653	169	4914										
			P	352	4926	2	2653	354	4913	14	4886	0	0	14	4886	366	4924	2	2653	368	4912										
13	Rajasthan	C	Rabi	63	4040	0	0	63	4040	45	3287	0	0	45	3287	108	3726	0	0	108	3726										
			S	61	3988	2	10808	63	4204	27	3763	0	0	27	3763	88	3919	2	10808	90	4072										
			P	124	4014	2	10808	126	4122	72	3465	0	0	72	3465	196	3813	2	10808	198	3883										
14	Uttar Pradesh	C	Rabi	518	3695	4	2266	522	3684	44	3370	2	1020	46	3267	562	3670	6	1851	568	3650										
			S	57	3434	0	0	57	3434	4	2807	0	0	4	2807	61	3393	0	0	61	3393										
			P	575	3669	4	2266	579	3660	48	3323	2	1020	50	3231	623	3643	6	1851	629	3625										
15	Uttarakhand	C	Rabi	32	4218	2	2013	34	4089	7	1988	9	1171	16	1529	39	3818	11	1324	50	3269										
			S	36	3999	0	0	36	3999	2	2381	22	1072	24	1181	38	3914	22	1072	60	2871										
			P	68	4102	2	2013	70	4042	9	2076	31	1100	40	1320	77	3865	33	1156	110	3052										
16	West Bengal	C	Rabi	98	3125	0	0	98	3125	6	4349	0	0	6	4349	104	3196	0	0	104	3196										
			S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
			P	98	3125	0	0	98	3125	6	4349	0	0	6	4349	104	3196	0	0	104	3196										
For States Covered	C	Rabi	1524	3638	81	1832	1605	3547	303	2864	169	1458	472	2361	1827	3510	250	1579	2077	3277											
		S	711	3738	59	2195	770	3619	215	2923	161	1460	376	2296	926	3548	220	1657	1146	3185											
		P	2235	3670	140	1985	2375	3570	518	2889	330	1459	848	2332	2753	3523	470	1616	3223	3245											
BARLEY																															
1	Haryana	C	Rabi	21	2957	0	0	21	2957	5	1707	2	3192	7	2131	26	2717	2	3192	28	2750										
			S	34	3422	4	2853	38	3362	2	3586	0	0	2	3586	36	3431	4	2853	40	3373										
			P	55	3244	4	2853	59	3218	7	2244	2	3192	9	2455	62	3131	6	2966	68	3117										
2	Himachal Pradesh	C	Rabi	0	0	0	0	0	0	4	1738	10	1679	14	1696	4	1738	10	1679	14	1696										
			S	0	0	2	4965	2	4965	0	0	12	1713	12	1713	0	0	14	2178	14	2178										
			P	0	0	2	4965	2	4965	4	1738	22	1698	26	1704	4	1738	24	1970	28	1937										
3	Punjab	C	Rabi	30	3732	0	0	30	3732	6	3523	0	0	6	3523	36	3697	0	0	36	3697										
			S	28	4120	0	0	28	4120	4	2861	0	0	4	2861	32	3963	0	0	32	3963										
			P	58	3919	0	0	58	3919	10	3258	0	0	10	3258	68	3822	0	0	68	3822										
4	Rajasthan	C	Rabi	42	3646	0	0	42	3646	26	2750	0	0	26	2750	68	3303	0	0	68	3303										
			S	42	3836	0	0	42	3836	26	3501	0	0	26	3501	68	3708	0	0	68	3708										
			P	84	3741	0	0	84	3741	52	3126	0	0	52	3126	136	3505	0	0	136	3505										
For States Covered	C	Rabi	93	3518	0	0	93	3518	41	2637	12	1931	53	2477	134	3248	12	1931	146	3140											
		S	104	3777	6	0	110	3765	32	3426	12	1713	44	2959	136	3695	18	2328	154	3535											
		P	197	3655	6	0	203	3652	73	2983	24	1822	97	2696	270	3473	30	2169	300	3343											
GRAM																															
1	Andhra Pradesh	C	Rabi	0	0	58	1466	58	1466	0	0	0	0	0	0	58	1466	58	1466	58	1466										
			S	0	0	40	1536	40	1536	0	0	1	700	1	700	0	0	41	1516	41	1516										
			P	0	0	98	1494	98	1494	0	0	1	700	1	700	0	0	99	1486	99	1486										
2	Bihar	C	Rabi	0	0	0	0	0	0	4	587	30	925	34	886	4	587	30	925	34	886										
			S	0	0	0	0	0	0	8	796	28	966	36	928	8	796	28	966	36	928										
			P	0	0	0	0	0	0	12	726	58	945	70	908	12	726	58	945	70	908										
3	Chhattisgarh	C	Rabi	4	908	0	0	4	908	24	673	12	696	36	681	28	706	12	696	40	703										
			S	0	0	0	0	0	0	15	549	11	1081	26	774	15	549	11	1081	26	774										
			P	4	908	0	0	4	908	39	625	23	880	62	720	43	652	23	880	66	731										
4	Gujarat	C	Rabi	15	1469	15	1300	30	1384	3	1285	5	1074	8	1153	18	1438	20	1243	38	1336										
			S	3	829	3	186	6	508	16	1171	4	1285	20	1194	19	1117	7	814	26	1035										
			P	18	1362	18	1114	36	1238	19	1189	9	1168	28	1182	37	1273	27	1132	64	1214										
5	Haryana	C	Rabi	7	1487	6	1571	13	1526	7	1160	6	604	13	904	14	1324	12	1088	26	1215										
			S	21	1441	14	900	35	1225	4	1292	3	1631	7	1437	25	1417	17	1029	42	1260										
			P	28	1453	20	1102	48	1306	11	1208	9	946	20	1090	39	1383	29	1053	68	1243										
6	Jharkhand	C	Rabi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
			S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
			P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
7	Karnataka	C	Rabi	3	731	6	727	9	729	4	648	18	615	22	621	7	683	24	643	31	652										
			S	7	829	20	902	27	883	1	619	10	664	11	660	8	802	30	823	38	818										
			P	10	799																										

