

**42वां अंक**

**42<sup>nd</sup> – ISSUE**

**भारत में  
फसल सांख्यिकी प्रणाली का पुनरावलोकन**

**REVIEW OF CROP STATISTICS SYSTEM  
IN INDIA**



**2016-17**

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



डी.पी.मंडल  
महा निदेशक

## संदेश

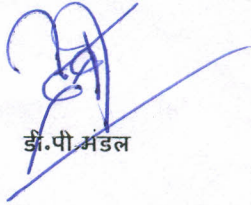
कृषि सतत और समावेशी आर्थिक विकास एवं ग्रामीण विकास के लिए एक इंजन है जो कि भारतीय अर्थव्यवस्था का सबसे महत्वपूर्ण क्षेत्र रहा है और सकल घरेलू उत्पाद में महत्वपूर्ण योगदान देता है तथा यह क्षेत्र कुल कार्य बल के लगभग आधे लोगों को रोजगार प्रदान करता है। कृषि क्षेत्र में ठोस और समयबद्ध आंकड़ों का संग्रह 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 सुचारू 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 42वीं है जो कि अखिल भारतीय स्तर पर कृषि वर्ष 2016-17 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।

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।

नई दिल्ली  
जुलाई, 2018

  
डी.पी.मंडल

D.P.Mondal  
Director General

**Message**

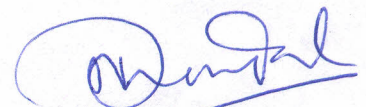
Agriculture is an engine of sustainable and inclusive economic growth and Rural Development, which continues to be the most crucial sector of the Indian economy with significant contribution to the Gross Domestic Product (GDP) and providing employment to nearly half of total work force. Collection of 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 42<sup>nd</sup> in the series and deals with the findings of the ICS scheme during the Agricultural Year 2016-17 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 Agriculture 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 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.

**New Delhi  
July, 2018**

  
**D.P.Mondal**

## 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 सर्वे०) के माध्यम से किया जाता है।

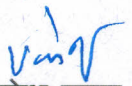
2. राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (रा० प्र० स० का०), सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय, भारत सरकार की यह समग्र जिम्मेदारी है कि वह विश्वसनीय फसल प्राक्कलन हेतु उचित सर्वेक्षण तकनीक विकसित करने के लिए राज्यों के कर्मचारियों को प्रशिक्षण, तकनीकी सहयोग एवं पर्यवेक्षण का कार्य करे। फसल 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 42वीं है जो कि अखिल भारतीय स्तर पर कृषि वर्ष 2016-17 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 2016-17 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।

जुलाई, 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 second in the series and deals with the findings of the ICS scheme during the agricultural year 2016-17 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), Agriculture Statistics Headquarters, Faridabad who have been associated with the work of bringing out this report. The contribution of field officials in data collection and other related work is also appreciated. I also acknowledge with gratitude the support and cooperation received from State Agriculture Statistics Authorities and other State officials engaged in the field for the successful conduct of the ICS scheme during the year 2016-17.

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

  
Rakesh Kumar

**Additional Director General**

**July, 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

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## **A. Organization and Agriculture Statistics Schemes**

### **1. National Statistical Commission (NSC)**

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

### **2. National Sample Survey Office (NSSO)**

The Directorate of National Sample Survey (NSS) established in 1950 was re-organized into the present NSSO under the Government of India's Resolution of 5<sup>th</sup> 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).

### **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.

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## **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.

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## **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.

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## कार्य सारांश

फसल सांख्यिकी सुधार योजना को 1973-74 के रबी मौसम से लागू किया गया है जिसका मुख्य उद्देश्य भारत सरकार के राष्ट्रीय 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 2016-17 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 2016-17 के लिए सम्पूर्ण भारत के स्तर पर योजना के निष्कर्षों की मुख्य बातें निम्न प्रकार हैं:

