

41वां अंक

41st - ISSUE

**भारत में
फसल सांख्यिकी प्रणाली का पुनरावलोकन**

**REVIEW OF CROP STATISTICS SYSTEM
IN INDIA**



2015-16

**GOVERNMENT OF INDIA
MINISTRY OF STATISTICS & PROGRAMME IMPLEMENTATION
NATIONAL SAMPLE SURVEY OFFICE
(FIELD OPERATIONS DIVISION)
AGRICULTURE STATISTICS HEADQUARTERS
FARIDABAD**

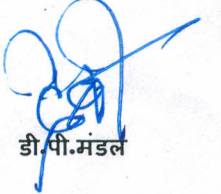
संदेश

कृषि सतत और समावेशी आर्थिक विकास एवं ग्रामीण विकास के लिए एक इंजन है जो कि भारतीय अर्थव्यवस्था का सबसे महत्त्वपूर्ण क्षेत्र रहा है और सकल घरेलू उत्पाद में महत्त्वपूर्ण योगदान देता है तथा यह क्षेत्र कुल कार्य बल के लगभग आधे लोगों को रोजगार प्रदान करता है। कृषि क्षेत्र में ठोस और समयबद्ध आंकड़ों का संग्रह समावेशी आर्थिक विकास की सुदृढ़ नीति निर्माण हेतु आवश्यक है।

2. सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय देश में जारी किए जाने वाले आंकड़ों के आवृत्त क्षेत्र एवं गुणवत्ता जैसे पहलुओं को अत्यधिक महत्व देता है। इस मंत्रालय के अंतर्गत राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (रा.प्र.स.का.) के क्षेत्र संकार्य प्रभाग (क्षे.सं.प्र.) को फसल क्षेत्रफल और उपजदर के समय पर और विश्वसनीय अनुमान प्राप्त करने के लिए उपयुक्त सर्वेक्षण तकनीक विकसित करने, राज्यों को तकनीकी दिशा-निर्देश और सहायता प्रदान करने व योजना को सुचारु रूप से अमल में लाने के लिए 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।

3. फसल सांख्यिकी सुधार योजना के निष्कर्षों के आधार पर कृषि सांख्यिकी मुख्यालय, राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (क्षेत्र संकार्य प्रभाग) प्रतिवर्ष एक रिपोर्ट "भारत में फसल सांख्यिकी प्रणाली का पुनरावलोकन" जारी करता है। यह रिपोर्ट श्रृंखला में 41वीं है जो कि अखिल भारतीय स्तर पर कृषि वर्ष 2015-16 के दौरान फसल सांख्यिकी सुधार योजना के निष्कर्षों को प्रस्तुत करती है। फसल सांख्यिकी के मुख्य दो घटक क्षेत्रफल और उपजदर 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 श्री एस.आर.जोशी, उप महानिदेशक, रा.प्र.स.का.(क्षे.सं.प्र.), कृषि सांख्यिकी मुख्यालय फरीदाबाद व उनकी टीम के अधिकारियों के प्रयासों की सराहना करता हूँ जिनके प्रयासों से उपयोगी रिपोर्ट जारी की गयी है।

4. मुझे विश्वास है कि यह रिपोर्ट प्रतिभागी राज्यों में कृषि के समग्र विकास के लिए नीति निर्माताओं, कृषिविदों, शोधकर्ताओं, सांख्यिकीविदों व योजनाकारों के योगदान में बहुत उपयोगी साबित होगी।



डी.पी.मंडल

D.P.Mondal
Director General


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 nearly half of total 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, Agriculture Statistics Hqrs., NSSO (FOD) brings out every year a publication entitled "**Review of Crop Statistics System in India**". This report is 41st in the series and deals with the findings of the ICS scheme during the Agricultural Year 2015-16 at all India level. Major components of crop statistics, viz. Area and Yield rates 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 about 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 Agricultural Statistics Authorities (SASAs). I take this opportunity to convey my appreciation to Sh. S.R.Joshi, DDG and his team of officers of Agriculture Statistics Headquarters 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 participating States.



D.P.Mondal

**New Delhi
June, 2018**

प्रस्तावना

राष्ट्रीय अर्थव्यवस्था में कृषि क्षेत्र द्वारा निभाई गई महत्वपूर्ण भूमिका को देखते हुए फसलों के अंतर्गत क्षेत्रफल और फसल उत्पादन पर समयबद्ध, विश्वसनीय तथा विस्तृत कृषि सांख्यिकी संग्रहण की आवश्यकता विशेष महत्व रखती है। निर्धारित कार्य प्रणाली का पालन करते हुए भू-उपयोग तथा फसलाधीन क्षेत्र के सांख्यिकी संग्रहण की प्राथमिक जिम्मेदारी राज्य प्राधिकारों की होती है। मुख्य फसलों की उपज दरों का आँकलन राज्य की विभिन्न एजेंसियों द्वारा यादृच्छिक प्रतिचयन की वैज्ञानिक तकनीकों का पालन करते हुये सामान्य फसल प्राक्कलन सर्वेक्षण (सा० फ० प्रा० सर्व०) के माध्यम से किया जाता है।


2. राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (रा० प्र० सा० का०), सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय, भारत सरकार की यह समग्र जिम्मेदारी है कि वह विश्वसनीय फसल प्राक्कलन हेतु उचित सर्वेक्षण तकनीक विकसित करने के लिए राज्यों के कर्मचारियों को प्रशिक्षण, तकनीकी सहयोग एवं पर्यवेक्षण का कार्य करे। फसल सांख्यिकी सुधार योजना, जो कि 1973-74 से लागू है, का उद्देश्य राष्ट्रीय 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 प्राप्त करने के लिए क्षेत्रफल परिगणना तथा समुच्चयीकरण पर प्रतिदर्श जाँच का कार्य प्रत्येक मौसम में लगभग 10,000 प्रतिदर्श ग्रामों में किया जाता है तथा वर्ष भर में लगभग 32,000 फसल कटाई प्रयोगों का निरीक्षण भी किया जाता है।

3. फसल सांख्यिकी सुधार योजना के निष्कर्ष सभी शामिल राज्यों का समुच्चयन कर "भारत में फसल सांख्यिकी प्रणाली का पुनरावलोकन" के अन्तर्गत प्रतिवेदन के रूप में प्रकाशित किए जाते हैं। यह प्रतिवेदन श्रृंखला में 41वीं है जो कि अखिल भारतीय स्तर पर कृषि वर्ष 2015-16 के दौरान फसल सांख्यिकी सुधार योजना के निष्कर्षों को प्रस्तुत करता है।

4. मैं इस प्रतिवेदन को तैयार करने में श्री एस.आर.जोशी, उप महानिदेशक, रा.प्र.स.का.(क्षे.सं.प्र.), कृषि सांख्यिकी मुख्यालय फरीदाबाद के मार्गदर्शन में अधिकारियों की टीम, जो इस कार्य में सम्मिलित रही हैं, की निष्ठा एवं अथक प्रयासों की सराहना करता हूँ। आंकड़ों का संग्रहण, संसाधन तथा सम्बन्धित अन्य कार्य सम्पन्न करने वाले सभी अधिकारियों का योगदान भी प्रशंसनीय है। मैं सम्बन्धित राज्य कृषि सांख्यिकी प्राधिकारों एवं अन्य राज्यीय पदाधिकारियों, जो कि फसल सांख्यिकी सुधार योजना को कृषि वर्ष 2015-16 में सफलतापूर्वक संचालित करने में सहयोग देते रहे हैं, का हृदय से आभार व्यक्त करता हूँ।

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

जून, 2018


राकेश कुमार
अपर महानिदेशक

PREFACE


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

2. Field Operations Division (FOD) of the National Sample Survey Office (NSSO) under the Ministry of Statistics & Programme Implementation 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.

3. The findings of the ICS scheme are brought out in the form of Report "Review of Crop Statistics System in India" for the aggregate of the States covered. This report is forty first in the series and deals with the findings of the ICS scheme during the agricultural year 2015-16 at all India level.

4. I place on record my deep appreciation for the dedicated and painstaking efforts made by the team of officers under the guidance of Sh. S.R.Joshi, DDG of NSSO (FOD), Agricultural Statistics Headquarters, Faridabad who have been associated with the work of bringing out this report. The contribution of field officials in data collection and other related work is also appreciated. I also acknowledge with gratitude the support and cooperation received from State Agricultural Statistics Authorities and other State officials engaged in the field for the successful conduct of the ICS scheme during the year 2015-16.

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


Rakesh Kumar
Additional Director General

June, 2018



प्रकाशन से जुड़े अधिकारीगण

1	श्री एस.आर.जोशी	उप महानिदेशक
2	सुश्री नितिका गुप्ता	निदेशक
3	श्री आलोक कुमार	उप निदेशक
4	श्री विजय भास्कर शर्मा	वरिष्ठ सांख्यिकी अधिकारी
5	श्री सुबीर दास	कनिष्ठ सांख्यिकी अधिकारी
6	श्री अमित कुमार	कनिष्ठ सांख्यिकी अधिकारी
7	सुश्री गरिमा चानना	कनिष्ठ सांख्यिकी अधिकारी

THE OFFICERS ASSOCIATED WITH THE REPORT

1	Shri S.R. Joshi	Deputy Director General
2	Ms. Nitika Gupta	Director
3	Shri Alok Kumar	Deputy Director
4	Shri Vijay Bhaskar Sharma	Senior Statistical Officer
5	Shri Subir Das	Junior Statistical Officer
6	Shri Amit Kumar	Junior Statistical Officer
7	Ms. Garima Chanana	Junior Statistical Officer



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A. Organization and Agriculture Statistics Schemes

1. National Sample Survey Office (NSSO)

The Directorate of National Sample Survey (NSS) established in 1950 was re-organized into the present 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) Coordination and Publication 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 Agriculture Surveys under the scheme for Improvement of Crop Statistics (ICS).

2. 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.

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. Agriculture Statistics

The Agriculture 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. Agricultural Surveys under NSSO (FOD)

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 Agriculture 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 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 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 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. 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 & yield, and imparting training to State Govt. field personnel. The scheme is operational in 21 States and 1 U.T. covering about 44 crops.

7. General Crop Estimation Surveys (GCES)

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



B. Concepts & Definitions

1. Area Statistics

1.1 Schedule AS 1.0

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

1.2 Schedule AS 1.1

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

2. Yield Statistics

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

2.2 The Schedule AS 2.0

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

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

2.3 Standard Error

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

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

2.4 Conversion factor

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

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

3. Reference period

The reference period for a survey is the Agriculture Year (July to June) e.g. agriculture year 2015-16 corresponds to the period starting from July 2015 to June 2016.

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 tehsil/ 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 Agriculture 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 Agriculture 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 Agriculture 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 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 प्रतिदर्श सर्वेक्षण 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 2015-16 के दौरान इस योजना में देश के जिन 21 राज्यों तथा 1 केन्द्र शासित प्रदेश 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, तमिलनाडू, तेलंगाना, उत्तर प्रदेश, उत्तराखंड, पश्चिम बंगाल तथा पुडुचेरी। तेलंगाना एक नवनिर्मित राज्य है जो कि आंध्र प्रदेश राज्य से पृथक किया गया है। वर्ष 2015-16 के लिए सम्पूर्ण भारत के स्तर पर योजना के निष्कर्षों की मुख्य बातें निम्न प्रकार हैं:

1. कुछ राज्यों (देश के रिपोर्टिंग क्षेत्र का लगभग 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. राष्ट्रीय कृषि आयोग ने सिफारिश की है कि जहां कहीं भी पटवारी का कार्य क्षेत्र वृहद है तो इसे घटा दिया जाना चाहिए। अखिल भारतीय स्तर पर 2015-16 के दौरान फसल सांख्यिकी सुधार के अनुसार प्रति प्राथमिक कर्मों का औसत कार्य भार 8 गाँव है जिसमें प्रति गाँव औसतन भौगोलिक क्षेत्रफल 500 हैक्टेयर है, तथा 1200 सर्वेक्षण संख्या निहित है। (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 2014-15 में ये प्रयोग बढ़कर 13,08,025 हो गए। ये प्रयोग 19 भू-अभिलेख राज्यों /संघ शासित प्रदेशों, 3 ईएआरएएस राज्यों- केरल, ओडिशा, पश्चिम बंगाल और अन्य राज्यों- गोवा, मेघालय एवं दादरा और नगर, हवेली और दमन और दीव के केंद्र शासित प्रदेशों के अन्य राज्यों में किए गए तथा जो वर्ष 2014-15 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. जी0सी0ई0एस0 के अधीन यह देखा गया है कि कुछ राज्यों में कम क्षेत्रफल की फसलों को भी शामिल किया जाता है, जबकि अन्य राज्यों के अन्तर्गत ज्यादा क्षेत्रफल रहने के बावजूद इन फसलों को शामिल नहीं किया जाता है। इस विषमता को दूर करने के लिए इन राज्यों में जी0 सी0 ई0 एस0 विस्तारण की समय-समय पर समीक्षा की सलाह दी जाती है। (पैरा 3.1.5)

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

7. सभी सम्बन्धित राज्य प्राधिकारों के ठोस प्रयासों एवं सहयोग के कारण वर्ष 2015-16 के दौरान नौ राज्यों- असम, छत्तीसगढ़, गुजरात, हरियाणा, हिमाचल प्रदेश, केरल, महाराष्ट्र, ओडीशा और पंजाब उच्च स्तरीय समन्वय समिति (एच0एल0सी0सी0) की बैठक आयोजित करना सम्भव हो सका। एच0 एल0 सी0 सी0 / एस0 टी0 सी0 की बैठकें नियमित अंतराल पर आयोजित किये जाने की आवश्यकता है। (पैरा 4.1.3)

8. 2015-16 के दौरान विभिन्न मौसमों में क्षेत्रफल परिगणना की प्रतिदर्श जांच पर कुल मिला कर केन्द्रीय प्रतिदर्श में प्रत्युत्तर लगभग शत-प्रतिशत तथा राज्य प्रतिदर्श में 63 प्रतिशत से 90 प्रतिशत के मध्य था। राज्य प्रतिदर्श के प्रत्युत्तर-दर में संकलित आँकड़ों की गुणवत्ता में सुधार हेतु सम्बन्धित राज्यों को समुचित उपाय करने की आवश्यकता है। (पैरा 8.1.1)

9. 2015-16 के दौरान गिरदावरी की सामयिक संपूर्ति पूर्व खरीफ मौसम में प्रतिदर्श ग्रामों की केवल 46 प्रतिशत, खरीफ मौसम में 50 प्रतिशत, रबी में 47 प्रतिशत तथा ग्रीष्म मौसम में 30 प्रतिशत मामलों में पायी गयी। आंध्र प्रदेश, असम, बिहार, गुजरात, झारखंड, महाराष्ट्र, पंजाब, तेलंगाना, उत्तराखंड एवं पश्चिम बंगाल में गिरदावरी की गैर-संपूर्ति चिंताजनक थी। 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. 2015-16 के दौरान टी0 आर0 एस0 विवरण पूर्व खरीफ में 43 प्रतिशत प्रतिदर्श ग्रामों, खरीफ मौसम में 45 प्रतिशत प्रतिदर्श ग्रामों, रबी में 41 प्रतिशत प्रतिदर्श ग्रामों तथा ग्रीष्म में 28 प्रतिशत प्रतिदर्श ग्रामों में ही समय पर प्रस्तुत किया गया। इसके साथ ही वर्ष 2015-16 के दौरान पूर्व खरीफ, खरीफ, रबी तथा ग्रीष्म में क्रमशः 6, 9, 8 तथा 1 प्रतिशत प्रतिदर्श ग्रामों में गिरदावरी किये बिना ही टी0 आर0 एस0 विवरण प्रस्तुत किया गया। गिरदावर- संपूर्ति के उपरान्त टी0 आर0 एस0 विवरण की समय पर प्रस्तुति को सुनिश्चित करने के लिए उपचारी कदम उठाने की आवश्यकता है।

(सारणी-7, पैरा 8.1.4)

11. 86 प्रतिशत मामलों में प्राथमिक कर्मियों के पास उपलब्ध नक्शे उपयोगी पाए गए। 61 प्रतिशत मामलों में पाया गया कि प्राथमिक कार्यकर्ता के पास उपलब्ध नक्शों का अंतिम अद्यतन 20 वर्षों से भी पहले किया गया था। राज्य प्रणाली की कार्यकुशलता के लिये गाँवों के नक्शों का नियमित रूप से अद्यतन होना आवश्यक है। (पैरा 8.1.5)

12. अखिल भारतीय स्तर पर 2015-16 के दौरान क्षेत्रफल परिगणना के समय फसल तथा फसल क्षेत्रफल को दर्ज करने में विभिन्न राज्यों में पूर्व खरीफ में 26 प्रतिशत, खरीफ में 16 प्रतिशत, रबी में 15 प्रतिशत तथा ग्रीष्म मौसम में 9 प्रतिशत सर्वेक्षण संख्याओं में विसंगतियाँ पाई गयीं। इस तरह की विसंगतियाँ फसल क्षेत्रफल के आँकड़ों पर पर्याप्त असर डालती हैं। (पैरा 8.1.6 से 8.1.8)

13. समग्र रूप से वर्ष 2015-16 के दौरान कटाई स्तर पर फसल कटाई प्रयोगों का प्रत्युत्तर पूर्व खरीफ में 87 प्रतिशत, खरीफ में 80 प्रतिशत, रबी में 76 प्रतिशत तथा ग्रीष्म में 91 प्रतिशत रहा। कटाई स्तर पर फसल कटाई प्रयोगों के शत-प्रतिशत पर्यवेक्षण का लक्ष्य प्राप्त करने के लिए कदम उठाये जाने की आवश्यकता है। (पैरा 8.2.1)

14. 2015-16 के दौरान 57 प्रतिशत प्रयोगों को निर्धारित प्रक्रियाओं के अनुसार संचालित पाया गया। तथापि, प्रतिदर्श जांचों के द्वारा पायी गयी कमियों को राज्यों में 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. फसल कटाई प्रयोगों के संचालन के लिए 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 के दौरान झारखंड, महाराष्ट्र व उत्तर प्रदेश में अधिक रहा। बिहार, झारखंड व उत्तर प्रदेश में स्थिति और चिंताजनक हो जाती है जहां पर अप्रशिक्षित कर्मियों द्वारा प्रयोगों का अधिक संचालन किया गया।
(पैरा 8.2.5)

18. कुछ राज्यों में विभिन्न कारणों से फसल कटाई प्रयोगों के लिए चयनित गावों / क्षेत्रों का प्रतिस्थापन किया गया। प्रयोगात्मक फसल की अनुपलब्धता के कारण मूल रूप से चयनित गांव का प्रतिस्थापन 2015-16 के दौरान 8% से 11% के बीच रहा। इसे प्रतिदर्श गावों 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।
(पैरा 8.2.6 तथा 8.2.7)

19. आई0 सी0 एस0 पर्यवेक्षक द्वारा की गयी रिपोर्टिंग पर आधारित तथा राज्य प्राथमिक कर्मचारियों द्वारा तदनुरूपी (फसल क्षेत्रफल आकलनों) की तुलना में राज्य प्राथमिक कर्मचारियों द्वारा क्षेत्रफल को कम आँके जाने (under-estimation) की सामान्य प्रवृत्ति का संकेत देता है।
(पैरा 9.1.1 एवं 9.1.2)



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 2015-16, the scheme covered 21 States and 1 Union Territory 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, Telanagana, Uttar Pradesh, Uttarakhand, West Bengal and Puducherry. Telangana is newly created State carved out from Andhra Pradesh. The highlights of the findings of the scheme at all India level for the year 2015-16 are as follows:-

1. A few States (accounting for about 5% of the 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 –2.1.5)

2. The National Commission on Agriculture had recommended that the jurisdiction of the Patwari should be reduced wherever it is extensive. The average workload per primary worker as per ICS scheme during 2015-16 at all India level was 8 villages having 1200 survey numbers and 500 hectares of geographical area per village.

(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 and 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 13,08,025 in number under GCES 2014-15 which formed the basis for sample selection for supervision of Crop Cutting Experiments under the ICS Scheme during agricultural year 2015-16 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 estimates 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. HLCC meetings were organized in the nine States namely Assam, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Kerala, Maharashtra, Odisha and Punjab during 2015-16 owing to the co-operation of respective SASAs. Convening of meeting of HLCCs/ 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 but ranged from 63% to 90% for State sample during 2015-16. 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 2015-16, timely completion of girdawari was found only in 46% sample villages during Early Kharif, 50% during Late Kharif, 47% during Rabi and 30% during Summer of 2015-16. **Instances of non-completion of Girdawari in Andhra Pradesh, Assam, Bihar, Gujarat, Jharkhand, Maharashtra, Punjab, Telangana, Uttarakhand & West Bengal were alarmingly high.** Suitable action needs to be taken to ensure timely completion of Girdawari in all the States in general. **(Para 8.1.3)**

10. During 2015-16, TRS statements were submitted in time after completion of Girdawari only in 43% sample villages during Autumn, 45% during Winter, 41% during Rabi and 28% during Summer. Further, the submission of TRS statement without completion of girdawari was 6%, 9%, 8% and 1% of the 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 primary workers were found usable in 86% cases. In 61% cases, the maps available with the primary worker were found to be last updated more than 20 years back. For efficient functioning of the State system, regular updation of village maps is essential. **(Para-8.1.5)**

12. During 2015-16, errors in recording crops and crop areas at the time of area enumeration were observed in 26% of the survey numbers during Autumn, 16% during Winter, 15% during Rabi and 9% during Summer at all India level. These discrepancies of errors exert substantial impact on reporting of the crop area. **(Para-8.1.6 to 8.1.8)**

13. The overall response for crop cutting experiments at harvest stage during 2015-16 was 87% for Autumn, 80% Winter, 76% for Rabi and 91% for Summer. Steps need be taken to achieve the target of cent percent supervision of crop cutting experiments at the harvest stage. **(Para-8.2.1)**

14. During 2015-16, the experiments were found to be conducted according to the prescribed procedures in 57% cases. However, deficiencies noticed through the sample checks need to be emphasized in the training camps organised for primary 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. Position of supply of equipment for conduct of crop cutting experiments and their use by the primary workers needs improvement in almost all the States. **(Para-8.2.4)**

17. Delegation of work to others including juniors for conducting crop cutting experiments was found more frequent in Jharkhand, Maharashtra, & Uttar Pradesh during the year. Bihar, Jharkhand & Uttar Pradesh are at alarming condition where more of the work is being done by the untrained workers. **(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 8% to 11% cases during 2015-16. These instances may be reduced by proper selection of sample villages, timely selection of field and proper liaison with cultivators, which needs to be stressed upon the

primary 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 primary worker indicates a general trend of under-estimation of area by the State officials.

(Para-9.1.1 & 9.1.2)



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PART-I

(TEXT)

1



INTRODUCTION

1.1 Improvement of Crop Statistics (ICS)

1.1.1 The primary responsibility of collection of crop statistics rests with the State Governments. Crop statistics have two major components - Area sown and Average Yield. While collection of land use statistics is attempted through various methods by the State governments, the yield rates of principal crops are estimated through General Crop Estimation Surveys (GCES) conducted by them. The estimates of area and yield are compiled by State Agricultural Statistics Authorities (SASAs) for their use and also transmitted to the Directorate of Economics and Statistics (DES) in the Union Ministry of Agriculture & Farmers Welfare. The National Sample Survey Office (NSSO) through its Agriculture 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, providing guidance for training of the primary staff engaged in the conduct of GCES, (iii) examining documents relating to various stages of work pertaining to GCES and (iv) 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.

1.1.2 While Timely Reporting Scheme (TRS) was able to provide estimates of area within a short period, there was an imperative necessity to point out and to take action with a view to remove the errors in the system of collection of statistics not only of area, but also of yield. In order to meet this requirement, another scheme viz., scheme for Improvement of Crop Statistics (ICS) was initiated from Rabi season of **1973-74** with the main objective of pointing out, through the joint efforts of the Central and State agencies, deficiencies in the system of collection of crop statistics and suggesting remedial measures for strengthening the system. The programme of ICS was initiated with a special emphasis on wheat in 9 major wheat growing States. The scheme was extended to 5 more land record States and to Odisha in 1974-75, to Kerala and West Bengal in Rabi 1975-76 covering various crops. It was also extended to UTs of Delhi and Puducherry in 1978-79 and 1980-81 respectively and to 3 new Land Record States namely Chhattisgarh, Jharkhand and Uttarakhand carved out from Madhya Pradesh, Bihar and Uttar Pradesh respectively in 2001-02. The scheme has also started implementation in Telangana state from the year 2015-16 onwards ever since its carving out from Andhra Pradesh. Due to diminishing of

cropped area in Delhi over the years and lackluster co-operation of State field officials, the scheme has been discontinued from the year 2010-11.

1.1.3 In 1976, the Working Group on Agricultural Statistics of the NSSO decided that reports be prepared regularly on the status of estimation of crop production in India, which would contain full account of the current position of estimation of crop production, the procedures followed for enumeration of area and yield in different States/UTs and the steps to be taken for improving the system. The reports should also give the position of training of staff entrusted with crop cutting work, the equipment supplied to them, the adequacy of experiments planned under General Crop Estimation Surveys (GCES), the response rate etc. Besides, the findings of the sample checks under ICS Scheme on the working of the system are also brought out indicating the remedial measures to rectify the deficiencies observed. Such status reports are being prepared every year from the Rabi season of **1973-74**. The reports are brought out separately for all India and the individual States/ UTs. 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 first in the existing series and relates to the Agriculture Year 2015-16. 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 deal with the Design and Methodology followed under the ICS scheme together with the NSSO's responsibility for co-ordinating the Central and State agencies in collection of supervised data on Agriculture 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 SASA 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 18 States viz., Andhra Pradesh, Assam, (except two hill districts of North Cachar and Karbi Anglong), Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Telanagana, Uttar Pradesh and Uttarakhand as also in 4 Union Territories of Chandigarh, Delhi, Dadra & Nagar Haveli 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 roaster. 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 Agriculture Statistics, the Ministry of Agriculture & Farmers 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 and forward reports to the Ministry of Agriculture & Farmers Welfare 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 & Farmers 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 18 States and 1 Union Territory of Puducherry.

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

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

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

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

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

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

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

EARAS States, rest are TRS States.

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

2.3.1 As a sequel to the introduction of the TRS in the Land Records States, the Ministry of Agriculture & Farmers 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 entries in each season and (c) 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 2015-16 in all TRS/EARAS States and Union Territory is given in **Table-2**. It can be observed that the workload of the primary worker in various States/UT varies from 2 villages in Tamil Nadu to 23 villages in Odisha, from 500 survey numbers per village in Assam and Maharashtra to 3100 survey numbers per village in Haryana, from 200 hectares of the geographical area per village in Assam, Himachal Pradesh and Uttarakhand to 1200 hectares in Andhra Pradesh.

Table - 2
Workload of Patwari during 2015-16

Sl.No.	State	No. of villages	Survey / Sub survey Nos. per village('000')	Geographical Area per village ('000' Ha.)
1	Andhra Pradesh	3	1.4	1.2
2	Assam	11	0.5	0.2
3	Bihar	15	1.4	0.4
4	Chhatisgarh	6	1.1	0.5
5	Gujarat	3	0.6	0.9
6	Haryana	6	3.1	1
7	Himachal Pradesh	13	0.8	0.2
8	Jammu & Kashmir	6	1.2	0.6
9	Jharkhand	21	1.1	0.3
10	Karnataka	5	0.6	0.9
11	Kerala	#	#	#
12	Madhya Pradesh	5	0.7	0.5
13	Maharashtra	4	0.5	0.8
14	Odisha	23	1.1	0.3
15	Punjab	5	2.3	0.6
16	Rajasthan	7	0.8	0.9
17	Tamil Nadu	2	2.4	0.9
18	Telangana	3	1.6	0.9
19	Uttar Pradesh	8	0.7	0.3
20	Uttarakhand	12	1.4	0.2
21	West Bengal	4	1.0	0.3
22	Puducherry	12	1.2	0.4
All India average		8	1.2	0.5

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 in vogue.

TEXT

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 13,08,025 in number under GCES 2014-15 which formed the basis for sample selection for supervision of Crop Cutting Experiments under the ICS Scheme during agriculture year 2015-16 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 of 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 unit of sampling. 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 or at least periodically. For ensuring the reliability of the data collected, it is generally desired that the standard error of the yield rates of major crops at State level should not be more than 2 to 3 % and that of other crops should not be more than 5%. Judged by these norms, it is observed that standard errors are higher in a large number of cases, which calls for a review of existing process.

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 2014-15 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 2014-15

Sl. No.	Crop	Minimum Area (% of the total area under the crop)	Name of State
1.	Rice (Kharif-Lv-Irr.)	77	Madhya Pradesh
2.	Rice (Rabi/ Summer)	86	Gujarat
3.	Rice (Kharif- Tra-UI,HYV)	33	Karnataka
4.	Jowar (Rabi- Tra-UI)	18	Karnataka
5.	Jowar (Kharif- Tra- UI)	20	Karnataka
6.	Bajra (Kharif)	68	Haryana
7.	Maize	7	Haryana
8.	Maize (Rabi)	38	Andhra Pradesh
9.	Ragi (Kharif-Tra)	29	Karnataka
10.	Ragi (Rabi)	39	Andhra Pradesh
11.	Ragi (Rabi Hyv. Ir.)	23	Karnataka
12.	Wheat (Tra-Irr)	21	Karnataka
13.	Barley	29	Haryana
14.	Gram	40	Haryana
15.	Redgram /Tur	21	Haryana
16.	Cotton	45	Haryana
17.	Mesta	68	Andhra Pradesh
18.	Jute	90	Meghalaya
19.	Groundnut	81	Chhattisgarh
20.	Groundnut (Rabi)	56	Andhra Pradesh
21.	Sesamum (Kharif)	50	Chhattisgarh
22.	Sesamum (Rabi)	22	Maharashtra
23.	Castor	49	Andhra Pradesh
24.	Sugarcane	66	Haryana
25.	Linseed	32	Uttar Pradesh
26.	Rape & Mustard	80	Madhya Pradesh & Bihar
27.	Chillies (Rabi)	6	Chhattisgarh
28.	Tobacco	24	Andhra Pradesh

Note:-

GES data pertains to the year 2014-15 as this forms the basis for sample selection on Crop Cutting Experiment under ICS scheme 2015-16.

Table – 4
Status of Pre-Stratification under CES during 2014-15

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

Note: Kh. – Kharif, Sum - Summer

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

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

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

3.1.10 In some of the States, the limitation of the official acreage statistics under Irrigation or under High Yielding crops has been a handicap in adopting pre-stratification. To obviate this difficulty, it is necessary that 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 Agriculture 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 Agriculture 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 & Farmers 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. 2015-16, the nine meetings of these committees were held in the States of Assam, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Kerala, Maharashtra, Odisha and Punjab. 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 Agriculture 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.

During the year 2015-16, 23rd COCSSO was held at Guwahati on 4th and 5th November, 2015.

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 2015-16, the scheme was operational in 21 States and one Union Territory of 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

* *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 21 States and 1 Union Territory.

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, 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, weighing 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 & Farmers 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, dispensing with the system of Phase-I and Phase-II. 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.

TEXT

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 2015-16 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 & Farmers 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 drriage 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.

TEXT

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 2015-16. The overall response at all India level for all the States/UT covered was cent percent for Central Sample, 63% to 90% for State sample and 82% to 95% for Pooled sample during 2015-16 in all the seasons. There was no participation in State sample from Haryana during the Summer season. The response for the Central sample was cent percent except in Gujarat (Rabi 97%), Haryana (Kharif 99%), Jharkhand (Late Kharif 70%), Madhya Pradesh (Kharif 99%), Punjab (Kharif and Rabi 99%), Rajasthan (Kharif 98% and Rabi 99%), Tamil Nadu (Early Kharif 99%, Late Kharif 98%), West Bengal (Aman 94%). The response for the State sample was below 63% in Bihar (Summer 62%), Jharkhand (Late Kharif 55%, Rabi 47% and Summer 43%), Maharashtra (Summer 61%), Uttar Pradesh (Kharif 21%, Rabi 12% and Summer 11%). 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 2015-16. A summary showing agency wise brief picture of the timeliness in completing area enumeration by primary workers is given below in **Table-6** for 2015-16 and 2014-15. 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 2015-16 are given in **Annex-II**. On comparison of the position of timely completion of area enumeration work during 2015-16 with that of the last year, it is observed that for all the States taken together, the timely completion of area enumeration was found to be of the order of 46% during Early Kharif, 50% during Late Kharif, 47% during

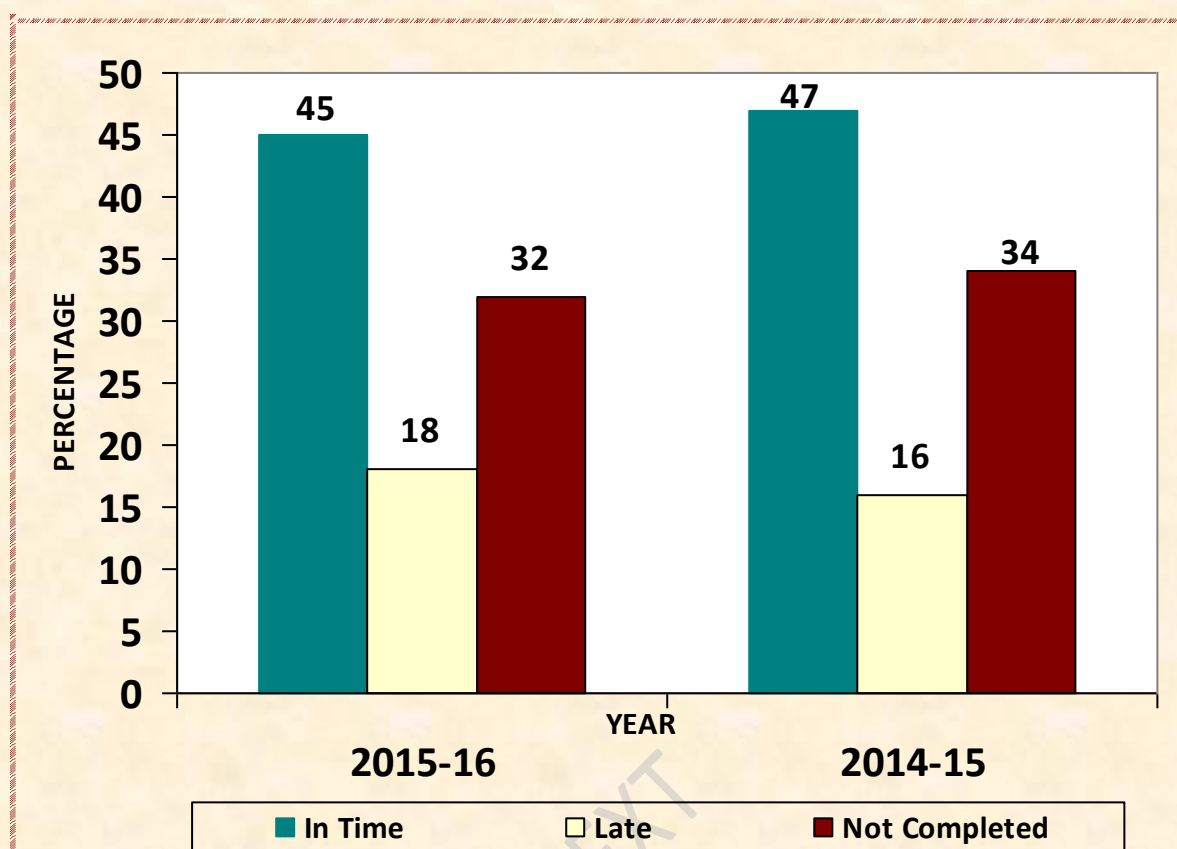
Rabi and 30% during Summer of 2015-16 as against 44%, 51%, 49 % and 37% during 2014-15. The position continues to be unsatisfactory for some of the States. For example, the percentage of delayed and non-completion of area enumeration work was observed to be 83% (Kharif), 58% (Rabi) in Andhra Pradesh, 99%, 97%, 99%, 95% during E.Kharif, L.Kharif, Rabi and Summer seasons respectively in Assam, 90%, 88%, 82% and 97% during E.Kharif, L. Kharif, Rabi and Summer seasons respectively in Bihar, 97%, 90% and 87% Kharif, Rabi and Summer seasons respectively in Gujarat, 86%, 72%, 86% & 83% during E. Kharif, L. kharif, Rabi and Summer seasons respectively in Jharkhand, 69%, 47% & 74% during Kharif, Rabi & Summer seasons respectively in Maharashtra, 63% and 67% during Kharif & Rabi seasons respectively in Punjab, 81% during Rabi in Telanagana, 72% and 76% during Kharif and Rabi season in Uttarakhand and during E. Kharif 85%, L. kharif 75%, Rabi 57% and Summer 79% in 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 2015-16 and 2014-15

Status	Percentage of Villages					
	2015-16			2014-15		
	Central	State	Pooled	Central	State	Pooled
Early Kharif						
In time	46	47	46	44	44	44
Late	4	20	12	6	23	14
Not Completed	50	29	40	49	28	38
Late Kharif						
In time	49	52	50	49	53	51
Late	12	25	18	11	23	17
Not Completed	39	18	29	40	18	29
Rabi						
In time	44	51	47	45	53	49
Late	15	28	21	11	22	16
Not Completed	33	16	25	44	18	32
Summer						
In time	31	30	30	35	40	37
Late	9	23	14	8	21	13
Not Completed	61	27	48	55	27	44
All Seasons						
In time	43	47	45	44	50	47
Late	12	25	18	10	22	16
Not Completed	42	20	32	45	21	34

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 2015-16 & 2014-15.

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 2015-16 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 **without completion of area enumeration work was observed in 7% cases, which is a matter of great concern**. The percentage of villages for which TRS statement was submitted without completion of Girdawari was very high in a few States, for instance Andhra Pradesh (Kharif 67% & Rabi 83%), Assam (E. Kharif 12%), Bihar (Bhadai 9%), Jharkhand (Bhadai 8%, Rabi 12%, Summer 8%), Tamil Nadu (E.Kharif 10%), and Telangana (Kharif 68%, Rabi 18%). It is reiterated that these State governments may take appropriate administrative measures to curb this recurring tendency. Further, the position of submission of TRS statements after completion of Girdawari by due date was found to be less than 50% of the selected villages in many states except Chhattisgarh (Kharif & Rabi), Haryana (Kharif & Rabi), Himachal Pradesh (Kharif & Rabi), Jammu & Kashmir (Kharif), Karnataka (Kharif, Rabi & Summer), Madhya Pradesh (Kharif & Rabi), Odisha (Autumn, Winter & Summer), Rajasthan (Kharif & Rabi), Tamil Nadu (Phase-I, Phase-II, Phase-III), Uttarakhand (Summer) and Puducherry (Kharif, Rabi I & Rabi II). In 2015-16, TRS statements were submitted in time after completion of Girdawari only in 43% sample villages during Autumn, 45% during Winter, 41% during Rabi and 28% during Summer. Further, the submission of TRS statement without completion of Girdawari was 6%, 9%, 8% and 1% of the sample villages during Early Kharif (Autumn), Late Kharif (Winter), Rabi and Summer

respectively. This is a matter of great concern. 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 **2015-16** and **2014-15** is presented in **Table-7**.