Sl. No.	State	A G E N C Y	S E A S O N	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
9	Maharashtra	C	Rabi	45	1421	16	976	61	1305	11	714	8	702	19	709	56	1282	24	885	80	1163
			S	22	1280	14	1051	36	1191	15	848	21	790	36	815	37	1105	35	894	72	1003
			P	67	1375	30	1011	97	1262	26	791	29	766	55	778	93	1212	59	890	152	1087
10	Punjab	C	Rabi	35	1361	2	1019	37	1342	3	849	0	0	3	849	38	1320	2	1019	40	1305
			S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			P	35	1361	2	1019	37	1342	3	849	0	0	3	849	38	1320	2	1019	40	1305
11	Rajasthan	C	Rabi	20	1159	2	0	22	1054	29	1300	25	816	54	1076	49	1242	27	756	76	1070
			S	18	1232	14	958	32	1112	29	1104	18	825	47	997	47	1153	32	883	79	1044
			P	38	1194	16	838	54	1088	58	1202	43	820	101	1039	96	1199	59	825	155	1056
12	Uttar Pradesh	C	Rabi	6	1402	2	610	8	1204	27	1144	15	1391	42	1232	33	1191	17	1299	50	1228
			S	0	0	4	947	4	947	0	0	0	0	0	0	0	0	4	947	4	947
			P	6	1402	6	835	12	1119	27	1144	15	1391	42	1232	33	1191	21	1232	54	1207
For States Covered	C	Rabi	160	1346	111	1273	271	1316	157	996	185	891	342	940	317	1173	296	1034	613	1106	
		S	81	1230	111	1131	192	1173	102	993	114	947	216	969	183	1098	112	1038	408	1065	
		P	241	1307	222	1202	463	1257	259	995	299	913	558	951	500	1145	521	1036	1021	1090	
RAPE & MUSTARD																					
1	Assam	C	Rabi	0	0	2	952	2	952	0	54	773	54	773	0	0	56	779	56	779	
			S	0	0	0	0	0	0	6	663	38	626	44	631	6	663	38	626	44	631
			P	0	0	2	952	2	952	6	663	92	712	98	709	6	663	94	717	100	714
2	Bihar	C	Rabi	11	1161	0	0	11	1161	19	956	6	854	25	932	30	1031	6	854	36	1002
			S	8	1095	0	0	8	1095	28	998	4	1418	32	1051	36	1020	4	1418	40	1059
			P	19	1133	0	0	19	1133	47	981	10	1080	57	999	66	1025	10	1080	76	1032
3	Chhattisgarh	C	Rabi	4	855	4	134	8	495	8	495	20	508	28	493	12	589	24	445	36	493
			S	0	0	0	0	0	0	0	0	18	459	18	459	0	18	459	18	459	
			P	4	855	4	134	8	495	8	495	38	485	46	480	12	589	42	451	54	482
4	Gujarat	C	Rabi	38	1889	3	1067	41	1829	1	1960	0	0	1	1960	39	1891	3	1067	42	1832
			S	33	1862	0	0	33	1862	2	1940	0	0	2	1940	35	1866	0	0	35	1866
			P	71	1876	3	1067	74	1844	3	1947	0	0	3	1947	74	1879	3	1067	77	1848
5	Haryana	C	Rabi	51	1906	0	0	51	1906	2	1915	0	0	2	1915	53	1907	0	0	53	1907
			S	71	1788	3	2025	74	1797	0	0	0	0	0	71	1788	3	2025	74	1797	
			P	122	1837	3	2025	125	1842	2	1915	0	0	2	1915	124	1838	3	2025	127	1843
6	Jharkhand	C	Rabi	14	507	5	336	19	462	11	855	10	703	21	783	25	660	15	581	40	630
			S	0	0	0	0	0	4	685	26	1477	30	1372	4	685	26	1477	30	1372	
			P	14	507	5	336	19	462	15	810	36	1262	51	1129	29	664	41	1149	70	948
7	Madhya Pradesh	C	Rabi	27	1282	2	792	29	1248	17	1066	14	368	31	751	44	1199	16	421	60	991
			S	6	1098	2	1147	8	1110	0	0	8	461	8	1098	10	598	16	786		
			P	33	1249	4	970	37	1218	17	1066	22	402	39	691	50	1186	26	489	76	948
8	Punjab	C	Rabi	34	1701	1	542	35	1667	5	1529	0	0	5	1529	39	1679	1	542	40	1650
			S	34	1637	3	915	37	1578	3	1787	0	0	3	1787	37	1649	3	915	40	1594
			P	68	1669	4	822	72	1622	8	1626	0	0	8	1626	76	1664	4	822	80	1622
9	Rajasthan	C	Rabi	45	1628	4	928	49	1571	24	1599	0	0	24	1599	69	1618	4	928	73	1580
			S	44	1591	2	2241	46	1619	14	1719	4	745	18	1503	58	1622	6	1244	64	1587
			P	89	1610	6	1365	95	1594	38	1643	4	745	42	1558	127	1620	10	1117	137	1583
10	Uttar Pradesh	C	Rabi	64	1535	2	828	66	1514	22	2492	12	890	34	1927	86	1780	14	882	100	1654
			S	7	1868	4	1230	11	1636	2	1794	0	0	2	1794	9	1851	4	1230	13	1660
			P	71	1568	6	1096	77	1531	24	2434	12	890	36	1919	95	1787	18	959	113	1655
11	West Bengal	C	Rabi	86	1343	2	881	88	1333	12	1148	4	897	16	1085	98	1319	6	891	104	1295
			S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			P	86	1343	2	881	88	1333	12	1148	4	897	16	1085	98	1319	6	891	104	1295
For States Covered	C	Rabi	374	309	25	70	399	294	121	114	120	30	241	72	495	261	145	37	640	1315	
		S	203	2817	14	1184	217	2711	59	2877	98	852	157	1613	262	2830	112	893	374	1383	
		P	577	1584	39	951	616	1544	180	1341	218	380	398	1024	757	1526	257	791	1014	1340	

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.