1. कुछ राज्यों (देश के कुल 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. अखिल भारतीय स्तर पर 2016-17 के दौरान फसल सांख्यिकी सुधार के अनुसार प्रति प्राथमिक कर्मों का औसत कार्य भार 7 गाँव है जिसमें प्रति गाँव औसतन भौगोलिक क्षेत्रफल 600 हैक्टेयर है, तथा 1200 सर्वेक्षण संख्या निहित है। राष्ट्रीय कृषि आयोग ने सिफारिश की है कि जहां कहीं भी पटवारी का कार्य क्षेत्र वृहद है तो इसे घटा दिया जाना चाहिए। **(सारणी- 2) (पैरा 2.4.1)**
3. छत्तीसगढ़, मध्य प्रदेश, उत्तर प्रदेश तथा उत्तराखंड में अमान्य मिश्रित फसलों के लघु संघटकों के अधीन क्षेत्रफल को नजर अंदाज करके उसके सम्पूर्ण क्षेत्र को मुख्य संघटकों के अन्तर्गत दर्ज किया जाता है जिससे मुख्य फसलों के अन्तर्गत क्षेत्र का आंकलन ज्यादा हो जाता है। इस प्रणाली में सुधार की आवश्यकता है। **(पैरा 2.4.2 iii)**

4. वर्ष 1973-74 के फसल सांख्यिकी सुधार योजना के आरंभ होने के समय सामान्य फसल प्राक्कलन योजना के अंतर्गत 1,73,097 प्रयोग नियोजित किए गए। वर्ष 2015-16 में ये प्रयोग बढ़कर 12,52,113 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 2016-17 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 2016-17 के दौरान चार राज्यों- बिहार, हरियाणा, कर्नाटक और राजस्थान में 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. 2016-17 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 58 प्रतिशत से 88 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. 2016-17 के दौरान गिरदावरी की सामयिक संपूर्ति पूर्व खरीफ मौसम में प्रतिदर्श ग्रामों की केवल 45 प्रतिशत, खरीफ मौसम में 49 प्रतिशत, रबी में 51 प्रतिशत तथा ग्रीष्म मौसम में 37 प्रतिशत मामलों में पायी गयी। आंध्र प्रदेश, असम, बिहार, गुजरात, हरियाणा, जम्मू-कश्मीर, झारखंड, महाराष्ट्र, पंजाब, तेलंगाना 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. 2016-17 के दौरान टी0 आर0 एस0 विवरण पूर्व खरीफ में 44 प्रतिशत प्रतिदर्श ग्रामों, खरीफ मौसम में 44 प्रतिशत प्रतिदर्श ग्रामों, रबी में 47 प्रतिशत प्रतिदर्श ग्रामों तथा ग्रीष्म में 27 प्रतिशत प्रतिदर्श ग्रामों में ही समय पर प्रस्तुत किया गया। इसके साथ ही वर्ष 2016-17 के दौरान पूर्व खरीफ, खरीफ, रबी तथा ग्रीष्म में क्रमशः 3, 7, 6 तथा 3 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. 88 प्रतिशत मामलों में प्राथमिक कर्मियों के पास उपलब्ध नक्शे उपयोगी पाए गए। 62 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 2016-17 के दौरान क्षेत्रफल परिगणना के समय फसल तथा फसल क्षेत्रफल को दर्ज करने में विभिन्न राज्यों में पूर्व खरीफ में 29 प्रतिशत, खरीफ में 16 प्रतिशत, रबी में 14 प्रतिशत तथा ग्रीष्म मौसम में 8 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 2016-17 के दौरान कटाई स्तर पर फसल कटाई प्रयोगों का प्रत्युत्तर पूर्व खरीफ में 85 प्रतिशत, खरीफ में 68 प्रतिशत, रबी में 73 प्रतिशत तथा ग्रीष्म में 83 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. 2016-17 के दौरान 57 प्रतिशत प्रयोगों को निर्धारित प्रक्रियाओं के अनुसार संचालित किया पाया गया। तथापि, प्रतिदर्श जांच के द्वारा पायी गयी कमियों को राज्यों के प्राथमिक कर्मियों के लिए आयोजित प्रशिक्षण कैम्पों में चर्चा के लिए उठाने की आवश्यकता है।

(पैरा 8.2.3)

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

(पैरा 8.2.3)