Table – 7
Status of Submission of TRS/EARAS Statement during 2015-16 and 2014-15

Season	Percentage of villages for which TRS statement							Information about TRS not available
	Submitted				Not Submitted			
	Without completing Girdawari		After completing Girdawari		But date of submission not known	Though Girdawari completed	As Girdawari not completed	
	By due date	After due date	By due date	After due date				
2015-16								
Early Kharif	2	4	43	9	2	4	27	8
Late Kharif	8	1	45	14	2	5	20	5
Rabi	6	2	41	16	3	7	21	4
Summer	0	1	28	14	2	6	42	6
2014-15								
Early Kharif	1	3	42	10	2	8	29	5
Late Kharif	4	2	42	17	2	10	18	5
Rabi	4	2	37	17	2	9	20	7
Summer	1	1	27	14	2	7	33	14

*Note: - * Excluding percentages of TRS statements submitted but could not be compared with Girdawari completion (Item-8) of Annex - VI, State wise Status Report 2015-16 & 2014-15.*

IV - Availability and Usability of village maps

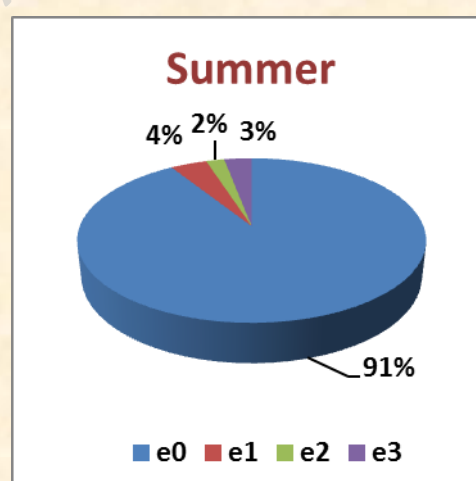
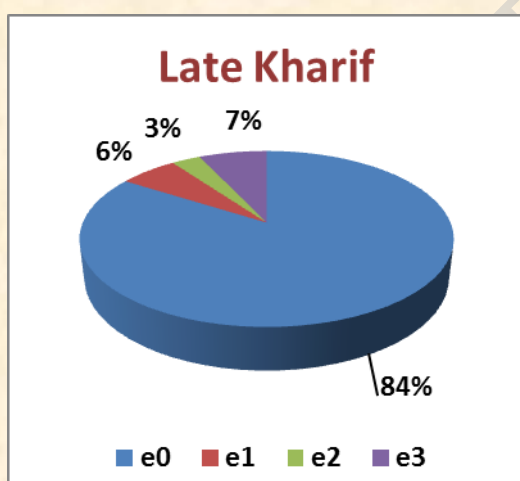
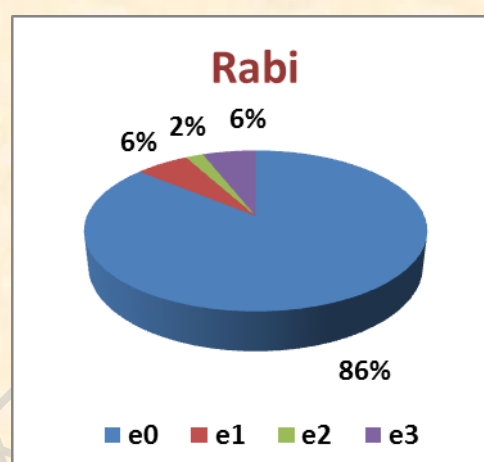
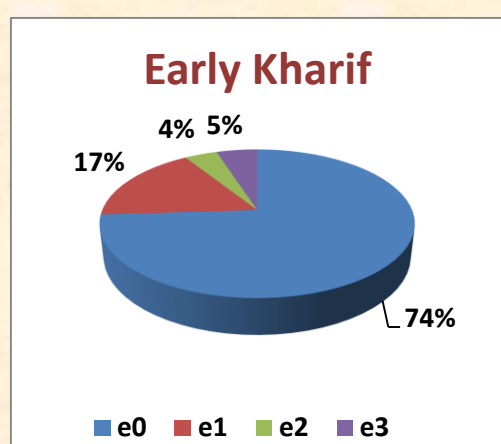
8.1.5 **Annex-IV** gives the details regarding updation of village maps, their availability and usability. It may be seen that at all India level, maps available with the primary workers were found usable for identification of the survey numbers in 86% cases during 2015-16. Information in respect of updation of the maps reveals that in 61% 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, the discrepancy of one or the other type was observed in 26% of the selected survey numbers during Autumn, 16% during Winter, 15% during Rabi and 9% during Summer, 2015-16. The magnitude of discrepancies was very high in Bihar (Autumn 42%, Winter 34%, Rabi 43% & Summer 41%), Chhattisgarh (Rabi 19%), Himachal Pradesh (Kharif 18%, Rabi 18%),

Karnataka (Kharif 26% & Rabi 18%, Summer 10%), Maharashtra (Kharif 29%, Summer 23%), Rajasthan (Kharif 18%), Tamil Nadu (Phase-I 31%, Phase-II 20% & Phase-III 23%), Uttar Pradesh (Kharif 21%, Rabi 21% & Summer 25%), Uttarakhand (Kharif 6%, Rabi 9% and Summer 11%) and West Bengal (Aus. 43%, Aman 13%, Rabi 38% & Summer 24%). The accuracy of crop inspection could not be measured effectively in case of Assam, Bihar (Rabi) and Jharkhand because of abnormally low cases of completion of area enumeration by the State primary workers till the time of ICS supervision.

CHART –II
ERRORS OBSERVED IN AREA ENUMERATION DURING 2015-16



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

8.1.7 The most predominant error observed was that of **not recording the crops actually sown in the field (e_1)**, which occurred mostly in Bihar (Autumn 42%, Winter 34%, Rabi 43%, Summer 41%), Chhattisgarh (Rabi 13%), Karnataka (Kharif 11% & Rabi 8%), Maharashtra (Summer 21%), Tamil Nadu (Phase-I 22%, Phase II 12%, Phase III 14% Summer 21%), Uttar Pradesh (Kharif 9%, Rabi 8% & Summer 13%), and West Bengal (Aus. 16%, Rabi 18% & Summer 12%). **Reporting of crops not actually sown (e_2) was the least occurring of the three errors.** It was found mostly in Himachal Pradesh (Kharif 4%), Karnataka (Kharif 4%), Kerala (Kharif 7%), Tamil Nadu (Phase I 5% & Phase III 7%), Uttar Pradesh (Rabi 4%), West Bengal (Aus. 14%, Rabi 12% & Summer 6%). **The error of inaccurate assessment of area under crop (e_3)** was found dominant in Himachal Pradesh (Kharif 9% & Rabi 10%), Karnataka (Kharif 11%, Rabi 8%), Kerala (Summer 4%), Maharashtra (Kharif 20%, Rabi 10%), Rajasthan (Kharif 9%), Tamil Nadu (Phase I 6%), Uttar Pradesh (Kharif 9%, Rabi 12% & Summer 10%), Uttrakhand (Summer 6%) and West Bengal (Aus. 13%, Rabi 9% & Summer 7%).

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 Bihar (Paddy Winter, Wheat, Gram, R&M), Gujarat (Cotton & Groundnut), Jharkhand (Maize), Karnataka (Jowar (Rabi) & Wheat), Rajasthan, Uttar Pradesh & Uttrakhand (Sugarcane, R & M).

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 2015-16, it was observed at all India level for all seasons taken together there had been mismatch of information regarding irrigation particulars as reported by Patwari and that observed during sample check programmes in 9% of the survey numbers. High percentage (more than 20%) of mismatch was observed in Bihar (Bhadai 43%, Aghani 34%, Rabi 42%, Summer 41%), Haryana(Summer 100%), Maharashtra (Summer 22%), Tamil Nadu (Phase-I 26%, Phase-III 22%). The accuracy of crop inspection could not be measured in West Bengal due to non- availability of this information (as the same is not collected by the State primary workers). In case of Assam, Bihar (Bhadai, Aghani & Rabi), Gujarat (Kharif, Rabi & Summer), Jharkhand (Early Kharif, Late Kharif, Rabi & Summer) and Odisha (Winter & Summer) 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)**. Seed variety observed by technical personnel differed from that reported by the Patwari at all India level for all seasons taken together in 12% of the

selected survey numbers. The seed variety differed in more than 25% of the selected survey numbers in Bihar (Summer 41%), Haryana (Summer 100%), Punjab (Kharif 34% & Rabi 32%), Tamil Nadu (Phase-I 31% & Phase-III 28%) and West Bengal (Aus. 33%). This aspect requires adequate attention of the State Government for controlling the situation. In case of Assam, Bihar (Bhadai, Aghani & Rabi), Gujarat (Kharif, Rabi & Summer), Jharkhand (Early Kharif, Late Kharif, Rabi & Summer), Odisha (Autumn, Winter & Summer) 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 2015-16. The response achieved in respect of all the States in different seasons was above 90% except in Assam (Early Kharif 71%, Rabi 76% & Summer 80%), Bihar (Early Kharif 60%, Late Kharif 71%, Rabi 60% & Summer 50%), Gujarat (Kharif 77% & Rabi 80%), Haryana (Kharif 87% & Rabi 81%), Himachal Pradesh (Kharif 82% & Rabi 83%), Jammu & Kashmir (Kharif 55% & Rabi 64%), Jharkhand (Early Kharif 85%, Late Kharif 60% & Rabi 68%), Karnataka (Rabi 87%), Madhya Pradesh (Rabi 71%), Maharashtra (Kharif 70% & Rabi 64%), Punjab (Rabi 86%), Rajasthan (Kharif 86%), Tamil Nadu (Phase I 82%, Rabi 84%), Telangana (Kharif 80% & Rabi 85%) Uttar Pradesh (Kharif 57%, Rabi 56% & Summer 49%), Uttarakhand (Kharif 80%). The overall response at all India level (Pooled) was of the order of 87% for Autumn, 80% for Winter, 76% for Rabi and 91% for Summer during 2015-16 as against 87% for Autumn, 80% for Winter, 81% for Rabi and 92% for Summer in corresponding seasons during 2014-15.

II – Distribution of number of experiments conducted by important inputs

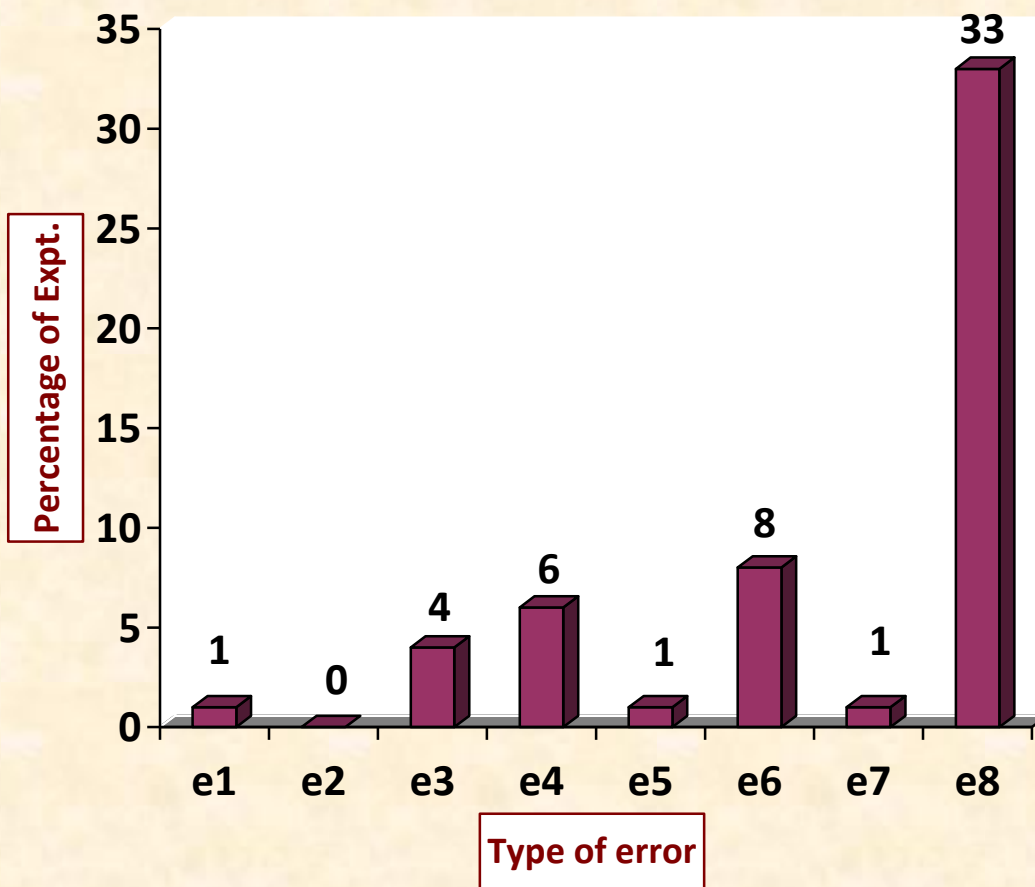
8.2.2 Annex-VII gives details of the crop-wise percentage distribution of experiments according to important inputs viz. Irrigation, High Yielding Varieties of Seeds and Fertilizers applied.

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, 57% cases of the experiments (during Autumn, Winter, Rabi and Summer taken together) were conducted in accordance with the prescribed procedures during 2015-16. There is need 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 2015-16 was found in 8% 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 2015 – 16**



- 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 drriage and incorrect reporting of constituents in crop mixtures.*
- e₈ = Others (Comparison not possible between Supervisor & Primary Worker entries)*

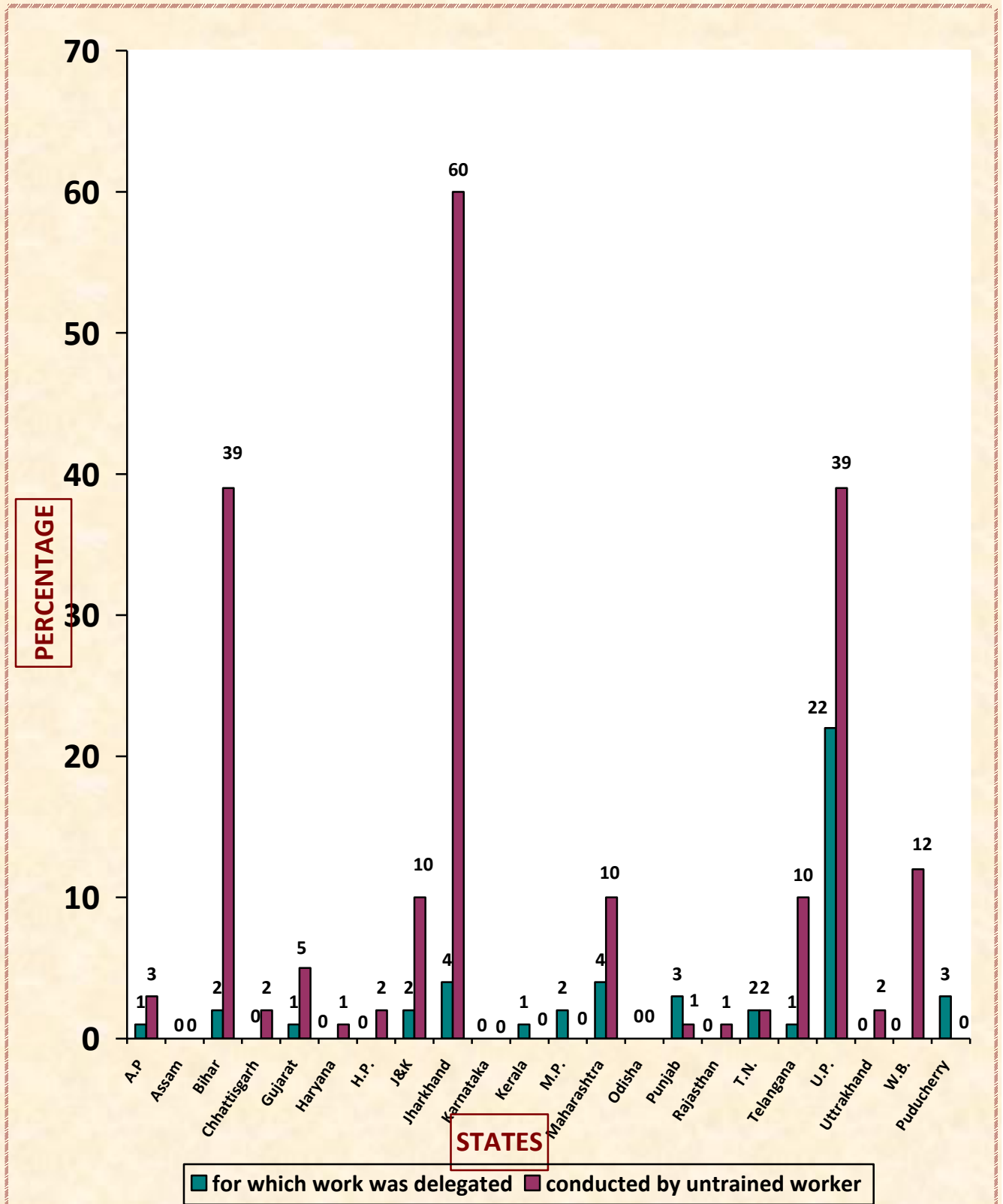
IV - Supply and Use of Equipment

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 2015-16, is presented in **Annex-IX**. It was found that the primary workers were not supplied with essential items of equipment such as Tapes, Pegs, Balances and set of Weights in as many as 19%, 63%, 36% and 38% supervised experiments respectively during 2015-16. 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 19%, 9%, 17% & 16% supervised experiments respectively but did not carry with them to the field 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 1%, Bihar 2%, Gujarat 1%, Jammu & Kashmir 2%, Jharkhand 4%, Kerala 1%, Madhya Pradesh 2%, Maharashtra 4%, Punjab 3%, Tamil Nadu 2%, Telangana 1%, Uttar Pradesh 22%, Puducherry 3% during 2015-16. The percentage of experiments conducted by workers for all the seasons taken together without proper training was 3% in Andhra Pradesh, 39% in Bihar, 2% in Chhattisgarh, 5% in Gujarat, 1% in Haryana, 2% in Himachal Pradesh, 10% in Jammu & Kashmir, 60% in Jharkhand, 10% in Maharashtra and 1% in Punjab & Rajasthan, 2% in Tamil Nadu, 10% in Telangana, 39% in Uttar Pradesh, 2% in Uttarakhand and 12% in West Bengal during 2015-16. 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**

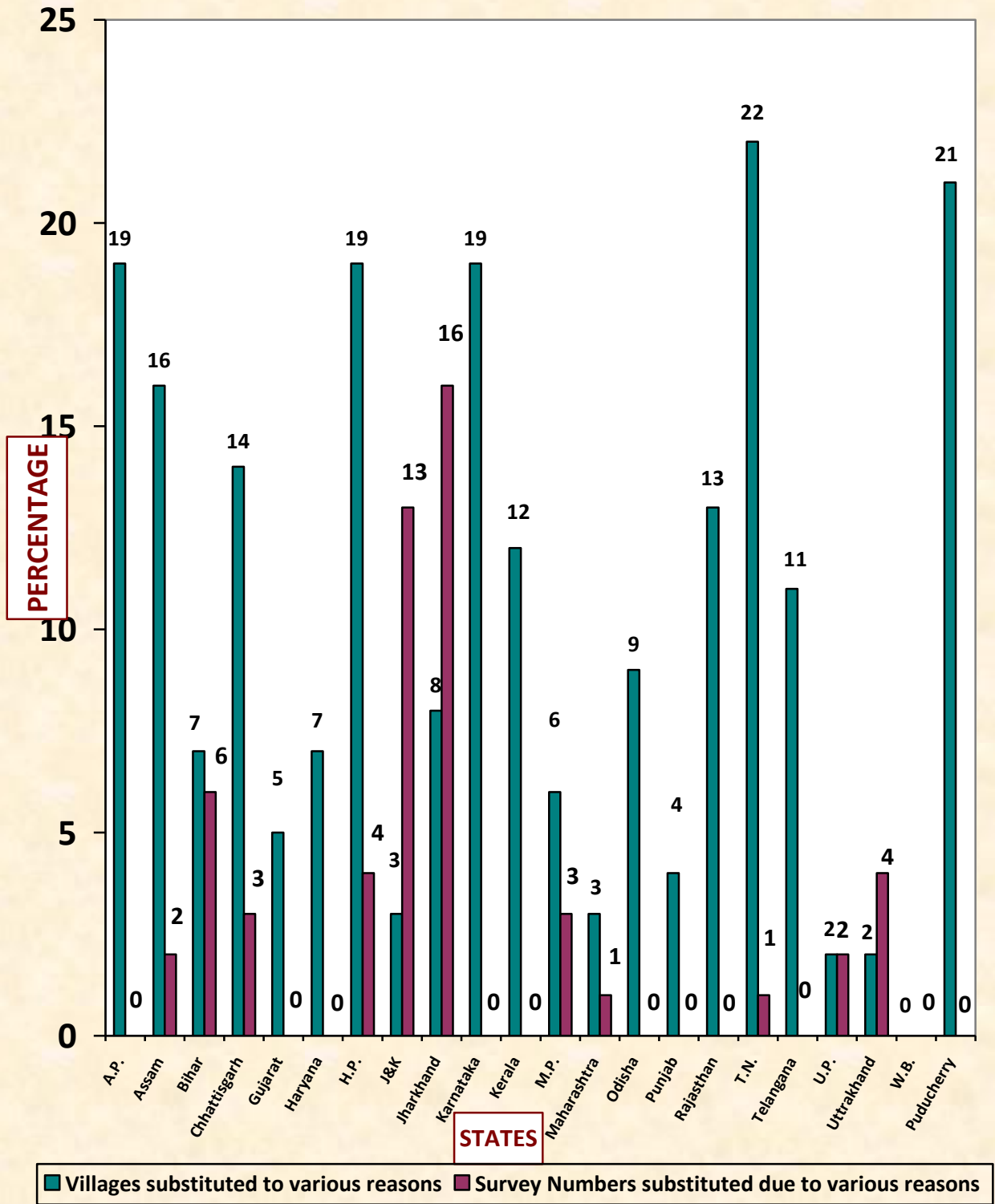


VI - Substitution of sampling units

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. Instances of substitution of sampling units at village and field level are still noticed on continuous basis year after year during the sample check. The percentage of such substitutions are 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, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Maharashtra, Punjab, Telanagana, Uttar Pradesh, Uttrakhand and West Bengal during 2015-16. Barring other reasons, 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. However, 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 13%, 10%, 9% and 11% during Early Kharif, Late Kharif, Rabi and Summer during 2015-16 respectively. It varied from 17% to 20% of the experiments conducted in Andhra Pradesh, 3% to 28% in Assam, 3 to 20% in Bihar, 12% to 15% in Chhattisgarh, 4% to 5% in Gujarat, 3% to 10% in Haryana, 16% to 20% in Himachal Pradesh, 0% to 9% in Jharkhand, 11% to 21% in Karnataka, 0% to 41% in Kerala, 5% to 7% in Madhya Pradesh, 1 to 7% in Maharashtra, 7% to 41% in Odisha, 3% in Punjab, 11% in Rajasthan, 22% in Tamil Nadu, 1% to 5% in Uttar Pradesh, 2% to 6% in Uttarakhand and 0% to 33% in Puducherry in various seasons of 2015-16. There is a need to look into this aspect in all the States which are showing this trend and take corrective action.

**CHART- V
SUBSTITUTION OF SAMPLING UNITS**



9



ESTIMATION OF AREA AND AVERAGE YIELD RATES

9.1 Estimation of Area

9.1.1 Annex-XII gives State-wise Estimates based on Khasra entries in sample village (A-I), in sample clusters (A-III) and Estimates based on Supervisors' observation of crop area in sample village (A-II), in sample cluster (A-IV) under each major crop. State wise estimates of crop area under A-I and A-II could not be worked out for 2015-16 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 & Farmers 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:

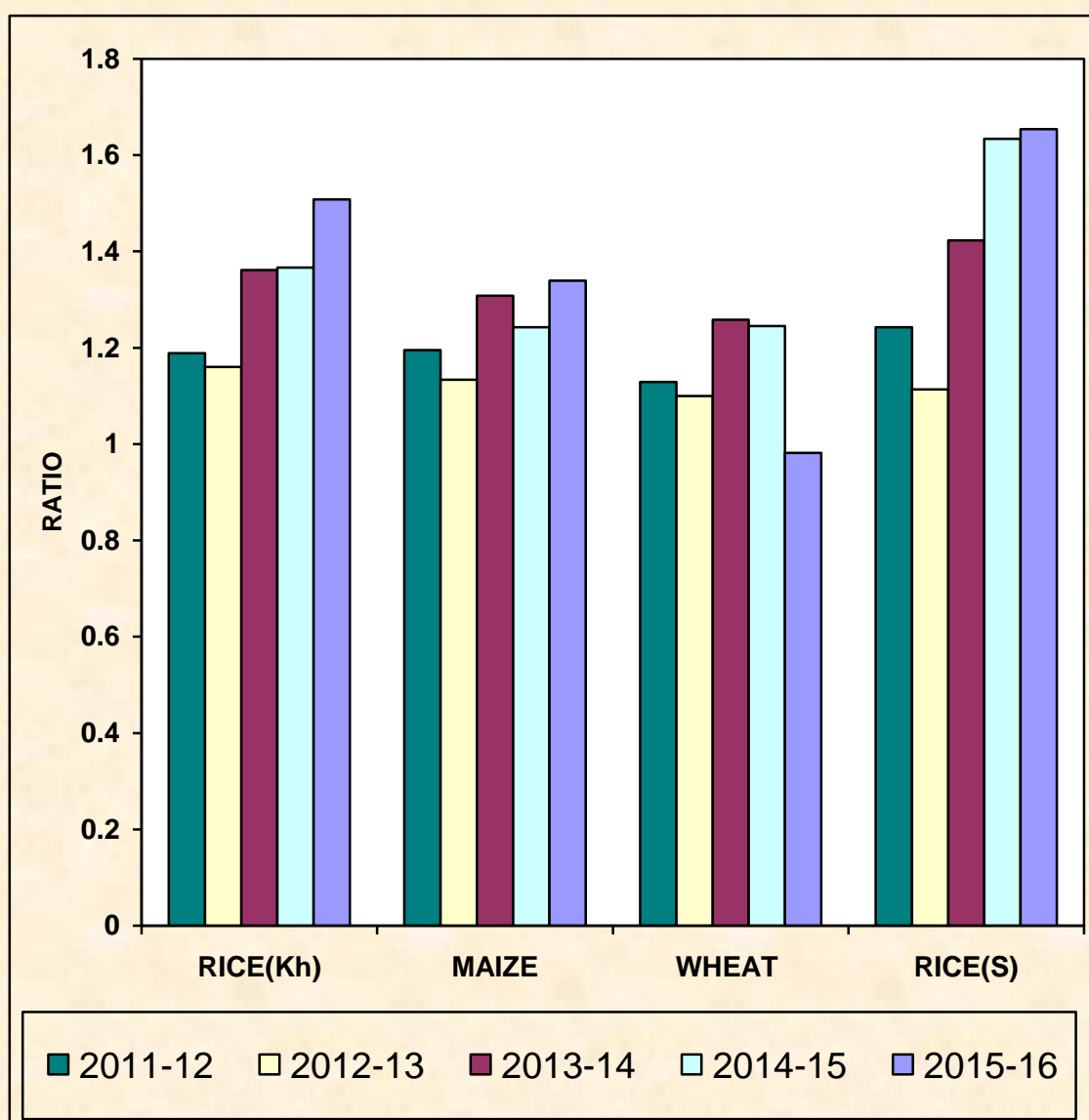
Table - 8
Ratio of Area Estimates (A-IV/A-III)

S. NO.	CROP	2015-16	2014-15	2013-14	2012-13	2011-12
1	Rice (Kh)	1.5081	1.3667	1.3612	1.1603	1.1887
2	Rice (Sum)	1.6954	1.6340	1.4228	1.1138	1.2429
3	Jowar (Kh)	0.7962	0.7887	0.8444	0.7970	0.8015
4	Jowar (R)	1.8301	1.7178	1.4205	1.1637	1.3131
5	Bajra	1.2625	1.2666	1.1263	1.0501	1.1177
6	Maize	1.3399	1.2423	1.3083	1.1338	1.1954
7	Ragi	1.0242	1.0700	0.9860	0.9651	1.0024
8	Cotton	1.7311	1.7134	1.6443	1.4574	1.5377
9	Groundnut	1.6884	1.8089	1.4452	1.2492	1.4593
10	Sugarcane	1.6054	1.2953	1.1269	1.0452	1.0652
11	Wheat	0.9816	1.2455	1.2583	1.1000	1.1288
12	Barley	0.9773	1.0000	1.0149	0.9933	0.9619
13	Gram	1.2419	1.2125	1.1485	1.0560	1.0774
14	R & M	1.3864	1.3513	1.3021	1.0918	1.3088

*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 except Jowar (Kharif), Wheat and Barley during 2015-16. 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 nearly half of the total cropped area under food grains and about 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 2011-12 can be seen in **Chart-VI** for Rice (Kharif & Summer), Wheat and Maize.

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

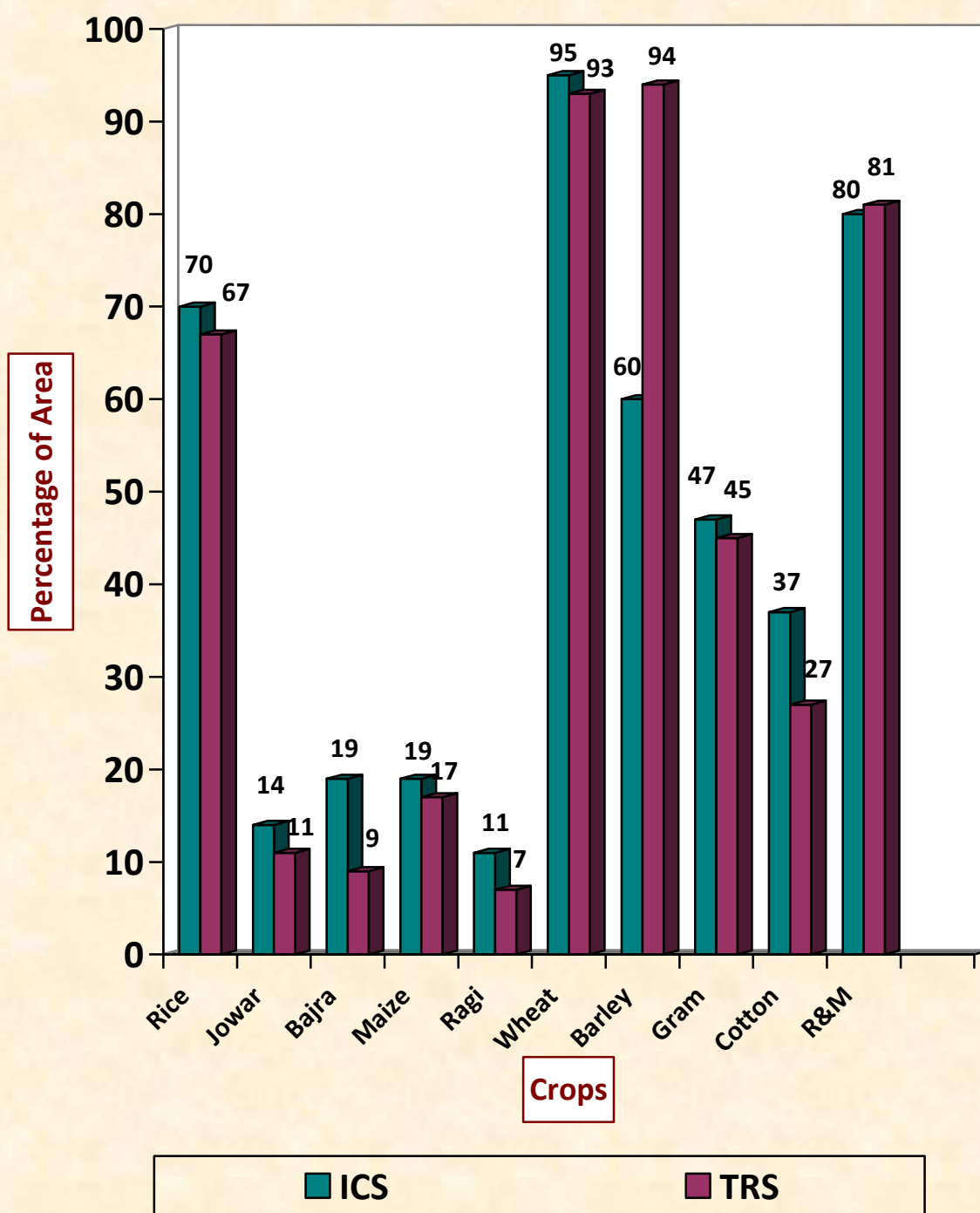


Note: A-III & A-IV denote estimated Area based on Patwari's and Supervisor's entries respectively

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 2015-16



9.2. Estimation of Yield Rates

9.2.1 Estimates of yield rates for important crops based on sample check on crop cutting experiments along with the percentage of standard errors and the corresponding CES estimates are presented in **Annex-XIV**. The percentage standard error at all India level for ICS estimates for 14 important crops varies from 1.0% (Wheat in Punjab) to 28.1% (Jowar Kharif) in Uttar Pradesh for the year 2015-16. Ratio of estimates of yield rates under ICS and CES at all India level are given in **Table-9** for last five years since 2011-12. The yield rates under ICS Scheme are higher as compared to CES estimates in case of Rice (Summer), Maize, Sugarcane and Wheat crops and lower in the case of Rice (Kharif), Jowar (Kharif & Rabi), Bajra, Ragi, Cotton, Groundnut, Barley and Rape & Mustard crops during 2015-16.

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 (2011-12 to 2015-16) 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	2015-16	2014-15	2013-14	2012-13	2011-12
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Rice (Kh)	0.8492	1.0368	0.9717	1.1791	1.2301
2	Rice (S)	1.1697	0.9220	1.0612	1.0960	1.0630
3	Jowar (Kh)	0.7210	1.0995	0.8271	0.9320	1.3062
4	Jowar (R)	0.7564	0.8325	1.2104	1.2552	1.0665
5	Bajra	0.8637	0.6627	0.7515	0.6571	1.6219
6	Maize	1.0095	1.0572	1.1918	0.9285	1.2492
7	Ragi	0.9078	0.8580	1.1232	0.8633	0.9075
8	Cotton	0.9038	0.5557	0.7808	0.7590	1.2484
9	Groundnut	0.9631	1.2810	1.9174	0.7356	1.5129
10	Sugarcane	1.0086	1.2385	1.2006	0.6500	0.5409
11	Wheat	1.1126	0.7782	0.9428	1.0423	1.1774
12	Barley	0.7443	0.7978	0.9307	0.9601	0.9283
13	Gram	0.8059	1.1286	0.7697	1.3875	1.1064
14	R & M	0.9930	0.8822	0.7911	1.0266	1.0065

Note :- (1) CES data pertains to year 2014-15 in column 3.
(2) CES data pertains to year 2012-13 in column 4.
(3) CES data pertains to year 2010-11 in column 5.
(4) CES data pertains to year 2009-10 in column 6.

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

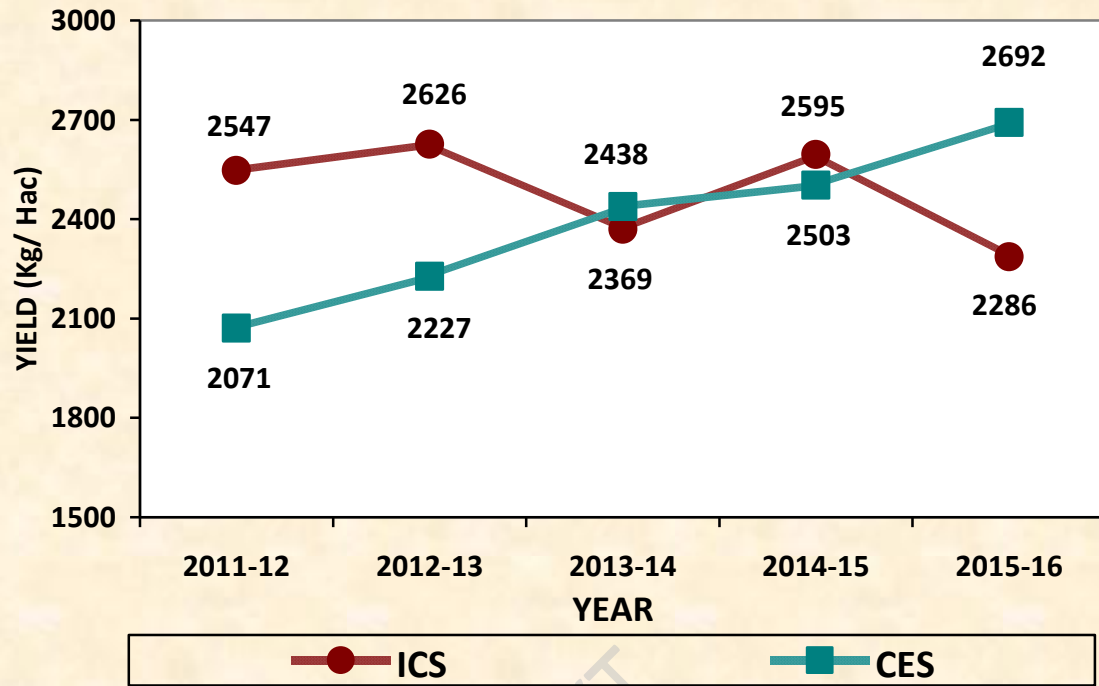
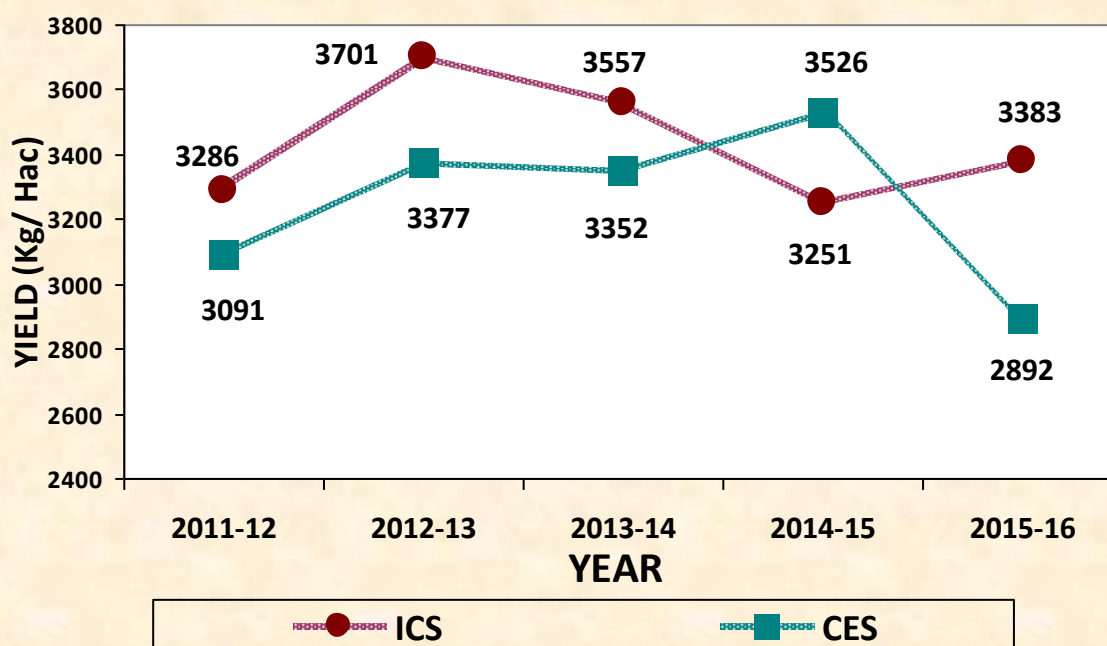
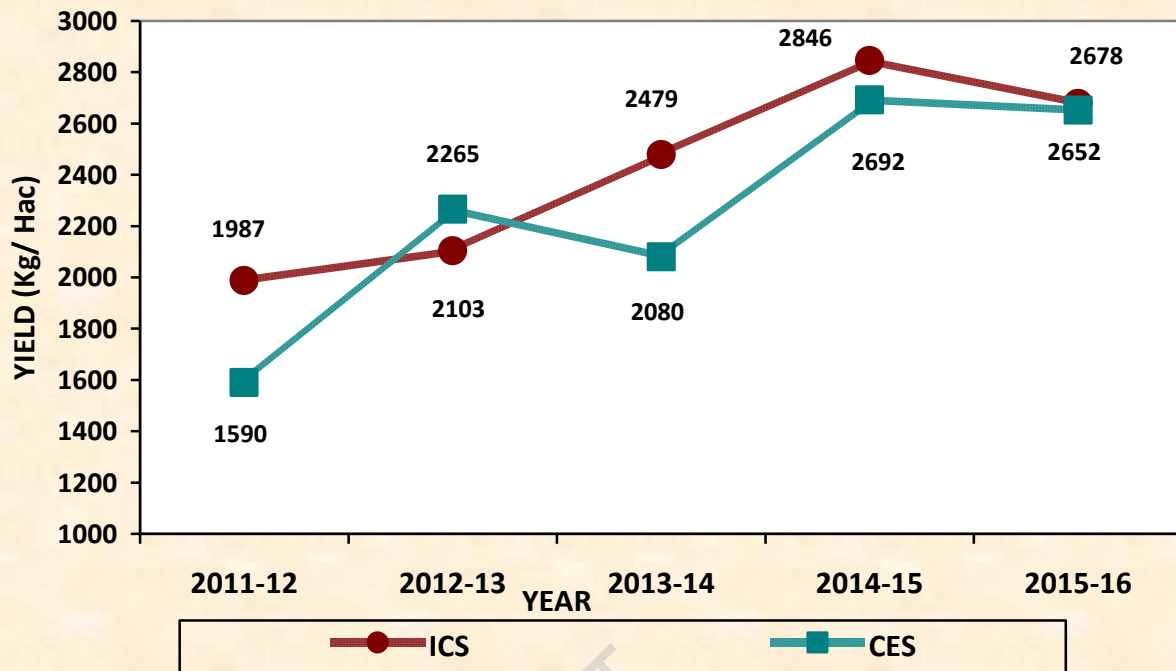