**ESTIMATES OF YIELD RATE ACCORDING TO USE OF
FERTILISERS, MANURES AND UNMANURED UNDER ICS DURING 2020-21**

Sl. No.	State	S E A S O N	A G E N C Y	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 Pradesh	Kharif	C	94	2958	2	2328	54	2632	1	2788	151	2832
			S	96	2784	0	0	50	2709	2	2104	148	2749
		Summer	P	190	2870	2	2328	104	2669	3	2332	299	2791
			C	60	4122	0	0	25	3585	1	190	86	3920
			S	69	4131	0	0	28	3539	2	2479	99	3930
		P	129	4127	0	0	53	3560	3	1716	185	3925	
2	Assam	Early Kharif	C	2	785	6	2460	2	2859	12	1346	22	1736
			S	6	1797	2	1175	2	1094	6	988	16	1328
		Late Kharif	P	8	1544	8	2139	4	1977	18	1227	38	1564
			C	52	2291	16	2267	9	2168	59	2043	136	2173
			S	34	2260	9	2224	8	2507	60	2194	111	2240
		Summer	P	86	2279	25	2251	17	2328	119	2120	247	2203
			C	3	3343	0	0	6	3916	0	0	9	3725
			S	14	3212	0	0	2	3478	2	1756	18	3080
		P	17	3235	0	0	8	3806	2	1756	27	3295	
3	Bihar	Bhadai	C	21	1584	0	0	2	4817	5	1650	28	1826
			S	24	1814	0	0	0	0	10	1620	34	1757
			P	45	1706	0	0	2	4817	15	1630	62	1788
		Aghani	C	127	2521	15	1703	32	2414	5	1409	179	2402
			S	105	2398	2	1242	24	2102	4	2056	135	2318
			P	232	2465	17	1649	56	2280	9	1696	314	2366
		Summer	C	14	2079	0	0	0	0	4	1699	18	1995
			S	12	2619	0	0	0	0	0	0	12	2619
		P	26	2328	0	0	0	0	4	1699	30	2244	
4	Chhattisgarh	Kharif	C	28	2109	5	2227	37	2490	0	0	70	2319
			S	55	2091	2	962	7	1993	2	2660	66	2063
			P	83	2097	7	1865	44	2411	2	2660	136	2195
5	Gujarat	Kharif	C	14	1520	0	0	49	2139	2	1163	65	1976
			S	25	1763	0	0	34	1464	0	0	59	1591
			P	39	1676	0	0	83	1863	2	1163	124	1793
6	Haryana	Kharif	C	69	3753	0	0	0	0	3	2783	72	3713
			S	49	3734	0	0	0	0	0	0	49	3734
			P	118	3745	0	0	0	0	3	2783	121	3721
7	Himachal Pradesh	Kharif	C	2	2376	8	1471	30	3020	6	2762	46	2689
			S	6	2178	12	1535	16	1681	6	1722	40	1718
			P	8	2227	20	1510	46	2555	12	2242	86	2237
8	Jammu & Kashmir	Kharif	C	13	1610	0	0	57	2511	0	0	70	2343
			S	10	1771	0	0	18	2674	0	0	28	2352
			P	23	1680	0	0	75	2550	0	0	98	2346
9	Jharkhand	Bhadai	C	2	2864	20	843	16	1446	2	1676	40	1227
			S	5	883	2	708	1	524	18	1042	26	966
			P	7	1449	22	830	17	1392	20	1106	66	1124
		Aghani	C	12	1923	4	1998	34	2178	0	0	50	2102
			S	12	1786	3	2306	12	1972	13	2204	40	2017
			P	24	1854	7	2130	46	2124	13	2204	90	2064

Sl. No.	State	S E A S O N	A G E N C Y	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	15	3341	7	2282	84	2791	1	2377	107	2831	
			S	37	3324	4	2811	64	2984	9	2727	114	3068	
			P	52	3329	11	2474	148	2875	10	2692	221	2953	
		Summer	C	0	0	0	0	0	0	0	7	2584	7	2584
			S	6	2931	0	0	18	3408	4	2350	28	3155	
			P	6	2931	0	0	18	3408	11	2499	35	3041	
11	Kerala	Autumn	C	27	2045	19	1274	52	2365	2	1705	100	2058	
			S	34	2411	14	1242	48	2425	4	1974	100	2236	
			P	61	2249	33	1260	100	2394	6	1884	200	2147	
		Winter	C	22	2768	17	1718	60	2702	1	811	100	2530	
			S	35	2637	8	1646	51	2464	6	1496	100	2401	
			P	57	2688	25	1695	111	2593	7	1398	200	2466	
		Summer	C	37	2987	4	2793	45	2492	1	4724	87	2742	
			S	52	2827	6	1953	39	2410	2	1753	99	2588	
			P	89	2894	10	2289	84	2454	3	2744	186	2660	
12	Madhya Pradesh	Kharif	C	56	2280	0	0	27	2399	13	1297	96	2180	
			S	26	2201	2	1720	11	2173	17	1707	56	2028	
			P	82	2255	2	1720	38	2333	30	1529	152	2124	
13	Maharashtra	Kharif	C	36	1422	1	2531	26	1511	2	531	65	1447	
			S	26	1969	2	725	16	1651	12	1049	56	1636	
			P	62	1651	3	1327	42	1564	14	975	121	1535	
14	Odisha	Autumn	C	64	1787	6	2400	76	1890	10	1606	156	1849	
			S	74	1875	17	1999	103	1914	13	1739	207	1896	
			P	138	1834	23	2103	179	1904	23	1681	363	1876	
		Winter	C	54	2292	12	2213	162	2377	4	1803	232	2339	
			S	83	2332	27	2413	136	2489	10	2432	256	2428	
			P	137	2316	39	2351	298	2428	14	2253	488	2385	
		Summer	C	2	2857	0	0	2	2578	0	0	4	2718	
			S	91	3535	4	1672	41	2699	4	1564	140	3181	
			P	93	3521	4	1672	43	2693	4	1564	144	3168	
15	Punjab	Kharif	C	148	4800	0	0	13	5145	0	0	161	4827	
			S	149	4755	0	0	1	5549	0	0	150	4760	
			P	297	4777	0	0	14	5174	0	0	311	4795	
16	Tamil Nadu	Phase-I	C	9	3470	0	0	27	5037	0	0	36	4645	
			S	11	4273	0	0	28	4380	1	4219	40	4347	
			P	20	3912	0	0	55	4702	1	4219	76	4488	
		Phase-II	C	11	2115	4	4464	45	3644	0	0	60	3418	
			S	19	3207	0	0	35	2999	0	0	54	3072	
			P	30	2807	4	4464	80	3362	0	0	114	3254	
		Phase-III	C	3	3506	0	0	15	4151	1	3059	19	3992	
			S	6	4073	0	0	24	4104	0	0	30	4098	
			P	9	3884	0	0	39	4123	1	3059	49	4057	