Chart - VIII (b)
Trend of yield rates under ICS & CES
Rice Summer



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



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

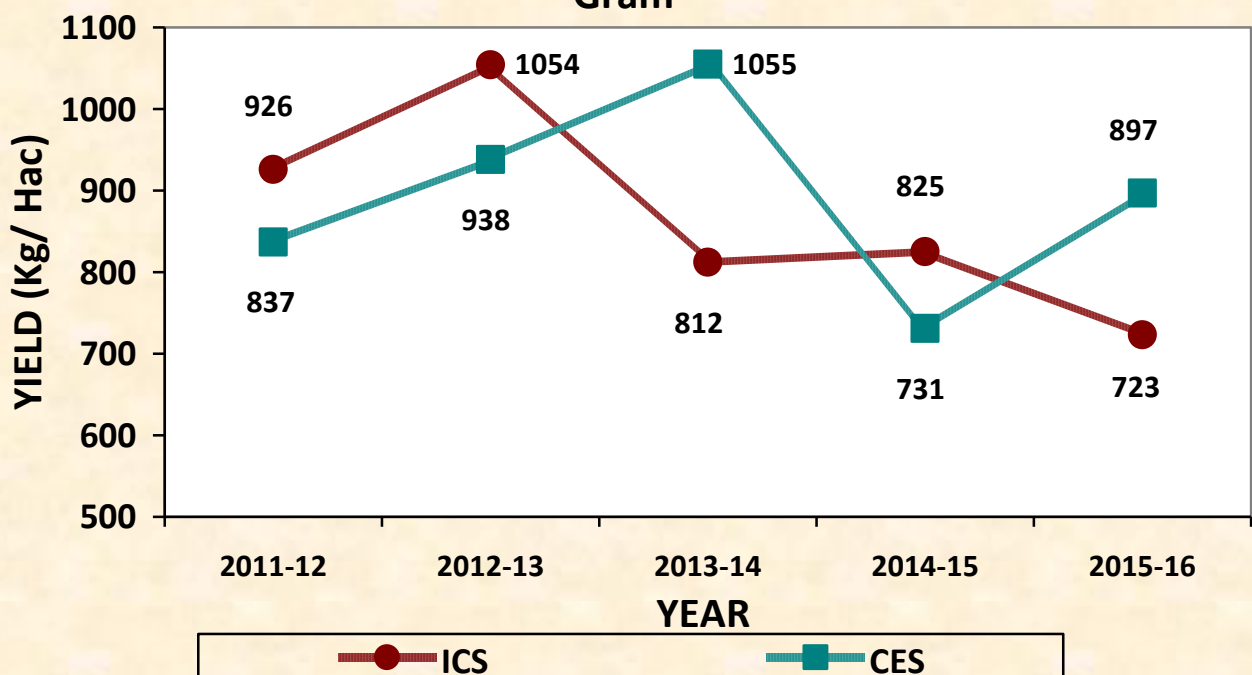
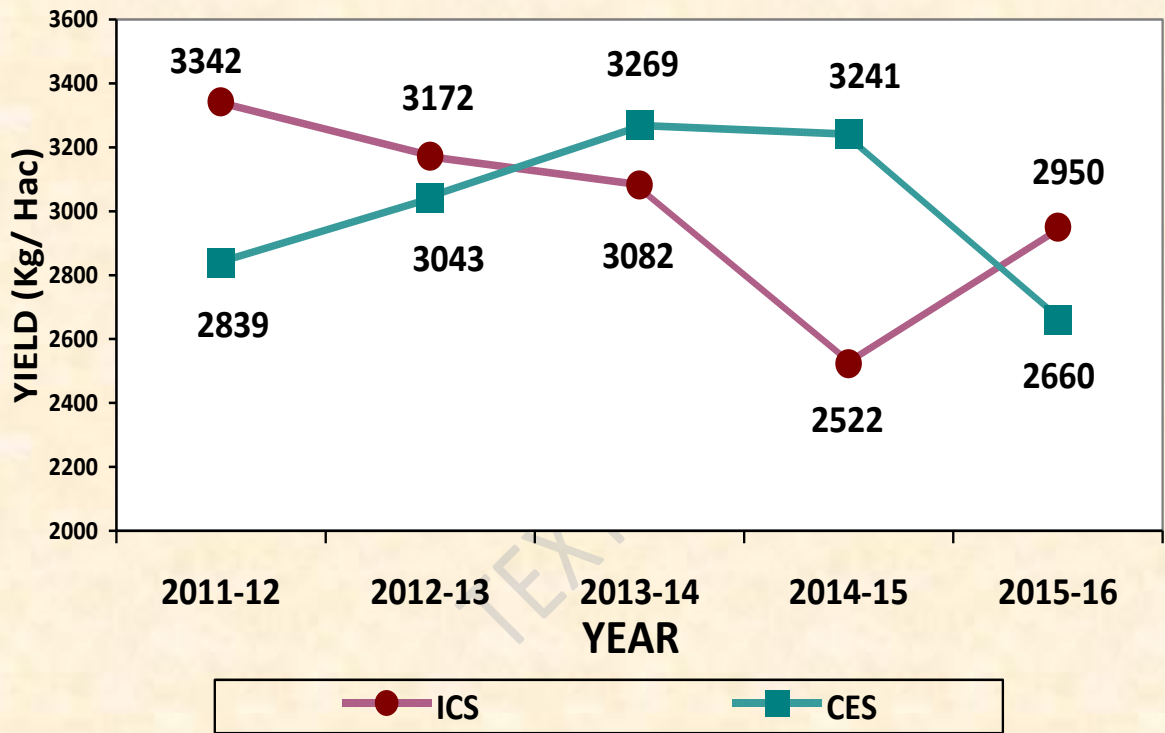


Chart - VIII (e) Trend of yield rates under ICS & CES
Wheat





PART-II

(ANNEXURES)



ANNEXURES & APPENDIX

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**RESPONSE IN SAMPLE CHECK ON AREA ENUMERATION
DURING 2015-16**

Sl. No.	State	A G E N C Y	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	86	88	84	79
		P	320	93	94	92	89
3	Bihar	C	240	100	100	100	100
		S	240	63	63	63	62
		P	480	81	81	81	81
4	Chhattisgarh	C	100		100	100	
		S	100		100	100	
		P	200		100	100	
5	Gujarat	C	340		100	97	100
		S	340		81	81	67
		P	680		90	89	84
6	Haryana @	C	200		99	100	100
		S	200		81	73	
		P	400		90	87	100
7	Himachal Pradesh	C	140		100	100	
		S	140		99	100	
		P	280		100	100	
8	Jammu & Kashmir	C	100		100	100	
		S	140		84	79	
		P	240		91	88	
9	Jharkhand	C	60	100	70	100	100
		S	60	68	55	47	43
		P	120	84	63	73	72
10	Karnataka	C	300		100	100	100
		S	300		99	97	96
		P	600		100	99	98
11	Kerala	C	80	100	100		100
		S	80	100	100		100
		P	160	100	100		100

1	2	3	4	5	6	7	8
12	Madhya Pradesh	C	360		99	100	
		S	360		93	93	
		P	720		96	96	
13	Maharashtra	C	440		100	100	100
		S	440		92	81	61
		P	880		96	90	81
14	Odisha	C	220	100	100		100
		S	220	100	100		100
		P	440	100	100		100
15	Punjab	C	200		99	99	
		S	200		75	82	
		P	400		87	90	
16	Rajasthan	C	300		98	99	
		S	300		95	94	
		P	600		97	97	
17	Tamil Nadu	C	260	99	98	100	
	§	S	260	99	99	100	
		P	520	99	99	100	
18	Telangana	C	160		100	100	
		S	250		100	100	
		P	410		100	100	
19	Uttar Pradesh	C	690		100	100	100
		S	690		21	12	11
		P	1380		61	56	55
20	Uttarakhand	C	110		100	100	100
		S	110		93	95	48
		P	220		96	98	74
21	West Bengal	C	250	100	94	100	100
		S	400	97	98	98	100
		P	650	98	96	99	100
22	Puducherry	C	9		100	100	100
		S	9		100	100	100
		P	18		100	100	100
For States Covered		C	4939	100	99	100	100
		S	5349	90	82	79	63
		P	10288	95	90	89	82

Note:

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

TIMELINESS IN COMPLETION OF GIRDAWARI DURING 2015-16

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	1	0	99			
	Pradesh	S				28	36	36	67	19	13			
		P				17	22	61	42	12	46			
2	Assam	C	0	0	100	0	0	100	0	0	100	0	0	100
		S	0	0	98	0	0	93	0	0	98	1	1	88
		P	0	0	99	0	0	97	0	0	99	0	0	95
3	Bihar	C	0	0	99	0	0	97	0	0	100	0	0	100
		S	6	14	64	1	27	48	3	25	28	3	32	60
		P	2	5	85	1	10	78	1	10	72	1	12	85
4	Chhattisgarh	C				82	8	9	71	20	9			
		S				100	0	0	82	13	3			
		P				91	4	3	77	17	6			
5	Gujarat	C				0	0	100	0	0	97	0	0	100
		S				5	2	91	3	12	72	0	1	91
		P				2	1	96	2	5	85	0	0	88
6	Haryana	C				79	18	4	92	2	6	30	1	54
	@	S				99	1	0	100	0	0	0	0	0
		P				88	10	2	95	1	3	30	1	54
7	Himachal	C				96	4	0	97	3	0			
	Pradesh	S				96	2	0	96	4	0			
		P				96	3	0	96	4	0			
8	Jammu & Kashmir	C				74	22	2	50	32	18			
		S				59	39	2	76	22	2			
		P				66	32	2	64	27	10			
9	Jharkhand	C	0	0	100	0	0	100	0	0	100	0	0	100
		S	0	56	10	21	33	3	0	50	7	0	42	0
		P	0	23	63	9	15	57	0	16	70	0	13	70
10	Karnataka	C				64	26	9	56	34	10	48	48	34
		S				92	8	0	87	10	0	12	12	0
		P				78	17	5	71	22	5	26	26	13
11	Kerala	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
12	Madhya Pradesh	C				97	3	0	82	16	2			
		S				86	11	0	80	10	4			
		P				92	7	0	81	13	3			
13	Maharashtra	C				14	7	79	7	2	36	4	2	94
		S				35	41	11	30	41	24	31	30	7
		P				24	23	46	16	18	29	14	12	62
14	Odisha	C	100	0	0	100	0	0				99	1	0
		S	100	0	0	100	0	0				97	3	0
		P	100	0	0	100	0	0				98	2	0
15	Punjab	C				40	57	3	36	58	4			
		S				33	67	0	24	74	0			
		P				37	61	2	31	65	2			

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
16	Rajasthan	C				85	14	0	93	7	0				
		S				72	27	0	71	27	0				
		P				79	21	0	82	17	0				
17	Tamil Nadu	C	92	2	6	90	6	4	89	9	2				
		§	S	92	6	2	90	0	10	78	12	8			
		P	92	4	4	90	3	7	83	10	5				
18	Telangana	C	0	0	0	90	1	97	0	3	97				
		S	0	0	0	90	71	17	32	60	8				
		P	0	0	0	90	43	48	20	38	43				
19	Uttar Pradesh	C				60	15	25	47	25	15	47	18	34	
		S				65	35	0	55	45	0	73	15	1	
		P				60	19	21	47	27	13	50	18	32	
20	Uttarakhand	C				22	73	5	29	70	1	98	2	0	
		S				29	65	1	7	83	0	75	25	0	
		P				25	69	3	18	76	0	91	9	0	
21	West Bengal	C	15	19	66	16	11	64	65	26	8	22	17	61	
		S	15	50	34	10	49	26	25	55	17	14	59	20	
		P	15	38	47	13	34	41	41	44	13	17	43	36	
22	Puducherry	C				100	0	0	100	0	0	100	0	0	
		S				89	0	0	100	0	0	100	0	0	
		P				94	0	0	100	0	0	100	0	0	
For States covered		C	46	4	50	49	12	39	44	15	33	31	9	61	
		S	47	20	29	52	25	18	51	28	16	30	23	27	
		P	46	12	40	50	18	29	47	21	25	30	14	48	

Note:

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

TIMELINESS IN SUBMISSION OF TRS STATEMENT DURING 2015-16

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		
1	Andhra Pradesh	Kharif	C	99	0	0	0	0	0	0	0	0	
			S	46	1	54	0	0	0	0	0	0	
			P	66	1	33	0	0	0	0	0	0	
		Rabi	C	97	2	0	0	0	0	0	0	0	0
			S	73	0	27	0	0	0	0	0	0	0
			P	82	1	17	0	0	0	0	0	0	0
2	Assam	E.Kh.	C	1	7	0	0	1	0	89	2		
			S	3	13	0	0	8	0	56	20		
			P	2	10	0	0	4	0	74	10		
		L.Kh.	C	1	1	0	0	1	0	96	1		
			S	1	4	1	10	13	0	53	15		
			P	1	2	0	4	7	0	76	7		
		Rabi	C	0	1	0	0	0	0	99	0		
			S	8	0	0	0	3	1	70	12		
			P	4	0	0	0	1	1	86	6		
		Summer	C	0	0	0	1	0	0	99	0		
			S	1	3	1	5	3	0	74	12		
			P	0	1	0	3	1	0	88	5		
3	Bihar	Bhadhai	C	0	0	0	0	0	2	98	0		
			S	0	24	1	7	13	3	12	30		
			P	0	9	1	3	5	2	65	12		
		Aghani	C	0	0	0	0	1	2	92	5		
			S	1	11	1	15	15	0	13	39		
			P	1	4	0	6	6	1	62	18		
		Rabi	C	0	0	0	0	0	0	100	0		
			S	0	6	9	14	16	0	20	35		
			P	0	2	3	5	6	0	69	14		
		Summer	C	0	0	0	0	0	0	100	0		
			S	0	5	1	26	11	0	32	25		
			P	0	2	0	10	4	0	74	10		
4	Chhattisgarh	Kharif	C	0	2	80	14	0	3	1	0		
			S	0	0	76	18	1	0	0	5		
			P	0	1	78	16	1	2	1	3		
		Rabi	C	5	4	57	30	0	2	1	0		
			S	2	0	55	36	3	1	1	1		
			P	4	2	56	33	2	2	1	1		

1	2	3	4	5	6	7	8	9	10	11	12	
5	Gujarat	Kharif	C	0	0	0	0	0	0	99	1	
			S	0	0	3	2	0	0	93	2	
			P	0	0	1	1	0	0	96	1	
		Rabi	C	0	0	0	0	0	0	0	98	1
			S	0	0	7	4	0	0	52	37	
			P	0	0	3	2	0	0	77	18	
		Summer	C	0	0	0	0	0	0	0	98	2
			S	1	0	2	0	2	0	69	26	
			P	0	0	1	1	1	0	86	12	
6	Haryana @	Kharif	C	0	12	62	8	0	15	3	0	
			S	0	1	99	0	1	0	0	0	
			P	0	7	78	4	0	8	1	0	
		Rabi	C	0	0	78	10	2	7	4	1	
			S	0	0	100	0	0	0	0	0	
			P	0	0	87	6	1	4	2	0	
		Summer	C	0	0	0	1	1	26	68	6	
			S									
			P	0	0	0	1	1	26	68	6	
7	Himachal Pradesh	Kharif	C	1	0	50	10	0	38	0	1	
			S	0	1	71	15	0	14	0	0	
			P	0	0	60	13	0	26	0	1	
		Rabi	C	0	0	85	2	0	12	0	1	
			S	0	1	88	3	0	8	0	1	
			P	0	0	86	3	0	10	0	1	
8	Jammu & Kashmir	Kharif	C	0	0	53	22	0	21	2	1	
			S	0	1	54	19	0	8	1	18	
			P	0	0	53	21	0	14	1	10	
		Rabi	C	0	0	49	13	1	20	15	1	
			S	0	1	39	28	0	11	3	19	
			P	0	0	43	21	0	15	9	11	
9	Jharkhand	Bhadhai	C	5	7	0	0	0	0	88	0	
			S	0	2	0	46	2	0	10	34	
			P	3	5	0	19	1	0	56	14	
		Aghani	C	0	2	0	0	0	0	98	0	
			S	0	6	0	48	0	9	12	24	
			P	0	4	0	21	0	4	60	11	
		Rabi	C	13	5	0	0	0	0	82	0	
			S	0	0	14	21	0	14	0	50	
			P	9	3	5	7	0	5	56	16	
		Summer	C	0	3	0	0	0	0	97	0	
			S	4	15	0	0	46	0	15	15	
			P	1	7	0	0	14	0	72	5	
10	Karnataka	Kharif	C	0	0	44	39	2	7	8	0	
			S	0	0	75	23	1	0	0	1	
			P	0	0	59	31	2	4	4	1	
		Rabi	C	0	0	37	32	1	16	12	0	
			S	0	0	64	32	2	0	0	1	
			P	0	0	50	32	2	8	6	1	
		Summer	C	0	0	45	26	1	13	13	0	
			S	0	0	62	34	3	0	0	0	
			P	0	0	53	30	2	7	7	0	

1	2	3	4	5	6	7	8	9	10	11	12		
11	Kerala	Autumn	C	0	0	100	0	0	0	0	0		
			S	0	0	100	0	0	0	0	0		
			P	0	0	100	0	0	0	0	0		
		Winter	C	0	0	100	0	0	0	0	0	0	
			S	0	0	100	0	0	0	0	0	0	
			P	0	0	100	0	0	0	0	0	0	
		Summer	C	0	0	100	0	0	0	0	0	0	
			S	0	0	100	0	0	0	0	0	0	
			P	0	0	100	0	0	0	0	0	0	
12	Madhya Pradesh	Kharif	C	0	0	94	4	0	1	0	0		
			S	0	0	84	9	1	2	0	4		
			P	0	0	89	6	0	2	0	2		
		Rabi	C	0	0	84	12	1	3	0	0		
			S	1	0	78	8	9	0	0	2		
			P	1	0	81	10	5	1	0	1		
		13	Maharashtra	Kharif	C	2	0	8	2	0	14	72	0
					S	2	2	36	18	11	1	10	18
					P	2	1	21	10	5	8	43	9
Rabi	C			10	1	4	1	1	2	81	0		
	S			0	0	40	20	26	1	8	10		
	P			6	1	20	10	11	2	49	4		
Summer	C			0	0	0	0	0	0	6	93	0	
	S			0	0	23	18	20	0	6	33		
	P			0	0	9	7	7	4	61	12		
14	Odisha	Autumn	C	0	0	99	0	0	0	0	0		
			S	0	0	99	0	0	0	0	0		
			P	0	0	99	0	0	0	0	0		
		Winter	C	0	0	100	0	0	0	0	0		
			S	0	0	99	0	0	1	0	0		
			P	0	0	100	0	0	0	0	0		
		Summer	C	0	0	98	0	0	0	0	0		
			S	0	0	98	0	0	0	0	0		
			P	0	0	98	0	0	0	0	0		
15	Punjab	Kharif	C	1	0	22	20	1	53	3	2		
			S	0	0	20	70	6	3	0	1		
			P	0	0	21	42	3	31	1	1		
		Rabi	C	0	0	19	31	0	46	3	0		
			S	0	0	15	72	4	4	0	4		
			P	0	0	17	50	2	27	2	2		
16	Rajasthan	Kharif	C	0	1	66	27	1	1	0	3		
			S	0	0	58	28	5	0	0	8		
			P	0	1	62	27	3	1	0	5		
		Rabi	C	0	0	77	23	0	0	0	0		
			S	0	0	58	29	4	0	0	10		
			P	0	0	68	26	2	0	0	5		
17	Tamil Nadu	Phase-I	C	0	1	86	5	0	7	0	0		
			S	18	1	69	11	0	0	0	0		
			P	9	1	78	8	0	3	0	0		
		Phase-II	C	2	1	85	9	1	0	0	0		
			S	10	0	83	5	0	0	1	1		
			P	6	1	84	7	1	0	1	1		

1	2	3	4	5	6	7	8	9	10	11	12
		Phase-II	C	0	1	89	9	0	1	1	0
			S	0	2	81	5	2	7	0	0
			P	0	1	85	7	1	4	1	0
18	Telangana	Kharif	C	88	10	3	0	0	0	0	0
			S	49	1	45	2	3	0	0	1
			P	64	4	29	1	2	0	0	0
		Rabi	C	11	35	0	3	0	52	0	0
			S	0	1	37	1	3	55	0	2
			P	4	14	23	1	2	54	0	1
19	Uttar Pradesh	Kharif	C	2	1	39	19	1	11	26	1
			S	0	2	23	74	1	0	0	0
			P	1	1	36	29	1	9	22	0
		Rabi	C	0	2	20	33	1	12	31	0
			S	0	0	5	87	7	0	0	1
			P	0	2	18	39	1	11	28	0
		Summer	C	0	1	27	24	0	15	32	0
			S	1	0	4	82	9	1	0	1
			P	0	1	25	29	1	14	29	0
20	Uttrakhand	Kharif	C	0	0	24	65	0	5	5	1
			S	0	1	7	83	6	0	1	0
			P	0	0	16	74	3	3	3	0
		Rabi	C	0	0	18	76	1	4	1	0
			S	0	1	1	85	7	0	0	3
			P	0	0	10	80	4	2	0	1
		Summer	C	0	0	60	38	0	2	0	0
			S	0	0	67	33	0	0	0	0
			P	0	0	62	36	0	1	0	0
21	West Bengal	Aus	C	0	0	8	6	4	24	51	7
			S	0	6	19	36	3	3	6	26
			P	0	4	15	24	3	12	24	18
		Aman	C	1	0	17	1	3	17	57	74
			S	1	7	39	19	2	4	6	9
			P	1	5	31	12	2	9	25	34
		Rabi	C	0	0	19	5	5	6	56	9
			S	0	9	25	36	2	4	8	17
			P	0	5	22	24	3	4	27	14
		Summer	C	0	0	22	2	0	18	52	5
			S	3	7	23	40	2	3	5	18
			P	2	4	23	25	1	8	24	13
22	Puducherry	Kharif	C	0	0	100	0	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	100	0	0	0	0	0
		Rabi-I	C	0	0	100	0	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	100	0	0	0	0	0
		Rabi-II	C	0	0	100	0	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	100	0	0	0	0	0
FOR STATES COVERED		Early Kharif	C	0	1	43	2	1	7	44	2
			S	4	6	44	16	3	2	9	15
			P	2	4	43	9	2	4	27	8
		Late Kharif	C	8	1	39	11	1	9	29	4
			S	7	2	49	17	3	1	10	6
			P	8	1	45	14	2	5	20	5
		Rabi	C	6	2	37	14	1	8	32	1
			S	6	1	47	19	5	5	8	9
			P	6	2	41	16	3	7	21	4
		Summer	C	0	0	23	9	0	9	57	1
			S	1	2	35	22	6	1	18	15
			P	0	1	28	14	2	6	42	6
All seasons			C	5	1	35	11	1	8	37	2
			S	6	2	45	19	4	3	10	9
			P	5	2	40	14	2	6	25	5

Note:

@- The Field work was not carried out for State sample during Summer season.

**INFORMATION REGARDING UPDATION OF VILLAGE
MAPS AND THEIR USABILITY DURING 2015-16**

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	74	90	0	10
2	Assam	79	96	0	4
3	Bihar	92	62	4	34
4	Chhattisgarh	40	90	5	5
5	Gujarat	10	67	9	24
6	Haryana	31	100	0	0
7	Himachal Pradesh	59	94	4	1
8	Jammu & Kashmir	48	72	18	10
9	Jharkhand	80	59	0	41
10	Karnataka	46	65	8	27
11	Kerala	78	95	0	0
12	Madhya Pradesh	31	99	1	0
13	Maharashtra	27	83	9	8
14	Odisha	96	100	0	0
15	Punjab	53	98	2	0
16	Rajasthan	67	98	2	1
17	Tamil Nadu	93	93	4	4
18	Telangana	57	57	10	33
19	Uttar Pradesh	86	96	2	2
20	Uttarakhand	90	97	3	0
21	West Bengal	92	83	0	17
22	Puducherry	83	94	0	6
For States Covered		61	86	4	10

PERCENTAGE OF SURVEY NUMBERS IN WHICH ERRORS IN RECORDING CROP AREA WERE OBSERVED DURING 2015-16																		
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	100	0	0	0				
		S					98	1	0	2	99	0	1	0				
		P					98	1	0	2	99	0	1	0				
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	58	42	0	0	66	34	0	0	57	43	0	0	59	41	0	0
		P	58	42	0	0	66	34	0	0	57	43	0	0	59	41	0	0
4	Chhattisgarh	C					86	12	1	0	73	24	3	1				
		S					100	0	0	0	89	2	9	0				
		P					93	6	1	0	81	13	6	0				
5	Gujarat	C#																
		S					96	0	0	4	100	0	0	0	0	0	0	0
		P					96	0	0	4	100	0	0	0	0	0	0	0
6	Haryana *	C					88	6	5	1	88	7	2	3	0	100	0	0
		S					100	0	0	0	99	1	0	0	0	0	0	0
		P					93	3	3	1	92	5	1	2	0	100	0	0
7	Himachal Pradesh	C					81	7	7	5	82	7	7	5				
		S					83	2	1	14	83	2	0	15				
		P					82	5	4	9	82	4	3	10				
8	Jammu & Kashmir	C					87	3	2	8	89	3	1	7				
		S					99	0	0	0	99	0	1	0				
		P					94	2	1	4	94	2	1	3				
9	Jharkhand @	C																
		S	100	0	0	0	100	0	0	0	100	0	0	0	100	0	0	0
		P	100	0	0	0	100	0	0	0	100	0	0	0	100	0	0	0
10	Karnataka	C					53	20	7	19	64	16	4	16	71	18	2	9
		S					97	1	1	1	99	1	0	0	100	0	0	0
		P					74	11	4	11	82	8	2	8	90	6	1	3
11	Kerala	C	98	0	0	2	87	0	8	5					99	0	0	1
		S	95	0	0	5	92	0	6	3					94	0	0	6
		P	97	0	0	3	89	0	7	4					96	1	0	4
12	Madhya Pradesh	C					74	9	4	12	75	10	4	11				
		S					96	1	1	2	98	1	0	1				
		P					84	5	3	8	85	6	2	6				
13	Maharashtra	C					48	11	5	35	66	6	1	27	48	48	0	4
		S					85	3	1	10	93	3	0	5	99	0	0	0
		P					71	6	3	20	86	3	0	10	77	21	0	2

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

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					100	0	0	0
		S	100	0	0	0	100	0	0	0					99	1	0	0
		P	100	0	0	0	100	0	0	0					100	0	0	0
15	Punjab	C					92	4	3	1	91	3	2	4				
		S					99	1	0	0	99	0	1	0				
		P					95	2	2	1	94	2	1	2				
16	Rajasthan	C					68	11	5	15	80	9	4	7				
		S					98	1	1	1	97	1	0	1				
		P					82	6	3	9	88	5	2	4				
17	Tamil Nadu	C	68	22	3	7	73	13	6	8	77	20	1	2				
		S	70	23	4	4	85	10	4	1	77	12	10	1				
		P	69	22	3	6	80	12	5	3	77	14	7	2				
18	Telangana	C					73	3	0	24	0	0	0	0				
		S					99	0	0	1	99	1	0	0				
		P					99	0	0	1	99	1	0	0				
19	Uttar Pradesh	C					79	9	3	9	78	8	2	12	75	13	2	11
		S					80	9	4	7	79	9	3	9	80	16	2	2
		P					79	9	3	9	79	8	2	12	75	13	2	10
20	Uttarakhand	C					90	7	3	0	86	6	4	4	84	7	1	8
		S					98	1	1	0	96	3	0	1	100	0	0	0
		P					94	4	2	0	91	5	2	3	89	5	0	6
21	West Bengal	C	85	12	1	2	96	2	1	1	86	7	5	2	85	9	5	1
		S	51	17	16	15	84	7	4	6	53	22	14	11	72	12	6	9
		P	57	16	14	13	87	5	3	5	62	18	12	9	76	12	6	7
22	Puducherry	C					100	0	0	0	100	0	0	0	100	0	0	0
		S					100	0	0	0	100	0	0	0	100	0	0	0
		P					100	0	0	0	100	0	0	0	100	0	0	0
For States covered		C	77	15	2	5	73	10	4	13	80	8	3	9	91	5	1	3
		S	72	18	5	5	93	2	1	4	91	4	2	3	90	3	1	6
		P	74	17	4	5	84	6	3	8	85	6	2	6	91	4	1	3

Note:

- e_0 = No error
- e_1 = Not reporting the crop which is actually grown in the survey numbers .
- e_2 = Recording a crop as sown in the field when actually no crop has been sown in the field.
- e_3 = Under (or) over assessment of the area under the crop sown in the field.
- @ = 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.
- *- The Field work was not carried out for State sample during Summer season.

IMPACT OF ERRORS IN RECORDING CROP AREA DURING 2015-16

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		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	NA	0.0000	0.0000	0.0000			0.0000		
		S		0.9953	1.0039	0.0000	0.0000	1.0016	0.0000			0.9813	1.0035	1.0000			1.0003	
		P		0.9953	0.9965	0.0000	0.0000	1.0016	0.0000			0.9813	1.0035	1.0000			1.0003	
2	Assam @	C																
		S																
		P																
3	Bihar	C#	NR	NR	NR									NR		NR	NR	
		S		0.6620										0.2772		0.2254	0.7166	
		P		0.6620										0.2772		0.2254	0.7166	
4	Chhattisgarh	C		0.9821					0.8109					0.9737		0.8682	1.0110	
		S		0.9948					1.0000					1.0452		1.0074	1.0260	
		P		0.9884					0.9201					1.0037		0.9462	1.0233	
5	Gujarat	C#																
		S		1.0000				0.0000	1.0000		0.3590	0.6792		1.0000		1.0000		
		P		1.0000				0.0000	1.0000		0.3590	0.6792		0.9721		1.0000		
6	Haryana	C		1.0251				0.9824	0.0000		1.0106		0.8775	0.9919	1.3861	0.9375	0.9550	
		S		0.9952				0.9789	1.0000		0.9417		1.0000	1.0000	1.0000	1.0000	1.0000	
		P		1.0134				0.9808	0.8900		0.9783		0.9314	0.9952	1.0888	0.9676	0.9704	
7	Himachal Pradesh	C		1.0336					1.0477					1.0142	1.0296			
		S		0.9986					1.0045					0.9951	0.9962			
		P		1.0202					1.0236					1.0074	1.0237			
8	Jammu & Kashmir	C		0.9997					1.0031					1.0118				
		S		0.8908					1.6988					0.9999				
		P		0.9324					1.3616					1.0049				
9	Jharkhand @	C																
		S	0.0000	0.8911					0.0802									
		P	0.0000	0.8911					0.0802									
10	Karnataka	C		1.0103	0.8127	1.0261	0.7674	1.0155	0.8674	0.8952	0.9069	1.0496	0.9346	0.6927		0.8811		
		S		1.0095	1.0000	0.9972	0.9649	0.9672	1.0034	0.9915	1.0004	1.0014	1.0000	1.0009		1.0009		
		P		1.0099	0.9037	1.0094	0.8606	0.9898	0.9315	0.9425	0.9554	1.0257	0.9641	0.8304		0.9433		
11	Kerala	C	1.0000	1.0000	1.0000													
		S	1.0000	1.0000	0.9839													
		P	1.0000	1.0000	0.9892													
12	Madhya Pradesh	C		0.9175		1.0027			1.0103		0.9592	0.9458		1.0092		0.9277	0.9224	
		S		0.9295		0.9739			0.9900		0.9279	1.0054		0.9907		0.9496	0.9752	
		P		0.9228		0.9859			1.0012		0.9427	0.9799		1.0002		0.9393	0.9504	
13	Maharashtra	C		0.9043		0.9289	0.8625	0.9515			1.0086	0.7450	0.7440	0.9765		0.9178		
		S		1.0063		0.9840	0.9778	0.8803			0.9335	1.0217	0.9463	0.9856		0.9474		
		P		0.9682		0.9687	0.9654	0.8915			0.9591	0.9235	0.8956	0.9821		0.9388		
14	Odisha	C	0.9940	0.9742	1.0000				0.9577									
		S	1.0003	0.9959	1.0000				1.0000									
		P	0.9969	0.9859	1.0000				0.9890									

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
15	Punjab	C		0.9417					0.8188		1.0230		1.1680	0.9991	0.5513	0.9474	1.0219
		S		0.9537					0.9182		0.9992		0.8644	0.9986	1.0077	0.0000	1.0000
		P		0.9467					0.8798		1.0124		1.0319	0.9989	0.7587	0.9474	1.0167
16	Raja-	C				1.0151		0.9257	1.1571		0.9787	0.9828	0.0000	0.9441	0.9477	0.9174	1.0012
	sthan	S				1.0101		1.0011	0.9486		1.0000	0.9979	1.0000	1.0131	0.9706	1.0007	0.9780
		P				1.0126		0.9625	1.0382		0.9903	0.9914	0.6379	0.9827	0.9576	0.9490	0.9887
17	Tamil	C	0.9881	0.9557	1.0291	0.8599	1.0000	0.9852	1.0087	0.9123	1.2756	0.9543	0.9543				
	Nadu	S	1.2749	0.9066	0.9722	0.9440	0.8870	1.0307	0.7450	0.8090	0.6850	0.9070	0.9070				
		P	1.1757	0.9304	0.9839	0.9038	0.9107	1.0148	0.8896	0.8715	0.9053	0.9249	1.0812				
18	Telangana	C	1.0598	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000				
		S	0.9319	0.0000	0.9804	0.9461	0.9265	0.0000	0.9070	0.0000	0.9415	1.0000	0.0000				
		P	0.9394	0.0000	0.9804	0.9461	0.8740	0.0000	0.9070	0.0000	0.9418	1.0000	0.0000				
19	Uttar	C		0.9345		1.0013		0.9676	0.8940				0.7141	0.9202		0.9893	0.7974
	Pradesh	S		0.9522		1.0000		1.1352	0.9049				0.9982	0.8750		1.0156	0.6507
		P		0.9377		1.0008		0.9764	0.8971				0.8144	0.9141		0.9983	0.7793
20	Uttara-	C		0.9908						1.0028			0.0000	0.9912			
	khand	S		0.8955						1.0306			0.4512	1.0279			
		P		0.9596						1.0085			0.4512	1.0058			
21	West	C	0.4880	0.9513	0.7758									0.9341			0.9346
	Bengal	S	1.1205	1.0004	0.9018									1.1991			1.2684
		P	1.0651	0.9887	0.8658									1.1400			1.1697
22	Pudu-	C		1.0000	1.0000												
	cherry *	S		1.0000	1.0000												
		P		1.0000	1.0000												
	For states	C	0.9914	0.9621	0.8670	0.9682	0.7831	0.9415	0.9271	0.9056	0.9843	0.9862	0.8305	0.9701	0.6467	0.9138	0.9431
	covered	S	1.0484	0.9749	0.9719	0.9853	0.9723	0.9711	1.0250	0.9832	0.9460	0.9869	0.9080	0.9920	0.4973	0.9725	0.9863
		P	1.0337	0.9687	0.9519	0.9790	0.9170	0.9566	0.9817	0.9420	0.9580	0.9890	0.8740	0.9708	0.9737	0.9498	0.9633

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.
- 3 NA = Data Not available
- 4 NR= Data Not Reported

DISCREPANCIES IN RECORDING IRRIGATION PARTICULARS DURING 2015-16

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		
1	Andhra Pradesh	Kharif	C	0	0	0	0	0	0	0	0	0	0	0	0	
			S	53	46	99	0	0	0	1	0	0	1	1		
			P	53	46	99	0	13	1	1	1	0	1	1		
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0	0	
			S	54	45	99	0	0	1	1	1	0	0	1		
			P	54	45	99	0	0	1	1	1	0	0	1		
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	11	47	57	20	23	0	43	1	0	42	43		
			P^	11	47	57	20	23	0	43	1	0	42	43		
		Aghani	C	NR												
			S	43	24	66	32	1	0	34	0	0	34	34		
			P^	43	24	66	32	1	0	34	0	0	34	34		
		Rabi	C	NR												
			S	39	19	58	33	9	0	42	0	0	42	42		
			P^	39	19	58	33	9	0	42	0	0	42	42		
		Summer	C	NR												
			S	8	50	59	10	32	0	41	0	0	41	41		
			P^	8	50	59	10	32	0	41	0	0	41	41		
		4	Chhattisgarh	Kharif	C	24	59	84	3	11	2	16	2	2	12	16
					S	25	74	99	0	0	0	1	0	0	0	1
P	24				67	91	2	6	1	9	1	1	6	9		
Rabi	C			27	47	74	5	16	5	26	4	1	20	26		
	S			30	58	88	2	2	9	12	0	10	2	12		
	P			28	52	81	3	9	7	19	2	6	11	19		
5	Gujarat	Kharif	C	NR												
			S	10	90	100	0	0	0	0	0	0	0	0		
			P^	10	90	100	0	0	0	0	0	0	0	0		
		Rabi	C	NR												
			S	41	59	100	0	0	0	0	0	0	0	0		
			P^	41	59	100	0	0	0	0	0	0	0	0		
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				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
6	Haryana *	Kharif	C	76	14	89	6	1	4	11	4	0	6	11		
			S	86	14	100	0	0	0	0	0	0	0	0	0	
			P	80	14	94	3	1	3	6	2	1	4	6	6	
		Rabi	C	86	5	91	7	0	2	9	2	0	7	9	9	
			S	97	3	100	0	0	0	0	0	0	0	0	0	
			P	90	5	95	4	0	1	5	1	0	4	5	5	
		Summer	C	0	0	0	100	0	0	100	0	0	100	100	100	
			S													
			P	0	0	0	100	0	0	100	0	0	100	100	100	
7	Himachal Pradesh	Kharif	C	22	62	84	2	7	7	16	1	7	8	16		
			S	11	87	98	0	1	1	2	0	1	1	2		
			P	17	74	91	1	4	4	9	0	4	4	9		
		Rabi	C	20	65	85	2	6	7	15	2	5	7	15		
			S	14	84	98	0	2	0	2	0	0	2	2		
			P	17	75	92	1	4	3	8	1	3	4	8		
		8	Jammu & Kashmir	Kharif	C	44	49	94	2	3	2	6	2	2	3	6
					S	51	49	100	0	0	0	0	0	0	0	0
					P	48	49	97	1	1	1	3	1	1	2	3
Rabi	C			40	54	95	3	1	1	5	1	1	3	5		
	S			42	57	99	0	0	1	1	1	0	0	1		
	P			41	56	97	1	1	1	3	1	1	2	3		
9	Jharkhand @			E. Kharif	C	NR										
					S	3	97	100	0	0	0	0	0	0	0	0
					P^	3	97	100	0	0	0	0	0	0	0	0
		L. Kharif	C	NR												
			S	6	94	100	0	0	0	0	0	0	0	0		
			P^	6	94	100	0	0	0	0	0	0	0	0		
		Rabi	C	NR												
			S	40	60	100	0	0	0	0	0	0	0	0		
			P^	40	60	100	0	0	0	0	0	0	0	0		
		Summer	C	NR												
			S	33	67	100	0	0	0	0	0	0	0	0		
			P^	33	67	100	0	0	0	0	0	0	0	0		
		10	Karnataka	Kharif	C	27	45	71	9	12	7	29	2	6	21	29
					S	35	63	98	0	1	1	2	0	1	1	2
					P	31	53	84	5	7	4	16	1	3	11	16
Rabi	C			21	59	80	8	8	4	20	2	2	16	20		
	S			27	72	99	0	0	0	1	0	0	1	1		
	P			24	65	90	4	4	2	10	1	1	8	10		
Summer	C			80	0	80	14	4	2	20	2	0	18	20		
	S			84	16	100	0	0	0	0	0	0	0	0		
	P			83	11	93	5	1	1	7	1	0	6	7		
11	Kerala			Autumn	C	18	82	100	0	0	0	0	0	0	0	
					S	45	55	100	0	0	0	0	0	0	0	
					P	26	74	100	0	0	0	0	1	0	0	
		Winter	C	22	69	92	0	0	8	8	0	8	0	8		
			S	24	70	94	0	0	6	6	0	6	0	6		
			P	23	70	92	0	0	7	8	0	7	0	8		
		Summer	C	16	84	100	0	0	0	0	0	0	0	0		
			S	21	79	100	0	0	0	0	0	0	0	0		
			P	18	82	100	0	0	0	0	0	0	0	0		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
12	Madhya Pradesh	Kharif	C	9	74	83	4	8	5	17	1	7	9	16
			S	9	88	98	0	1	1	2	1	1	1	2
			P	9	81	90	2	5	3	10	1	4	5	10
		Rabi	C	74	11	85	9	2	4	15	3	2	10	15
			S	80	18	98	1	0	0	2	1	0	1	2
			P	77	14	91	6	1	2	9	2	1	6	9
13	Maharashtra	Kharif	C	26	57	83	4	9	5	17	1	5	11	17
			S	19	76	95	1	3	1	5	0	1	3	5
			P	22	69	91	2	5	3	9	0	3	6	9
		Rabi	C	67	26	93	4	2	1	7	0	1	6	7
			S	37	60	97	1	2	0	3	0	0	3	3
			P	45	51	96	1	2	0	4	0	0	4	4
		Summer	C	51	1	52	48	0	0	48	0	0	48	48
			S	91	9	99	0	0	0	1	0	0	0	1
			P	73	5	78	21	0	0	22	0	0	21	22
14	Odisha	Autumn	C	7	93	99	0	1	0	1	0	0	0	1
			S	9	91	100	0	0	0	0	0	0	0	0
			P	8	92	100	0	0	0	0	0	0	0	0
		Winter	C	32	68	100	0	0	0	0	0	0	0	0
			S	35	65	100	0	0	0	0	0	0	0	0
			P	34	66	100	0	0	0	0	0	0	0	0
		Summer	C	47	53	99	1	0	0	1	0	0	0	1
			S	63	37	99	0	1	0	1	0	0	1	1
			P	55	45	99	0	0	0	1	0	0	0	1
15	Punjab	Kharif	C	92	0	93	4	0	3	7	3	0	4	7
			S	98	1	99	1	0	0	1	0	0	1	1
			P	95	1	95	3	0	2	5	2	0	2	5
		Rabi	C	94	0	95	3	0	2	5	2	0	3	5
			S	98	1	99	0	0	1	1	1	0	0	1
			P	96	1	96	2	0	1	4	2	0	2	4
16	Rajasthan	Kharif	C	15	67	82	5	8	5	18	1	6	11	18
			S	18	80	98	1	1	0	2	0	1	1	2
			P	16	73	89	3	5	3	11	1	4	6	11
		Rabi	C	78	8	86	9	1	4	14	4	0	10	14
			S	92	4	96	2	2	0	4	0	0	3	4
			P	85	6	91	5	1	2	9	2	1	6	9
17	Tamil Nadu	Phase-I	C	47	27	74	11	12	3	26	2	2	22	26
			S	47	27	73	12	11	4	27	2	2	23	27
			P	47	27	74	11	12	3	26	2	2	22	26
		Phase-II	C	61	20	80	10	4	6	20	4	2	13	20
			S	60	26	85	9	2	4	15	4	0	10	15
			P	60	23	83	9	2	5	17	4	1	12	17
		Phase-III	C	60	16	76	17	6	1	24	0	4	20	24
			S	71	8	78	8	4	10	22	8	2	12	22
			P	67	10	78	11	5	7	22	5	3	14	22
18	Telangana	Kharif	C	63	34	97	3	0	0	3	0	1	1	3
			S	39	59	99	0	1	0	1	1	0	0	1
			P	40	59	99	0	1	0	1	1	0	0	1
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0
			S	86	13	99	0	0	0	1	1	0	0	1
			P	86	13	99	0	0	0	1	1	0	0	1
19	Uttar Pradesh	Kharif	C	51	35	86	6	5	3	14	2	2	10	14
			S	56	30	86	9	1	4	14	3	1	9	14
			P	52	34	86	7	4	3	14	2	2	10	14
		Rabi	C	86	4	90	7	1	2	10	2	0	8	10
			S	85	3	88	9	0	3	12	3	0	9	12
			P	86	4	90	8	1	2	10	2	0	8	10
		Summer	C	79	6	85	11	2	2	15	1	0	13	15
			S	79	2	81	13	3	2	19	3	0	16	19
			P	79	6	85	11	2	2	15	2	0	13	15

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
20	Uttarakhand	Kharif	C	40	49	90	2	5	3	10	0	3	7	10
			S	53	43	97	1	1	1	3	0	2	1	3
			P	46	47	93	2	3	2	7	0	3	4	7
		Rabi	C	53	37	90	3	3	4	10	1	3	6	10
			S	58	38	96	3	0	0	4	0	0	3	4
			P	55	38	93	3	2	2	7	0	2	5	7
		Summer	C	87	5	92	7	1	1	8	1	0	7	8
			S	98	0	98	0	0	0	0	2	0	0	2
			P	90	3	94	5	0	0	6	1	1	5	6
21	West Bengal \$	Aus	C	NOT APPLICABLE										
			S											
			P											
		Amman	C											
			S											
			P											
		Rabi	C											
			S											
			P											
		Summer	C											
			S											
			P											
22	Puducherry	Kharif	C	90	10	100	0	0	0	0	0	0	0	0
			S	28	70	98	0	2	0	2	0	0	2	2
			P	60	38	99	0	1	0	1	0	0	1	1
		Rabi-I	C	93	7	100	0	0	0	0	0	0	0	0
			S	84	16	100	0	0	0	0	0	0	0	0
			P	88	12	100	0	0	0	0	0	0	0	0
		Rabi-II	C	66	34	100	0	0	0	0	0	0	0	0
			S	86	14	100	0	0	0	0	0	0	0	0
			P	78	22	100	0	0	0	0	0	0	0	0
FOR STATES COVERED		Early Kharif	C	37	45	81	8	9	2	19	2	2	15	19
			S	37	42	79	10	9	2	21	1	2	19	21
			P	37	43	80	9	9	2	20	1	2	17	20
		Late Kharif	C	35	49	84	5	6	5	16	2	4	10	16
			S	35	61	97	1	1	1	3	0	1	2	3
			P	35	55	91	3	4	3	9	1	2	6	9
		Rabi	C	73	15	89	7	2	3	11	2	1	8	11
			S	65	32	97	2	1	1	3	0	0	3	3
			P	69	23	92	4	1	2	8	1	1	6	8
		Summer	C	35	60	94	5	1	0	6	0	0	5	6
			S	32	66	98	1	1	1	2	1	0	2	2
			P	33	63	96	3	1	1	4	0	0	3	4
	All seasons		C	47	39	86	5	5	3	14	2	3	9	14
			S	43	53	96	2	1	1	4	1	1	3	4
			P	45	46	91	4	3	2	9	1	2	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.
- \$ - Recording of irrigation particulars discontinued as per the decision taken in 21st STC meeting in 1988.
- PA - Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
- NR - Not Reported.

DISCREPANCIES IN RECORDING SEED VARIETY PARTICULARS DURING 2015-16

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		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	Andhra Pradesh	Kharif	C	0	0	0	0	0	0	0	0	0	0	0	0	
			S	77	22	99	0	0	0	1	0	0	1	1		
			P	77	22	99	0	4	1	1	2	0	1	1		
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0	0	0
			S	80	19	99	0	0	1	1	1	1	0	0	1	
			P	80	19	99	0	0	1	1	1	0	0	1		
2	Assam @	Early Kharif	C													
			S													
			P													
		Late Kharif	C													
			S													
			P													
		Rabi	C													
			S													
			P													
		Summer	C													
			S													
			P													
3	Bihar #	Bhadai	C													
			S	10	48	58	5	37	0	42	0	0	42	42		
			P^	10	48	58	5	37	0	42	0	0	42	42		
		Aghani	C													
			S	32	33	65	23	12	0	35	0	1	34	35		
			P^	32	33	65	23	12	0	35	0	1	34	35		
		Rabi	C													
			S	23	35	58	28	13	0	42	0	0	42	42		
			P^	23	35	58	28	13	0	42	0	0	42	42		
		Summer	C													
			S	7	51	59	10	32	0	41	0	0	41	41		
			P^	7	51	59	10	32	0	41	0	0	41	41		
4	Chhattisgarh	Kharif	C	57	29	86	9	4	2	14	1	1	12	14		
			S	62	37	99	1	0	0	1	0	1	0	1		
			P	59	33	93	5	2	1	7	0	1	6	7		
		Rabi	C	13	61	74	7	14	5	26	3	3	20	26		
			S	33	55	88	0	3	9	12	3	7	2	12		
			P	23	58	81	4	9	1	19	3	1	11	19		
5	Gujarat	Kharif	C													
			S	28	72	100	0	0	0	0	0	0	0	0		
			P^	28	72	100	0	0	0	0	0	0	0	0		
		Rabi	C													
			S	23	77	100	0	0	0	0	0	0	0	0		
			P^	23	77	100	0	0	0	0	0	0	0	0		
		Summer	C													
			S	0	0	0	0	0	0	0	0	0	0	0		
			P^	0	0	0	0	0	0	0	0	0	0	0		
		6	Haryana *	Kharif	C	85	4	89	5	1	4	11	4	0	6	11
					S	93	7	100	0	0	0	0	0	0	0	0
					P	88	6	94	3	1	3	6	3	0	4	6
Rabi	C			89	2	91	7	0	2	9	2	0	7	9		
	S			97	3	100	0	0	0	0	0	0	0	0		
	P			92	2	95	4	0	1	5	1	0	4	5		
Summer	C	0	0	0	100	0	0	100	0	0	100	100				
	S															
	P	0	0	0	100	0	0	100	0	0	100	100				
7	Himachal Pradesh	Kharif	C	36	40	76	12	5	7	24	1	15	8	24		
			S	64	32	96	3	0	1	4	1	3	1	4		
			P	50	36	86	8	3	4	14	1	9	4	14		
		Rabi	C	37	35	71	18	4	7	29	3	18	7	29		
			S	59	38	98	2	0	0	2	0	0	2	2		
			P	48	37	85	10	2	3	15	2	9	4	15		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
8	Jammu & Kashmir	Kharif	C	25	62	88	6	4	2	12	3	7	3	12
			S	35	64	99	0	0	0	1	0	0	0	1
			P	30	63	94	3	2	1	6	1	3	2	6
		Rabi	C	39	48	87	10	2	1	13	1	9	3	13
			S	22	76	98	1	1	1	2	0	1	0	2
			P	29	64	93	5	1	1	7	1	5	2	7
9	Jharkhand @	Early Kharif	C	NR										
			S	22	78	100	0	0	0	0	0	0	0	0
			P^A	22	78	100	0	0	0	0	0	0	0	0
		Late Kharif	C	NR										
			S	35	65	100	0	0	0	0	0	0	0	0
			P^A	35	65	100	0	0	0	0	0	0	0	0
		Rabi	C	NR										
			S	29	71	100	0	0	0	0	0	0	0	0
			P^A	29	71	100	0	0	0	0	0	0	0	0
		Summer	C	NR										
			S	78	22	100	0	0	0	0	0	0	0	0
			P^A	78	22	100	0	0	0	0	0	0	0	0
10	Karnataka	Kharif	C	59	13	71	15	7	7	29	6	2	21	29
			S	78	20	98	1	1	1	2	0	1	1	2
			P	68	16	84	8	4	4	16	4	1	11	16
		Rabi	C	56	24	80	12	4	4	20	4	0	16	20
			S	72	27	99	1	0	0	1	0	0	1	1
			P	64	25	90	6	2	2	10	2	0	8	10
		Summer	C	69	11	80	13	5	2	20	2	0	18	20
			S	67	33	100	0	0	0	0	0	0	0	0
			P	68	26	93	5	2	1	7	1	0	6	7
		11	Kerala	Autumn	C	15	85	100	0	0	0	0	0	0
S	50				50	100	0	0	0	0	0	0	0	0
P	25				75	100	0	0	0	0	1	0	0	0
Winter	C			14	78	92	0	0	8	8	0	8	0	8
	S			15	79	94	0	0	6	6	0	6	0	6
	P			14	78	93	0	0	7	7	0	7	0	7
Summer	C			3	97	100	0	0	0	0	0	0	0	0
	S			2	98	100	0	0	0	0	0	0	0	0
	P			3	97	100	0	0	0	0	0	0	0	0
12	Madhya Pradesh			Kharif	C	33	51	84	5	6	5	16	2	5
		S	52		47	98	1	0	1	2	0	0	1	2
		P	42		49	90	3	4	3	10	1	3	5	10
		Rabi	C	45	39	84	5	8	4	16	2	4	10	16
			S	60	39	98	1	1	0	2	1	0	1	2
			P	51	39	90	3	4	2	10	1	2	6	10
13	Maharashtra	Kharif	C	73	10	83	11	1	5	17	3	2	11	17
			S	70	24	94	5	0	1	6	1	2	3	6
			P	71	18	89	7	1	3	10	2	2	6	10
		Rabi	C	77	13	90	7	2	1	10	1	4	6	10
			S	61	35	97	2	1	0	3	0	0	3	3
			P	65	30	95	3	1	0	5	0	1	4	5
		Summer	C	52	0	52	47	1	0	48	0	0	48	48
			S	81	19	99	0	0	0	1	0	0	0	1
			P	68	10	78	21	0	0	22	0	0	21	22
		14	Odisha	Autumn	C	64	36	100	0	0	0	0	0	0
S	52				48	100	0	0	0	0	0	0	0	0
P	58				42	100	0	0	0	0	0	0	0	0
Winter	C			76	23	100	0	0	0	0	0	0	0	0
	S			67	33	100	0	0	0	0	0	0	0	0
	P			71	28	100	0	0	0	0	0	0	0	0
Summer	C			42	58	99	0	0	0	1	0	0	0	1
	S			47	52	99	0	0	0	1	0	0	1	1
	P			44	55	99	0	0	0	1	0	0	0	1
15	Punjab	Kharif	C	37	6	43	53	1	3	57	1	52	4	57
			S	97	2	99	1	0	0	1	0	0	1	1
			P	62	4	66	31	1	2	34	1	30	2	34
		Rabi	C	34	10	44	54	0	2	56	0	52	3	56
			S	98	1	99	0	0	1	1	1	0	0	1
			P	62	6	68	31	1	1	32	1	30	2	32
16	Rajasthan	Kharif	C	35	46	81	8	6	5	19	3	5	11	19
			S	39	59	97	1	1	0	3	0	1	2	3
			P	37	52	89	5	4	3	11	2	3	7	11
		Rabi	C	54	31	86	6	5	4	14	2	2	10	14
			S	63	28	91	2	6	0	9	0	2	7	9
			P	59	30	88	4	5	2	12	1	2	8	12

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
17	Tamil Nadu	Phase-I	C	45	20	65	19	12	3	35	2	11	21	35		
			S	62	12	73	17	6	4	27	3	1	23	27		
			P	53	16	69	18	9	3	31	2	6	22	31		
		Phase-II	C	46	11	58	34	2	6	42	4	25	13	42		
			S	73	12	85	10	1	4	15	3	1	10	15		
			P	63	12	75	19	1	5	25	4	10	12	25		
		Phase-III	C	45	16	61	34	4	1	39	1	18	20	39		
			S	68	9	77	11	2	10	23	9	1	13	23		
			P	61	11	72	18	2	7	28	6	6	15	28		
18	Telangana	Kharif	C	91	7	99	1	0	0	1	0	0	1	1		
			S	89	10	100	0	0	0	0	0	0	0	0		
			P	89	10	100	0	0	0	0	0	0	0	0		
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0	0	
			S	90	9	99	0	0	0	1	0	0	0	1		
			P	90	9	99	0	0	0	1	0	0	0	1		
		19	Uttar Pradesh	Kharif	C	65	21	86	8	3	3	14	3	1	10	14
					S	64	22	86	9	0	4	14	4	0	9	14
					P	65	22	86	8	2	3	14	3	1	10	14
Rabi	C			81	9	90	6	2	2	10	2	0	8	10		
	S			81	7	88	9	0	3	12	3	0	9	12		
	P			81	9	90	7	2	2	10	2	0	8	10		
Zaid Rabi	C			69	16	85	10	3	2	15	2	0	13	15		
	S			72	9	81	13	4	2	19	3	0	16	19		
	P			69	15	85	10	3	2	15	2	0	13	15		
20	Uttarakhand	Kharif	C	31	59	90	2	5	3	10	0	3	7	10		
			S	47	51	97	0	1	1	3	0	1	1	3		
			P	39	55	94	1	3	2	6	0	2	4	6		
		Rabi	C	44	46	90	3	3	4	10	1	3	6	10		
			S	50	46	96	3	0	0	4	0	1	3	4		
			P	47	46	93	3	2	2	7	0	2	5	7		
		Summer	C	49	43	105	6	1	1	8	1	0	7	8		
			S	98	0	98	0	0	2	2	2	0	0	2		
			P	64	30	94	4	1	1	6	1	0	5	6		
21	West Bengal	Aus	C	7	80	87	0	12	1	13	0	1	12	13		
			S	40	23	62	16	5	17	38	11	10	17	38		
			P	34	33	67	13	6	14	33	9	8	16	33		
		Aman	C	2	95	97	0	2	1	3	0	1	2	3		
			S	60	22	82	12	2	4	18	2	10	6	18		
			P	46	39	85	9	2	3	15	1	8	5	15		
		Rabi	C	3	86	89	0	6	5	11	0	5	6	11		
			S	43	19	62	14	10	14	38	7	10	22	38		
			P	32	37	69	11	9	12	31	5	9	18	31		
Summer	C	6	81	87	0	9	5	13	0	5	9	13				
	S	62	20	82	6	6	6	18	3	3	12	18				
	P	48	35	83	5	7	6	17	2	3	11	17				
22	Puducherry	Kharif	C	98	2	100	0	0	0	0	0	0	0	0		
			S	26	72	98	0	2	0	2	0	0	2	2		
			P	64	35	99	0	1	0	1	0	0	1	1		
		Rabi-I	C	100	0	100	0	0	0	0	0	0	0	0		
			S	83	17	100	0	0	0	0	0	0	0	0		
			P	90	10	100	0	0	0	0	0	0	0	0		
		Rabi-II	C	100	0	100	0	0	0	0	0	0	0	0		
			S	82	18	100	0	0	0	0	0	0	0	0		
			P	88	12	100	0	0	0	0	0	0	0	0		
FOR STATES COVERED	Early Kharif	C	42	34	76	13	9	2	24	1	8	15	24			
		S	52	24	76	13	7	5	24	4	2	18	24			
		P	47	28	76	13	8	4	24	3	5	17	24			
	Late Kharif	C	52	29	81	11	4	4	19	3	7	10	19			
		S	65	30	95	3	1	1	5	1	2	2	5			
		P	59	30	89	7	2	3	11	2	4	6	11			
	Rabi	C	60	23	82	12	3	3	18	2	8	8	18			
		S	66	28	93	3	2	2	7	1	1	4	7			
		P	63	25	88	7	3	2	12	1	5	6	12			
Summer	C	22	71	94	4	1	1	7	0	1	5	7				
	S	23	72	95	2	2	1	5	1	1	4	5				
	P	23	72	94	3	2	1	6	1	1	4	6				
All seasons	C	50	32	82	11	4	3	18	2	7	9	18				
	S	60	34	94	3	1	2	6	1	1	4	6				
	P	55	33	88	7	2	2	12	2	4	6	12				

Note:

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

**RESPONSE IN SAMPLE CHECK ON CROP CUTTING EXPERIMENTS
DURING 2015-16 (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	
			4	5	6	7	8	9	10	11	
1	Andhra Pradesh	C			500	97	180	94			680
		S			500	94	180	81			680
		P			1000	96	360	87			1360
2	Assam	C	170	78	120	100	190	87	40	85	520
		S	170	65	120	85	190	64	40	75	520
		P	340	71	240	93	380	76	80	80	1040
3	Bihar	C	120	81	240	90	350	93	40	80	750
		S	120	40	240	52	350	27	40	20	750
		P	240	60	480	71	700	60	80	50	1500
4	Chhattisgarh	C			200	99	150	100			350
		S			200	97	150	91			350
		P			400	98	300	95			700
5	Gujarat	C			750	96	240	94			990
		S			750	57	240	65			990
		P			1500	77	480	80			1980
6	Haryana	C			320	99	380	90			700
		S			320	75	380	71			700
		P			640	87	760	81			1400
7	Himachal Pradesh	C			150	84	150	85			300
		S			150	80	150	81			300
		P			300	82	300	83			600
8	Jammu & Kashmir	C			160	97	120	98			280
		S			160	14	120	29			280
		P			320	55	240	64			560
9	Jharkhand	C	40	100	80	100	100	98			220
		S	40	70	80	35	100	38			220
		P	80	85	160	68	200	68			440
10	Karnataka	C			620	85	200	77	80	83	900
		S			620	96	200	98	80	100	900
		P			1240	91	400	87	160	91	1800
11	Kerala	C	100	99	100	99			320	100	520
	§	S	100	97	100	100			320	98	520
		P	200	98	200	100			640	99	1040
12	Madhya Pradesh	C			628	97	524	96			1152
		S			628	83	524	46			1152
		P			1256	90	1048	71			2304
13	Maharashtra	C			850	82	450	82			1300
		S			850	58	450	46			1300
		P			1700	70	900	64			2600
14	Odisha	C	260	100	390	99			180	98	830
		S	260	100	390	99			180	100	830
		P	520	100	780	99			360	99	1660
15	Punjab	C			380	94	320	98			700
		S			380	87	320	88			700
		P			760	91	640	93			1400

1	2	3	4	5	6	7	8	9	10	11	12
16	Rajasthan	C			520	88	420	96			940
		S			520	83	420	91			940
		P			1040	86	840	94			1880
17	Tamil Nadu	C	60	88	120	100	560	89	40	98	780
	#	S	60	75	120	98	560	79	40	90	780
		P	120	82	240	99	1120	84	80	94	1560
18	Telangana	C			360	91	120	98			480
		S			360	69	120	73			480
		P			720	80	240	85			960
19	Uttar Pradesh	C			1380	100	840	99	80	93	2300
		S			1380	14	840	14	80	5	2300
		P			2760	57	1680	56	160	49	4600
20	Uttarakhand	C			130	100	60	100			190
		S			130	60	60	90			190
		P			260	80	120	95			380
21	West Bengal	C	180	97	160	100	220	98	190	99	750
		S	180	96	160	96	220	92	190	93	750
		P	360	96	320	98	440	95	380	96	1500
22	Puducherry	C			10	100	10	100	10	100	30
		S			10	80	10	100	10	100	30
		P			20	90	20	100	20	100	60
For States covered		C	930	92	8168	94	5584	93	980	96	15662
		S	930	82	8168	66	5584	60	980	86	15662
		P	1860	87	16336	80	11168	76	1960	91	31324

Note:

- 1- \$ In Kerala, 220 experiments of Whole year crops are included in Summer season.
- 2- # In Tamil Nadu, whole year crops have been included in Rabi season.

**DISTRIBUTION OF PERCENTAGE OF EXPERIMENTS
ACCORDING TO IMPORTANT INPUTS DURING 2015-16**

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	11.29	12.90	19.35
		S		20.31	15.63	53.13
		P		15.87	14.29	36.51
		C	T	7.45	8.51	12.77
		S		15.85	12.20	41.46
		P		11.36	10.23	26.14
2	Bihar	C	H	29.41	5.88	100.00
		S		11.11	0.00	88.89
		P		23.08	3.85	96.15
		C	T	25.00	5.00	85.00
		S		11.11	0.00	88.89
		P		20.69	3.45	86.21
3	Jharkhand	C	H	0.00	0.00	60.00
		S		0.00	0.00	25.00
		P		0.00	0.00	44.44
		C	T	0.00	0.00	60.00
		S		0.00	0.00	25.00
		P		0.00	0.00	44.44
4	Kerala	C	H	34.34	81.82	74.75
		S		32.99	85.57	79.38
		P		33.67	83.67	77.04
		C	T	34.34	81.82	74.75
		S		32.99	85.57	79.38
		P		33.67	83.67	77.04
5	Odisha	C	H	11.36	83.64	82.73
		S		9.09	84.09	87.73
		P		10.23	83.86	85.23
		C	T	11.36	83.64	82.73
		S		9.09	84.09	87.73
		P		10.23	83.86	85.23
6	Tamil Nadu	C	H	100.00	100.00	100.00
		S		96.00	100.00	100.00
		P		98.08	100.00	100.00
		C	T	100.00	100.00	100.00
		S		96.00	100.00	100.00
		P		93.58	95.41	95.41
7	West Bengal	C	H	74.49	84.69	94.90
		S		75.79	88.42	95.79
		P		75.13	86.53	95.34
		C	T	73.00	83.00	93.00
		S		75.79	88.42	95.79
		P		74.36	85.64	94.36
Paddy-Winter						
1	Andhra Pradesh	C	H	94.32	97.73	98.86
		S		96.39	98.80	99.40
		P		95.32	98.25	99.12
		C	T	94.32	97.73	98.86
		S		96.39	98.80	99.40
		P		95.32	98.25	99.12

T= Total (Harvest+Missed+Lost).

I= Irrigation

HYV= High yield variety

F= Fertilizers

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

1	2	3	4	5	6	7
2	Assam	C	H	0.00	0.00	0.00
		S		1.96	5.88	30.39
		P		0.90	9.01	30.63
		C	T	0.00	0.00	0.00
		S		1.96	5.88	30.39
		P		0.90	9.01	30.63
3	Bihar	C	H	57.14	55.36	99.11
		S		57.30	52.81	97.75
		P		57.21	54.23	98.51
		C	T	56.14	54.39	97.37
		S		57.30	52.81	97.75
		P		56.65	53.69	97.54
4	Chhattisgarh	C	H	50.00	73.75	86.25
		S		50.00	71.25	87.50
		P		50.00	72.50	86.88
		C	T	50.00	73.75	86.25
		S		50.00	71.25	87.50
		P		50.00	72.50	86.88
5	Gujarat	C	H	56.76	77.03	100.00
		S		56.00	57.33	93.33
		P		56.38	67.11	96.64
		C	T	52.50	71.25	92.50
		S		55.26	56.58	92.11
		P		53.85	64.10	92.31
6	Haryana	C	H	100.00	100.00	98.89
		S		100.00	98.61	100.00
		P		100.00	99.38	99.38
		C	T	100.00	100.00	98.89
		S		100.00	98.61	100.00
		P		100.00	99.38	99.38
7	Himachal Pradesh	C	H	51.92	28.85	55.77
		S		36.96	30.43	82.61
		P		44.90	29.59	68.37
		C	T	46.55	25.86	50.00
		S		30.36	25.00	67.86
		P		38.60	25.44	58.77
8	Jammu & Kashmir	C	H	79.71	11.59	82.61
		S		89.47	31.58	92.11
		P		83.18	18.69	85.98
		C	T	78.57	11.43	81.43
		S		85.00	30.00	87.50
		P		80.91	18.18	83.64
9	Jharkhand	C	H	15.00	22.50	77.50
		S		0.00	0.00	0.00
		P		10.17	20.34	66.10
		C	T	15.00	22.50	77.50
		S		0.00	0.00	0.00
		P		10.17	20.34	66.10
10	Karnataka	C	H	68.12	91.30	92.75
		S		63.38	90.14	95.77
		P		65.71	90.71	94.29
		C	T	67.14	90.00	91.43
		S		62.50	88.89	94.44
		P		64.79	89.44	92.96

1	2	3	4	5	6	7
11	Kerala	C	H	75.76	71.72	77.78
		S		79.00	74.00	84.00
		P		77.39	72.86	80.90
		C	T	75.76	71.72	77.78
		S		79.00	74.00	84.00
		P		77.39	72.86	80.90
12	Madhya Pradesh	C	H	32.65	50.00	76.53
		S		34.88	45.35	68.60
		P		33.70	47.83	72.83
		C	T	32.00	49.00	75.00
		S		34.09	44.32	67.05
		P		32.98	46.81	71.28
13	Maharashtra	C	H	29.33	74.67	92.00
		S		28.85	61.54	86.54
		P		29.13	69.29	89.76
		C	T	26.83	68.29	84.15
		S		25.00	53.33	75.00
		P		26.06	61.97	80.28
14	Odisha	C	H	31.34	87.69	87.69
		S		39.63	87.04	92.59
		P		35.50	87.36	90.15
		C	T	31.34	87.69	87.69
		S		39.63	87.04	92.59
		P		35.50	87.36	90.15
15	Punjab	C	H	99.46	99.46	100.00
		S		100.00	97.06	100.00
		P		99.72	98.31	100.00
		C	T	99.46	99.46	100.00
		S		100.00	97.06	100.00
		P		99.72	98.31	100.00
16	Tamil Nadu	C	H	91.67	100.00	100.00
		S		93.16	100.00	98.29
		P		92.41	100.00	99.16
		C	T	91.67	100.00	100.00
		S		92.37	99.15	97.46
		P		92.02	99.58	98.74
17	Telangana	C	H	87.50	88.54	100.00
		S		91.25	98.75	96.25
		P		89.20	93.18	98.30
		C	T	87.50	88.54	100.00
		S		89.02	96.34	93.90
		P		88.20	92.13	97.19
18	Uttar Pradesh	C	H	96.80	85.39	99.39
		S		92.22	90.00	95.56
		P		96.25	85.94	98.93
		C	T	96.80	85.39	99.39
		S		92.22	90.00	95.56
		P		96.25	85.94	98.93
19	Uttarakhand	C	H	66.00	36.00	58.00
		S		34.00	28.00	56.00
		P		50.00	32.00	57.00
		C	T	66.00	36.00	58.00
		S		34.00	28.00	56.00
		P		50.00	32.00	57.00

1	2	3	4	5	6	7
20	West Bengal	C	H	66.25	90.00	96.25
		S		57.14	90.26	95.45
		P		61.78	90.13	95.86
		C	T	66.25	90.00	96.25
		S		57.14	90.26	95.45
		P		61.78	90.13	95.86
21	Puducherry	C	H	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
Paddy-Rabi/Summer						
1	Andhra Pradesh	C	H	100.00	97.62	97.62
		S		96.88	81.25	100.00
		P		98.65	90.54	98.65
		C	T	97.67	95.35	95.35
		S		96.88	81.25	100.00
		P		97.33	89.33	97.33
2	Assam	C	H	41.18	11.76	70.59
		S		40.00	6.67	53.33
		P		40.63	9.38	62.50
		C	T	35.00	10.00	60.00
		S		40.00	6.67	53.33
		P		37.14	8.57	57.14
3	Bihar	C	H	100.00	68.75	100.00
		S		100.00	50.00	100.00
		P		100.00	65.00	100.00
		C	T	80.00	55.00	80.00
		S		100.00	50.00	100.00
		P		83.33	54.17	83.33
4	Karnataka	C	H	100.00	100.00	100.00
		S		100.00	100.00	97.50
		P		100.00	100.00	98.75
		C	T	100.00	100.00	100.00
		S		100.00	100.00	97.50
		P		100.00	100.00	98.75
5	Kerala	C	H	95.00	88.00	83.00
		S		92.71	95.83	80.21
		P		93.88	91.84	81.63
		C	T	95.00	88.00	83.00
		S		89.00	92.00	77.00
		P		92.00	90.00	80.00
6	Odisha	C	H	98.53	97.79	97.06
		S		100.00	97.14	100.00
		P		99.28	97.46	98.55
		C	T	95.71	95.00	94.29
		S		100.00	97.14	100.00
		P		97.86	96.07	97.14
7	Tamil Nadu	C	H	100.00	97.44	97.44
		S		97.22	100.00	86.11
		P		98.67	98.67	92.00
		C	T	97.50	95.00	95.00
		S		97.22	100.00	86.11
		P		97.37	97.37	90.79

1	2	3	4	5	6	7
8	West Bengal	C	H	100.00	97.14	100.00
		S		100.00	97.76	92.54
		P		100.00	97.45	96.35
		C	T	100.00	97.14	100.00
		S		100.00	97.76	92.54
		P		100.00	97.45	96.35
9	Puducherry	C	H	100.00	100.00	100.00
	Rabi-I	S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
	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	Telangana	C	H	100.00	89.87	97.47
		S		100.00	97.22	97.22
		P		100.00	93.38	97.35
		C	T	98.75	88.75	96.25
		S		100.00	97.22	97.22
		P		99.34	92.76	96.71
Jowar- Kharif						
1	Karnataka	C	H	28.57	97.62	92.86
		S		30.43	95.64	84.78
		P		29.55	96.59	88.64
		C	T	24.00	82.00	78.00
		S		28.00	88.00	78.00
		P		26.00	85.00	78.00
2	Madhya Pradesh	C	H	1.00	24.00	41.00
		S		2.56	38.46	25.64
		P		1.69	30.34	34.27
		C	T	1.00	24.00	41.00
		S		2.56	38.46	25.64
		P		1.69	30.34	34.27
3	Maharashtra	C	H	6.45	93.55	90.32
		S		0.00	100.00	85.71
		P		3.39	96.61	88.14
		C	T	5.06	73.42	70.89
		S		0.00	93.33	80.00
		P		2.88	82.01	74.82
4	Rajasthan	C	H	30.61	8.16	26.53
		S		3.70	3.70	50.00
		P		16.50	5.83	38.83
		C	T	29.41	7.84	25.49
		S		3.33	3.33	45.00
		P		15.32	5.41	36.04
5	Tamil Nadu	C	H	39.62	75.47	60.38
	(Whole Year)	S		28.00	84.00	48.00
		P		33.98	79.61	54.37
		C	T	39.62	75.47	60.38
		S		28.00	84.00	48.00
		P		33.98	79.61	54.37

1	2	3	4	5	6	7
8	Telangana	C	H	2.00	26.00	88.00
		S		0.00	5.88	85.29
		P		1.19	17.86	86.90
		C	T	2.00	26.00	88.00
		S		0.00	5.88	85.29
		P		1.19	17.86	86.90
6	Uttar Pradesh	C	H	35.00	5.00	12.50
		S		0.00	0.00	0.00
		P		30.43	4.35	10.87
		C	T	35.00	5.00	12.50
		S		0.00	0.00	0.00
		P		30.43	4.35	10.87
Jowar-Rabi						
1	Karnataka	C	H	21.88	84.38	82.81
		S		32.35	85.29	97.06
		P		27.27	84.85	90.15
		C	T	20.00	77.14	75.71
		S		32.35	85.29	97.06
		P		26.09	81.16	86.23
2	Maharashtra	C	H	37.21	60.47	49.61
		S		29.35	45.65	54.35
		P		33.94	54.30	51.58
		C	T	32.21	52.35	42.95
		S		28.72	44.68	53.19
		P		30.86	49.38	46.91
3	Telangana	C	H	12.50	27.50	77.50
		S		22.22	14.81	62.96
		P		16.42	22.39	71.64
		C	T	12.50	27.50	77.50
		S		21.43	14.29	60.71
		P		16.18	22.06	70.59
BAJRA						
1	Andhra Pradesh	C	H	27.78	44.44	61.11
		S		0.00	40.00	40.00
		P		18.42	48.68	68.42
		C	T	27.78	44.44	61.11
		S		10.00	52.50	75.00
		P		18.42	48.68	68.42
2	Gujarat	C	H	45.28	95.28	85.85
		S		35.14	97.30	66.22
		P		41.11	96.11	77.78
		C	T	43.64	91.82	82.73
		S		35.14	97.30	66.22
		P		40.22	94.02	76.09
3	Haryana	C	H	76.47	96.08	90.20
		S		94.74	94.74	90.79
		P		84.27	95.51	90.45
		C	T	75.00	94.23	88.46
		S		94.74	94.74	90.79
		P		83.33	94.44	89.44
4	Karnataka	C	H	19.05	100.00	78.57
		S		24.00	96.00	88.00
		P		21.74	97.83	83.71
		C	T	16.00	84.00	66.00
		S		24.00	96.00	88.00
		P		20.00	90.00	77.00

1	2	3	4	5	6	7
5	Maharashtra	C	H	22.00	96.00	66.00
		S		19.51	73.17	56.10
		P		20.88	85.71	61.54
		C	T	18.33	80.00	55.00
		S		18.18	68.18	52.27
		P		18.27	75.00	53.85
6	Rajasthan	C	H	19.30	45.61	35.09
		S		8.33	33.33	40.00
		P		13.68	39.32	37.61
		C	T	18.97	44.83	34.48
		S		8.33	33.33	40.00
		P		13.56	38.98	37.29
7	Tamil Nadu (Whole Year)	C	H	35.29	91.18	67.65
		S		40.00	70.00	26.67
		P		37.50	81.25	48.44
		C	T	30.00	77.50	57.50
		S		40.00	70.00	26.67
		P		34.29	74.29	44.29
9	Uttar Pradesh	C	H	35.00	5.00	12.50
		S		85.71	57.14	85.71
		P		54.78	70.70	83.44
		C	T	35.00	5.00	12.50
		S		85.71	57.14	85.71
		P		54.78	70.70	83.44
Maize						
	Bihar	C	H	65.63	37.50	100.00
		S		50.00	33.33	100.00
		P		58.93	35.71	100.00
		C	T	52.50	30.00	80.00
		S		50.00	33.33	100.00
		P		51.56	31.25	87.50
2	Chhattisgarh	C	H	2.50	15.00	30.00
		S		0.00	35.00	20.00
		P		1.25	25.00	25.00
		C	T	2.50	15.00	30.00
		S		0.00	35.00	20.00
		P		1.25	25.00	25.00
3	Gujarat	C	H	20.00	50.00	100.00
		S		13.33	26.67	93.33
		P		17.14	40.00	97.14
		C	T	20.00	50.00	100.00
		S		12.50	25.00	87.50
		P		16.67	38.89	94.44
4	Haryana	C	H	70.00	50.00	90.00
		S		50.00	57.14	85.71
		P		61.76	52.94	88.24
		C	T	70.00	50.00	90.00
		S		43.75	50.00	75.00
		P		58.33	50.00	83.33
5	Himachal Pradesh	C	H	9.46	32.43	66.22
		S		4.76	42.86	71.43
		P		6.96	37.97	68.99
		C	T	8.97	30.77	62.82
		S		4.65	41.86	69.77
		P		6.71	36.59	66.46

1	2	3	4	5	6	7
6	Jammu & Kashmir	C	H	4.55	25.00	63.64
		S		8.70	13.04	41.30
		P		5.97	20.90	55.97
		C	T	4.44	24.44	62.22
		S		8.00	12.00	38.00
		P		5.71	20.00	53.57
7	Jharkhand	C	H	10.00	0.00	60.00
		S		0.00	0.00	50.00
		P		6.25	0.00	56.25
		C	T	10.00	0.00	60.00
		S		0.00	0.00	50.00
		P		6.25	0.00	56.25
8	Karnataka	C	H	24.00	96.00	94.00
		S		32.00	100.00	100.00
		P		28.00	98.00	97.00
		C	T	24.00	96.00	94.00
		S		32.00	100.00	100.00
		P		28.00	98.00	97.00
9	Madhya Pradesh	C	H	2.50	30.00	51.25
		S		0.00	33.33	52.78
		P		1.32	31.58	51.97
		C	T	2.50	30.00	51.25
		S		0.00	33.33	52.78
		P		1.32	31.58	51.97
10	Odisha	C	H	0.00	85.00	65.00
		S		0.00	87.50	80.00
		P		0.00	86.25	72.50
		C	T	0.00	85.00	65.00
		S		0.00	87.50	80.00
		P		0.00	86.25	72.50
11	Punjab	C	H	68.57	80.00	100.00
		S		90.00	92.50	100.00
		P		80.00	86.67	100.00
		C	T	68.57	80.00	100.00
		S		90.00	92.50	100.00
		P		80.00	86.67	100.00
12	Rajasthan	C	H	37.78	28.89	66.67
		S		8.33	4.17	54.17
		P		22.58	16.13	60.22
		C	T	37.78	28.89	66.67
		S		8.00	4.00	52.00
		P		22.11	15.79	58.95
13	Tamil Nadu	C	H	44.44	100.00	86.11
		S		46.15	100.00	76.92
		P		45.16	100.00	82.26
		C	T	40.00	90.00	77.50
		S		46.15	100.00	76.92
		P		42.42	93.94	77.27
14	Telangana	C	H	40.82	83.67	100.00
		S		36.84	94.74	100.00
		P		39.08	88.51	100.00
		C	T	40.00	82.00	98.00
		S		36.84	94.74	100.00
		P		38.64	87.50	98.86