ANNEX XVI (Contd.....)

Sl. No.	State	S E A S O N	A G E N C Y	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		
17	Telangana	Kharif	C	42	3041	0	0	23	2978	0	0	65	3019		
			S	34	2987	1	5184	23	3080	4	3309	62	3078		
			P	76	3017	1	5184	46	3029	4	3309	127	3047		
		Rabi	C	37	3744	0	0	5	4489	0	0	42	3833		
			S	55	4093	0	0	17	3724	0	0	72	4006		
			P	92	3953	0	0	22	3898	0	0	114	3942		
18	Uttar Pradesh	Kharif	C	542	2800	0	0	113	2831	0	0	655	2805		
			S	10	2777	0	0	0	0	7	2979	17	2860		
			P	552	2799	0	0	113	2831	7	2979	672	2806		
19	Uttarakhand	Kharif	C	15	3599	25	1929	10	3952	0	0	50	2834		
			S	24	3132	17	1444	2	3031	3	1022	46	2366		
			P	39	3311	42	1732	12	3798	3	1022	96	2610		
20	West Bengal	Aus	C	78	2744	3	1371	19	2311	0	0	100	2620		
			S	0	0	0	0	0	0	0	0	0	0		
			P	78	2744	3	1371	19	2311	0	0	100	2620		
		Aman	C	105	2931	2	1983	43	2933	4	2133	154	2898		
			S	1	3323	0	0	1	3395	0	0	2	3359		
			P	106	2934	2	1983	44	2944	4	2133	156	2904		
	Summer	C	62	3350	0	0	16	3385	0	0	78	3357			
		S	0	0	0	0	0	0	0	0	0	0			
		P	62	3350	0	0	16	3385	0	0	78	3357			
	21	Puducherry	Kharif	C	0	0	0	0	10	3031	0	0	10	3031	
				S	10	3069	0	0	0	0	0	0	10	3069	
				P	10	3069	0	0	10	3031	0	0	20	3050	
Rabi-I			C	0	0	0	0	10	2604	0	0	10	2604		
			S	10	2300	0	0	0	0	0	0	10	2300		
			P	10	2300	0	0	10	2604	0	0	20	2452		
Rabi-II			C	0	0	0	0	10	3137	0	0	10	3137		
			S	10	3182	0	0	0	0	0	0	10	3182		
			P	10	3182	0	0	10	3137	0	0	20	3159		
For states covered			C	1878	2915	176	1859	1246	2694	146	1881	3446	2737		
			S	1325	3014	134	1847	860	2602	221	1938	2540	2719		
			P	3203	2956	310	1854	2106	2656	367	1915	5986	2730		
JOWAR															
1	Karnataka	Kharif	C	2	2920	1	1496	3	1067	4	1412	10	1618		
			S	5	2757	2	2537	17	2101	22	2275	46	2274		
			P	7	2804	3	2190	20	1946	26	2142	56	2157		
		Rabi	C	0	0	0	0	0	0	55	1005	55	1005		
			S	4	956	2	279	7	806	40	977	53	926		
			P	4	956	2	279	7	806	95	993	108	967		
2	Madhya Pradesh	Kharif	C	50	1307	4	1045	10	1782	36	1060	100	1255		
			S	23	1164	4	1064	6	2070	21	958	54	1177		
			P	73	1262	8	1054	16	1890	57	1022	154	1228		
3	Maha-rashtra	Kharif	C	26	1063	2	396	12	1326	0	0	40	1108		
			S	19	769	5	1701	5	640	11	1042	40	945		
			P	45	939	7	1328	17	1124	11	1042	80	1026		
		Rabi	C	50	1068	6	1127	25	1392	25	382	106	986		
			S	50	1153	1	1247	3	750	42	1026	96	1086		
			P	100	1110	7	1144	28	1323	67	786	202	1033		

ANNEX XVI (Contd.....)