1	2	3	4	5	6	7
15	Uttar Pradesh	C	H	61.76	56.47	94.71
		S		21.43	32.14	85.71
		P		56.06	53.03	93.43
		C	T	61.76	56.47	94.71
		S		21.43	32.14	85.71
		P		56.06	53.03	93.43
Ragi						
1	Karnataka	C	H	25.00	100.00	90.00
		S		15.79	94.74	94.74
		P		20.51	97.44	92.31
		C	T	24.00	96.00	94.00
		S		15.79	94.74	94.74
		P		20.51	97.44	92.31
2	Tamil Nadu (Whole Year)	C	H	55.00	100.00	95.00
		S		42.11	100.00	68.42
		P		48.72	100.00	82.05
		C	T	55.00	100.00	95.00
		S		42.11	100.00	68.42
		P		48.72	100.00	82.05
3	Uttarakhand	C	H	5.00	0.00	0.00
		S		0.00	0.00	0.00
		P		2.78	0.00	0.00
		C	T	5.00	0.00	0.00
		S		0.00	0.00	0.00
		P		2.78	0.00	0.00
Cotton						
1	Andhra Pradesh	C	H	15.00	100.00	95.00
		S		7.50	100.00	95.00
		P		11.25	100.00	95.00
		C	T	15.00	100.00	95.00
		S		7.50	100.00	95.00
		P		11.25	100.00	95.00
2	Gujarat	C	H	51.96	87.25	86.27
		S		50.00	76.61	74.19
		P		51.22	83.23	81.71
		C	T	48.62	81.65	80.73
		S		49.21	75.40	73.02
		P		48.84	79.36	77.91
3	Haryana	C	H	100.00	98.21	92.86
		S		100.00	100.00	98.08
		P		100.00	99.07	95.37
		C	T	100.00	98.21	92.86
		S		100.00	100.00	98.08
		P		100.00	90.67	98.67
4	Karnataka	C	H	20.00	92.00	96.00
		S		23.08	100.00	100.00
		P		21.57	96.08	98.04
		C	T	19.23	88.46	92.31
		S		23.08	100.00	100.00
		P		21.15	94.23	96.15
5	Madhya Pradesh	C	H	91.67	97.92	97.92
		S		75.00	92.50	100.00
		P		84.09	95.45	98.86
		C	T	91.67	97.92	97.92
		S		75.00	92.50	100.00
		P		84.09	95.45	98.86

1	2	3	4	5	6	7
6	Maharashtra	C	H	47.10	100.00	100.00
		S		36.96	92.39	95.65
		P		43.04	96.96	98.26
		C	T	46.43	98.57	98.57
		S		36.17	90.43	93.62
		P		42.31	95.30	96.58
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		94.44	94.44	94.44
		P		97.22	97.22	97.22
8	Rajasthan	C	H	100.00	91.67	100.00
		S		82.35	82.35	70.59
		P		91.43	87.14	85.71
		C	T	90.00	82.50	90.00
		S		73.68	73.68	63.16
		P		82.05	78.21	76.92
9	Tamil Nadu	C	H	26.09	100.00	97.83
		S		34.09	97.73	93.18
		P		30.00	98.89	95.56
		C	T	25.00	95.83	93.75
		S		33.33	95.56	91.11
		P		29.03	95.70	92.47
10	Telangana	C	H	26.32	100.00	94.74
		S		8.33	100.00	100.00
		P		19.35	100.00	96.77
		C	T	26.32	100.00	94.74
		S		8.33	100.00	100.00
		P		19.35	100.00	96.77
Groundnut						
1	Andhra Pradesh	C	H	5.07	86.96	84.78
		S		4.35	86.96	87.68
		P		4.71	86.96	86.23
		C	T	5.07	86.96	84.78
		S		4.35	86.96	87.68
		P		4.71	86.96	86.23
2	Gujarat	C	H	75.68	85.81	93.92
		S		52.04	64.29	95.92
		P		66.26	77.24	94.72
		C	T	74.67	84.67	92.67
		S		51.00	63.00	94.00
		P		65.20	76.00	93.20
3	Karnataka	C	H	16.13	96.77	80.65
		S		25.00	100.00	96.88
		P		20.63	98.41	88.89
		C	T	14.29	85.71	71.43
		S		25.00	100.00	96.88
		P		19.40	92.54	83.58
4	Madhya Pradesh	C	H	17.50	10.00	50.00
		S		10.53	10.53	52.63
		P		14.10	10.26	51.28
		C	T	17.50	10.00	50.00
		S		10.53	10.53	52.63
		P		14.10	10.26	51.28

1	2	3	4	5	6	7
5	Maharashtra	C	H	35.19	70.37	81.48
		S		30.43	54.35	78.26
		P		33.00	63.00	80.00
		C	T	31.67	63.33	73.33
		S		26.92	48.08	69.23
		P		29.46	56.25	71.43
6	Rajasthan	C	H	70.59	52.94	76.47
		S		68.42	39.47	78.95
		P		69.44	45.83	77.78
		C	T	63.16	47.37	68.42
		S		65.00	37.50	75.00
		P		64.10	42.31	71.79
7	Tamil Nadu (Whole Year)	C	H	38.38	95.96	71.72
		S		47.13	86.21	64.37
		P		42.47	91.40	68.28
		C	T	38.38	95.96	71.72
		S		46.59	85.23	63.64
		P		42.25	90.91	67.91
8	Telangana	C	H	20.59	38.24	88.24
		S		10.00	80.00	80.00
		P		15.63	57.81	84.38
		C	T	20.59	38.24	88.24
		S		10.00	80.00	80.00
		P		15.63	57.81	84.38
Sugarcane						
1	Andhra Pradesh	C	H	100.00	93.22	98.31
		S		100.00	96.15	94.23
		P		100.00	94.59	96.40
		C	T	100.00	93.22	98.31
		S		100.00	96.15	94.23
		P		100.00	94.59	96.40
2	Assam	C	H	0.00	0.00	25.00
		S		0.00	0.00	21.43
		P		0.00	0.00	23.53
		C	T	0.00	0.00	25.00
		S		0.00	0.00	21.43
		P		0.00	0.00	23.53
3	Bihar	C	H	42.11	15.79	89.47
		S		45.45	9.09	100.00
		P		43.33	13.33	93.33
		C	T	40.00	15.00	85.00
		S		45.45	9.09	100.00
		P		41.94	12.90	90.32
4	Haryana	C	H	100.00	93.88	100.00
		S		100.00	84.62	96.15
		P		100.00	90.67	98.67
		C	T	100.00	93.88	100.00
		S		100.00	84.62	96.15
		P		100.00	90.67	98.67
5	Karnataka	C	H	94.44	94.44	97.22
		S		73.68	94.74	100.00
		P		83.78	94.59	98.65
		C	T	85.00	85.00	87.50
		S		73.68	94.74	100.00
		P		79.49	89.74	93.59

1	2	3	4	5	6	7
6	Maharashtra	C	H	100.00	72.00	100.00
		S		97.37	86.84	100.00
		P		98.86	78.41	100.00
		C	T	75.76	54.55	75.76
		S		86.05	76.74	88.37
		P		79.82	63.30	80.73
7	Punjab	C	H	100.00	92.54	100.00
		S		100.00	100.00	100.00
		P		100.00	95.87	100.00
		C	T	100.00	92.54	100.00
		S		100.00	100.00	100.00
		P		100.00	95.87	100.00
8	Rajasthan	C	H	100.00	28.21	82.05
		S		92.86	21.43	57.14
		P		97.01	25.37	71.64
		C	T	100.00	28.21	82.05
		S		92.86	21.43	57.14
		P		97.01	25.37	71.64
9	Tamil Nadu	C	H	100.00	97.96	100.00
		S		86.36	90.91	90.91
		P		93.55	94.62	95.70
		C	T	98.00	96.00	98.00
		S		86.36	90.91	90.91
		P		92.55	93.62	94.68
10	Uttar Pradesh	C	H	99.50	72.00	99.50
		S		90.48	80.95	100.00
		P		97.93	73.55	99.59
		C	T	99.50	72.00	99.50
		S		90.48	80.95	100.00
		P		97.93	73.55	99.59
11	Uttarakhand	C	H	100.00	82.50	92.50
		S		0.00	0.00	0.00
		P		100.00	82.50	92.50
		C	T	100.00	82.50	92.50
		S		0.00	0.00	0.00
		P		100.00	82.50	92.50
Wheat						
1	Assam	C	H	0.00	18.75	28.13
		S		15.38	46.15	53.85
		P		6.90	31.03	39.66
		C	T	0.00	12.00	18.00
		S		15.38	46.15	53.85
		P		5.26	23.68	30.26
2	Bihar	C	H	85.91	62.73	99.09
		S		82.58	65.91	100.00
		P		84.66	63.92	99.43
		C	T	85.14	62.16	98.20
		S		81.34	64.93	98.51
		P		83.71	63.20	98.31
3	Chhattisgarh	C	H	50.00	60.00	90.00
		S		50.00	65.00	85.00
		P		50.00	62.50	87.50
		C	T	50.00	60.00	90.00
		S		50.00	65.00	85.00
		P		50.00	62.50	87.50

1	2	3	4	5	6	7
4	Gujarat	C	H	89.04	86.30	96.58
		S		78.70	67.59	90.74
		P		84.65	78.35	94.09
		C	T	86.67	84.00	94.00
		S		78.70	67.59	90.74
		P		83.33	77.13	92.64
5	Haryana	C	H	100.00	99.41	100.00
		S		100.00	100.00	100.00
		P		100.00	99.67	100.00
		C	T	100.00	99.41	100.00
		S		100.00	100.00	100.00
		P		100.00	99.67	100.00
6	Himachal Pradesh	C	H	7.29	31.25	69.79
		S		11.22	28.57	56.12
		P		9.28	29.90	62.89
		C	T	6.36	27.27	60.91
		S		10.58	26.92	52.88
		P		8.41	27.10	57.01
7	Jammu & Kashmir	C	H	27.97	52.54	90.68
		S		41.18	49.02	96.08
		P		34.09	50.91	93.18
		C	T	27.50	51.67	89.17
		S		35.00	41.67	81.67
		P		31.25	46.67	85.42
8	Jharkhand	C	H	70.00	25.00	100.00
		S		55.56	11.11	77.78
		P		65.52	20.69	93.10
		C	T	70.00	25.00	100.00
		S		55.56	11.11	77.78
		P		65.52	20.69	93.10
9	Karnataka	C	H	55.56	72.22	77.78
		S		56.00	76.00	100.00
		P		55.81	74.42	90.70
		C	T	40.00	52.00	56.00
		S		56.00	76.00	100.00
		P		48.00	64.00	78.00
10	Madhya Pradesh	C	H	72.73	48.35	90.91
		S		73.64	64.55	76.36
		P		73.01	53.41	86.36
		C	T	71.54	47.56	89.43
		S		72.19	52.81	85.39
		P		73.01	53.41	86.36
11	Maharashtra	C	H	84.85	86.36	96.97
		S		29.35	45.65	54.35
		P		81.98	81.53	93.69
		C	T	75.17	76.51	85.91
		S		28.72	44.68	53.19
		P		74.90	74.49	85.60
12	Punjab	C	H	99.55	100.00	100.00
		S		100.00	97.51	100.00
		P		99.76	98.81	100.00
		C	T	99.95	100.00	100.00
		S		99.50	97.03	99.50
		P		99.53	98.58	99.76

1	2	3	4	5	6	7
13	Rajasthan	C	H	100.00	67.69	86.92
		S		93.85	58.46	87.69
		P		96.92	63.08	87.31
		C	T	100.00	67.69	86.92
		S		93.85	58.46	87.69
		P		96.92	63.08	87.31
14	Uttar Pradesh	C	H	99.30	94.38	99.47
		S		100.00	96.34	93.90
		P		99.39	94.62	98.77
		C	T	99.30	94.38	99.47
		S		100.00	96.34	93.90
		P		99.39	94.62	98.77
15	Uttarakhand	C	H	53.33	60.00	55.00
		S		44.44	44.44	25.93
		P		49.12	52.63	41.23
		C	T	53.33	60.00	55.00
		S		41.38	41.38	24.14
		P		47.46	50.85	39.83
16	West Bengal	C	H	98.17	91.74	100.00
		S		100.00	100.00	100.00
		P		99.07	95.79	100.00
		C	T	97.27	90.91	99.09
		S		100.00	100.00	100.00
		P		98.60	95.35	99.53
Barley						
1	Haryana	C	H	100.00	84.00	100.00
		S		100.00	71.43	100.00
		P		100.00	79.49	100.00
		C	T	96.15	80.77	96.15
		S		100.00	71.43	100.00
		P		97.50	77.50	97.50
2	Himachal Pradesh	C	H	25.00	0.00	12.50
		S		2.63	0.00	47.37
		P		12.86	0.00	31.43
		C	T	20.00	0.00	10.00
		S		2.50	0.00	45.00
		P		11.25	0.00	27.50
3	Punjab	C	H	100.00	96.67	100.00
		S		100.00	100.00	100.00
		P		100.00	98.33	100.00
		C	T	100.00	96.67	100.00
		S		100.00	100.00	100.00
		P		100.00	98.33	100.00
4	Rajasthan	C	H	100.00	40.00	85.00
		S		97.37	39.47	76.32
		P		98.72	39.74	80.77
		C	T	100.00	40.00	85.00
		S		94.87	38.46	74.36
		P		97.47	39.24	79.75
Gram						
1	Andhra Pradesh	C	H	2.50	75.00	97.50
		S		0.00	79.49	100.00
		P		1.27	77.22	98.73
		C	T	2.50	75.00	97.50
		S		0.00	79.49	100.00
		P		1.27	77.22	98.73

1	2	3	4	5	6	7
2	Bihar	C	H	17.50	2.50	45.00
		S		0.00	0.00	25.00
		P		12.50	1.79	39.29
		C	T	17.50	2.50	45.00
		S		0.00	0.00	25.00
		P		12.50	1.79	39.29
3	Chhattisgarh	C	H	52.50	27.50	75.00
		S		39.47	21.05	57.89
		P		46.15	24.36	66.67
		C	T	52.50	27.50	75.00
		S		37.50	20.00	55.00
		P		45.00	23.75	65.00
4	Gujarat	C	H	32.35	44.12	58.82
		S		40.00	40.00	73.33
		P		35.94	42.19	65.63
		C	T	27.50	37.50	50.00
		S		40.00	40.00	73.33
		P		32.86	38.57	60.00
5	Haryana	C	H	66.07	67.86	55.36
		S		64.00	62.00	52.00
		P		65.09	65.09	53.77
		C	T	52.86	54.29	44.29
		S		61.54	59.62	50.00
		P		56.56	56.56	46.72
6	Jharkhand	C	H	20.00	0.00	15.00
		S		0.00	25.00	50.00
		P		14.29	7.14	25.00
		C	T	20.00	0.00	15.00
		S		0.00	25.00	50.00
		P		14.29	7.14	25.00
7	Karnataka	C	H	22.22	50.00	72.22
		S		20.00	100.00	100.00
		P		21.05	76.32	86.84
		C	T	20.00	45.00	65.00
		S		20.00	100.00	100.00
		P		20.00	72.50	82.50
8	Madhya Pradesh	C	H	49.64	17.52	69.34
		S		51.85	33.33	50.00
		P		50.26	21.99	63.87
		C	T	48.57	17.14	67.86
		S		51.85	33.33	50.00
		P		49.48	21.65	62.89
9	Maharashtra	C	H	51.04	71.88	80.00
		S		53.33	66.67	66.67
		P		51.92	69.87	75.64
		C	T	49.00	69.00	78.00
		S		53.33	66.67	66.67
		P		50.63	68.13	73.75
10	Punjab	C	H	84.62	100.00	19.23
		S		93.75	100.00	37.50
		P		88.10	100.00	26.19
		C	T	73.33	86.67	16.67
		S		93.75	100.00	37.50
		P		80.43	91.30	23.91

1	2	3	4	5	6	7
11	Rajasthan	C	H	67.31	26.92	37.50
		S		59.43	12.26	33.96
		P		63.33	19.52	35.71
		C	T	58.33	23.33	32.50
		S		53.39	11.02	30.51
		P		55.88	17.23	31.51
12	Uttar Pradesh	C	H	41.67	6.25	43.75
		S		50.00	0.00	100.00
		P		42.31	5.77	48.08
		C	T	41.67	6.25	43.75
		S		50.00	0.00	100.00
		P		42.31	5.77	48.08
Rape & Mustard						
1	Assam	C	H	0.00	0.00	26.47
		S		2.27	0.00	65.91
		P		0.89	0.00	41.96
		C	T	0.00	0.00	26.47
		S		2.27	0.00	65.91
		P		0.89	0.00	41.96
2	Bihar	C	H	70.00	0.00	70.00
		S		57.14	0.00	100.00
		P		66.67	0.00	77.78
		C	T	70.00	0.00	70.00
		S		57.14	0.00	100.00
		P		66.67	0.00	77.78
3	Chhattisgarh	C	H	13.33	6.67	20.00
		S		0.00	0.00	13.33
		P		6.67	3.33	16.67
		C	T	13.33	6.67	20.00
		S		0.00	0.00	13.33
		P		6.67	3.33	16.67
4	Gujarat	C	H	93.48	91.30	93.48
		S		91.30	76.09	95.65
		P		92.39	83.70	94.57
		C	T	89.58	87.50	89.58
		S		91.30	76.09	95.65
		P		90.43	81.91	92.55
5	Haryana	C	H	95.56	87.78	97.78
		S		98.67	98.67	94.67
		P		96.97	92.73	96.36
		C	T	95.56	87.78	97.78
		S		97.37	97.37	93.42
		P		96.39	92.17	95.78
6	Jharkhand	C	H	70.00	0.00	40.00
		S		25.00	0.00	50.00
		P		50.00	0.00	44.44
		C	T	70.00	0.00	40.00
		S		25.00	0.00	50.00
		P		50.00	0.00	44.44
7	Madhya Pradesh	C	H	60.00	40.00	63.33
		S		54.55	40.91	70.45
		P		57.69	40.38	66.35
		C	T	60.00	40.00	63.33
		S		54.55	40.91	70.45
		P		57.69	40.38	66.35

1	2	3	4	5	6	7
8	Punjab	C	H	97.37	73.68	89.47
		S		97.06	94.12	88.24
		P		97.22	83.33	88.89
		C	T	92.50	70.00	85.00
		S		97.06	94.12	88.24
		P		94.59	81.08	86.49
9	Rajasthan	C	H	89.89	65.17	89.89
		S		88.10	45.24	75.00
		P		89.02	55.49	82.66
		C	T	88.89	64.44	88.89
		S		88.10	45.24	75.00
		P		88.51	55.17	82.18
10	Uttar Pradesh	C	H	91.84	56.12	93.88
		S		85.71	57.14	85.71
		P		91.07	56.25	92.86
		C	T	91.84	56.12	93.88
		S		85.71	57.14	85.71
		P		91.07	56.25	92.86
11	West Bengal	C	H	90.57	78.30	94.34
		S		81.44	88.66	88.66
		P		86.21	83.25	91.63
		C	T	87.27	75.45	90.91
		S		81.44	88.66	88.66
		P		84.54	81.64	89.86

**INCIDENCE OF ERRORS IN CONDUCTING CROP CUTTING EXPERIMENTS
DURING 2015-16**

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	
1	Andhra Pradesh	Kharif	C	82	0	0	3	3	0	8	1	10	
			S	50	0	0	6	1	0	4	0	45	
			P	66	0	0	5	2	0	6	0	28	
		Rabi	C	95	0	0	2	0	0	1	0	3	
			S	44	2	1	11	2	0	2	0	56	
			P	71	1	1	6	1	0	2	0	28	
2	Assam	Early Kharif	C	70	0	0	0	0	0	0	0	30	
			S	39	0	0	0	0	0	0	0	61	
			P	56	0	0	0	0	0	0	0	44	
		Late Kharif	C	73	0	0	0	0	0	0	3	0	28
			S	53	0	0	0	0	0	0	0	0	47
			P	64	0	0	0	0	0	1	0	36	
		Rabi	C	93	0	0	0	0	0	0	0	0	7
			S	56	0	0	0	0	0	0	0	0	44
			P	77	0	0	0	0	0	0	0	0	23
		Summer	C	94	0	0	0	0	0	0	0	0	6
			S	53	0	0	0	0	0	0	0	0	47
			P	75	0	0	0	0	0	0	0	0	25
3	Bihar	Autumn (Bhadai)	C	71	0	0	0	6	0	0	0	27	
			S	14	0	0	0	0	0	3	0	86	
			P	49	0	0	0	4	0	1	0	49	
		Winter (Agahani)	C	64	0	0	0	0	0	0	2	0	34
			S	18	0	0	0	0	0	0	2	0	131
			P	48	0	0	0	0	0	2	0	68	
		Rabi	C	86	0	0	0	0	0	0	4	0	11
			S	13	0	0	0	0	0	0	0	0	87
			P	60	0	0	0	0	0	3	0	38	
		Summer	C	100	0	0	0	0	0	0	0	0	0
			S	75	0	0	0	0	0	0	0	0	25
			P	95	0	0	0	0	0	0	0	0	5
4	Chhattisgarh	Kharif	C	90	1	1	0	3	0	4	0	5	
			S	98	0	0	0	0	0	1	0	1	
			P	94	1	1	0	2	0	3	0	3	
		Rabi	C	93	0	0	0	0	2	5	0	0	
			S	100	0	0	0	0	0	0	0	0	
			P	97	0	0	0	0	1	2	0	0	
5	Gujarat	Kharif	C	75	0	0	0	2	0	4	0	20	
			S	45	1	1	0	2	0	6	1	52	
			P	63	0	0	0	2	0	5	1	33	
		Rabi	C	77	0	0	2	4	0	7	0	16	
			S	28	0	0	0	0	0	1	7	72	
			P	55	0	0	1	2	0	4	3	41	
6	Haryana	Kharif	C	83	0	0	0	1	2	7	0	10	
			S	44	0	0	0	0	0	1	0	56	
			P	66	0	0	0	0	1	4	0	30	
		Rabi	C	83	0	0	0	1	0	0	0	17	
			S	47	0	0	0	0	0	0	0	53	
			P	67	0	0	0	0	0	0	0	33	
7	Himachal Pradesh	Kharif	C	75	0	0	2	2	0	24	0	3	
			S	54	0	0	2	0	8	22	2	31	
			P	64	0	0	2	1	4	23	1	17	
		Rabi	C	47	1	0	2	2	2	12	0	47	
			S	49	1	0	8	9	10	18	0	32	
			P	48	1	0	5	5	6	15	0	39	

ANNEX VIII (Contd.....)

1	2	3	4	5	6	7	8	9	10	11	12	13		
8	Jammu & Kashmir	Kharif	C	6	9	9	17	55	14	14	0	77		
			S	12	0	0	21	17	0	8	0	79		
			P	8	6	6	19	42	9	12	0	78		
		Rabi	C	10	0	0	7	47	14	19	0	80		
			S	20	6	2	29	21	0	6	0	60		
			P^	15	3	1	17	35	8	13	0	70		
9	Jharkhand	Early Kharif (Bhadai)	C	100	0	0	0	0	0	0	0	0		
			S	7	0	0	0	0	0	0	0	93		
			P	62	0	0	0	0	0	0	0	38		
		Late Kharif (Agahani)	C	84	3	0	0	1	0	0	0	0	13	
			S	5	0	0	0	0	0	0	0	0	95	
			P	58	2	0	0	1	0	0	0	0	39	
		Rabi	C	96	0	0	0	0	2	2	0	0	0	
			S	10	0	0	0	0	0	2	0	88		
			P	67	0	0	0	0	1	2	0	29		
		10	Karnataka	Kharif	C	70	0	0	0	1	0	0	1	29
					S	51	0	0	1	0	0	1	0	47
					P	60	0	0	0	1	0	0	0	39
Rabi	C			52	0	0	0	1	0	0	0	47		
	S			106	0	0	2	1	9	0	0	90		
	P			72	0	0	1	1	3	0	0	63		
Summer	C			65	0	0	0	0	0	4	0	31		
	S			53	0	0	4	0	3	0	0	44		
	P			59	0	0	2	0	1	2	0	38		
11	Kerala			Autumn	C	88	0	0	2	2	0	1	0	10
					S	79	0	0	0	0	0	0	0	21
					P	84	0	0	1	1	0	1	0	15
		Winter	C	84	0	0	0	0	1	0	0	15		
			S	84	0	0	0	1	0	0	0	16		
			P	84	0	0	0	1	1	0	0	16		
		Summer	C	83	0	0	0	0	0	0	0	17		
			S	56	0	0	0	0	0	4	0	42		
			P	70	0	0	0	0	0	2	0	29		
		12	Madhya Pradesh	Kharif	C	71	0	0	1	5	4	5	0	21
					S	38	0	0	0	0	0	0	0	43
					P	56	0	0	0	3	2	3	0	31
Rabi	C			82	2	2	1	9	8	6	0	7		
	S			23	0	0	0	0	1	4	0	75		
	P			63	1	1	0	6	5	6	0	29		
13	Maharashtra	Kharif	C	40	3	2	19	51	0	31	10	22		
			S	18	5	2	4	6	1	6	5	80		
			P	30	4	2	13	32	1	20	8	48		
		Rabi	C	27	2	4	54	81	2	33	3	6		
			S	19	2	1	0	3	2	4	2	79		
			P	24	2	3	33	50	2	21	3	35		
14	Odisha	Autumn	C	96	0	0	0	0	0	1	0	3		
			S	96	0	0	0	0	0	1	0	3		
			P	96	0	0	0	0	0	1	0	3		
		Winter	C	94	0	0	0	0	0	1	0	5		
			S	98	0	0	0	1	0	0	0	2		
			P	96	0	0	0	1	0	1	0	3		
		Summer	C	95	0	0	0	0	0	2	1	3		
			S	99	0	0	0	0	0	0	0	1		
			P	97	0	0	0	0	0	1	1	2		

ANNEX VIII (Contd.....)

1	2	3	4	5	6	7	8	9	10	11	12	13	
15	Punjab	Kharif	C	58	0	0	1	1	2	23	1	28	
			S	26	0	0	0	0	0	0	1	1	73
			P	43	0	0	0	1	1	12	1	50	
		Rabi	C	44	0	0	5	1	2	14	2	53	
			S	19	0	0	1	0	0	0	0	80	
			P	32	0	0	3	1	1	8	1	66	
16	Rajasthan	Kharif	C	61	1	1	4	1	0	33	1	11	
			S	26	0	0	0	5	1	5	0	69	
			P	44	1	0	2	3	0	19	0	40	
		Rabi	C	51	1	1	11	4	0	51	0	15	
			S	33	0	1	3	4	0	7	0	65	
			P	42	0	1	7	4	0	29	0	40	
17	Tamil Nadu	Total @	C	68	0	0	2	2	0	19	0	10	
			S	41	0	0	8	0	0	5	1	53	
			P	55	0	0	5	1	0	13	1	30	
18	Telangana	Kharif	C	94	0	0	0	0	0	1	0	5	
			S	48	0	0	3	0	0	3	0	48	
			P	74	0	0	2	0	0	2	0	24	
		Rabi	C	92	0	1	1	1	0	0	0	8	
			S	52	0	0	4	7	0	2	0	48	
			P	73	0	0	2	4	0	1	0	26	
19	Uttar Pradesh	Kharif	C	52	1	0	11	13	1	15	1	30	
			S	25	1	0	5	2	1	14	1	74	
			P	49	1	0	11	12	1	15	1	36	
	Rabi	C	58	0	0	12	11	0	20	0	25		
		S	47	0	0	1	0	0	3	0	52		
		P	57	0	0	11	10	0	18	0	28		
Zaid Rabi	C	70	0	0	11	16	0	15	0	24			
	S	25	0	0	100	0	0	0	0	50			
	P	68	0	0	15	15	0	14	0	26			
20	Uttarakhand	Kharif	C	43	0	0	2	3	0	35	0	28	
			S	16	0	0	5	21	0	7	0	78	
			P	33	0	0	3	10	0	24	0	48	
		Rabi	C	43	0	0	0	0	0	57	0	10	
			S	17	0	0	11	4	0	59	0	80	
			P	31	0	0	5	2	0	58	0	43	
21	West Bengal	Aus	C	47	0	0	0	0	1	0	0	53	
			S	61	0	0	0	0	0	1	1	39	
			P	54	0	0	0	0	0	0	0	46	
		Aman	C	49	0	0	0	0	0	0	0	0	51
			S	64	0	0	0	0	0	0	0	0	36
			P	56	0	0	0	0	0	0	0	0	44
Rabi	C	88	0	0	0	0	0	0	0	0	12		
	S	75	0	0	0	0	0	1	0	25			
	P	82	0	0	0	0	0	1	0	18			
Summer	C	93	0	0	0	1	0	0	1	5			
	S	73	0	0	0	0	0	13	0	18			
	P	83	0	0	0	1	0	6	0	12			
22	Puducherry	Kharif	C	70	0	0	0	0	0	0	0	30	
			S	50	13	0	0	0	0	0	0	50	
			P	61	6	0	0	0	0	0	0	39	
		Rabi-I	C	80	0	0	0	0	0	10	0	10	
			S	40	0	0	0	0	0	0	0	60	
			P	60	0	0	0	0	0	5	0	35	
Rabi-II	C	90	0	0	0	0	0	20	10	0			
	S	20	0	0	0	0	0	0	0	80			
	P	55	0	0	0	0	0	10	5	40			

ANNEX VIII (Contd.....)

1	2	3	4	5	6	7	8	9	10	11	12	13
For States covered	Early Kharif	C	46	0	0	0	0	1	0	0	1	21
		S	32	0	0	0	0	0	0	0	1	32
		P	40	0	0	0	1	0	0	1	26	
	Late Kharif	C	66	1	1	5	9	1	13	1	21	
		S	44	1	0	2	2	0	4	1	52	
		P	57	1	0	4	6	1	9	1	34	
	Rabi	C	66	0	1	8	11	2	14	0	19	
		S	40	1	0	3	2	1	4	1	61	
		P	56	1	0	6	8	1	10	0	36	
	Summer	C	86	0	0	1	2	0	2	0	12	
		S	68	0	0	1	0	0	4	0	28	
		P	78	0	0	1	1	0	3	0	20	
	All Seasons	C	66	1	1	5	9	1	12	1	20	
		S	44	1	0	2	2	1	4	1	52	
		P	57	1	0	4	6	1	8	1	33	

Note:

1. e_1 = Error in selection of survey/sub-survey nos.
2. e_2 = Error in selection of field within survey/sub-survey nos.
3. e_3 = Error in measurement of field
4. e_4 = Error in selection of random nos., location and marking of plots
5. e_5 = Error in weighing of produce
6. e_6 = Error in reporting ancillary information
7. e_7 = Inadequate arrangements for storing of produce for drying and incorrect reporting of constituents in crop mixture.
8. e_8 = Others.
9. \$ In Kerala, whole year data has been included in Summer season
10. @ = For the year as a whole (Total of all seasons).
11. P^ - Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
12. NR - Not Reported.

**SUPPLY AND USE OF EQUIPMENT FOR CROP CUTTING
EXPERIMENTS DURING 2015-16**

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	
1	Andhra	Kharif	C	0	99	2	3	2	0	2	2	
			S	0	73	0	0	14	12	14	11	
	Pradesh	Rabi	P	0	86	1	1	8	6	8	7	
			C	0	100	0	1	3	0	3	2	
		Summer	S	0	82	0	0	16	8	18	18	
			P	0	92	0	1	9	4	10	9	
2	Assam	Early Kharif	C	0	97	0	0	14	0	14	14	
			S	0	67	0	4	4	16	4	4	
			P	0	83	0	2	9	7	9	9	
		Late Kharif	C	0	100	0	2	23	0	23	23	
			S	0	76	0	0	0	12	0	2	
			P	0	89	0	1	13	5	13	14	
	Rabi	C	0	99	0	0	10	0	10	10		
		S	0	67	2	2	2	15	2	2		
		P	0	85	1	1	6	6	6	6		
	Summer	C	0	100	0	0	12	0	12	12		
		S	0	67	0	0	7	27	7	7		
		P	0	84	0	0	9	13	9	9		
	3	Bihar	Autumn (Bhadai)	C	94	100	98	98	6	0	2	2
				S	50	50	50	50	19	13	19	19
				P	77	81	80	80	11	5	8	8
			Winter (Aghani)	C	95	100	97	97	4	0	3	3
				S	37	33	38	32	31	21	30	29
				P	69	70	71	68	16	9	15	14
Rabi		C	94	99	99	99	6	0	1	1		
		S	29	29	29	25	36	29	36	36		
		P	71	74	74	73	17	10	14	14		
Summer		C	100	100	100	100	0	0	0	0		
		S	0	0	0	0	0	0	0	0		
		P	80	80	80	80	0	0	0	0		
4	Chhattisgarh	Kharif	C	8	83	35	56	46	4	52	31	
			S	4	31	7	15	9	6	25	17	
			P	6	57	21	36	28	5	38	24	
		Rabi	C	3	100	40	76	61	0	53	17	
			S	0	11	0	0	0	12	11	11	
			P	1	56	20	38	31	6	32	14	
5	Gujarat	Kharif	C	9	98	39	40	27	1	18	19	
			S	4	50	9	9	65	17	63	62	
			P	7	79	27	27	43	7	37	37	
		Rabi	C	25	97	48	48	30	3	21	21	
			S	0	52	11	11	75	15	66	66	
			P	14	77	31	31	50	8	41	41	
6	Haryana	Kharif	C	32	100	93	94	7	0	3	0	
			S	3	83	54	55	65	14	42	38	
			P	20	93	76	77	32	6	19	16	
		Rabi	C	47	99	96	96	14	1	2	1	
			S	1	77	72	72	61	20	28	28	
			P	27	90	85	85	35	9	13	13	
7	Himachal Pradesh	Kharif	C	22	100	75	76	16	0	14	13	
			S	8	71	43	66	43	26	46	32	
			P	15	85	59	71	30	13	30	23	
		Rabi	C	17	100	63	63	9	0	25	25	
			S	9	56	38	41	43	43	57	57	
			P	13	77	50	52	27	22	42	42	
8	Jammu & Kashmir	Kharif	C	95	99	99	99	3	0	0	0	
			S	62	79	62	62	19	2	19	19	
			P	83	92	86	86	8	1	7	7	
		Rabi	C	93	100	100	100	7	0	0	0	
			S	61	88	61	61	27	1	29	29	
			P*	78	95	82	82	16	0	14	14	

1	2	3	4	5	6	7	8	9	10	11	12
9	Jharkhand	Early Kharif	C	65	100	100	100	30	0	0	0
			S	4	14	7	14	64	7	64	57
			P	40	65	62	65	44	3	26	24
		Late Kharif	C	70	100	95	98	20	0	0	0
			S	11	26	11	26	42	0	37	26
			P	51	76	68	75	27	0	12	8
		Rabi	C	72	96	94	94	8	0	0	0
			S	48	48	48	48	16	0	16	16
			P	64	80	79	79	11	0	5	5
10	Karnataka	Kharif	C	58	98	66	66	7	1	9	8
			S	15	54	16	16	24	15	22	22
			P	36	75	40	40	16	8	16	15
		Rabi	C	61	96	67	67	14	2	13	13
			S	36	44	38	38	15	5	20	19
			P	47	68	51	51	15	4	17	16
		Summer	C	47	97	56	56	17	3	17	17
			S	5	35	5	5	38	23	38	30
			P	25	64	29	29	28	13	28	24
11	Kerala \$ & *	Autumn	C	2	42	0	31	21	21	10	10
			S	0	0	0	0	0	0	0	0
			P	1	21	0	16	11	11	5	5
		Winter	C	0	29	1	39	11	38	8	8
			S	0	0	0	0	0	0	0	0
			P	0	15	1	20	6	19	4	4
		Summer	C	8	25	3	30	4	12	11	8
			S	0	0	0	1	0	0	0	0
			P	4	13	1	16	2	6	6	4
12	Madhya Pradesh	Kharif	C	6	74	39	42	34	18	55	50
			S	0	2	0	0	8	56	38	39
			P	3	40	21	23	22	36	47	45
		Rabi	C	2	76	47	48	39	16	49	48
			S	0	0	0	0	13	41	39	39
			P	1	52	32	33	30	24	46	45
13	Maharashtra	Kharif	C	72	98	96	96	21	1	3	2
			S	5	9	5	7	25	18	24	23
			P	43	60	56	58	23	8	12	12
		Rabi	C	73	99	97	97	16	0	3	2
			S	6	12	7	14	43	32	42	38
			P	46	65	61	64	27	13	19	17
14	Odisha	Autumn	C	0	1	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	0	0	0
		Winter	C	0	0	0	0	0	2	0	0
			S	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	1	0	0
Summer	C	0	0	0	0	0	0	0	0		
	S	0	0	0	0	0	0	0	0		
	P	0	0	0	0	0	0	0	0		
15	Punjab	Kharif	C	48	99	97	89	7	0	3	2
			S	18	70	81	81	15	8	8	8
			P	34	86	89	86	11	4	5	5
		Rabi	C	36	100	99	99	18	0	1	0
			S	14	72	84	84	8	8	4	4
			P	25	87	92	92	13	4	2	2
16	Rajasthan	Kharif	C	60	97	97	97	16	3	3	3
			S	30	40	34	33	44	32	47	47
			P	45	69	65	65	30	20	25	25
		Rabi	C	63	98	96	98	17	1	3	1
			S	38	44	35	34	46	32	49	48
			P	50	71	66	66	31	17	26	24
17	Tamil Nadu	#	C	0	21	3	1	4	21	11	9
			S	3	3	3	3	23	26	23	24
			P	2	12	3	2	13	23	17	16
18	Telangana	Kharif	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
		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

1	2	3	4	5	6	7	8	9	10	11	12				
19	Uttar Pradesh	Kharif	C	14	91	64	75	28	4	21	18				
			S	0	32	1	5	12	4	12	11				
				P	12	83	56	66	26	4	19	17			
				Rabi	C	17	93	76	76	28	4	22	22		
					S	0	0	0	0	4	4	5	5		
							P	15	82	67	67	25	4	20	20
							Summer	C	24	100	55	53	55	0	45
				S	0	100		0	0	100	0	100	100		
				P	23	100	53	50	58	0	47	47			
				20	Uttarakhand	Kharif	C	0	69	9	34	2	6	12	12
S	0	0	0				0	22	27	27	27				
P	0	42	6				21	9	14	18	18				
	Rabi	C	0			75	20	20	10	3	25	25			
		S	0			0	0	0	30	44	33	33			
		P	0			39	11	11	19	23	29	29			
			C			0	87	0	0	13	0	13	13		
			S			0	69	0	0	0	2	0	0		
			P			0	78	0	0	7	1	7	7		
			Winter			C	5	84	0	0	6	3	6	6	
S	0	110		0	0	0	10	10	10						
P	3	92		0	0	4	5	8	8						
	Rabi	C	8	85	0	0	7	0	7	7					
		S	0	43	0	0	0	0	0	0					
		P	4	86	0	0	4	0	4	4					
	Summer	C	6	78	0	0	3	0	3	3					
		S	0	60	0	0	0	0	0	0					
		P	3	69	0	0	2	0	2	2					
22	Puducherry	Kharif	C	0	20	0	0	0	0	0	0				
			S	0	50	0	0	0	0	0	0				
			P	0	33	0	0	0	0	0	0				
			Rabi-I	C	0	20	0	0	0	0	0	0			
				S	0	40	0	0	0	0	0	0			
				P	0	30	0	0	0	0	0	0			
			Rabi-II	C	0	0	0	0	0	0	0	0			
				S	0	0	0	0	0	0	0	0			
				P	0	0	0	0	0	0	0	0			
				For States Covered	Early Kharif	C	16	58	18	21	10	3	7	7	
S	4	32	5			5	5	4	5	4					
P	10	45	11			14	7	3	6	5					
	Late Kharif	C	26	82	51	54	16	5	14	12					
		S	9	38	16	17	25	19	26	25					
		P	19	64	36	38	20	11	19	18					
	Rabi	C	32	87	61	64	19	3	14	13					
		S	12	38	24	24	24	17	25	24					
		P	23	69	45	46	21	9	18	17					
	Summer	C	13	48	13	23	8	4	10	9					
		S	0	20	0	1	4	3	4	4					
		P	7	35	7	13	7	4	7	6					
All Seasons			C	27	81	51	54	16	4	14	12				
			S	9	37	17	17	22	16	23	22				
			P	19	63	36	38	19	9	17	16				

Note:

- @= ISI Equipments in place of Tape
- \$ In Kerala, whole year data has been included in Summer season
- # In Tamil Nadu, total of the data is taken covering all seasons including whole year crops.
- * Since data from one agency is available, the same data has been taken against pooled data for comparison purpose .

**DELEGATION OF WORK AND CONDUCT OF CROP CUTTING EXPERIMENTS BY
UNTRAINED WORKERS DURING 2015-16**

Sl. No.	State	A G E N C Y	Percentage of Experiments																							
			Early Kharif						Late Kharif						Rabi						Summer					
			DS	UW	DJ	UW	NC	UW	DS	UW	DJ	UW	NC	UW	DS	UW	DJ	UW	NC	UW	DS	UW	DJ	UW	NC	UW
			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	Andhra Pradesh	C							1	0	0	0	99	1	0	0	3	2	98	1						
		S							0	0	0	0	99	5	1	0	0	0	100	3						
		P							1	0	0	0	99	3	0	0	2	1	99	2						
2	Assam	C	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	2	0	0	0	0	100	12
		S	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0
		P	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	1	0	0	0	0	100	6
3	Bihar	C	4	0	8	0	88	50	0	0	2	0	98	56	1	0	1	0	98	27	0	0	0	0	100	0
		S	0	0	0	0	100	41	0	0	0	0	100	78	0	0	0	0	100	0	0	0	0	0	100	0
		P	2	0	5	0	93	46	0	0	1	0	99	66	0	0	1	0	99	17	0	0	0	0	100	0
4	Chhattisgarh	C							1	0	0	0	99	0	0	0	0	0	100	0						
		S							0	0	0	0	100	0	1	0	0	0	99	0						
		P							1	0	0	0	100	0	0	0	0	0	100	0						
5	Gujarat	C							1	0	0	0	99	2	0	0	0	0	100	0						
		S							2	0	0	0	98	13	0	0	0	0	100	0						
		P							1	0	0	0	99	6	0	0	0	0	100	0						
6	Haryana	C							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						
		P							0	0	0	0	100	0	0	0	0	0	100	0						
7	Himachal Pradesh	C							0	0	0	0	100	5	0	0	0	0	100	3						
		S							0	0	0	0	100	0	0	0	0	0	100	0						
		P							0	0	0	0	100	2	0	0	0	0	100	2						
8	Jammu & Kashmir	C							1	0	3	0	96	11	0	0	0	0	100	17						
		S							2	0	0	0	98	5	0	0	0	0	112	2						
		P							2	0	2	0	97	9	0	0	0	0	105	10						
9	Jharkhand	C	0	0	0	0	100	45	3	3	8	8	90	70	0	0	6	6	94	53						
		S	0	0	0	0	100	64	0	0	0	0	100	68	0	0	0	0	100	32						
		P	0	0	0	0	100	53	2	2	5	5	93	69	0	0	4	4	96	46						
10	Karnataka	C							0	0	0	0	100	1	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
11	Kerala @	C	1	1	0	0	99	0	4	0	0	0	96	0							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
		P	1	1	0	0	99	0	2	0	0	0	98	0							0	0	0	0	100	0
12	Madhya Pradesh	C							0	0	1	0	99	0	1	0	3	0	97	0						
		S							0	0	1	0	99	0	0	0	0	0	100	0						
		P							0	0	1	0	99	0	1	0	2	0	98	0						

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		
13	Maharashtra	C							0	0	0	0	100	1	1	0	1	0	99	0								
		S							8	0	4	1	88	24	0	0	0	0	100	0								
		P							3	0	2	1	95	11	0	0	0	0	99	0								
14	Odisha	C	0	0	0	0	100	0	0	0	0	0	101	0						0	0	0	0	0	100	0		
		S	0	0	0	0	100	0	0	0	0	0	100	0							0	0	0	0	0	100	0	
		P	0	0	0	0	100	0	0	0	0	0	100	0							0	0	0	0	0	100	0	
15	Punjab	C							1	0	2	1	88	0	1	0	0	0	99	1								
		S							5	0	1	0	94	0	1	0	0	0	99	1								
		P							3	0	1	1	91	0	1	0	0	0	99	1								
16	Rajasthan	C							0	0	0	0	100	1	0	0	0	0	100	0								
		S							0	0	0	0	100	3	0	0	0	0	100	0								
		P							0	0	0	0	100	2	0	0	0	0	100	0								
17	Tamil Nadu #	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0								
		S	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	0	0	95	0							
		P	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	98	0							
18	Telangana	C							0	0	1	1	99	2	0	0	0	0	100	0								
		S							1	0	1	1	98	17	2	0	0	0	98	0								
		P							0	0	1	1	99	9	1	0	0	0	99	0								
19	Uttar Pradesh	C							0	16	4	1	77	19	1	0	0	17	77	39	0	0	0	39	61	27		
		S							0	0	1	0	83	0	0	0	7	2	93	0	0	0	0	0	100	0		
		P							0	14	4	1	78	16	1	0	0	16	79	34	0	0	0	37	63	26		
20	Uttarakhand	C							0	0	0	0	100	0	0	0	0	0	100	0								
		S							0	0	0	0	100	10	0	0	0	0	100	0								
		P							0	0	0	0	100	4	0	0	0	0	100	0								
21	West Bengal	C	0	0	0	0	100	0	0	0	0	0	100	31	0	0	0	0	100	37	0	0	0	0	0	100	29	
		S	0	0	0	0	100	8	0	0	0	0	100	14	0	0	0	0	100	5	0	0	0	0	0	100	14	
		P	0	0	0	0	100	4	0	0	0	0	100	23	0	0	0	0	100	22	0	0	0	0	0	100	21	
22	Pudu- cherry	C							0	0	0	0	80	0	0	0	0	0	100	0	0	0	0	0	0	100	0	
		S							0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	0	100	0	
		P							0	0	0	0	89	0	0	0	0	0	100	0	0	0	0	0	0	100	0	
For States		C	1	0	1	0	92	8	4	3	1	0	93	7	0	0	4	3	96	11	0	0	3	3	97	9		
Covered		S	0	0	0	0	94	7	2	0	1	0	95	8	1	0	0	0	99	1	0	0	0	0	100	3		
		P	0	0	0	0	93	8	3	2	1	0	94	8	1	0	2	2	97	7	0	0	2	2	98	6		

Note:

- 1- @= In Kerala Whole year data has been included in Summer season
- 2- # = In Tamil Nadu, for the year as a whole(total of all crops)
- 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 NC= 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

**SUBSTITUTION OF SAMPLING UNITS OBSERVED DURING SAMPLE CHECK ON CROP
CUTTING EXPERIMENTS UNDER ICS DURING 2015-16**

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	20	0	0	0	0	0	0	0
		Rabi	17	0	0	0	0	1	0	0
2	Assam	Early Kharif	24	0	0	3	0	0	0	2
		Late Kharif	3	3	0	0	0	1	0	0
		Rabi	13	0	0	1	0	0	0	0
		Summer	28	0	0	0	0	0	0	3
3	Bihar	Bhadai	13	1	0	1	2	0	0	10
		Aghani	3	0	0	0	0	1	0	3
		Rabi	5	1	0	0	6	0	0	4
		Summer	20	0	0	0	0	0	0	10
4	Chhattisgarh	Kharif	12	0	0	0	1	0	0	0
		Rabi	15	0	0	2	1	0	0	3
5	Gujarat	Kharif	5	0	0	0	0	0	0	0
		Rabi	4	0	0	0	0	0	0	0
6	Haryana	Kharif	10	1	0	1	0	0	0	0
		Rabi	3	0	0	0	0	0	0	0
7	Himachal Pradesh	Kharif	20	0	1	1	0	0	0	2
		Rabi	16	0	0	0	0	0	0	7
8	Jammu & Kashmir	Kharif	5	0	0	2	2	0	0	22
		Rabi	0	0	0	0	0	0	0	0
9	Jharkhand	Early Kharif	9	6	0	0	0	3	0	12
		Late Kharif	0	0	0	0	1	3	0	12
		Rabi	8	0	0	3	1	0	0	39
10	Karnataka	Kharif	21	1	0	1	0	0	0	0
		Rabi	12	1	2	0	0	0	0	0
		Summer	11	0	0	0	0	0	0	0
11	Kerala	Autumn	41	0	0	0	0	0	0	1
		Winter	21	0	1	0	0	0	0	0
		Summer@	0	0	0	0	0	0	0	0
12	Madhya Pradesh	Kharif	5	0	0	0	1	0	0	1
		Rabi	7	0	0	0	1	0	0	3
13	Maharashtra	Kharif	1	0	0	0	0	0	0	0
		Rabi	5	0	0	0	0	0	0	0
14	Odisha	Autumn	7	0	0	0	0	0	0	0
		Winter	12	0	0	0	0	1	0	0
		Summer	41	0	0	0	0	0	0	1
15	Punjab	Kharif	3	0	0	1	0	0	0	0
		Rabi	3	0	0	1	0	0	0	0
16	Rajasthan	Kharif	11	0	0	0	0	0	0	1
		Rabi	11	0	0	0	0	0	0	1
17	Tamil Nadu #	Whole Year	22	0	0	0	1	0	0	0

ANNEX- XI (Contd.....)

1	2	3	4	5	6	7	8	9	10	11
18	Telangana	Kharif	0	0	0	0	0	0	0	0
		Rabi	0	0	0	0	0	0	0	0
19	Uttar Pradesh	Kharif	3	0	0	0	0	1	0	1
		Rabi	1	0	0	0	0	1	0	0
		Summer	5	0	0	0	1	0	3	0
20	Uttarakhand	Kharif	6	0	0	0	0	0	0	0
		Rabi	2	0	0	0	0	0	0	0
21	West Bengal	Aus	0	0	0	0	0	0	0	0
		Aman	0	0	0	0	0	0	0	0
		Rabi	0	0	0	0	0	0	0	0
		Summer	0	0	0	0	0	0	0	0
22	Puducherry	Kharif	33	11	0	0	0	0	0	0
		Rabi-I	0	0	0	0	0	0	0	0
		Rabi-II	20	0	0	0	0	0	0	0
	For States covered	Early Kharif	13	0	0	1	0	0	0	2
		Late Kharif	10	0	0	0	0	0	0	1
		Rabi	9	0	0	0	1	0	0	1
		Summer	11	0	0	0	0	0	0	0
		All Seasons	10	0	0	0	0	0	0	1

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 Tamil Nadu, total of all seasons have been taken.

**COMPARISON OF ESTIMATES OF CROP AREAS BASED ON
ICS, TRS & FINAL ESTIMATES : 2015-16**

Sl No	State	A G E N C Y	Estimates of Area based on sample checks (in '000' hectares)				Estimated area as per TRS (in '000' ha)	Final Estimates of Area (in '000' ha)	Ratio of Area Estimates				
			A-I	A-II	A-III	A-IV			TRS/ Final	A-I/ Final	A-II/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10	11	12	13	14
RICE-KHARIF													
1	Andhra Pradesh	C			0	2035							
		S			1559	1643							
		PA			958	1794	1387	1399	0.9914			0.6847	1.2824
2	Assam (Autumn)	C				156							
		S				30							
		PA				98	154	196	0.7857				0.5023
	Assam (Winter)	C				513							
		S				395							
		PA				458		1883	0.0000				0.2435
3	Bihar (Bhadai)	C				440							
		S				673							
		P				530	2528	581					0.9120
	Bihar (Aghani)	C				NR	5150						
		S			431	2283							
		P			166	4049	550	2600				0.0637	1.5573
4	Chhattisgarh	C			4204	4583							
		S			3856	3873							
		P			4030	4228	3913	3816	1.0254			1.0561	1.1080
5	Gujarat	C				NR	967						
		S			266	880							
		PA			119	928	124	741	0.1673			0.1605	1.2525
6	Haryana	C			1747	1701							
		S			998	1001							
		P			1412	1388	1359	1354				1.0430	1.0252
7	Himachal Pradesh	C			99	101							
		S			51	51							
		PA			75	76	71	74	0.9595			1.0183	1.0320
8	Jammu & Kashmir	C			277	275							
		S			268	324							
		P			272	301	279	305	0.9148			0.8923	0.9880
9	Jharkhand (Bhadai)	C				NR	1396						
		S			547	625							
		PA			222	1083	652						
	(Aghani)	C				NR	149						
		S			0	170							
		PA			0	158	143	1589				0.0000	0.0996
10	Karnataka	C			884	949							
		S			1074	1072							
		P			979	1010	988	977	1.0113			1.0016	1.0340
11	Kerala (Autumn)	C			48	48							
		S			235	235							
		P			142	142		64				2.2109	2.2109
	Kerala (Winter)	C			135	135							
		S			272	272							
		P			204	204		89				2.2865	2.2865
12	Madhya Pradesh	C			2506	2607							
		S			1603	1793							
		P			2070	2214	1984	2024	0.9802			1.0229	1.0940
13	Maharashtra	C			952	1373							
		S			158	1555							
		P			571	1460	1471	1471	1.0000			0.3881	0.9928
14	Odisha (Autumn)	C			45	46							
		S			185	185							
		P			115	116		583				0.1973	0.1981
	Odisha (Winter)	C			3	3							
		S			11	11							
		P			7	7		3281				0.0021	0.0021
15	Punjab	C			3428	3584							
		S			2734	2851							
		P			3129	3268		2975				1.0517	1.0985
16	Tamil Nadu	C			2265	2343							
		S			3214	3078							
		P			2734	2706	2245	1829	1.2274			1.4948	1.4796

1	2	3	4	5	6	7	8	9	10	11	12	13	14
17	Telangana	C			65	1366							
		S			1157	1215							
		P			730	1274	630	749					
18	Uttar Pradesh	C			4456	5544							
		S			1185	1213							
		P			3906	4816	5837	5837	1.0000		0.6692	0.8251	
19	Uttar- akhanda @	C			524	563							
		S			158	175							
		P			348	376	250	250	1.0000		1.3916	1.5053	
20	W.Bengal (Autumn) @ (Winter) @	C			65	230							
		S			114	291							
		P			95	267		159				0.5957	
		C			832	2634							
		S			2155	3458							
21	Puducherry	P			1652	3145		3927				0.4207	0.8008
		C			7	7							
		S			2	2							
		PA			1	1	3	12	0.2500			0.0833	0.0833
For states covered					23936	36099	24568	38765				0.6175	0.9312
RICE (RABI/ SUMMER)													
1	Andhra Pradesh	C			0	1453							
		S			823	827							
		P			474	1092	757	762	0.9934		0.6224	1.4334	
2	Assam *	C											
		S											
		NR											
3	Bihar *	PA											
		C											
		S											
4	Karnataka	C			125	172							
		S			104	104							
		P			115	138	32	133	0.2406		0.8618	1.0406	
5	Kerala @	C			1	1							
		S			2	2							
		P			1	1		46			0.0325	0.0325	
6	Odisha @	C			549	549							
		S			395	395							
		PA			472	472		233			2.0250	2.0250	
7	West Bengal @	C			580	1386							
		S			1287	1809							
		P			1004	1640		1310			0.7662	1.2515	
8	Puducherry	C			7	7							
		Rabi-I			10	7							
		S			9	7							
		Rabi-II			2	8							
		S			7	7							
		P			4	8	4	4	1.0000		1.0000	1.9000	
For states covered					2078	3523	876	2974				0.6989	1.1846
JOWAR(KHARIF)													
1	Andhra Pradesh	C			0	0							
		S			0	0							
		PA			0	0	38	44	0.8636		0.0000	0.0000	
2	Karnataka	C			139	129							
		S			186	187							
		P			162	158	111	105	1.0571		1.5465	1.5034	
3	Madhya Pradesh	C			199	185							
		S			796	852							
		P			487	507	190	205	0.9268		2.3760	2.4725	
4	Maharashtra	C			234	531							
		S			677	677							
		P			447	601	621	621	1.0000		0.7192	0.9679	
5	Rajasthan	C			157	139							
		S			130	128							
		P			144	134	588	631	0.9319		0.2277	0.2117	
6	Tamil Nadu #	C			240	263							
		S			398	372							
		P			318	317	397	185	2.1459		1.7193	1.7128	
7	Telangana	C			0	49							
		S			68	73							
		P			41	64	397	185	2.1459		0.2238	0.3438	
8	Uttar Pradesh	C			117	123							
		S			29	29							
		P			102	107	155	155	1.0000		0.6594	0.6916	
For states covered					2291	1824	2100	1946	1.0791			1.1773	0.9375

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
JOWAR(RABI)														
1	Andhra Pradesh	C			0	0								
		S			0	0								
		P			0	0	125	130	0.9615			0.0000	0.0000	
2	Gujarat @	C			N.A.									
		S												
		P						28						
3	Karnataka	C			972	1238								
		S			848	924								
		P			911	1083	908	999	0.9089			0.9116	1.0839	
4	Maharashtra	C			216	3169								
		S			2817	2902								
		P			1349	3053	2596	2597				0.5196	1.1755	
For states covered					2260	4136	3629	3754				0.6020	1.1016	
BAJRA														
1	Andhra Pradesh	C			0	42								
		S			16	16								
		P			10	26	34	36	0.9444			0.2731	0.7229	
2	Gujarat	C			NR	165								
		S			0	154								
		PA			0	160	32	393	0.0814			0.0000	0.4073	
3	Haryana	C			333	346								
		S			306	311								
		P			321	330	372	370				0.8674	0.8929	
4	Karnataka	C			182	192								
		S			290	292								
		P			236	242	172	166	1.0361			1.4201	1.4563	
5	Maharashtra	C			284	849								
		S			982	1165								
		P			619	1001	801	801	1.0000			0.7728	1.2493	
6	Rajasthan	C			748	765								
		S			904	897								
		P			825	830	3899	4045	0.9639			0.2039	0.2052	
7	Tamil Nadu #	C			42	42								
		S			72	72								
		P			57	57	39	52	0.7500			1.0928	1.0928	
8	Uttar Pradesh	C			923	1128								
		S			88	83								
		P			783	952	975	975	1.0000			0.8027	0.9768	
For states covered					2850	3598	6324	6838				0.4168	0.5262	
MAIZE														
1	Andhra Pradesh	C			0	0								
		S			0	0								
		PA			0	0	76	75	1.0133			0.0000	0.0000	
2	Bihar @	C			NR		440							
		S					673							
		P					529	202	271					1.9538
3	Chhattisgarh	C			91	164								
		S			82	82								
		P			87	123	108	115	0.9391			0.7522	1.0696	
4	Gujarat @	C			NR	321								
		S			906	1076								
		PA			195	659	48	298	0.1611			0.6544	2.2101	
5	Haryana	C			3	6								
		S			11	11								
		PA			7	8	16	6				1.0959	1.3724	
6	Himachal Pradesh	C			225	207								
		S			350	350								
		PA			287	277	297	294	1.0102			0.9747	0.9437	
7	Jammu & Kashmir	C			337	324								
		S			319	206								
		P			327	261	302	294	1.0272			1.1133	0.8862	
8	Jharkhand	C			NR	0								
		S			0	0								
		PA			0	0	76	284				0.0000	0.0000	
9	Karnataka	C			1144	1451								
		S			1184	1184								
		P			1164	1318	1159	1091	1.0623			1.0668	1.2082	

1	2	3	4	5	6	7	8	9	10	11	12	13	14
10	Madhya Pradesh	C			805	824							
		S			495	495							
		P			655	665	864	1098	0.7869			0.5969	0.6059
11	Odisha	C			45	46							
		S			185	185							
		PA			115	116		53				2.1698	2.1792
12	Punjab	C			98	116							
		S			191	230							
		P			138	165		115				1.2007	1.4360
13	Rajasthan	C			269	241							
		S			202	259							
		P			236	250	845	867	0.9746			0.2722	0.2882
14	Tamil Nadu	C			173	178							
		S			429	483							
		P			300	329		355				0.8437	0.9260
14	Telngana	C			0	492							
		S			502	566							
		P			306	537		355				0.8609	1.5128
15	Uttar Pradesh	C			386	539							
		S			314	329							
		P			374	504	605	605	1.0000			0.6180	0.8326
For states covered					3884	5204	4598	5821				0.6672	0.8939
RAGI													
1	Gujarat	C			N.A.								
		S			N.A.								
		P			N.A.			19					
2	Karnataka	C			506	549							
		S			429	431							
		P			468	490	676	705	0.9589			0.6634	0.6955
3	Maharashtra	C			N.A.								
		S			N.A.								
		P			N.A.		94	92					
4	Tamil Nadu	C			77	71							
		#			33	45							
		P			55	58	89	90	0.9889			0.6140	0.6461
5	Uttarakhand	C			601	598							
		S			64	59							
		P			343	339	107	107	1.0000			3.2022	3.1651
For states covered					866	887	966	1013				0.8545	0.8757
COTTON													
1	Andhra Pradesh	C			0	963							
		S			946	987							
		P			581	978	669	666	1.0045			0.8728	1.4681
2	Gujarat	C			NR	3027							
		S			3	2800							
		PA			1	2925	405	2722	0.1488			0.0005	1.0748
3	Haryana	C			483	470							
		S			447	447							
		P			467	460	576	615				0.7592	0.7475
4	Karnataka	C			671	749							
		S			856	856							
		P			763	802	659	642	1.0265			1.1885	1.2496
5	Madhya Pradesh	C			507	518							
		S			361	371							
		P			437	447	459	563	0.8153			0.7754	0.7941
6	Maharashtra	C			2049	3257							
		S			4098	4461							
		P			3032	3835	4207	4207	1.0000			0.7208	0.9115
7	Punjab	C			273	270							
		S			288	288							
		P			279	278		339				0.8244	0.8193
8	Rajasthan	C			106	116							
		S			74	74							
		P			90	95	456	448	1.0179			0.2014	0.2127
9	Tamil Nadu	C			150	183							
		#			128	224							
		P			139	203	175	142	1.2324			0.9798	1.4314
For states covered					5790	10023	7606	10344				0.5598	0.9690

1	2	3	4	5	6	7	8	9	10	11	12	13	14
GROUNDNUT													
1	Andhra	C			0	470							
	Pradesh	S			582	580							
		PA			358	538	679	682	0.9956			0.5243	0.7883
2	Gujarat	C			NR	944							
		S			15	762							
		PA			7	863	200	1356	0.1475			0.0049	0.6361
3	Karnataka	C			452	435							
		S			390	390							
		P			421	413	450	406	1.1084			1.0373	1.0163
4	Madhya Pradesh	C			187	189							
		S			216	215							
		P			201	202	210	236	0.8898			0.8517	0.8540
5	Maharashtra	C			29	129							
		S			88	89							
		P			57	110	224	224	1.0000			0.2559	0.4902
6	Rajasthan	C			70	67							
		S			152	151							
		P			110	108	553	517	1.0696			0.2136	0.2097
7	Tamil Nadu	C			367	382							
	#	S			523	551							
		P			444	466	358	347	1.0317			1.2798	1.3415
For states covered					1598	2698	2674	3768	0.7097			0.4242	0.7161
SUGARCANE													
1	Andhra	C			0	55							
	Pradesh	S			244	287							
		PA			150	198	121	122	0.9918			1.2289	1.6193
2	Assam	C											
	*	S			NA	0							
		PA				1							
		S				0	20	30	0.6667				0.0154
3	Bihar	C											
	@	S			NR	112							
		PA				141							
		S				123	258	244				0.0000	0.5047
4	Haryana	C			42	48							
		S			60	60							
		P			50	53	95	93				0.5381	0.5738
5	Karnataka	C			754	798							
		S			602	602							
		P			678	700	546	450	1.2133			1.5075	1.5566
6	Maharashtra	C			415	1412							
	@	S			1419	1502							
		P			897	1455		987	0.0000			0.9086	1.4744
7	Punjab	C			145	98							
	@	S			76	79							
		P			115	90		90				1.2807	0.9979
8	Rajasthan	C											
		S			NR	NR							
		PA					7	6	1.1667			0.0000	
9	Tamil Nadu	C			67	265							
	#	S			182	471							
		P			124	367	303	252	1.2024			0.4914	1.4555
10	Uttar Pradesh	C			1102	2112							
		S			583	590							
		P			1015	1856	2196	2169	1.0124			0.4679	0.8558
11	Uttarakhand	C			0	0							
	@	S			16	67							
		P			8	32	96	97	0.9897			0.0794	0.3323
For states covered					3037	4875	3642	4540	0.8022			0.6689	1.0738
WHEAT													
1	Assam	C					3						
	*	S					8						
	@	PA					5	22	21	0.0000			
2	Bihar	C			NR	4637							
	*	S			180	2005							
	@	PA			81	3450	2151	2111				0.0384	1.6345
3	Chhattisgarh	C			332	329							
		S			187	173							
		P			259	251	102	108	0.9444			2.3994	2.3204

1	2	3	4	5	6	7	8	9	10	11	12	13	14
4	Gujarat	C			NR	1759							
		S			124	1489							
		PA			57	1635	189	851	0.2221			0.0667	1.9218
5	Haryana	C			2616	2634							
		S			1807	1807							
		P			2230	2239		2576	0.0000			0.8656	0.8692
6	Himachal Pradesh	C			663	656							
		S			561	562							
		PA			612	609	327	341	0.9589			1.7953	1.7864
7	Jammu & Kashmir	C			428	418							
		S			226	226							
		PA			333	328	291	278	1.0468			1.1979	1.1788
8	Jharkhand *	C				210							
		S			NR	78							
		PA				157	69	157	0.4395				1.0013
9	Karnataka	C			130	195							
		S			131	131							
		P			130	163	169	174	0.9713			0.7500	0.9390
10	Madhya Pradesh	C			7238	7257							
		S			6893	6944							
		P			7081	7115	6161	5911	1.0423			1.1979	1.2036
11	Maharashtra @	C			454	801							
		S			864	893							
		P			633	841	910	911				0.6945	0.9233
12	Punjab @	C			4003	3990							
		S			3486	3467							
		P			3758	3742		3508				1.0713	1.0668
13	Rajasthan	C			631	662							
		S			1106	1095							
		P			860	871	3071	3109	0.9878			0.2766	0.2800
14	Uttar Pradesh	C			8757	1200							
		S			1090	1210							
		P			7052	1202	9645	9645	1.0000			0.7312	0.1246
15	Uttarakhand	C			446	444							
		S			301	268							
		P			376	359	425	342	1.2427			1.1001	1.0506
16	West Bengal @	C			62	236							
		S			151	140							
		P			117	177		340				0.3431	0.5208
For states covered					23579	23146	23532	30383	0.7745			0.7761	0.7618
BARLEY													
1	Haryana	C			16	14							
		S			16	16							
		P			16	15		29	0.0000			0.5517	0.5157
2	Himachal Pradesh	C			165	153							
		PA			42	42							
3	Punjab @	C			104	98	18	19	0.9474			5.4593	5.1424
		S			4	8							
		P			4	4							
4	Rajasthan	C			4	6							
		S			4	6						0.4444	0.6784
		P			59	59							
4	Rajasthan	C			45	47							
		S			52	53	244	256				0.2041	0.2079
		P					262	313				0.5622	0.5495
For states covered					176	172	262	313				0.5622	0.5495
GRAM													
1	Andhra Prade	C			0	530							
		S			634	634							
		PA			365	590	465	471	0.9873			0.7757	1.2525
2	Bihar @	C			NR	39							
		S			1	39							
		P			0	39	59	59				0.0076	0.6610
3	Chhattisgarh	C			257	301							
		S			187	407							
		P			222	354	286	303	0.9439			0.7321	1.1692
4	Gujarat	C			NR	123							
		S			211	248							
		PA			97	180	16	115	0.1391			0.8396	1.5670
5	Haryana	C			60	63							
		S			46	46							
		P			53	55		42	0.0000			1.2694	1.3067

1	2	3	4	5	6	7	8	9	10	11	12	13	14
6	Jharkhand *	C			NR	54							
		S				50							
		PA				52	25	164	0.1524				0.3195
7	Karnataka	C			535	608							
		S			613	610							
		P			574	609	1271	1420	0.8951			0.4039	0.4289
8	Madhya Pradesh	C			1805	1877							
		S			2162	2157							
		P			1967	2004	2259	3017	0.7488			0.6521	0.6644
9	Maharashtra @	C			448	1179							
		S			1441	1565							
		P			881	1347	1440	1442				0.6107	0.9343
10	Punjab @	C			1	2							
		S			0	NR							
		P			1	1		2				0.2632	0.5265
11	Rajasthan	C			214	232							
		S			206	209							
		P			210	221	941	942	0.9989			0.2231	0.2345
12	Uttar Pradesh	C			222	246							
		S			58	54							
		P			186	203	263	268	0.9813			0.6923	0.7586
13	West Bengal @	C			N.A.								
		S											
		P						31					
For states covered					4555	5657	7025	8276				0.5504	0.6835
RAPE & MUSTARD													
1	Assam @	C			NR	56							
		S				82							
		PA				68	274	286	0.9580				0.2363
2	Bihar @	C			NR	281							
		S			8	93							
		PA			4	196		90				0.0401	2.1805
3	Chhattisgarh	C			51	51							
		S			132	127							
		P			92	89	46	43	1.0698			2.1327	2.0743
4	Gujarat	C			NR	252							
		S			0	188							
		PA			0	223	30	190	0.1579			0.0000	1.1722
5	Haryana	C			558	597							
		S			307	307							
		P			438	459		505	0.0000			0.8676	0.9080
6	Jharkhand * @ & \$	C			NR	43							
		S				20							
		PA				34		194	0.0000				0.1742
7	Jammu & Kashmir @	C			N.A.								
		S											
		P						51					
8	Madhya Pradesh @	C			362	409							
		S			746	758							
		P			537	568		617	0.0000			0.8699	0.9203
9	Punjab @	C			28	27							
		S			8	8							
		P			19	18		31				0.5977	0.5807
10	Rajasthan	C			513	527							
		S			748	811							
		P			626	664	2528	2532	0.9984			0.2473	0.2622
11	Uttar Pradesh	C			664	899							
		S			90	143							
		P			536	731	286	593	0.4823			0.9045	1.2326

1	2	3	4	5	6	7	8	9	10	11	12	13	14
12	West	C			121	355							
	Bengal	S			316	439							
	@	P			241	407		458				0.5256	0.8877
For states covered					2492	3455	3164	5590				0.4458	0.6181

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-I = Estimates based on abstract statement of sample village.
- 2) A-II = Estimates based on crop areas in sample village as aggregated by supervisor.
- 3) A-III = Estimates based on khasra entries in sample cluster.
- 4) A-IV = Estimates based on supervisors observations of crop area in sample cluster.
- 5) * = A-III figures not given due to insufficient data of primary workers
- 6) @ Data Not available for TRS estimates
- 7) \$ Data Not available for Final Estimates
- 8) TRS is not applicable in the States of Kerala, Orissa and West Bengal
- 9) NA- Not Available/Applicable.
- 10) # - In Tamil Nadu, all seasons have been totalled.
- 11) P^= Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
- 12) NR= Not Reported.

**COMPARISON OF PERCENTAGE OF AREA UNDER DIFFERENT INPUTS AS ESTIMATED
UNDER ICS & TRS : 2015-16**

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
RICE																
1	Andhra Pradesh	Kharif	95.01	1.87	96.88	2.23	0.89	3.12	100	0.00	0.00	95.67	0.00	0.00	4.33	100
		Rabi	99.05	0.00	99.05	0.95	0.00	0.95	100	0.00	0.00	100.00	0.00	0.00	0.00	100
2	Assam	Autumn	26.94	0.54	27.48	9.28	63.24	72.52	100	2.60	1.30	3.90	0.00	0.00	96.10	100
		Winter	1.03	0.00	1.03	1.08	97.89	98.97	100	0.00	0.00	0.00	0.00	0.00	0.00	0
		Summer	45.45	21.02	66.48	0.57	32.95	33.52	100	Data not available						
3	Bihar	Autumn	39.80	3.33	43.13	21.46	35.41	56.87	100	50.79	19.34	68.55	14.24	17.13	31.45	100
		Winter	71.52	14.59	86.11	3.28	10.62	13.89	100	0.00	0.00	39.45	0.00	0.00	60.55	100
		Summer	91.89	7.30	99.19	0.00	0.81	0.81	100	0.00	0.00	95.18	0.00	0.00	4.82	100
4	Chattisgarh	Kharif	34.53	0.45	34.98	34.70	30.32	65.02	100	0.00	0.00	30.69	0.00	0.00	69.31	100
5	Gujarat	Kharif	64.07	6.00	70.07	15.08	14.85	29.93	100	0.00	0.00	69.35	0.00	0.00	30.65	100
6	Haryana	Kharif	95.19	4.18	99.37	-	-	-	100	0.00	0.00	100.00	0.00	0.00	0.00	100
7	Himachal Pradesh	Kharif	53.54	25.83	79.38	12.67	7.95	20.62	100	43.66	15.49	59.15	25.35	15.49	40.85	100
8	Jammu & Kashmir	Kharif	49.48	46.21	95.69	0.58	3.73	4.31	100	65.59	19.71	85.30	8.60	6.09	14.70	100
9	Jharkhand	Autumn	0.00	0.00	0.00	3.40	96.60	100.00	100	0.00	21.93	21.93	0.00	78.07	78.07	100
		Winter	1.89	8.50	10.39	30.53	59.08	89.61	100	0.00	0.00	0.00	0.00	100.00	100.00	100
		Summer	Data Not Available													
10	Karnataka	Kharif	68.05	1.68	69.73	22.10	8.17	30.27	100	66.50	2.33	68.83	23.08	8.10	31.17	100
		Rabi	76.52	12.73	89.25	0.00	10.75	10.75	100	100.00	0.00	100.00	0.00	0.00	0.00	100
11	Kerala	Autumn	22.26	0.00	22.26	69.26	8.48	77.74	100	TRS NOT APPLICABLE						
		Winter	82.22	7.90	90.12	3.95	5.93	9.88	100	TRS NOT APPLICABLE						
		Summer	100.00	0.00	100.00	0.00	0.00	0.00	100	TRS NOT APPLICABLE						
12	Madhya Pradesh	Kharif	27.21	9.14	36.35	18.92	44.73	63.65	100	30.70	4.84	35.58	22.93	41.73	64.42	100
13	Maharashtra	Kharif	27.48	2.03	29.51	48.26	22.22	70.49	100	22.09	0.00	22.09	77.91	0.00	77.91	100
14	Odisha	Autumn	11.69	0.00	11.69	78.72	9.59	88.31	100	TRS NOT APPLICABLE						
		Winter	29.42	0.16	29.58	66.18	4.24	70.42	100	TRS NOT APPLICABLE						
		Summer	90.24	0.00	90.24	8.38	1.38	9.76	100	TRS NOT APPLICABLE						
15	Punjab	Kharif	94.35	4.72	99.07	0.00	0.93	0.93	100	Data not available						
16	Tamil Nadu	#	94.72	0.43	95.15	2.49	2.36	4.85	100	0.00	0.00	93.34	0.00	0.00	6.66	100
17	Telangana		86.86	0.00	86.86	12.98	0.15	13.14	100	0.00	0.00	95.24	0.00	0.00	4.76	100
			86.19	0.13	86.32	13.62	0.07	13.68	100	0.00	0.00	100.00	0.00	0.00	0.00	100
18	Uttar Pradesh	Kharif	93.46	0.55	94.01	5.18	0.81	5.99	100	84.65	2.43	87.77	11.34	1.22	12.23	100
19	Uttarakhand	Kharif	68.06	13.81	81.87	2.38	15.76	18.13	100	0.00	0.00	69.60	0.00	0.00	30.40	100
20	West Bengal	Autumn	Data Not Available													
		Winter	39.66	0.56	40.21	17.75	42.03	59.79	100	TRS NOT APPLICABLE						
		Summer	58.58	2.81	61.39	2.90	35.70	38.61	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	100.00	100
		Rabi-I	70.00	0.00	70.00	15.00	15.00	30.00	100	Data not available						
		Rabi-II	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	0.00	0.00	0.00	100.00	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			67.16	3.09	70.25	15.82	13.93	29.75	100	31.34	3.73	66.89	11.24	8.13	33.11	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			74.64	3.61	78.25	11.40	10.35	21.75	100	31.52	3.76	67.29	22.61	7.62	32.71	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			68.75	2.67	71.42	15.18	13.39	28.58	100	43.60	4.37	61.70	15.61	7.76	38.30	100