Sl. No.	State	S E A S O N	A G E C Y	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
4	Rajasthan	Kharif	C	24	1257	2	568	1	1393	23	1053	50	1138
			S	18	724	0	0	0	0	27	456	45	563
			P	42	1029	2	568	1	1393	50	731	95	866
5	Tamil Nadu	Kharif	C	3	1710	23	1045	11	1317	3	1261	40	1186
			S	2	1121	16	896	8	1102	6	906	32	963
		Rabi	P	5	1474	39	984	19	1227	9	1024	72	1087
			C	5	1298	5	739	18	1925	10	593	38	1336
			S	2	1946	8	1003	14	1124	8	568	32	1006
P	7	1483	13	902	32	1574	18	582	70	1185			
6	Telangana	Kharif	C	31	832	0	0	4	1155	4	479	39	829
			S	21	900	0	0	5	779	4	818	30	869
			P	52	859	0	0	9	946	8	648	69	846
		Rabi	C	30	2594	0	0	2	1873	6	769	38	2268
			S	28	2815	0	0	4	3477	8	1313	40	2581
			P	58	2701	0	0	6	2942	14	1080	78	2428
			C	2	4590	0	0	0	0	34	1906	36	2055
7	Uttar Pradesh	Kharif	S	0	0	0	0	0	0	0	0	0	
			P	2	4590	0	0	0	0	34	1906	36	2055
For states covered			C	218	1377	38	1010	68	1411	190	1095	514	1250
			S	170	1351	30	1132	55	1561	181	1079	436	1249
			P	388	1366	68	1064	123	1478	371	1087	950	1250
BAJRA													
1	Andhra Pradesh	Kharif	C	9	2171	5	372	16	2731	6	1749	36	2100
			S	17	1398	6	918	1	863	4	592	28	1161
			P	26	1666	11	670	17	2621	10	1286	64	1689
2	Gujarat	Kharif	C	35	1643	2	1948	33	1269	12	1427	82	1469
			S	56	1698	2	2062	34	1514	6	1271	98	1616
			P	91	1677	4	2005	67	1394	18	1375	180	1549
3	Haryana	Kharif	C	90	2171	1	2053	12	2342	9	2349	112	2203
			S	70	2192	0	0	2	1886	2	1301	74	2160
			P	160	2180	1	2053	14	2276	11	2159	186	2186
4	Karnataka	Kharif	C	15	1690	6	1645	1	1105	4	777	26	1517
			S	11	1267	0	0	2	1410	32	1044	45	1115
			P	26	1511	6	1645	3	1309	36	1015	71	1262
5	Maharashtra	Kharif	C	16	1183	1	2950	5	1683	6	610	28	1213
			S	19	1392	2	1000	4	1004	23	1052	48	1180
			P	35	1296	3	1650	9	1381	29	960	76	1192
6	Rajasthan	Kharif	C	24	2385	2	659	6	2101	26	1441	58	1873
			S	26	1251	3	2086	0	0	23	890	52	1139
			P	50	1795	5	1515	6	2101	49	1182	110	1526
7	Tamil Nadu	@	C	1	4544	13	3661	5	4447	21	2790	40	3324
			S	8	3562	4	1449	18	3941	8	4772	38	3774
			P	9	3671	17	3140	23	4051	29	3336	78	3543
8	Uttar Pradesh	Kharif	C	105	2564	1	1700	17	2505	19	1790	142	2447
			S	0	0	0	0	0	0	0	0	0	
			P	105	2564	1	1700	17	2505	19	1790	142	2447
For states covered			C	295	2196	31	2298	95	2112	103	1802	524	2109
			S	207	1806	17	1393	61	2195	98	1315	383	1724
			P	502	2035	48	1978	156	2144	201	1564	907	1946

Sl. No.	State	S E A S O N	A G E N C Y	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
MAIZE													
1	Bihar	Kharif	C	10	1645	0	0	1	292	1	159	12	1409
			S	2	1535	0	0	0	0	0	0	2	1535
			P	12	1627	0	0	1	292	1	159	14	1427
2	Chhattisgarh	Kharif	C	21	3903	5	2767	5	3946	5	2044	36	3493
			S	10	4498	8	2040	2	4510	4	2400	24	3330
			P	31	4095	13	2320	7	4107	9	2202	60	3428
3	Gujarat	Kharif	C	3	1670	0	0	33	1479	0	0	36	1495
			S	7	1359	0	0	27	1228	0	0	34	1255
			P	10	1452	0	0	60	1366	0	0	70	1378
4	Haryana	Kharif	C	13	3863	6	8481	17	4088	0	0	36	4739
			S	14	2473	6	2613	4	3291	4	1783	28	2522
			P	27	3143	12	5547	21	3936	4	1783	64	3769
5	Himachal Pradesh	Kharif	C	2	2063	20	2887	47	3272	0	0	69	3126
			S	6	4027	25	3591	37	3014	4	4646	72	3389
			P	8	3536	45	3278	84	3158	4	4646	141	3260
6	Jammu & Kashmir	Kharif	C	5	1678	21	1661	62	1961	2	642	90	1846
			S	3	2571	7	847	11	2297	0	0	21	1853
			P	8	2013	28	1458	73	2012	2	642	111	1847
7	Jharkhand	Kharif	C	17	3000	2	1692	19	3387	2	3224	40	3130
			S	12	2887	0	0	4	4582	16	2478	32	2894
			P	29	2953	2	1692	23	3595	18	2561	72	3025
8	Karnataka	Kharif	C	12	3229	0	0	20	3751	2	1706	34	3446
			S	17	2959	0	0	24	3859	8	3637	49	3510
			P	29	3071	0	0	44	3810	10	3251	83	3484
9	Madhya Pradesh	Kharif	C	41	2459	8	2015	17	1539	14	1382	80	2030
			S	25	2103	0	0	13	1741	12	1608	50	1890
			P	66	2324	8	2015	30	1627	26	1486	130	1977
10	Odisha	Kharif	C	3	1645	3	1994	7	3044	4	1142	17	2164
			S	15	3357	7	1926	15	2546	3	1695	40	2678
			P	18	3072	10	1946	22	2704	7	1379	57	2525
11	Punjab	Kharif	C	28	4608	0	0	4	6300	2	2799	34	4701
			S	18	3769	0	0	2	2821	0	0	20	3674
			P	46	4280	0	0	6	5140	2	2799	54	4321
12	Rajasthan	Kharif	C	14	2785	7	2479	13	22667	14	1995	48	7895
			S	19	2562	2	1241	1	1373	12	1749	34	2163
			P	33	2657	9	2204	14	21146	26	1882	82	5518
13	Tamil Nadu	@	C	9	7770	2	13115	29	9203	0	0	40	9076
			S	6	8562	2	10193	28	7549	2	10701	38	8014
			P	15	8087	4	11654	57	8391	2	10701	78	8559
14	Telangana	Kharif	C	32	4055	1	5656	12	5537	0	0	45	4486
			S	43	4654	0	0	4	7072	0	0	47	4860
			P	75	4398	1	5656	16	5921	0	0	92	4677
15	Uttar Pradesh	Kharif	C	138	2900	2	3640	16	1433	3	2674	159	2757
			S	0	0	1	1206	0	0	4	1419	5	1376
			P	138	2900	3	2829	16	1433	7	1957	164	2715
For states covered			C	348	3246	77	3109	302	4227	49	1775	776	3521
			S	197	3452	58	2849	172	3550	69	2558	496	3291
			P	545	3320	135	2997	474	3982	118	2233	1272	3432

Sl. No.	State	S E A S O N	A G E N C Y	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
RAGI													
1	Karnataka	Kharif	C	10	2093	3	1724	17	1524	2	3153	32	1822
			S	21	1991	0	0	8	2031	5	1679	34	1955
			P	31	2024	3	1724	25	1686	7	2100	66	639
2	Tamil Nadu	@	C									0	0
			S									0	0
			P	0	0	0	0	0	0	0	0	0	0
3	Uttarakhand	Kharif	C	0	0	38	1334	1	699	1	599	40	1299
			S	0	0	36	1563	0	0	0	0	36	1563
			P	0	0	74	1445	1	699	1	599	76	1424
For states covered			C	10	2093	41	1362	18	1478	3	0	72	1082
			S	21	1991	36	1563	8	2031	5	1679	70	1036
			P	31	2024	77	1456	26	1648	8	1912	142	1059
GROUNDNUT													
1	Andhra Pradesh	Kharif	C	35	761	12	985	55	890	8	1028	110	869
			S	43	1039	20	1324	31	1041	4	721	98	1085
			P	78	914	32	1197	86	944	12	926	208	971
		Rabi	C	13	2973	0	0	17	2938	0	0	30	2953
			S	17	2476	0	0	10	3650	2	3559	29	2955
			P	30	2691	0	0	27	3201	2	3559	59	2954
2	Gujarat	Kharif	C	61	1689	0	0	59	1990	5	1673	125	1831
			S	34	1415	0	0	30	1683	3	633	67	1500
			P	95	1591	0	0	89	1886	8	1283	192	1715
3	Karnataka	Kharif	C	10	757	8	1069	22	1135	4	709	44	998
			S	19	1061	2	1115	16	1119	25	926	62	1023
			P	29	956	10	1078	38	1128	29	896	106	1013
		Rabi	C	0	0	0	0	0	0	17	1549	17	1549
			S	7	1357	0	0	5	1241	19	1272	31	1286
			P	7	1357	0	0	5	1241	36	1403	48	1379
4	Madhya Pradesh	Kharif	C	13	1392	7	1155	5	1405	15	1624	40	1439
			S	8	1046	2	2150	4	1729	8	1170	22	1316
			P	21	1260	9	1376	9	1549	23	1466	62	1395
5	Maharashtra	Kharif	C	24	1396	0	0	17	1531	2	263	43	1397
			S	23	796	0	0	11	1043	8	750	42	852
			P	47	1102	0	0	28	1339	10	652	85	1127
6	Rajasthan	Kharif	C	20	1870	0	0	16	2511	0	0	36	2155
			S	20	2069	1	2154	2	2262	3	2367	26	2121
			P	40	1969	1	2154	18	2483	3	2367	62	2141
7	Tamil Nadu	Kharif	C	0	0	12	2619	20	2811	8	2694	40	2730
			S	9	2493	2	2027	19	2430	6	1311	36	2237
			P	9	2493	14	2535	39	2626	14	2101	76	2497
		Rabi	C	5	2768	2	3615	16	2858	3	3229	26	2941
			S	8	3056	0	0	22	3029	2	94	32	2852
			P	13	2945	2	3615	38	2957	5	1975	58	2892
8	Telangana	Kharif	C	29	1465	0	0	8	1585	2	216	39	1426
			S	31	1588	1	806	6	880	2	2597	40	1513
			P	60	1529	1	806	14	1283	4	1407	79	1470
For States Covered			C	192	1400	39	1536	202	1651	44	1507	477	1527
			S	187	1351	28	1430	119	1471	59	1076	393	1352
			P	379	1376	67	1491	321	1584	103	1260	870	1448

Sl. No.	State	S E A S O N	A G E N C Y	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
SUGARCANE													
1	Andhra Pradesh	Kharif	C	17	72742	0	0	35	84212	0	0	52	80462
			S	27	82028	0	0	27	84248	0	0	54	83138
			P	44	78440	0	0	62	84228	0	0	106	81826
2	Assam	Kharif	C	4	28800	2	33897	0	0	18	39451	24	37213
			S	0	0	8	30700	4	28750	8	46000	20	36430
			P	4	28800	10	31339	4	28750	26	41466	44	36857
3	Bihar	Kharif	C	8	46800	0	0	15	53043	0	0	23	50871
			S	20	53982	0	0	10	38280	0	0	30	48748
			P	28	51930	0	0	25	47138	0	0	53	49669
4	Haryana	Kharif	C	51	87805	1	148368	23	76760	0	0	75	85225
			S	26	86941	0	0	6	83259	0	0	32	86250
			P	77	87513	1	148368	29	78104	0	0	107	85532
5	Karnataka	Kharif	C	7	66257	3	96507	23	107767	2	112200	35	98753
			S	17	90103	0	0	9	102789	12	84660	38	91389
			P	24	83148	3	96507	32	106367	14	88594	73	94920
6	Maharashtra	Kharif	C	23	109405	0	0	18	88794	0	0	41	100356
			S	6	106953	2	65200	13	77616	10	94400	31	87907
			P	29	108898	2	65200	31	84106	10	94400	72	94996
7	Punjab	Kharif	C	55	91150	2	64600	1	159200	0	0	58	91407
			S	33	79388	0	0	3	58800	0	0	36	77673
			P	88	86739	2	64600	4	83900	0	0	94	86147
8	Rajasthan	Kharif	C	13	99677	12	83424	8	68500	2	171660	35	91092
			S	8	87208	0	0	14	62069	0	0	22	71210
			P	21	94927	12	83424	22	64407	2	171660	57	83418
9	Tamil Nadu	Kharif	C	13	123658	0	0	27	106698	0	0	40	112210
			S	2	107100	0	0	28	108941	0	0	30	108818
			P	15	121450	0	0	55	107840	0	0	70	110756
10	Uttar Pradesh	Kharif	C	152	73915	0	0	45	84658	2	68454	199	76289
			S	0	0	0	0	0	0	0	0	0	0
			P	152	73915	0	0	45	84658	2	68454	199	76289
11	Uttarakhand	Kharif	C	24	78313	4	47800	12	106110	0	0	40	83601
			S	0	0	0	0	0	0	0	0	0	0
			P	24	78313	4	47800	12	106110	0	0	40	83601
For States covered			C	367	82331	24	76132	240	76132	24	58948	622	83141
			S	139	81007	10	37600	247	37600	30	77597	293	79405
			P	506	81967	34	64799	425	64799	54	69309	915	81945
WHEAT													
1	Assam	Rabi	C	2	1082	0	0	0	0	4	1232	6	1182
			S	9	1372	3	1591	4	1865	4	1216	20	1472
			P	11	1319	3	1591	4	1865	8	1224	26	1405
2	Bihar	Rabi	C	163	2855	2	3846	36	2742	0	0	201	2845
			S	151	2914	0	0	1	1601	10	3132	162	2919
			P	314	2883	2	3846	37	2711	10	3132	363	2878
3	Chattisgarh	Rabi	C	20	1000	0	0	3	1797	3	1415	26	1140
			S	6	673	2	1852	2	1273	2	895	12	1006
			P	26	925	2	1852	5	1588	5	1207	38	1098
4	Gujarat	Rabi	C	74	3039	1	946	47	2775	7	871	129	2809
			S	73	2765	0	0	36	2760	6	321	115	2636
			P	147	2903	1	946	83	2768	13	617	244	2727