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
JOWAR																
1	Andhra	Kharif	0.00	0.00	0.00	0.00	0.00	0.00	0			2.63			97.37	100
	Pradesh	Rabi	13.78	0.00	13.78	18.41	67.81	86.22	100			19.20			80.80	100
2	Karnataka	Kharif	10.09	0.63	10.72	87.07	2.21	89.28	100	16.22	0.00	16.22	66.67	17.12	83.78	100
		Rabi	9.55	0.64	10.19	69.23	20.58	89.81	100	8.81	1.10	9.91	75.44	14.65	90.09	100
3	Madhya Pradesh	Kharif	0.00	0.00	0.00	88.29	11.71	100.00	100	0.00	0.00	0.00	41.58	58.42	100.00	100
4	Maharashtra	Kharif	8.73	0.08	8.81	0.00	14.31	91.19	100	0.00	0.00	1.93	0.00	0.00	98.07	100
		Rabi	16.48	2.49	18.97	62.79	18.24	81.03	100	Data Not Available						
5	Rajasthan	Kharif	0.78	0.00	0.78	34.44	64.78	99.22	100		0.17	0.17	0.00	99.83	99.83	100
6	Tamil Nadu	#	17.94	3.82	21.76	49.64	28.60	78.24	100			17.54			82.46	100
7	Telangana	Kharif	28.99	4.52	33.50	25.63	40.87	66.50	100			0.00			100.00	100
		Rabi	0.00	0.00	0.00	45.80	54.20	100.00	100			30.00			70.00	100
8	Uttar Pradesh	Kharif	3.78	0.00	3.78	9.82	86.40	96.22	100			2.58			97.42	100
TOTAL FOR			12.77	1.55	14.32	53.97	24.06	85.68	100	1.67	0.19	10.59	41.71	24.93	89.41	100
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			13.85	1.68	15.54	51.05	25.11	84.46	100	1.73	0.19	10.95	41.72	23.81	89.05	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			13.27	1.84	15.11	67.35	17.54	84.89	100	2.58	0.26	12.93	64.15	22.92	87.07	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																
BAJRA																
1	Andhra Pradesh	Kharif	11.61	0.00	11.61	65.79	22.60	88.39	100	0.00	0.00	11.76	0.00	0.00	88.24	100
2	Gujarat	Kharif	26.19	1.98	28.17	58.95	12.88	71.83	100	0.00	0.00	40.63	0.00	0.00	59.38	100
3	Haryana	Kharif	57.51	0.16	57.66	40.43	1.90	42.34	100	0.00	0.00	53.76	0.00	0.00	46.24	100
4	Karnataka	Kharif	16.30	0.41	16.71	77.92	5.37	83.29	100	10.47	0.58	11.05	85.47	3.49	88.95	100
5	Maharashtra	Kharif	17.93	4.23	22.15	71.63	6.22	77.85	100	0.00	0.00	5.24	0.00	0.00	94.76	100
6	Rajasthan	Kharif	2.56	2.34	4.91	48.98	46.11	95.09	100	0.00	0.00	3.85	0.00	0.00	96.15	100
7	Tamil Nadu	#	35.38	0.00	35.38	32.34	32.28	64.62	100	0.00	0.00	14.55	0.00	0.00	85.45	100
8	Uttar Pradesh	Kharif	15.42	1.38	16.81	71.20	12.00	83.19	100	0.00	0.00	12.51	0.00	0.00	87.49	100
TOTAL FOR			16.58	2.41	18.99	65.15	15.86	81.01	100	0.28	0.02	8.80	2.32	0.09	91.20	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			16.58	2.41	18.99	65.15	15.86	81.01	100	0.28	0.02	8.80	2.32	0.09	91.20	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			16.30	0.41	16.71	77.92	5.37	83.29	100	10.47	0.58	11.05	85.47	3.49	88.95	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RAGI																
1	Karnataka	Kharif	9.17	0.00	9.17	84.10	6.72	90.83	100	3.55	0.00	3.55	96.15	0.30	96.45	100.00
2	Maharashtra	Kharif	Data not available							Data not available						
3	Tamil Nadu	#	22.20	18.61	40.81	39.04	20.14	59.19	100	0.00	0.00	32.12	0.00	0.00	67.88	100.00
4	Uttarakhand	Kharif	-	-	-	0.13	97.77	97.90	100	0.00	0.00	0.00	0.00	0.00	100.00	100.00
TOTAL FOR			8.58	1.94	10.52	64.97	24.52	89.48	100	2.37	0.00	6.71	64.10	0.20	93.29	100.00
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			10.50	1.90	12.40	79.50	8.09	87.60	100	2.95	0.00	8.36	79.95	0.25	91.64	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			9.17	0.00	9.17	84.10	6.72	90.83	100	3.55	0.00	3.55	96.15	0.30	96.45	100.00
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																
MAIZE																
1	Andhra Pradesh	Kharif	15.84	2.25	18.09	71.68	10.23	81.91	100	0.00	0.00	25.00	0.00	0.00	75.00	100
2	Bihar	Kharif	22.02	3.07	25.09	8.43	66.47	74.91	100	Data not available						
3	Chattisgarh	Kharif	0.00	0.00	0.00	31.24	68.76	100.00	100	1.85	0.00	1.85	98.15	0.00	98.15	100
4	Gujarat	Kharif	5.82	0.76	6.58	50.07	43.35	93.42	100	0.00	0.00	14.58	0.00	0.00	85.42	100
5	Haryana	Kharif	46.62	29.54	76.16	23.84	0.00	23.84	100	0.00	0.00	56.25	0.00	0.00	43.75	100
6	Himachal Pradesh	Kharif	10.28	0.76	11.03	59.47	29.50	88.97	100	9.09	5.05	14.14	63.64	22.22	85.86	100
7	Jharkhand	Kharif	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	30.26	69.74	100.00	100
8	Jammu & Kashmir	Kharif	0.16	0.21	0.37	40.03	59.61	99.63	100	5.96	5.30	11.26	78.48	10.26	88.74	100
9	Karnataka	Kharif	22.51	0.08	22.58	76.54	0.87	77.42	100	25.71	0.17	25.88	73.77	0.35	74.12	100
10	Madhya Pradesh	Kharif	1.37	0.69	2.06	47.21	50.73	97.94	100	0.69	0.12	0.81	50.12	53.13	99.19	100
11	Odisha	Kharif	0.00	0.00	0.00	42.81	57.19	100.00	100	Not applicable						
12	Punjab	Kharif	61.00	10.01	71.01	12.12	16.87	28.99	100	Data not available						
13	Rajasthan	Kharif	0.62	0.21	0.83	20.79	78.37	99.17	100	0.00	0.00	1.30	0.00	0.00	98.70	100
14	Tamil Nadu #	Kharif	67.65	3.18	70.83	19.44	9.73	29.17	100	Data not available						
15	Telangana	Kharif	7.04	1.42	8.46	56.26	35.29	91.54	100	0.00	0.00	14.09	0.00	0.00	85.91	100
15	Uttar Pradesh	Kharif	29.81	1.09	30.89	43.84	25.26	69.11	100	0.00	0.00	42.81	0.00	0.00	57.19	100
TOTAL FOR			17.15	1.35	18.50	53.21	28.29	81.50	100	6.87	0.67	17.24	36.06	11.99	82.76	100.00
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			14.39	1.15	15.54	55.52	28.93	84.46	100	6.97	0.68	17.50	36.15	11.12	82.50	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			13.90	0.32	14.22	64.41	21.37	85.78	100	12.94	1.26	14.20	64.38	22.72	85.80	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
COTTON																
1	Andhra Pradesh	Kharif	19.29	0.00	19.29	79.61	1.10	80.71	100	0.00	0.00	13.75	0.00	0.00	86.25	100
2	Gujarat	Kharif	69.29	2.23	71.51	24.46	4.03	28.49	100	0.00	0.00	61.48	0.00	0.00	38.52	100
3	Haryana	Kharif	98.71	1.07	99.79	0.21	0.00	0.21	100	0.00	0.00	98.96	0.00	0.00	1.04	100
4	Karnataka	Kharif	43.46	0.00	43.46	56.54	0.00	56.54	100	21.24	0.15	21.40	71.47	7.13	78.60	100
5	Madhya Pradesh	Kharif	81.45	0.00	81.45	18.10	0.45	18.55	100	0.00	0.00	62.09	0.00	0.00	37.91	100
6	Maharashtra	Kharif	20.51	0.69	21.20	73.92	4.88	78.80	100	0.00	0.00	11.43	0.00	0.00	88.57	100
7	Punjab	Kharif	97.56	2.44	100.00	0.00	0.00	0.00	100	Data not available						
8	Rajasthan	Kharif	74.96	17.15	92.11	2.63	5.26	7.89	100	0.00	0.00	95.39	0.00	0.00	4.61	100
9	Tamil Nadu	#	30.81	0.50	31.31	48.09	20.60	68.69	100	0.00	0.00	24.60	0.00	0.00	75.40	100
10	Telangana	Kharif	6.11	0.00	6.11	91.43	2.46	93.89	100	0.00	0.00	11.13	0.00	0.00	88.87	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			35.65	0.88	36.53	60.10	3.37	63.47	100	1.52	0.01	26.95	5.11	0.51	73.05	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			34.93	0.86	35.79	60.80	3.41	64.21	100	1.52	0.01	26.95	5.11	0.51	73.05	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			75.30	0.00	43.46	56.54	0.00	56.54	100	21.24	0.15	21.40	71.47	7.13	78.60	100
GROUNDNUT																
1	Andhra Pradesh	Kharif	5.95	1.55	7.50	65.69	26.81	92.50	100	0.00	0.00	4.71	0.00	0.00	95.29	100
2	Gujarat	Kharif	58.26	2.09	60.35	31.37	8.28	39.65	100	-	-	23.50	-	-	76.50	100
3	Karnataka	Kharif	2.67	1.09	3.76	76.72	19.52	96.24	100	6.67	1.56	8.22	61.78	30.00	91.78	100
4	Madhya Pradesh	Kharif	0.00	8.39	8.39	83.23	91.61	100	-	-	9.52	-	-	90.48	100	
5	Maharashtra	Kharif	26.30	0.00	26.30	62.70	11.00	73.70	100	0.00	0.00	9.38	0.00	0.00	90.63	100
6	Rajasthan	Kharif	30.00	59.52	89.53	7.64	2.83	10.47	100	-	-	87.34	-	-	12.66	100
7	Tamil Nadu	#	51.00	7.17	58.17	34.59	7.24	41.83	100	-	-	45.21	-	-	54.79	100
8	Telangana	Kharif	0.00	28.86	28.86	71.14	0.00	71.14	100	-	-	18.18	-	-	81.82	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			27.95	4.84	32.79	46.50	20.71	67.21	100	1.11	0.26	29.98	10.33	5.01	70.02	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			27.95	4.84	32.79	46.50	20.71	67.21	100	1.11	0.26	29.98	10.33	5.01	70.02	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			2.67	1.09	3.76	76.72	19.52	96.24	100	6.67	1.56	8.22	61.78	30.00	91.78	100

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	90.91	0.00	0.00	9.09	100
2	Assam	Kharif	0.00	0.00	0.00	0.00	0.00	0.00	0	Data not available						
3	Bihar	Kharif	73.53	0.00	73.53	0.00	26.47	26.47	100	0.00	0.00	87.16	0.00	0.00	12.84	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	93.77	2.22	95.99	3.58	0.43	4.01	100	0.00	0.00	98.72	0.00	0.00	1.28	100
6	Maharashtra	Kharif	86.66	12.72	99.38	0.41	0.22	0.62	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	Not Tabulated							-	-	100.00	-	-	0.00	100
9	Tamil Nadu	#	92.45	7.29	99.74	0.26	0.00	0.26	100	-	-	100.00	-	-	0.00	100
10	Uttar Pradesh	Kharif	95.52	2.71	98.23	1.55	0.22	1.77	100	-	-	98.99	-	-	1.01	100
11	Uttarakhand	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	-	-	100.00	-	-	0.00	100
TOTAL FOR			92.34	5.82	98.17	1.22	0.61	1.83	100	0.00	0.00	97.42	0.00	0.00	2.58	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			94.88	2.70	97.58	1.62	0.80	2.42	100	0.00	0.00	97.97	0.00	0.00	2.03	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.																

@ TRS data for Rabi season

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
WHEAT																
1	Assam	Rabi	0.00	42.62	42.62	0.00	57.38	57.38	100	0.00	0.00	0.00	0.00	0.00	100.00	100
2	Bihar	Rabi	74.66	22.50	97.15	0.81	2.04	2.85	100	71.41	23.66	95.07	2.28	2.70	4.93	100
3	Chhattisgarh	Rabi	86.43	5.43	91.86	0.20	7.94	8.14	100	0.00	0.00	80.39	0.00	0.00	19.61	100
4	Gujarat	Rabi	84.35	9.55	93.91	2.79	3.30	6.09	100	0.00	0.00	98.41	0.00	0.00	1.59	100
5	Haryana	Rabi	99.14	0.02	99.16	0.32	0.51	0.84	100	0.00	0.00	0.00	0.00	0.00	0.00	0
6	Himachal Pradesh	Rabi	12.81	5.09	17.90	34.00	48.10	82.10	100	21.04	4.27	25.30	60.67	14.02	74.70	100
7	Jammu & Kashmir	Rabi	21.14	6.34	27.48	15.84	56.68	72.52	100	Data not available						
8	Jharkhand	Rabi	30.42	32.32	62.74	27.76	9.51	37.26	100	23.53	66.18	89.71	1.47	8.82	10.29	100
9	Karnataka	Rabi	40.61	3.92	44.53	32.55	22.92	55.47	100	43.79	5.33	49.11	22.49	28.40	50.89	100
10	Madhya Pradesh	Rabi	75.02	17.54	92.56	3.11	4.33	7.44	100	80.37	12.53	92.91	4.11	3.00	7.09	100
11	Maharashtra	Rabi	83.98	6.89	90.88	8.37	0.76	9.12	100	0.00	0.00	75.16	0.00	0.00	24.84	100
12	Punjab	Rabi	93.54	5.08	98.62	1.01	0.37	1.38	100	Data not available						
13	Rajasthan	Rabi	63.68	34.39	98.07	0.60	1.34	1.93	100	0.00	0.00	99.67	0.00	0.00	0.33	100
14	Uttar Pradesh	Rabi	98.09	0.49	98.58	1.33	0.09	1.42	100	98.65	0.28	98.93	0.87	0.20	1.07	100
15	Uttarakhand	Rabi	42.04	8.47	50.52	0.58	48.91	49.48	100			55.06			44.94	100
16	West Bengal	Rabi	39.11	14.74	53.85	0.00	46.15	46.15	100	TRS not applicable						
TOTAL FOR			86.56	8.31	94.87	2.41	2.71	5.13	100	68.82	6.05	92.92	3.17	1.91	7.08	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			90.50	8.93	94.67	2.65	2.68	5.33	100	68.89	6.05	93.01	3.18	1.91	6.99	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED																
AND UNIRRIGATED																
TOTAL FOR			86.87	8.14	95.01	2.48	2.52	4.99	100	86.09	7.56	93.65	3.97	2.39	6.35	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																

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	0
2	Himachal Pradesh	Rabi	0.50	3.61	4.11	11.87	84.02	95.89	100	-	-	11.11	-	-	88.89	100
3	Punjab	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
4	Rajasthan	Rabi	65.18	33.90	99.08	0.00	0.92	0.92	100	0.00	0.00	99.59	0.00	0.00	0.41	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			42.84	17.65	60.49	4.84	34.68	39.51	100	-	-	93.51	-	-	6.49	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			42.84	17.65	60.49	4.84	34.68	39.51	100	-	-	93.51	-	-	6.49	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY-WISE TRS ESTIMATES NOT AVAILABLE													
GRAM																
1	Andhra Pradesh	Rabi	5.26	2.22	7.48	76.15	16.38	92.52	100	0.00	0.00	0.43	0.00	0.00	99.57	100
2	Bihar	Rabi	12.48	30.07	42.55	6.85	50.60	57.45	100	0.00	0.00	0.00	0.00	0.00	100.00	100
3	Chhattisgarh	Rabi	9.35	42.86	52.20	12.55	35.25	47.80	100	-	-	44.41	-	-	55.59	100
4	Gujarat	Rabi	17.08	12.72	29.81	5.12	65.07	70.19	100	-	-	56.25	-	-	43.75	100
5	Haryana	Rabi	20.80	0.00	20.80	79.20	0.00	79.20	100	-	-	0.00	-	-	0.00	0
6	Jharkhand	Rabi	0.00	7.01	7.01	0.00	92.99	92.99	100	-	-	28.00	-	-	72.00	100
7	Karnataka	Rabi	12.46	0.71	13.17	66.37	20.46	86.83	100	7.08	1.49	8.58	74.59	16.84	91.42	100
8	Madhya Pradesh	Rabi	17.33	55.33	72.66	1.29	26.05	27.34	100	-	-	67.77	-	-	32.23	100
9	Maharashtra	Rabi	35.12	8.60	43.71	40.21	16.08	56.29	100	43.61	0.00	43.96	0.00	0.00	56.04	100
10	Punjab	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
11	Rajasthan	Rabi	19.44	46.89	66.33	13.60	20.07	33.67	100	-	-	69.61	-	-	30.39	100
12	Uttar Pradesh	Rabi	3.14	21.67	24.81	15.48	59.71	75.19	100	-	-	22.81	-	-	77.19	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			19.65	27.68	47.32	27.20	25.48	52.68	100	-	-	44.60	-	-	55.40	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			19.68	27.67	47.34	27.28	25.38	52.66	100	-	-	44.98	-	-	55.02	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			30.38	6.95	37.32	45.68	16.99	62.68	100	26.48	0.70	27.37	34.97	7.89	72.63	100

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RAPE & MUSTARD																
1	Assam	Rabi	9.84	5.93	15.78	1.64	82.58	84.22	100	-	-	0.00	-	-	100.00	100
2	Bihar	Rabi	72.57	8.16	80.73	1.07	18.21	19.27	100	Data Not available						
3	Chattisgarh	Rabi	0.00	0.55	0.55	0.00	99.45	99.45	100	-	-	10.87	-	-	89.13	100
4	Gujarat	Rabi	82.45	17.55	100.00	0.00	0.00	0.00	100	-	-	100.00	-	-	0.00	100
5	Haryana @	Rabi	87.17	0.00	87.17	12.38	0.46	12.83	100	-	-	0.00	-	-	0.00	0
6	Jharkhand	Rabi	8.88	21.30	30.18	17.75	52.07	69.82	100	-	-	0.00	-	-	0.00	0
7	Madhya Pradesh	Rabi	24.30	39.93	64.23	22.91	12.86	35.77	100	-	-	61.27	-	-	38.73	100
8	Punjab	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	Data Not available						
9	Rajasthan	Rabi	64.30	29.77	94.07	1.46	4.47	5.93	100	-	-	93.43	-	-	6.57	100
10	Uttar Pradesh	Rabi	66.08	24.32	90.40	6.20	3.40	9.60	100	-	-	91.61	-	-	8.39	100
11	West Bengal	Rabi	41.85	7.10	48.95	7.10	43.96	51.05	100	TRS Not applicable						
TOTAL FOR STATES COVERED UNDER ICS SCHEME			57.44	22.42	79.86	8.19	11.95	20.14	100	-	-	81.30	-	-	18.70	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			56.39	28.51	84.90	8.39	6.70	15.10	100	-	-	87.28	-	-	12.72	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY-WISE TRS ESTIMATES NOT AVAILABLE													

@ Data for oilseeds used

Note: # - In Tamil Nadu, for the year as a whole (total of all seasons).

**COMPARISON OF ESTIMATES OF YIELD RATES UNDER
ICS AND CES DURING 2015-16**

Sl. No.	State	A G E N C Y	ICS				C.E.S. \$				% Diff. (Col.6/ 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	180	176	2895	4.0							53
		S	180	164	N.P.								N.C.
		P	360	340	2844	2.9	4284	4284	3119	0.4	-8.82		53
2	Assam (Aut)	C	100	62	1817	10.3							81
		S	100	60	0	0.0							0
		P	200	122	1817	10.3	2000	1374	1454	1.3	24.97		114
	Assam (Wint)	C	120	120	2063	4.6							50
		S	120	102	0	0.0							0
	*	P	240	222	2063	4.6	3000	2956	2005	2.0	2.89		69
3	Bihar (Aut/ Bhadai)	C	40	34	1483	11.2							65
		S	40	10	N.P.								N.C.
	*	P	80	44	1483	11.2	840	576	2604	NR	-43.05		74
	Bihar (Wint/Winter)	C	240	216	2370	4.2							62
		S	240	124	N.P.								N.C.
	*	P	480	340	2370	4.2	74160	64398	4083	0.0	-41.95		77
4	Chhattisgarh	C	80	78	2084	8.8							78
		S	80	74	1337	8.3							71
		P	160	152	1536	6.2	3588	3178	2098	1.1	-26.79		76
5	Gujarat	C	80	74	2062	4.4							38
		S	80	73	0	0.0							N.C.
		P	160	147	2062	4.4	0	0	0	0.0	#DIV/0!		53
6	Haryana	C	90	90	3128	3.5							33
		S	90	72	3116	5.3							45
		P	180	162	3124	2.9	990	974	3124	1.2	0.00		37
7	Himachal Pradesh *	C	60	52	1492	12.1							87
		S	60	46	N.P.								N.C.
		P	120	98	1508	11.3	990	755	1953	2.0	-22.79		112
8	Jammu & Kashmir *	C	70	69	2618	7.0							58
		S	70	16	N.P.								N.C.
		P	140	85	2618	7.0	1230	930	1780	6.0	47.08		65
9	Jharkhand (Aut/E. Kharif)	C	20	20	1056	10.1							45
		S	20	16	N.P.								N.C.
		P	40	36	1056	10.1	720	612	1461	0.0	-27.72		61
	Jharkhand (Wint/L. Kharif)	C	80	80	1414	11.0							98
		S	80	28	N.P.								N.C.
	*	P	160	108	1414	11.0	7800	7020	2124	0.0	-33.43		114
10	Karnataka	C	144	136	2818	5.0							58
		S	144	142	3624	6.3							75
		P	288	278	3038	3.9	7906	7790	3282	1.8	-7.43		65
11	Kerala (Aut)	C	100	99	1871	11.7							116
		S	100	97	2271	8.1							80
		P	200	196	2106	6.7	2541	2541	2524	2.0	-16.56		94
	Kerala (Wint)	C	100	99	2392	8.6							86
		S	100	100	2441	8.6							86
		P	200	199	2416	6.1	3318	3317	2859	1.1	-15.49		86
12	Madhya Pradesh	C	100	95	882	8.3							81
		S	100	78	1138	10.1							89
		P	200	173	955	6.5	4826	4392	1683	2.8	-43.26		85
13	Maharashtra *	C	82	75	1270	8.9							77
		S	82	45	N.P.								N.C.
		P	164	120	1270	8.9	5030	4551	1731	0.9	-26.63		97
14	Odisha (Aut)	C	220	220	714	9.4							139
		S	220	220	652	8.9							132
		P	440	440	679	6.5	6850	6850	1775	0.7	-61.75		136
	Odisha (Wint)	C	270	268	1386	6.3							103
		S	270	270	1482	6.0							99
		P	540	538	1434	4.4	10560	10560	2378	0.3	-39.70		102
15	Punjab	C	190	185	4286	2.0							27
		S	190	170	4118	2.3							30
		P	380	355	4208	1.5	1984	1982	3838	NR	9.64		28
16	Tamil Nadu (Phase-I)	C	60	53	4677	1.8							13
		S	60	45									0
		P	120	98	4677	1.8	428	422	4680	1.2	-0.06		18
	Tamil Nadu (Phase-II)	C	120	120	3324	4.4							48
		S	120	117	2891	5.1							55
		P	240	237	3107	3.3	1260	1252	4331	0.7	-28.26		51

1	2	3	4	5	6	7	8	9	10	11	12	13
17	Telangana	C	100	96	3106	3.9						38
		S	100	80								34
		P	200	176	3176	2.7	0	0	0	0.0	#DIV/0!	36
18	Uttar Pradesh	C	660	656	2052	2.4						61
		S	660	89	N.P.							N.C.
		P	1320	745	2052	2.4	170256	168904	2254	NR	-8.96	66
19	Uttarakhand	C	50	50	2278	6.1						43
		S	50	46	N.P.							N.C.
		P	100	96	2278	6.1	2958	2531	3048	0.9	-25.26	60
20	West Bengal	C	100	98	2241	4.5						45
	E. Kharif	S	100	95	1274	9.6						94
		P	200	193	1855	4.2	4826	3450	2596	1.1	-28.54	58
	L. Kharif	C	160	160	2637	3.4						43
		S	160	154	2658	3.5						43
		P	320	314	2647	2.5	13268	10683	2740	0.6	-3.39	44
20	Puducherry	C	10	10	2524	6.3						20
	(Kh.)	S	10	8	N.P.							21
		P	20	18	2583	4.9	88	88	3167	2.1	-18.44	21
For states covered			7252	6032	2286	1.1	335701	316370	2692	0.2	-15.10	89
RICE (SUMMER)												
1	Andhra Pradesh	C	90	84	3866	4.3						39
		S	90	62								0
		P	180	146	3835	2.4	2868	2732	4424	0.5	-13.31	29
2	Assam	C	40	34	3285	7.7						45
	*	S	40	30	N.P.							N.C.
		P	80	64	3285	7.7	1500	1317	2940	1.2	11.73	62
3	Bihar	C	40	32	2655	5.0						28
	*	S	40	0	N.P.							N.C.
		P	80	32	2655	5.0	440	188	2342	NR	13.36	28
4	Karnataka	C	40	34	3048	10.8						63
	*	S	40	40	0	0.0						0
		P	80	74	3048	10.8	670	540	2576	6.1	18.32	93
5	Kerala	C	100	100	2579	9.7						97
		S	100	96	2843	6.1						60
		P	200	196	2757	5.2	1613	1611	3235	1.8	-14.78	73
6	Odisha	C	140	136	3344	4.8						56
		S	140	140	3172	4.1						49
		P	280	276	3241	3.1	4662	4662	3342	1.2	-3.02	52
7	Tamil Nadu	C	40	39	4270	2.8						17
		S	40	36	3883	4.0						24
		P	80	75	4125	2.3	300	300	4728	1.1	-12.75	20
8	Telangana	C	80	77	2875	5.6						49
		S	80	62	2950	5.9						46
		P	160	139	2909	4.0	0	0	0	0.0	0.00	47
9	West Bengal	C	140	140	3180	2.0						24
		S	140	134	3171	2.7						31
		P	280	274	3177	1.6	11647	9502	3373	0.6	-5.81	26
10	Puducherry	C	10	10	2605	15.6						49
	(Rabi-I)	S	10	10	N.P.							N.C.
		P	20	20	2508	9.7	140	140	2906	1.9	-13.70	43
	Puducherry	C	10	10	2825	3.6						11
	(Rabi-II)	S	10	10	0	0.0						0
	*	P	20	20	2825	3.6	70	70	3099	2.8	-8.84	16
For states covered			1460	1316	3383	1.2	23910	21062	2892	0.5	17.00	43
JOWAR (KHARIF)												
1	Karnataka	C	50	42	1417	19.2						136
		S	50	46	1053	13.6						96
		P	100	88	1131	11.2	3720	3248	1420	2.5	-20.35	105
2	Madhya Pradesh	C	100	90	1310	12.6						120
		S	100	78	1060	7.9						70
		P	200	168	1111	6.7	2412	1810	1709	0.7	-34.99	87
3	Maharashtra	C	80	60	671	11.8						91
	*	S	80	51	N.P.							N.C.
		P	160	111	671	11.8	5042	4519	1082	0.8	-37.99	124
4	Rajasthan	C	60	48	366	23.3						161
		S	60	52	198	23.7						171
		P	120	100	237	17.3	2582	2450	763	3.5	-68.94	173
5	Tamil Nadu	C	60	53	1352	9.0						66
	#	S	60	50	960	13.6						96
		P	120	103	1170	7.6	1080	1040	2094	1.7	-44.13	77
6	Telangana	C	50	50	1193	12.1						86
		S	50	34	873	20.2						118
		P	100	84	1065	10.5	0	0	0	0.0	0.00	96
7	Uttar Pradesh	C	40	40	413	28.1						178
		S	40	6	N.P.							N.C.
	*	P	80	46	413	28.1	8284	7554	984	NR	-58.03	191
For states covered			880	700	879	4.3	23120	20621	1220	0.8	-27.90	114

1	2	3	4	5	6	7	8	9	10	11	12	13
JOWAR(RABI)												
1	Karnataka	C	70	62	775	14.7						116
		S	70	68	827	25.4						209
		P	140	130	787	12.8	5078	4908	1068	2.2	-26.31	146
2	Maharashtra	C	150	124	461	14.9						166
	*	S	150	80	N.P.							N.C.
		P	300	204	461	14.9	8848	8436	687	0.7	-32.90	213
3	Telangana	C	40	40	941	15.2						96
	*	S	40	25	0	0.0						0
		P	80	65	941	15.2	0	0	0	0.0	0.00	123
For states covered			520	399	587	9.1	13926	13344	776	0.9	-24.36	182
BAJRA												
1	Andhra Pradesh	C	40	36	2253	12.9						77
		S	40	40	N.P.							78
		P	80	76	2129	9.0	462	448	1289	5.6	65.17	78
2	Gujarat	C	110	106	1574	7.8						80
	*	S	110	51	N.P.							N.C.
		P	220	157	1574	7.8	2026	1886	1631	0.0	-3.49	98
3	Haryana	C	104	102	4006	22.2						224
		S	104	76	3115	12.9						112
		P	208	178	3265	11.2	1532	1456	1705	1.0	91.50	149
4	Karnataka	C	50	40	688	27.2						172
		S	50	50	679	9.6						68
		P	100	90	680	9.0	2790	2680	1097	3.4	-38.01	85
5	Maharashtra	C	60	48								261
	*	S	60	33	N.P.							N.C.
		P	120	81			3900	3704	1086	NR	48.07	338
6	Rajasthan	C	60	57	1137	9.6						72
		S	60	58	488	20.0						152
		P	120	115	774	9.4	8754	8502	1093	1.2	-29.19	101
7	Tamil Nadu	C	40	34	2613	6.4						37
	#	S	40	30	2063	12.8						70
		P	80	64	2455	5.7	444	436	3077	2.0	-20.21	46
8	Uttar Pradesh	C	150	150	1797	5.5						67
		S	150	7	N.P.							N.C.
	*	P	300	157	2218	4.3	34224	33833	1893	NR	17.17	54
For states covered			1228	918	1095	15.7	54132	52945	1268	0.6	-13.63	477
MAIZE												
2	Bihar	C	40	32	2841	9.4						53
	*	S	40	20	N.P.							N.C.
		P	80	52	2841	9.4	10660	6863	2975	NR	-4.50	68
3	Chhattisgarh	C	40	40	1753	13.3						84
	*	S	40	40	1548	6.9						44
		P	80	80	1583	6.1	1362	1108	1886	3.1	-16.07	55
4	Gujarat	C	40	40	1573	11.7						74
	**	S	40	30	N.P.							N.C.
		P	80	70	1573	11.7	1240	1040	1256	0.0	25.24	98
5	Haryana	C	20	20								99
		S	20	14	N.P.							48
		P	40	34			144	76	2000	5.9	#REF!	65
6	Himachal Pradesh	C	90	74	2696	5.9						51
	*	S	90	74	2315	7.2						62
		P	180	148	2635	4.6	1570	1402	2795	1.4	-5.72	56
7	Jammu & Kashmir	C	90	86	2190	8.7						81
	*	S	90	6	N.P.							37
		P	180	92	2190	8.7	1454	1158	1236	5.0	77.18	83
8	Jharkhand	C	20	20	1929	15.2						68
		S	20	12								0
		P	40	32	1929	15.2	720	648	1716	0.0	12.41	86
9	Karnatka	C	50	48	3076	12.2						85
		S	50	50	2874	12.4						88
		P	100	98	2970	8.7	6406	6352	3294	2.1	-9.84	86
10	Madhya Pradesh	C	80	80	1203	7.0						63
	@	S	80	70	0	0.0						0
		P	160	150	1926	7.4	3714	3537	2169	1.7	-11.20	91
11	Odisha	C	40	40	2163	9.5						60
		S	40	40	2225	6.7						42
		P	80	80	2204	5.5	131	131	1670	2.6	31.98	49
12	Punjab	C	48	35	3290	10.4						62
	*	S	48	40	0	0.0						0
		P	96	75	3290	10.4	354	354	3652	NR	-9.91	90
13	Rajasthan	C	50	45	2014	20.7						139
		S	50	46	1368	16.7						113
		P	100	91	1516	13.2	5462	5402	1740	1.1	-12.87	126
14	Tamil Nadu	C	40	36	5690	8.2						49
	*	S	40	26	0	0.0						0
		P	80	62	5690	8.2	432	432	8227	1.6	-30.84	65
15	Telangana	C	50	49	3668	13.1						92
		S	50	34	3255	20.1						117
		P	100	83	3523	11.0	0	0	0	0.0	0.00	100

1	2	3	4	5	6	7	8	9	10	11	12	13
16	Uttar Pradesh	C	170	170	2328	6.5						85
		S	170	28	N.P.							N.C.
	*	P	340	198	2328	6.5	31004	30741	1840	NR	26.52	91
For states covered			1736	1345	2678	2.3	64653	59244	2652	0.7	0.95	84
RAGI												
1	Karnataka	C	40	40	1564	11.8						75
		S	40	38	2150	8.2						51
		P	80	78	1872	6.8	4810	4784	1887	2.2	-0.79	60
2	Tamil Nadu	C	40	40	2703	4.1						26
	*	S	40	38	N.P.							87
		P	80	78	2624	3.9	360	360	3348	1.9	-21.62	34
3	Uttarakhand	C	40	40	1632	8.3						52
	*	S	40	32	N.P.							N.C.
		P	80	72	1632	8.3	1086	1023	1485	1.1	9.90	70
For states covered			240	228	1829	4.8	6256	6167	2015	1.6	-9.22	72
COTTON												
1	Andhra Pradesh	C	40	40								
		S	40	40								
		P	80	80	437	19.3	718	718	1603	2.6	-72.74	173
2	Gujarat	C	220	204								
		S	220	110								
		P	440	314	444	6.6	0	0	0	0.0	0.00	117
3	Haryana	C	56	56								
		S	56	52								
		P	112	108	392	11.2	940	842	509	0.0	-22.99	116
4	Karnataka	C	56	50								
		S	56	52								
		P	112	102	315	8.2	1880	1750	493	3.4	-36.11	83
5	Madhya Pradesh	C	48	48								
		S	48	40								
		P	96	88	826	9.1	998	980	1105	2.1	-25.25	85
6	Maharashtra	C	140	138	0	0.0						0
		S	140	84								
		P	280	222	450	8.8	8674	8194	322	0.4	39.75	131
7	Punjab	C	72	72								
		S	72	68								
		P	144	140	189	6.3	698	694	543	NR	-65.19	75
8	Rajasthan	C	40	36								
		S	40	28								
		P	80	64	531	6.7	1576	1411	1601	1.6	-66.83	54
9	Tamil Nadu	C	100	92								
		S	100	88								
		P	200	180	400	5.1	820	788	545	1.7	-26.61	68
10	Telangana	C	40	38								
		S	40	24								
		P	80	62	397	8.3	0	0	0	0.0	0.00	65
For states covered			1624	1360	441	4.3	16304	15377	488	0.8	-9.62	160
GROUNDNUT												
1	Andhra Pradesh	C	140	138	967	12.6						148
		S	140	138	N.P.							99
		P	280	276	809	7.0	2572	2468	410	2.0	97.32	116
2	Gujarat *	C	150	148	1801	9.7						118
		S	150	84	0	0.0						0
		P	300	232	1801	9.7	1800	1340	1840	0.0	-2.12	148
3	Karnataka	C	70	62	872	13.3						105
		S	70	64	828	11.2						90
		P	140	126	845	8.6	5338	5140	850	2.9	-0.59	97
4	Madhya Pradesh	C	40	40	798	21.1						133
		S	40	38	1127	15.6						96
		P	80	78	956	12.7	1096	1066	1604	2.9	-40.40	112
5	Maharashtra *	C	60	51								115
		S	60	38	N.P.							N.C.
		P	120	89			3030	2827	1256	1.0	-43.55	152
6	Rajasthan	C	40	34	1875	19.6						114
		S	40	38	1309	29.3						181
		P	80	72	1603	16.6	2092	1944	2019	1.6	-20.60	141
7	Tamil Nadu	C	100	99	2690	5.0						50
		S	100	87	2259	5.7						53
		P	200	186	2463	3.8	1160	1160	2753	1.3	-10.53	52
8	Telangana	C	40	34	1513	15.9						93
		S	40	26	0	0.0						0
		P	80	60	1513	15.9	0	0	0	0.0	0.00	123
For states covered			1280	1119	1422	4.3	17088	15945	1477	0.4	-3.69	145

1	2	3	4	5	6	7	8	9	10	11	12	13
SUGARCANE												
1	Andhra	C	60	57	84368	6.1						46
	Pradesh	S	60	50	N.P.							35
		P	120	107	82623	3.9	1602	1600	71842	0.8	15.01	40
2	Assam	C	40	40	31480	6.0						38
	**	S	40	28	N.P.							N.C.
		P	80	68	31480	6.0	700	581	36760	0.1	-14.36	49
3	Bihar	C	40	31	55158	6.6						37
	*	S	40	18	N.P.							N.C.
		P	80	49	55158	6.6	740	627	55179	NR	-0.04	46
4	Haryana	C	50	49	79149	5.4						38
	*	S	50	26	0	0.0						0
		P	100	75	79149	5.4	1070	848	73281	0.0	8.01	47
5	Karnataka	C	40	32	100251	9.2						52
		S	40	38	77889	6.6						41
		P	80	70	83181	5.4	1060	1060	97000	5.5	-14.25	45
6	Maharashtra	C	68	44	81597	16.5						109
	*	S	68	31	N.P.							N.C.
		P	136	75	81597	16.5	10278	8492	89000	0.4	-8.32	143
7	Punjab	C	70	67	64815	4.5						37
	*	S	70	54	0	0.0						0
		P	140	121	64815	4.5	686	663	74888	NR	-13.45	50
8	Rajasthan	C	40	39	81936	9.6						60
		S	40	28	75096	10.1						53
		P	80	67	78419	7.0	450	410	73390	6.7	6.85	57
9	Tamil Nadu	C	50	49	102172	5.9						41
		S	50	44	103231	5.2						34
		P	100	93	102767	3.9	468	467	107000	1.0	-3.96	38
10	Uttar Pradesh	C	200	200	65986	2.7						38
	*	S	200	42	N.P.							N.C.
		P	400	242	65986	2.7	9508	9311	65821	NR	0.25	42
11	Uttarakhand	C	40	40	60162	7.9	0					50
	*	S	40	0	N.P.		0					N.C.
		P	80	40	60162	7.9	0	0	0	0	0	50
For states covered			1396	1007	76106	5.7	26562	24059	75454	0.5	0.00	180
WHEAT												
1	Assam	C	50	32	0	0.0						0
	np	S	50	26	N.P.							N.C.
		P	100	58	0	0.0	850	636	1217	2.3	-100.00	0
2	Bihar	C	230	212	2470	2.7						39
	*	S	230	64	N.P.							N.C.
		P	460	276	2470	2.7	10640	10332	1657	NR	49.06	45
3	Chhattisgarh	C	40	40	1165	10.8						68
	@	S	40	38	1575	9.2						57
		P	80	78	1342	7.1	2130	1762	1446	1.7	-7.19	63
4	Gujarat	C	150	146	2913	3.7						45
	*	S	150	92	N.P.							N.C.
		P	300	238	2913	3.7	4738	4585	2812	0.0	3.59	57
5	Haryana	C	180	170	4428	1.8						23
	*	S	180	132	0	0.0						0
		P	360	302	4428	1.8	2200	2154	3979	0.5	11.28	31
6	Himachal Pradesh	C	110	96	1538	7.0						69
		S	110	90	1654	13.0						123
		P	220	186	1561	6.2	1784	1566	2180	1.4	-28.39	85
7	Jammu & Kashmir	C	120	118	1561	6.1						66
	*	S	120	35	N.P.							0
		P	240	153	1561	6.1	1938	1430	1004	4.0	55.48	75
8	Jharkhand	C	40	40	2120	7.4						47
	*	S	40	14	N.P.							N.C.
		P	80	54	2120	7.4	7800	7008	1463	0.0	44.91	54
9	Karnataka	C	50	33	812	14.9						86
	*	S	50	50	1045	17.0						120
		P	100	83	886	11.3	2792	2726	1099	3.5	-19.38	103
10	Madhya Pradesh	C	250	239	2538	3.6						56
	*	S	250	110	0	0.0						0
		P	500	349	2538	3.6	10426	9316	2790	0.5	-9.03	67
11	Maharashtra	C	150	132	1351	8.4						97
	*	S	150	75	N.P.							N.C.
		P	300	207	1351	8.4	8708	8208	1757	0.5	-23.11	121
12	Punjab	C	220	220	4465	1.2						18
		S	220	201	4497	1.6						23
		P	440	421	4477	1.0	2300	2294	4294	NR	4.26	21
13	Rajasthan	C	130	130	3341	5.3						60
		S	130	126	3220	4.8						54
		P	260	256	3272	3.5	17114	16564	2961	0.6	10.50	56
14	Uttar Pradesh	C	570	567	2611	1.7						40
	*	S	570	82	N.P.							N.C.
		P	1140	649	2611	1.7	205960	204284	2027	NR	28.81	43

1	2	3	4	5	6	7	8	9	10	11	12	13	
15	Uttarakhand*	C	60	60	1899	7.3						57	
		S	60	54	N.P.							N.C.	
		P	120	114	1899	7.3	2958	2706	1852	0.9	2.54	78	
16	West Bengal	C	110	109	2266	4.0						42	
		S	110	105	2240	4.0						41	
		P	220	214	2253	2.8	3143	2813	2807	0.5	-19.74	41	
For states covered			4920	3638	2959	1.1	285481	278384	2660	0.1	11.26	68	
BARLEY													
1	Haryana	C	30	25	2986	8.2						41	
	*	S	30	14	0	0.0						0	
		P	60	39	2986	8.2	300	273	1109	0.0	169.25	51	
2	Himachal Pradesh	C	40	32	1552	13.4						76	
	*	S	40	32	1898	7.2						41	
		P	80	64	1660	10.4	658	544	1877	4.4	-11.56	83	
3	Punjab	C	30	30	3431	4.5						25	
	*	S	30	30	0	0.0						0	
		P	60	60	3431	4.5	246	244	3580	NR	-4.16	35	
4	Rajasthan	C	80	80	2406	7.2						64	
		S	80	76	1856	6.9						60	
		P	160	156	2050	5.0	2758	2608	2803	1.4	-26.86	62	
For states covered			360	319	1958	5.4	3962	3669	2630	1.2	-25.57	96	
GRAM													
1	Andhra Pradesh	C	40	40	853	5.5						35	
	*	S	40	39	N.P.							N.C.	
		P	80	79	912	4.8	1262	1254	1144	0.0	-20.28	43	
2	Bihar	C	40	40	633	7.5						47	
	*	S	40	6	N.P.							N.C.	
		P	80	46	633	7.5	800	696	958	0.0	-33.92	51	
3	Chhattisgarh	C	40	40	831	19.6						124	
		S	40	34	644	17.0						99	
		P	80	74	702	12.9	1264	1083	1035	2.5	-32.17	111	
4	Gujarat	C	40	34	853	4.2						24	
	*	S	40	30	N.P.							N.C.	
		P	80	64	853	4.2	1360	1186	1023	0.0	-16.62	34	
5	Haryana	C	70	56	493	19.6						147	
	*	S	70	50	0	0.0						0	
		P	140	106	493	19.6	562	522	631	0.8	-21.87	202	
6	Jharkhand	C	20	18	488	14.6						62	
	*	S	20	8	N.P.							N.C.	
		P	40	26	488	14.6	720	648	879	NR	-44.48	74	
7	Karnataka	C	40	28	357	18.2						96	
		S	40	40	469	20.8						132	
		P	80	68	392	13.8	4880	4834	794	2.1	-50.63	114	
8	Madhya Pradesh	C	140	137	907	5.7						67	
	*	S	140	54	0	0.0						0	
		P	280	191	907	5.7	9224	7526	1002	0.7	-9.48	79	
9	Maharashtra	C	100	91	559	26.6						254	
	*	S	100	46	N.P.							N.C.	
		P	200	137	559	26.6	5456	5224	918	9.9	-39.11	311	
10	Punjab	C	30	26	1835	6.0						31	
	*	S	30	16	0	0.0						0	
		P	60	42	1835	6.0	100	100	1085	NR	69.12	39	
11	Rajasthan	C	120	104	800	15.3						156	
		S	120	100	911	17.0						170	
		P	240	204	843	11.4	8544	7492	725	2.4	16.28	163	
12	Uttar Pradesh	C	50	48	357	23.8						165	
	*	S	50	4	N.P.							N.C.	
		P	100	52	357	23.8	16342	16072	316	NR	12.97	172	
13	West Bengal	C	Not Planned										N.C.
	**	S	Not Planned										N.C.
		P	Not Planned					1009	879	1178	1.9	-100.0	N.C.
For states covered			1460	1089	723	5.7	51523	47516	897	1.1	-19.41	188	
RAPE & MUSTARD													
1	Assam	C	70	68	695	5.6						46	
	*	S	70	44	N.P.							N.C.	
		P	140	112	695	5.6	1250	1182	667	1.0	4.20	59	
2	Bihar	C	40	40	847	6.1						39	
	*	S	40	6	N.P.							N.C.	
		P	80	46	847	6.1	876	742	85	NR	896.47	41	
3	Chhattisgarh	C	30	30	388	16.0						88	
		S	30	30	517	8.8						48	
		P	60	60	472	7.8	1030	842	576	3.3	-18.06	60	
4	Gujarat	C	50	46	1537	5.6						38	
	*	S	50	34	N.P.							N.C.	
		P	100	80	1537	5.6	1100	1040	1820	1.1	-15.55	50	
5	Haryana	C	100	90	1276	5.5						52	
	*	S	100	75	0	0.0						0	
		P	200	165	1276	5.5	1040	990	1434	0.5	-11.02	71	

1	2	3	4	5	6	7	8	9	10	11	12	13
6	Jharkhand	C	20	20	641	5.6						25
	*	S	20	12	N.P.							N.C.
		P	40	32	641	5.6	720	652	1918	NR	-66.58	32
7	Madhya Pradesh	C	60	52	1054	8.9						64
		S	60	40	0	0.0						0
	*	P	120	92	1054	8.9	2214	2046	994	1.3	6.04	85
8	Punjab	C	40	38	1116	5.9						36
	*	S	40	34	0	0.0						0
		P	80	72	1116	5.9	542	540	1248	NR	-10.58	50
9	Rajasthan	C	90	89	985	10.7						101
		S	90	82	1163	7.3						66
		P	180	171	1093	6.1	13274	12440	1183	0.6	-7.61	80
10	Uttar Pradesh	C	100	98	1177	6.4						63
	*	S	100	14	N.P.							N.C.
		P	200	112	1177	6.4	29452	28416	777	NR	51.48	68
11	West Bengal	C	110	106	899	3.9						40
	*	S	110	97	N.P.							N.C.
		P	220	203	936	3.1	5137	4424	1069	1.0	-12.44	44
For states covered			1420	1145	1097	2.6	56635	53314	1104	0.4	-0.70	87

Note:- 1) @ = Combined estimates prepared due to low response

2) * = Central sample data repeated as 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) \$ = CES data pertains to the year 2012-13 except Jammu & Kashmir (2012-13).