ANNEX XVI (Contd.....)

Sl. No.	State	S E A S O N	A G E N C Y	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	105	4979	0	0	21	4405	0	0	126	4884
			S	107	4762	0	0	11	4849	2	4697	120	4769
			P	212	4870	0	0	32	4558	2	4697	246	4828
6	Himachal Pradesh	Rabi	C	0	0	10	2417	56	1680	0	0	66	1792
			S	4	1609	16	1499	38	1653	2	1471	60	1603
			P	4	1609	26	1852	94	1669	2	1471	126	1702
7	Jammu & Kashmir	Rabi	C	24	1974	5	1646	20	2530	1	1843	50	2161
			S	6	1995	8	1689	16	2298	2	773	32	1994
			P^	30	1978	13	1672	36	2427	3	1130	82	2096
8	Jharkhand	Rabi	C	19	1799	0	0	31	2338	0	0	50	2133
			S	26	2045	0	0	8	1618	0	0	34	1945
			P	45	1942	0	0	39	2190	0	0	84	2057
9	Karnataka	Rabi	C	0	0	0	0	0	0	34	1398	34	1398
			S	4	1177	0	0	0	0	36	1301	40	1288
			P	4	1177	0	0	0	0	70	1348	74	1339
10	Madhya Pradesh	Rabi	C	187	2645	6	2004	30	3364	21	2264	244	2685
			S	42	2913	4	3333	18	3035	10	2565	74	2918
			P	229	2694	10	2536	48	3241	31	2361	318	2739
11	Maharashtra	Rabi	C	89	2047	2	2075	23	2130	2	544	116	2038
			S	55	1929	2	3722	16	2499	24	1549	97	1966
			P	144	2002	4	2899	39	2281	26	1472	213	2005
12	Punjab	Rabi	C	177	4946	0	0	21	4585	1	5168	199	4909
			S	159	4898	0	0	10	5169	0	0	169	4914
			P	336	4924	0	0	31	4774	1	5168	368	4912
13	Rajasthan	Rabi	C	78	3940	2	1916	26	3389	2	1582	108	3726
			S	56	4008	11	3256	19	4045	4	7328	90	4072
			P	134	3968	13	3050	45	3666	6	5413	198	3883
14	Uttar Pradesh	Rabi	C	471	3672	0	0	92	3650	4	941	567	3649
			S	45	3388	2	3582	0	0	14	3383	61	3393
			P	516	3647	2	3582	92	3650	18	2841	628	3624
15	Uttarakhand	Rabi	C	12	4617	16	1529	22	3801	0	0	50	3269
			S	25	4177	23	1132	11	3595	1	2289	60	2871
			P	37	4319	39	1295	33	3732	1	2289	110	3052
16	West Bengal	Rabi	C	88	3186	0	0	16	3246	0	0	104	3196
			S	0	0	0	0	0	0	0	0	0	0
			P	88	3186	0	0	16	3246	0	0	104	3196
For states covered			C	1509	3474	44	1943	444	3040	79	1587	2076	3277
			S	768	3558	71	1912	190	2839	117	2072	1146	3185
			P	2277	3502	115	1924	634	2980	196	1877	3222	3244
BARLEY													
1	Haryana	Rabi	C	22	2477	2	4797	4	3231	0	0	28	2750
			S	39	3333	1	4934	0	0	0	0	40	3373
			P	61	3024	3	4843	4	3231	0	0	68	3117
2	Himachal Pradesh	Rabi	C	0	0	5	2081	9	1482	0	0	14	1696
			S	2	948	12	2383	0	0	0	0	14	2178
			P	2	948	17	2294	9	1482	0	0	28	1937
3	Punjab	Rabi	C	32	3800	0	0	4	2874	0	0	36	3697
			S	26	3951	0	0	4	4420	2	3201	32	3963
			P	58	3868	0	0	8	3647	2	3201	68	3822

ANNEX XVI (Contd.....)