6) # = In Tamil Nadu, for the year as a whole (Total of all seasons).

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

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

9) NA = Not Applicable

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
12	Uttar Pradesh	C	Rabi	2	219	1	230	3	223	18	453	27	381	45	410	20	429	28	376	48	398
		S		0	0	0	0	0	0	2	302	2	422	4	362	2	302	2	422	4	362
		P		2	219	1	230	3	223	20	438	29	384	49	406	22	417	30	379	52	395
For States Covered		C	Rabi	150	962	114	777	264	882	167	889	231	596	398	719	317	924	345	656	662	784
		S		94	996	107	745	201	862	106	1027	117	816	223	916	200	1013	224	782	424	891
		P		244	975	221	761	465	874	273	943	348	670	621	790	517	958	569	705	1086	826
RAPE & MUSTARD																					
1	Assam	C	Rabi	0	0	0	0	0	0	0	0	68	671	68	671	0	0	32	1240	32	1240
		S		0	0	0	0	0	0	1	439	43	699	44	693	1	439	43	699	44	693
		P		0	0	0	0	0	0	1	439	111	682	112	680	1	439	75	930	76	923
2	Bihar	C	Rabi	0	0	0	0	0	0	28	922	12	836	40	896	28	922	12	836	40	896
		S		0	0	0	0	0	0	4	764	0	0	4	764	4	764	0	0	4	764
		P		0	0	0	0	0	0	32	902	12	836	44	884	32	902	12	836	44	884
3	Chhattisgarh	C	Rabi	0	0	2	960	2	960	4	401	24	468	28	458	4	401	26	506	30	492
		S		0	0	0	0	0	0	0	30	436	30	436	0	0	30	436	30	436	
		P		0	0	2	960	2	960	4	401	54	450	58	447	4	401	56	469	60	464
4	Gujarat	C	Rabi	41	1566	1	800	42	1548	2	1620	2	290	4	955	43	1569	3	460	46	1497
		S		29	1691	0	0	29	1691	1	2880	4	1380	5	1680	30	1730	4	1380	34	1689
		P		70	1618	1	800	71	1606	3	2040	6	0	9	1358	73	1635	7	986	80	1578
5	Haryana	C	Rabi	86	1371	10	1283	96	1362	3	1470	1	1509	4	1480	89	1374	11	1304	100	1367
		S		68	1429	5	850	73	1389	3	1152	0	0	3	1152	71	1417	5	850	76	1380
		P		154	1397	15	1139	169	1374	6	1311	1	1509	7	1339	160	1393	16	1162	176	1372
6	Jharkhand	C	Rabi	0	0	0	0	0	0	14	612	6	997	20	728	14	612	6	997	20	728
		S		0	0	0	0	0	0	2	535	10	659	12	638	2	535	10	659	12	638
		P		0	0	0	0	0	0	16	602	16	786	32	694	16	602	16	786	32	694
7	Madhya Pradesh	C	Rabi	24	979	0	0	24	979	12	1345	16	957	28	1123	36	1101	16	957	52	1057
		S		15	1192	3	1773	18	1289	9	548	13	859	22	732	24	950	16	1031	40	982
		P		39	1061	3	1773	42	1112	21	1003	29	913	50	951	60	1041	32	994	92	1024
8	Punjab	C	Rabi	28	1603	0	0	28	1603	9	1225	1	743	10	1177	37	1511	1	743	38	1491
		S		32	1364	0	0	32	1364	1	619	1	812	2	716	33	1342	1	812	34	1326
		P		60	1476	0	0	60	1476	10	1164	2	778	12	1100	70	1431	2	778	72	1413
9	Rajasthan	C	Rabi	56	1102	2	3131	58	1172	24	866	7	122	31	698	80	1032	9	791	89	1008
		S		32	1123	4	656	36	1071	41	1093	5	853	46	1067	73	1106	9	766	82	1069
		P		88	1110	6	1481	94	1133	65	1009	12	427	77	918	153	1067	18	779	171	1037
10	Uttar Pradesh	C	Rabi	55	1444	0	0	55	1444	35	844	8	437	43	768	90	1211	8	437	98	1148
		S		8	977	0	0	8	977	4	444	2	422	6	381	12	800	2	254	14	722
		P		63	1385	0	0	63	1385	39	803	10	434	49	721	102	1163	10	400	112	1095
11	West Bengal	C	Rabi	98	2206	2	2343	100	2209	9	2702	0	0	9	2702	107	2248	2	2343	109	2250
		S		72	1109	14	660	86	1036	7	758	4	740	11	751	79	1077	18	678	97	1003
		P		170	1741	16	870	186	1666	16	1852	4	740	20	1629	186	1751	20	845	206	1663
For States Covered		C		388	763	17	819	405	765	140	212	145	20	285	114	528	617	126	134	654	1329
		S		256	2374	26	1019	282	2249	73	1992	112	852	185	1302	329	2290	138	840	467	1062
		P		644	1458	43	1115	687	1437	213	1004	257	664	470	817	857	1345	264	804	1121	1218

Note :-

** = in Tamil Nadu, for the year as a whole (Total of all seasons).

**ESTIMATES OF YIELD RATE ACCORDING TO USE OF
FERTILISERS, MANURES AND UNMANURED UNDER ICS DURING 2015-16**

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	
RICE														
1	Andhra	Kharif	C	104	2935	0	0	70	2839	2	1850	176	2884	
			Pradesh	S	77	3099	0	0	86	2732	1	43	164	2888
				P	181	3005	0	0	156	2780	3	1248	340	2886
		Summer	C	40	3699	1	3752	42	3613	1	0	84	3613	
			S	30	4348	0	0	32	4095	0	0	62	4217	
			P	70	3977	1	0	74	3821	1	0	146	3869	
2	Assam	Early	C	6	1869	28	1188	6	3576	22	1782	62	1696	
			Kharif	S	22	1365	4	1015	12	2214	22	1429	60	1535
				P	28	1473	32	1166	18	2668	44	1606	122	1617
		Late	C	24	1698	46	2046	13	2352	37	1840	120	1946	
			Kharif	S	24	3168	17	2251	7	2171	54	1942	102	2298
				P	48	2433	63	2101	20	2289	91	1901	222	2108
		Summer	C	20	3303	8	3659	4	4658	2	1658	34	3449	
			S	16	2900	0	0	0	0	14	2794	30	2851	
		P	36	3124	8	3659	4	4658	16	2652	64	3169		
3	Bihar	Bhadai	C	22	2678	0	0	12	3138	0	0	34	2840	
			S	8	1333	0	0	2	2532	0	0	10	1573	
			P	30	2319	0	0	2	2532	0	0	44	2552	
		Aghani	C	164	3466	0	0	50	3131	2	3170	216	3386	
			S	104	3387	0	0	20	1989	0	0	124	3162	
			P	268	3435	0	0	70	2805	2	3170	340	3304	
		Summer	C	28	2831	0	0	4	2135	0	0	32	2744	
			S	8	2095	0	0	0	0	0	0	8	2095	
			P	36	2667	0	0	4	2135	0	0	40	2614	
4	Chhattisgarh	Kharif	C	33	2292	6	855	34	2398	5	911	78	2139	
			S	47	4502	4	763	19	1635	4	705	74	3359	
			P	80	3590	10	818	53	2124	9	819	152	2733	
5	Gujarat	Kharif	C	36	1681	0	0	38	1835	0	0	74	1760	
			S	39	1396	0	0	29	1353	5	1956	73	1417	
			P	75	1533	0	0	67	1626	5	1956	147	1590	
6	Haryana	Kharif	C	85	2966	0	0	4	3616	1	5260	90	3020	
			S	65	3083	0	0	7	2756	0	0	72	3051	
			P	150	3017	0	0	11	3069	1	0	162	3034	
7	Himachal Pradesh	Kharif	C	2	2473	21	1485	27	1583	2	1446	52	1572	
			S	6	1388	8	2223	32	1543	0	0	46	1641	
			P	8	1659	29	1689	59	1561	2	1446	98	1605	
8	Jammu & Kashmir	Kharif	C	22	2387	12	3871	35	2328	0	0	69	2615	
			S	8	1568	0	0	8	2042	0	0	16	1805	
			P	30	2169	12	3871	43	2275	0	0	85	2463	
9	Jharkhand	Bhadai	C	8	1318	6	1457	4	1222	2	499	20	1259	
			S	4	1254	6	1247	0	0	6	1485	16	1338	
			P	12	1297	12	1352	4	1222	8	0	36	1294	
		Aghani	C	39	1531	18	1150	23	1907	0	0	80	1553	
			S	8	1190	12	1218	2	770	6	698	28	1067	
			P	47	1473	30	1177	25	1816	6	698	108	1427	

1	2	3	4	5	6	7	8	9	10	11	12	13	14
10	Karnataka	Kharif	C	32	2936	10	2208	94	2634	0	0	136	2674
			S	41	2798	6	1841	95	3288	0	0	142	3085
			P	73	2858	16	2070	189	2963	0	0	278	2884
		Summer	C	21	3259	0	0	13	3579	0	0	34	3381
			S	23	2644	0	0	16	3695	1	1118	40	3026
			P	44	2938	0	0	29	3643	1	1118	74	3189
11	Kerala	Autumn	C	23	2226	19	1416	51	2143	6	890	99	1947
			S	26	2522	15	1338	51	2161	5	1383	97	2090
			P	49	2383	34	1382	102	2152	11	1114	196	2018
		Winter	C	29	7579	17	1858	48	2479	5	1361	99	3810
			S	35	2662	11	1180	49	2340	5	856	100	2251
			P	64	4890	28	1592	97	2409	10	1109	199	3026
		Summer	C	34	2520	10	1555	49	2498	7	1439	100	2337
			S	38	2516	14	1997	39	2857	5	3044	96	2606
			P	72	2518	24	1813	88	2657	12	2108	196	2469
12	Madhya Pradesh	Kharif	C	46	1119	6	1027	26	1169	17	287	95	978
			S	35	1349	5	1104	18	1490	20	604	78	1175
			P	81	1218	11	1062	44	1300	37	458	173	1067
13	Maharashtra	Kharif	C	38	1103	4	505	31	1466	2	625	75	1208
			S	18	1442	3	778	20	1324	4	1885	45	1385
			P	56	1212	7	0	51	1410	6	1465	120	1275
14	Odisha	Autumn	C	85	647	10	863	97	740	28	713	220	706
			S	75	673	15	688	118	697	12	396	220	672
			P	160	659	25	758	215	716	40	618	440	689
		Winter	C	73	1360	20	911	162	1704	13	823	268	1508
			S	75	1623	12	832	175	1482	8	913	270	1475
			P	148	1493	32	881	337	1589	21	857	538	1492
		Summer	C	90	3302	3	1610	42	2686	1	1353	136	3060
			S	101	3097	0	0	39	3079	0	0	140	3092
			P	191	3194	3	0	81	2875	1	1353	276	3076
15	Punjab	Kharif	C	169	4249	0	0	16	4248	0	0	185	4249
			S	169	4083	0	0	1	2426	0	0	170	4073
			P	338	4166	0	0	17	4141	0	0	355	4165
16	Tamil Nadu	Phase-I	C	10	4361	0	0	43	4997	0	0	53	4877
			S	11	3767	0	0	34	4113	0	0	45	4028
			P	21	4050	0	0	77	4607	0	0	98	4487
		Phase-II	C	25	3582	0	0	95	4148	0	0	120	4030
			S	24	2822	2	3561	91	3291	0	0	117	3199
			P	49	3210	2	3561	186	3729	0	0	237	3620
		Phase-III	C	13	3685	1	4343	25	4469	0	0	39	4204
			S	6	4141	2	3987	25	3510	3	3488	36	3640
			P	19	3829	3	4106	50	3990	3	3488	75	3933
17	Telangana	Kharif	C	64	3026	0	0	32	2960	0	0	96	3004
			S	46	3135	0	0	31	3364	3	3013	80	3219
			P	110	3072	0	0	63	3159	3	3013	176	3102
		Rabi	C	49	2899	1	2493	26	3007	1	0	77	2893
			S	49	2675	0	0	11	2830	2	2220	62	2688
			P	98	2787	1	2493	37	2954	3	1480	139	2801
18	Uttar Pradesh	Kharif	C	561	2137	0	0	91	2252	4	1426	656	2149
			S	69	2381	3	1962	17	2443	0	0	89	2379
			P	630	2164	3	0	108	2282	4	1426	745	2176

1	2	3	4	5	6	7	8	9	10	11	12	13	14		
19	Uttarakhand	Kharif	C	13	2370	19	1228	16	2711	2	2906	50	2067		
			S	20	2526	14	1054	8	2304	4	1111	46	1916		
			P	33	2465	33	1154	24	2575	6	0	96	1995		
20	West Bengal	Aus	C	76	2617	1	2155	17	2228	4	1503	98	2499		
			S	78	2290	2	1632	13	2574	2	2124	95	2312		
			P	154	2451	3	1806	30	2378	6	1710	193	2407		
		Aman		C	90	2783	2	655	64	2584	4	1605	160	2647	
				S	99	2522	1	2677	48	2913	6	1805	154	2617	
				P	189	2646	3	1329	112	2725	10	1725	314	2632	
		Summer		C	106	3190	0	0	34	3088	0	0	140	3165	
				S	85	3107	0	0	39	2970	10	2754	134	3041	
				P	191	3153	0	0	73	3025	10	0	274	3104	
21	Puducherry	Kharif	C	4	2769	0	0	6	2233	0	0	10	2447		
			S	4	2622	0	0	4	2176	0	0	8	2399		
			P	8	2696	0	0	10	2210	0	0	18	2426		
		Rabi-I		C	0	0	0	0	10	2691	0	0	10	2691	
				S	6	2423	0	0	4	9131	0	0	10	5106	
				P	6	2423	0	0	14	4531	0	0	20	3899	
		Rabi-II		C	6	2863	0	0	4	2695	0	0	10	2796	
				S	4	2616	0	0	6	2752	0	0	10	2698	
				P	10	0	0	0	10	2729	0	0	20	2747	
For states covered			C	2290	2680	269	1644	1458	2547	170	1286	4187	2511		
			S	1603	2766	156	1456	1208	2407	202	1640	3169	2493		
			P	3893	2715	425	1575	2654	2495	372	1479	7356	2503		
JOWAR															
1	Karnataka	Kharif	C	21	1510	3	610	18	1665	0	0	42	1512		
			S	23	943	2	443	16	1245	5	900	46	1022		
			P	44	1214	5	543	34	1467	5	900	88	1256		
			Rabi		C	41	770	5	593	10	1088	6	690	62	799
					S	52	770	2	4177	14	1136	0	0	68	946
					P	93	770	7	0	24	1116	6	690	130	876
2	Madhya Pradesh	Kharif	C	36	1321	8	515	5	1575	41	1274	90	1242		
			S	20	1241	6	1662	0	0	52	961	78	1087		
			P	56	1292	14	1007	5	1575	93	1099	168	1170		
3	Maharashtra	Kharif	C	40	760	0	0	14	713	6	133	60	686		
			S	36	421	2	243	7	738	6	700	51	490		
			P	76	599	2	243	21	721	12	417	111	596		
			Rabi		C	39	643	6	671	24	540	55	334	124	487
					S	38	784	6	586	8	612	28	463	80	640
					P	77	713	12	629	32	558	83	378	204	547
4	Rajasthan	Kharif	C	8	456	6	610	5	615	29	318	48	408		
			S	27	477	0	0	0	0	25	516	52	496		
			P	35	472	6	610	5	615	54	410	100	454		
5	Tamil Nadu	@	C	8	512	17	1238	24	1740	4	763	53	1320		
			S	10	1544	6	1255	14	1157	20	777	50	1094		
			P	18	1085	23	1242	38	1525	24	775	103	1210		
6	Telangana	Kharif	C	28	1174	3	1098	16	1196	3	617	50	1143		
			S	25	916	1	501	4	868	4	668	34	869		
			P	53	1052	4	949	20	1130	7	646	84	1032		
			Rabi		C	25	844	6	932	6	831	3	859	40	856
					S	13	860	0	0	2	403	10	721	25	768
					P	38	849	6	932	8	724	13	753	65	822

1	2	3	4	5	6	7	8	9	10	11	12	13	14
7	Uttar Pradesh	Kharif	C	3	312	3	414	2	177	32	457	40	429
			S	0	0	0	0	0	6	260	6	260	
			P	3	312	3	414	2	0	38	426	46	407
For states covered			C	249	8302	57	6681	124	10140	179	5445	609	8884
			S	244	7956	25	8867	65	6159	156	5966	490	7671
			P	493	8359	82	6568	189	9432	335	6492	1099	8370
BAJRA													
1	Andhra Pradesh	Kharif	C	8	2312	12	1268	14	2496	2	1823	36	2008
			S	12	2022	10	1355	18	2068	0	0	40	1876
			P	20	2138	22	1308	32	2255	2	1823	76	1939
2	Gujarat	Kharif	C	47	1382	10	1018	44	2105	5	1144	106	1637
			S	18	1142	5	2345	17	1701	11	1615	51	1548
			P	65	1316	15	1460	61	1992	16	1468	157	1608
3	Haryana	Kharif	C	87	2507	1	2858	5	2519	9	2019	102	2468
			S	67	1912	1	1453	2	1574	6	1294	76	1848
			P	154	2248	2	2156	7	2249	15	1729	178	2203
4	Karnataka	Kharif	C	25	892	7	463	6	749	2	768	40	789
			S	39	672	1	226	5	566	5	302	50	615
			P	64	758	8	433	11	666	7	435	90	693
5	Maharashtra	Kharif	C	24	1123	3	1593	9	1066	12	204	48	912
			S	11	308	3	750	9	232	10	246	33	309
			P	35	867	6	0	18	649	22	223	81	666
6	Rajasthan	Kharif	C	19	1538	6	1414	1	618	31	918	57	1172
			S	24	861	0	0	0	0	34	418	58	601
			P	43	1160	6	1414	1	618	65	656	115	884
7	Tamil Nadu	@	C	4	2947	10	1865	19	3253	1	2520	34	2787
			S	0	0	2	840	8	2364	20	2164	30	2129
			P	4	2947	12	1694	27	2990	21	2181	64	2479
8	Uttar Pradesh	Kharif	C	109	2026	4	1820	16	1963	21	901	150	1856
			S	6	1424	0	0	0	0	1	448	7	1285
			P	115	1995	4	1820	16	1963	22	880	157	1831
For states covered			C	323	1897	53	1334	114	2176	83	981	573	1768
			S	177	1309	22	1404	59	1578	87	1005	345	1285
			P	500	1689	75	1354	173	1972	170	993	918	1586
MAIZE													
1	Bihar	Kharif	C	23	2982	0	0	9	3335	0	0	32	3081
			S	12	2412	0	0	8	2312	0	0	20	2372
			P	35	2787	0	0	17	2854	0	0	52	2808
2	Chhattisgarh	Kharif	C	9	2161	23	1942	3	892	5	1381	40	1842
			S	4	1098	24	1365	4	1736	8	1317	40	1366
			P	13	1834	47	1647	7	1374	13	1342	80	1604
3	Gujarat	Kharif	C	16	1700	0	0	24	1203	0	0	40	1402
			S	12	1923	0	0	16	750	2	2045	30	1306
			P	28	1796	0	0	40	1022	2	2045	70	1361
4	Haryana	Kharif	C	5	3578	0	0	13	4320	2	1694	20	3872
			S	8	3402	0	0	4	2422	2	1694	14	2878
			P	13	3470	0	0	17	3873	4	1694	34	3463
5	Himachal Pradesh	Kharif	C	2	3404	25	3253	47	2961	0	0	74	3072
			S	2	4419	22	2567	48	2511	2	3043	74	2594
			P	4	3912	47	2932	95	2734	2	3043	148	2833

1	2	3	4	5	6	7	8	9	10	11	12	13	14
6	Jammu & Kashmir	Kharif	C	8	1521	30	1638	46	2639	2	1112	86	2150
			S	0	0	6	1442	0	0	0	0	6	1442
			P	8	1521	36	1605	46	2639	2	1112	92	2104
7	Jharkhand	Kharif	C	2	1024	8	2402	10	1739	0	0	20	1933
			S	0	0	4	1979	6	1716	2	1215	12	1720
			P	2	1024	12	2261	16	1730	2	1215	32	1853
8	Karnataka	Kharif	C	16	3313	1	1044	29	3535	2	1374	48	3319
			S	10	3345	0	0	40	2838	0	0	50	2939
			P	26	3325	1	1044	69	3131	2	1374	98	3125
9	Madhya Pradesh	Kharif	C	30	2084	28	1651	11	2644	11	1456	80	1923
			S	30	2094	6	1458	8	392	26	1500	70	1624
			P	60	2089	34	1617	19	1696	37	1487	150	1784
10	Odisha	Kharif	C	11	2127	8	1613	15	3249	6	1206	40	2307
			S	11	2208	5	1324	21	2346	3	1227	40	2096
			P	22	2168	13	1502	36	2722	9	1213	80	2202
11	Punjab	Kharif	C	19	3619	0	0	16	3353	0	0	35	3497
			S	40	4058	0	0	0	0	0	0	40	4058
			P	59	3917	0	0	16	3353	0	0	75	3796
12	Rajasthan	Kharif	C	25	1650	11	1418	5	4931	4	2198	45	2007
			S	24	1655	2	312	2	870	18	707	46	1192
			P	49	1652	13	1248	7	3771	22	978	91	1595
13	Tamil Nadu	@	C	2	5532	5	5070	29	6929	0	0	36	6593
			S	2	6996	4	7852	18	5384	2	10520	26	6283
			P	4	6264	9	6306	47	6337	2	0	62	6463
14	Telangana	Kharif	C	39	3958	0	0	10	3421	0	0	49	3848
			S	19	2481	0	0	15	4508	0	0	34	3375
			P	58	3474	0	0	25	4073	0	0	83	3655
15	Uttar Pradesh	Kharif	C	150	2433	5	2559	11	2471	4	756	170	2400
			S	20	1630	4	478	4	1095	0	0	28	1389
			P	170	2339	9	1634	15	2104	4	756	198	2257
For states covered			C	357	2615	144	2141	278	3297	36	1398	815	2710
			S	194	2623	77	2014	194	2652	65	1584	530	2418
			P	551	2618	221	2097	472	3032	101	1518	1345	2595
RAGI													
1	Karnataka	Kharif	C	10	1710	0	0	26	1733	4	1068	40	1661
			S	12	2041	2	3065	24	2185	0	0	38	2186
			P	22	1891	2	0	50	1950	4	1068	78	1917
2	Tamil Nadu	@	C	3	4555	2	3324	35	3648	0	0	40	3700
			S	2	1581	10	2278	24	3387	2	1370	38	2894
			P	5	3365	12	2452	59	3542	0	0	78	3307
3	Uttarakhand	Kharif	C	0	0	38	1564	0	0	2	1544	40	1563
			S	0	0	28	1386	0	0	4	1524	32	1403
			P	0	0	66	1488	0	0	6	1531	72	1492
For states covered			C	13	2367	40	1652	61	2832	6	0	120	2308
			S	14	1975	40	1693	48	2786	6	1473	108	2203
			P	27	2164	80	1672	109	2812	10	1620	228	2258

1	2	3	4	5	6	7	8	9	10	11	12	13	14
GROUNDNUT													
1	Andhra	Kharif	C	33	1378	14	1872	84	1062	7	661	138	1199
	Pradesh		S	46	1099	12	1781	75	919	5	1297	138	1068
			P	79	1216	26	1830	159	995	12	926	276	1134
2	Gujarat	Kharif	C	59	1900	2	35	80	1937	7	2617	148	1929
			S	48	1670	2	224	32	1840	2	1229	84	1690
			P	107	1797	4	130	112	1909	9	2309	232	1842
3	Karnataka	Kharif	C	11	1068	9	867	39	819	3	1697	62	913
			S	30	694	2	91	32	885	0	0	64	771
			P	41	794	11	726	71	849	3	1697	126	841
4	Madhya Pradesh	Kharif	C	14	648	4	1002	6	812	16	1083	40	882
			S	20	879	6	1106	0	0	12	918	38	927
			P	34	784	10	1064	6	812	28	1012	78	904
5	Maharashtra	Kharif	C	26	351	6	655	15	803	4	334	51	518
			S	16	682	0	0	16	1001	6	157	38	733
			P	42	477	6	655	31	905	10	228	89	610
6	Rajasthan	Kharif	C	20	2469	0	0	6	1313	8	400	34	1778
			S	28	1988	0	0	2	385	8	1185	38	1735
			P	48	2188	0	0	8	1081	16	793	72	1755
7	Tamil Nadu	@	C	16	3272	27	2475	55	2987	1	5202	99	2916
			S	10	2381	12	2312	46	2473	19	2054	87	2349
			P	26	2929	39	2425	101	2753	20	2211	186	2651
8	Telangana	Kharif	C	21	1963	0	0	9	1335	4	1186	34	1705
			S	15	1397	2	1238	5	1884	4	1213	26	1450
			P	36	1727	2	1238	14	1531	8	1200	60	1595
For States Covered			C	200	1652	62	1756	294	1623	50	1197	606	1611
			S	213	1317	36	1635	208	1424	56	1326	513	1383
			P	413	1479	98	1711	502	1540	106	1265	1119	1507
SUGARCANE													
1	Andhra Pradesh	Kharif	C	18	108567	1	36800	38	82021	0	0	57	89611
			S	29	89170	3	95867	18	82033	0	0	50	87003
			P	47	96599	4	81100	56	82025	0	0	107	88392
2	Assam	Kharif	C	2	21935	18	18985	8	21751	12	19501	40	19841
			S	4	25243	0	0	2	16912	22	33464	28	31107
			P	6	24140	18	18985	10	20783	34	28536	68	24480
3	Bihar	Kharif	C	10	79440	4	54420	17	57463	0	0	31	64160
			S	14	61927	0	0	4	59620	0	0	18	61414
			P	24	69224	4	0	21	57874	0	0	49	63151
4	Haryana	Kharif	C	46	79712	0	0	3	59867	0	0	49	78497
			S	23	79592	1	86400	2	100000	0	0	26	81424
			P	69	79672	1	0	5	75920	0	0	75	79512
5	Karnataka	Kharif	C	14	104591	1	90000	17	102748	0	0	32	103156
			S	16	47652	0	0	22	94373	0	0	38	74701
			P	30	74224	1	0	39	98024	0	0	70	87709
6	Maharashtra	Kharif	C	16	56817	0	0	28	87122	0	0	44	76102
			S	16	103621	0	0	15	79048	0	0	31	91731
			P	32	80219	0	0	43	84305	0	0	75	82562
7	Punjab	Kharif	C	57	72025	0	0	10	70040	0	0	67	71729
			S	54	72670	0	0	0	0	0	0	54	72670
			P	111	72339	0	0	10	70040	0	0	121	72149
8	Rajasthan	Kharif	C	19	75761	7	69057	13	79275	0	0	39	75729
			S	16	80695	0	0	0	0	12	68905	28	75642
			P	35	78017	7	69057	13	79275	12	68905	67	75693

1	2	3	4	5	6	7	8	9	10	11	12	13	14
9	Tamil Nadu	@	C	13	115200	0	0	36	96325	0	0	49	101333
			S	12	71094	2	76000	28	38023	2	11400	44	47558
			P	25	94029	2	0	64	70818	2	0	93	75891
10	Uttar Pradesh	Kharif	C	162	59164	0	0	37	67076	1	69200	200	60678
			S	39	63846	0	0	3	23067	0	0	42	60933
			P	201	60072	0	0	40	63775	1	69200	242	60722
11	Uttarakhand	Kharif	C	22	61518	3	60667	15	59653	0	0	40	60755
			S	0	0	0	0	0	0	0	0	0	0
			P	22	61518	3	0	15	59653	0	0	40	60755
For States covered			C	379	70747	34	39753	222	77517	13	23324	648	70488
			S	223	73378	6	87667	94	67496	36	44052	359	69136
			P	602	71721	40	46940	316	74536	49	38553	1007	70006
WHEAT													
1	Assam	Rabi	C	9	1142	12	1346	0	0	11	1203	32	1239
			S	8	1054	0	0	6	1272	12	1299	26	1217
			P	17	1101	12	1346	6	1272	23	1253	58	1230
2	Bihar	Rabi	C	192	2086	2	354	18	1863	0	0	212	2051
			S	64	2366	0	0	0	0	0	0	64	2366
			P	256	2156	2	354	18	1863	0	0	276	2124
3	Chattisgarh	Rabi	C	34	1043	0	0	2	2050	4	1713	40	1160
			S	24	1424	0	0	8	1986	6	837	38	1450
			P	58	1201	0	0	10	1999	10	1187	78	1301
4	Gujarat	Rabi	C	96	2759	2	1394	45	2733	3	1497	146	2706
			S	61	2419	0	0	21	3129	10	1340	92	2464
			P	157	2627	2	1394	66	2859	13	1376	238	2613
5	Haryana	Rabi	C	157	4396	0	0	13	4433	0	0	170	4399
			S	120	4344	0	0	12	4814	0	0	132	4387
			P	277	4373	0	0	25	4616	0	0	302	4394
6	Himachal Pradesh	Rabi	C	2	2323	29	1772	65	1493	0	0	96	1595
			S	2	2126	37	2161	49	1667	2	1953	90	1887
			P	4	2225	66	1990	114	1568	2	0	186	1736
7	Jammu & Kashmir	Rabi	C	48	1765	11	1237	59	1545	0	0	118	1606
			S	16	1969	2	1390	17	1497	0	0	35	1707
			P^	64	1816	13	1261	76	1534	0	0	153	1629
8	Jharkhand	Rabi	C	17	2216	0	0	23	2218	0	0	40	2217
			S	8	1575	4	1710	2	4050	0	0	14	1967
			P	25	2011	4	1710	25	2365	0	0	54	2152
9	Karnataka	Rabi	C	21	943	6	606	4	985	2	144	33	838
			S	40	859	0	0	10	1226	0	0	50	932
			P	61	888	6	606	14	1157	2	144	83	895
10	Madhya Pradesh	Rabi	C	184	2278	4	1210	33	2023	18	1541	239	2169
			S	70	2421	6	7996	14	2207	20	1666	110	2561
			P	254	2317	10	5282	47	2078	38	1607	349	2293
11	Maha-rashtra	Rabi	C	95	1245	0	0	33	1715	4	987	132	1355
			S	56	1073	0	0	9	1517	10	1336	75	1161
			P	151	1181	0	0	42	1673	14	1236	207	1285
12	Punjab	Rabi	C	216	4454	0	0	4	4174	0	0	220	4449
			S	189	4574	0	0	12	4777	0	0	201	4586
			P	405	4510	0	0	16	4626	0	0	421	4514

1	2	3	4	5	6	7	8	9	10	11	12	13	14
13	Rajasthan	Rabi	C	83	2998	10	3177	30	3385	7	1982	130	3046
			S	87	3088	8	3262	27	2390	4	2586	126	2934
			P	170	3044	18	3215	57	2914	11	2202	256	2991
14	Uttar Pradesh	Rabi	C	521	2601	0	0	43	2468	3	507	567	2580
			S	70	3029	0	0	7	3934	5	2494	82	3074
			P	591	2652	0	0	50	2673	8	1749	649	2642
15	Uttarakhand	Rabi	C	26	2009	27	753	7	1888	0	0	60	1430
			S	12	2435	26	1042	2	2635	14	1910	54	1636
			P	38	2144	53	895	9	2054	14	1910	114	1527
16	West Bengal	Rabi	C	92	2263	0	0	17	2177	0	0	109	2250
			S	81	2172	0	0	24	2321	0	0	105	2206
			P	173	2220	0	0	41	2261	0	0	214	2228
For states covered			C	1793	2740	103	1410	396	2170	52	1384	2344	2555
			S	908	3002	83	2298	220	2406	83	1616	1294	2766
			P	2701	2828	186	1806	616	2254	135	1527	3638	2630
BARLEY													
1	Haryana	Rabi	C	24	3213	0	0	1	2411	0	0	25	3181
			S	13	3217	0	0	1	1983	0	0	14	3129
			P	37	3214	0	0	2	2197	0	0	39	3162
2	Himachal Pradesh	Rabi	C	0	0	24	1608	4	918	4	1213	32	1472
			S	0	0	14	2422	18	1673	0	0	32	2001
			P	0	0	38	1908	22	1536	4	1213	64	1737
3	Punjab	Rabi	C	30	3462	0	0	0	0	0	0	30	3462
			S	30	3588	0	0	0	0	0	0	30	3588
			P	60	3525	0	0	0	0	0	0	60	3525
4	Rajasthan	Rabi	C	53	2245	6	3334	15	1701	6	1705	80	2184
			S	56	2689	6	2590	2	1867	12	1859	76	2529
			P	109	2473	12	2962	17	1721	18	1808	156	2352
For states covered			C	107	2803	30	1953	20	1580	10	1508	167	2427
			S	99	3031	20	2472	21	1706	12	1859	152	2682
			P	206	2913	50	2161	41	1645	22	1700	319	2548
GRAM													
1	Andhra Pradesh	Rabi	C	22	959	0	0	17	1176	1	1800	40	1072
			S	25	1334	0	0	14	1291	0	0	39	1319
			P	47	1158	0	0	31	1228	1	0	79	1194
2	Bihar	Rabi	C	18	576	0	0	0	0	22	719	40	655
			S	0	0	0	0	0	0	6	999	6	999
			P	18	576	0	0	0	0	28	779	46	700
3	Chattisgarh	Rabi	C	28	979	0	0	2	706	10	424	40	827
			S	18	600	0	0	2	866	14	925	34	749
			P	46	831	0	0	4	786	24	716	74	791
4	Gujarat	Rabi	C	14	1003	4	623	6	649	10	853	34	852
			S	20	1072	0	0	2	767	8	979	30	1027
			P	34	1044	4	623	8	679	18	909	64	934
5	Haryana	Rabi	C	30	725	1	193	1	1053	24	544	56	644
			S	26	943	0	0	0	0	24	559	50	759
			P	56	826	1	193	1	1053	48	552	106	698
6	Jharkhand	Rabi	C	0	0	15	799	1	1300	2	400	18	783
			S	4	942	2	1100	0	0	2	990	8	994
			P	4	942	17	834	1	1300	4	695	26	847

7	Karnataka	Rabi	C	12	338	4	302	6	533	6	617	28	434
			S	36	444	0	0	4	343	0	0	40	434
			P	48	418	4	0	10	457	6	617	68	434
8	Madhya Pradesh	Rabi	C	83	893	14	884	12	930	28	587	137	833
			S	25	1259	5	1533	2	780	22	929	54	1132
			P	108	978	19	1055	14	909	50	737	191	917
9	Maharashtra	Rabi	C	48	618	2	440	26	745	15	516	91	634
			S	26	525	0	0	8	895	12	391	46	554
			P	74	585	2	440	34	780	27	460	137	607
10	Punjab	Rabi	C	5	1544	2	1558	0	0	19	1450	26	1476
			S	6	1489	0	0	0	0	10	1377	16	1419
			P	11	1514	2	0	0	0	29	1425	42	1455
11	Rajasthan	Rabi	C	32	934	8	1012	7	1485	57	751	104	877
			S	30	1011	5	677	5	1089	60	952	100	963
			P	62	971	13	883	12	1320	117	854	204	919
12	Uttar Pradesh	Rabi	C	20	522	2	5	1	44	25	345	48	398
			S	4	362	0	0	0	0	0	0	4	362
			P	24	495	2	5	1	0	25	345	52	396
For states covered			C	312	803	52	776	79	909	219	690	662	776
			S	220	890	12	1104	37	997	158	875	427	899
			P	532	839	64	838	116	937	377	767	1089	824
RAPE & MUSTARD													
1	Assam	Rabi	C	10	820	42	634	8	674	8	678	68	671
			S	14	771	5	572	15	664	10	686	44	693
			P	24	791	47	627	23	667	18	682	112	680
2	Bihar	Rabi	C	22	853	8	1077	6	850	4	842	40	896
			S	4	764	0	0	0	0	0	0	4	764
			P	26	839	8	1077	6	850	4	842	44	884
3	Chhattisgarh	Rabi	C	6	344	8	428	0	0	16	579	30	492
			S	4	458	12	500	0	0	14	375	30	436
			P	10	390	20	471	0	0	30	484	60	464
4	Gujarat	Rabi	C	33	1563	0	0	10	1588	3	460	46	1497
			S	20	1720	0	0	12	1772	2	880	34	1689
			P	53	1622	0	0	22	1688	5	628	80	1578
5	Haryana	Rabi	C	87	1292	0	0	1	1840	2	729	90	1286
			S	66	1295	0	0	5	1590	4	1649	75	1334
			P	153	1293	0	0	6	1632	6	1342	165	1307
6	Jharkhand	Rabi	C	4	612	9	875	4	826	3	308	20	728
			S	4	487	4	867	0	0	4	561	12	638
			P	8	550	13	873	4	826	7	453	32	694
7	Madhya Pradesh	Rabi	C	34	1071	6	1360	4	959	8	815	52	1056
			S	31	1008	0	0	0	0	9	892	40	982
			P	65	1041	6	1360	4	959	17	856	92	1024
8	Punjab	Rabi	C	34	1466	2	2412	0	0	2	1000	38	1491
			S	30	1384	0	0	0	0	4	890	34	1326
			P	64	1428	2	0	0	0	6	927	72	1413
9	Rajasthan	Rabi	C	57	1161	2	349	23	902	7	292	89	1007
			S	59	1092	4	1168	4	1173	15	924	82	1069
			P	116	1126	6	895	27	942	22	723	171	1037

1	2	3	4	5	6	7	8	9	10	11	12	13	14
10	Uttar Pradesh	Rabi	C	86	1201	0	0	6	1291	6	233	98	1147
			S	12	799	0	0	0	2	254	14	721	
	P	98	1152	0	0	6	1291	8	238	112	1094		
11	West Bengal	Rabi	C	86	925	2	1022	14	730	4	602	106	889
			S	66	1089	2	1217	20	832	9	710	97	1003
	P	152	996	4	1120	34	790	13	677	203	944		
For States Covered			C	459	1156	79	788	76	975	63	574	677	1039
			S	310	1149	27	720	56	1080	73	754	466	1054
			P	769	1153	106	771	132	1019	136	671	1143	1045

Note:

@ = In Tamil Nadu for the year as a whole(Total of all seasons).



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 NSSO/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

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

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

Then pooled estimate of area is given by

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

And an estimate of its variance by

$$V(\hat{Y}_p) = \frac{1}{\hat{e}_c + \hat{e}_s}$$

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 $\lambda_i =$ _____

$$n_i (m_i - 1)$$

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

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

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	Whole Year
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