Sl. No.	State	S E A S O N	A G E N C Y	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
4	Rajasthan	Rabi	C	34	3505	2	394	28	3244	4	3452	68	3303
			S	50	3758	6	3410	10	3705	2	3367	68	3708
			P	84	3655	8	2656	38	3366	6	3423	136	3505
For states covered			C	88	3355	9	2310	45	2858	4	0	146	3140
			S	117	3611	19	2842	14	3909	4	3284	154	3535
			P	205	3501	28	2671	59	3107	8	3368	300	3343
GRAM													
1	Andhra Pradesh	Rabi	C	43	1468	3	2033	11	1247	1	2080	58	1466
			S	36	1548	0	0	3	1589	2	822	41	1516
			P	79	1504	3	2033	14	1321	3	1241	99	1486
2	Bihar	Rabi	C	15	735	4	946	0	0	15	1020	34	886
			S	12	1023	0	0	2	663	22	901	36	928
			P	27	863	4	946	2	663	37	949	70	908
3	Chattisgarh	Rabi	C	23	727	0	0	5	825	12	607	40	703
			S	13	920	2	1320	2	436	9	517	26	774
			P	36	797	2	1320	7	714	21	568	66	731
4	Gujarat	Rabi	C	7	1659	6	1285	18	1393	7	909	38	1336
			S	6	1189	4	1007	10	1224	6	587	26	1035
			P	13	1442	10	1174	28	1332	13	760	64	1214
5	Haryana	Rabi	C	16	1528	0	0	1	3042	9	456	26	1215
			S	18	1256	2	2147	0	0	22	1182	42	1260
			P	34	1384	2	2147	1	3042	31	972	68	1243
6	Jharkhand	Rabi	C	0	0	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	0	0	0	0	0
7	Karnataka	Rabi	C	0	0	0	0	0	0	31	652	31	652
			S	6	920	0	0	2	291	30	833	38	818
			P	6	920	0	0	2	291	61	741	69	744
8	Madhya Pradesh	Rabi	C	101	1019	6	454	12	1203	21	1154	140	1030
			S	22	1234	4	814	2	501	16	1125	44	1123
			P	123	1057	10	598	14	1103	37	1142	184	1053
9	Maharashtra	Rabi	C	42	1145	0	0	25	1402	13	762	80	1163
			S	39	1094	2	610	2	1598	29	865	72	1003
			P	81	1120	2	610	27	1417	42	833	152	1087
10	Punjab	Rabi	C	19	1139	6	1790	0	0	15	1322	40	1305
			S	0	0	0	0	0	0	0	0	0	0
			P	19	1139	6	1790	0	0	15	1322	40	1305
11	Rajasthan	Rabi	C	22	1118	8	780	12	1134	34	1084	76	1070
			S	18	1163	10	1310	10	1068	41	921	79	1044
			P	40	1138	18	1074	22	1104	75	995	155	1056
12	Uttar Pradesh	Rabi	C	29	1305	0	0	4	1305	17	1078	50	1228
			S	4	947	0	0	0	0	0	0	4	947
			P	33	1261	0	0	4	1305	17	1078	54	1207
For states covered			C	317	1142	33	1130	88	1299	175	940	613	1106
			S	174	1206	24	1189	33	1050	177	912	408	1065
			P	491	1164	57	1155	121	1231	352	926	1021	1090

Sl. No.	State	S E A S O N	A G E N C Y	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
RAPE & MUSTARD													
1	Assam	Rabi	C	16	650	6	1058	16	714	18	860	56	779
			S	16	659	6	689	12	642	10	537	44	631
			P	32	654	12	874	28	683	28	745	100	714
2	Bihar	Rabi	C	22	1071	7	741	3	1253	4	893	36	1002
			S	30	1028	2	1473	6	1240	2	580	40	1059
			P	52	1046	9	903	9	1244	6	789	76	1032
3	Chattisgarh	Rabi	C	2	240	6	467	4	855	24	460	36	493
			S	4	552	2	550	0	0	12	413	18	459
			P	6	448	8	488	4	855	36	445	54	482
4	Gujarat	Rabi	C	34	1910	0	0	6	1811	2	570	42	1832
			S	26	1857	0	0	9	1892	0	0	35	1866
			P	60	1887	0	0	15	1860	2	570	77	1848
5	Haryana	Rabi	C	43	1904	2	1831	8	1940	0	0	53	1907
			S	68	1799	0	0	3	1745	3	1798	74	1797
			P	111	1840	2	1831	11	1887	3	1798	127	1843
6	Jharkhand	Rabi	C	9	458	7	840	21	651	3	517	40	630
			S	4	1808	0	0	0	0	26	1304	30	1372
			P	13	873	7	840	21	651	29	1223	70	948
7	Madhya Pradesh	Rabi	C	39	1245	4	397	5	651	12	506	60	991
			S	6	1098	0	0	0	0	10	598	16	786
			P	45	1226	4	397	5	651	22	548	76	948
8	Punjab	Rabi	C	34	1662	3	1734	2	1873	1	542	40	1650
			S	37	1642	1	425	0	0	2	1296	40	1594
			P	71	1651	4	1407	2	1873	3	1044	80	1622
9	Rajasthan	Rabi	C	61	1569	2	2049	6	1941	4	979	73	1580
			S	37	1652	10	1908	11	1523	6	766	64	1587
			P	98	1600	12	1931	17	1671	10	851	137	1583
10	Uttar Pradesh	Rabi	C	73	1483	1	480	17	2813	9	985	100	1654
			S	11	1636	2	1794	0	0	0	0	13	1660
			P	84	1503	3	1356	17	2813	9	985	113	1655
11	West Bengal	Rabi	C	89	1369	0	0	15	852	0	0	104	1295
			S	0	0	0	0	0	0	0	0	0	0
			P	89	1369	0	0	15	852	0	0	104	1295
For States Covered			C	422	1460	38	928	103	1339	77	678	640	1315
			S	239	1539	23	1360	41	1321	71	901	374	1383
			P	661	1489	61	1091	144	1334	148	785	1014	1340

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.



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 :

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

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

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

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

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

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:

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

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:

Let

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

Then pooled estimate of area is given by

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

And an estimate of its variance by

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

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 j^{th} 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

$$n_i^2 - \sum_{j=1}^{m_i} n_{ij}^2$$

Where $\lambda_i =$ _____

$$n_i (m_i - 1)$$

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

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

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	Rabi	
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