16. 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 बिहार व उत्तर प्रदेश में अधिक रहा। बिहार, झारखंड, उत्तर प्रदेश व पश्चिम बंगाल 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 गांवों / क्षेत्रों का प्रतिस्थापन किया गया। प्रयोगात्मक फसल की अनुपलब्धता के कारण मूल रूप से चयनित गांव का प्रतिस्थापन 2016-17 के दौरान 3% से 9% के बीच रहा। इसे प्रतिदर्श गांवों के उचित चयन, समय पर क्षेत्र के चयन तथा किसान के साथ उचित संपर्क के द्वारा कम किया जा सकता है, जिसके लिए प्राथमिक कर्मियों पर दबाव डालने की आवश्यकता है। प्रायोगिक कर्मियों के प्रशिक्षण एवं फसल कटाई प्रयोगों के नियोजन के समय इस विषय पर ध्यान देने योग्य देने की आवश्यकता है।

(पैरा 8.2.6 तथा 8.2.7)

19. 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)

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## Executive Summary

The Scheme for Improvement of Crop Statistics (ICS) was introduced from Rabi season of 1973-74 with the main objective of improving the quality and reliability of area and yield statistics by pointing out, through joint efforts of Field Operations Division (FOD) of National Sample Survey Office (NSSO) of Government of India and State Agricultural Statistics Authority (SASA), deficiencies in the State system of collection of area and yield statistics and suggest remedial measures. During 2016-17, 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. The highlights of the findings of the scheme at all India level for the year 2016-17 are as follows:-

1. A few States (accounting for about 5% of the total reporting area of the country) do not have a satisfactory system for collecting area statistics. Crop statistics are compiled in these States mainly by conventional methods. There have been sporadic attempts to improve the situation in some of these States, but a regular system is yet to be evolved.

**(Para –2.1.5)**

2. The average workload per Patwari worker (Patwari) as per ICS scheme during 2016-17 at all India level was found to be 7 villages having 1200 survey numbers and 600 hectares of geographical area per village. National Commission for Agriculture has suggested that there is need to reduce the jurisdiction of Patwari, wherever it is extensive. **(Table-2) (Para–2.4.1)**

3. For unrecognized mixtures, the entire area under minor constituents of crop mixtures in Chhattisgarh, Madhya Pradesh, Uttar Pradesh and Uttarakhand is ignored as per the state specific procedure. As a result, the entire area thereof is recorded under major constituents with the result that area under major crops tends to get overestimated. The system needs revision.

**(Para-2.4.2 iii)**

4. At the time of inception of Improvement of Crop Statistics (ICS) Scheme, during the year 1973-74, a total of **1,73,097** experiments were planned under GCES. These experiments increased to **12,52,113** in number under GCES 2015-16, which formed the basis for sample selection for supervision of Crop Cutting Experiments under the ICS Scheme during agricultural year 2016-17 on various crops covering the 19 Land Records States/ UTs, 3 EARAS States of Kerala, Odisha and West Bengal and other States of Goa and Meghalaya and Union Territory of Dadra & Nagar Haveli and Daman & Diu. Crop Estimation Surveys are not conducted in Nagaland and Sikkim as yet. **(Para-3.1.2)**

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

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

7. High Level Co-ordination Committee (HLCC) meetings were organized in the four States namely Bihar, Haryana, Karnataka, and Rajasthan during 2016-17 owing to the co-operation of respective SASAs. Convening of meeting of HLCCs/ State Technical Committees (STCs) at regular intervals needs to be pursued. **(Para-4.1.3)**

8. The overall response for sample check on enumeration of area was almost cent percent for the Central Sample but ranged from **58%** to **88%** for State sample during 2016-17. 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 2016-17, timely completion of Girdawari was found only in **45%** sample villages during Early Kharif, **49%** during Late Kharif, **51%** during Rabi and **37%** during Summer of 2016-17. **Instances of non-completion of Girdawari in Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Maharashtra, Punjab, Telangana, Uttar Pradesh & West Bengal were alarmingly high.** Suitable action needs to be taken by the respective State authority to ensure timely completion of Girdawari in all the States in general. **(Para 8.1.3)**

10. During 2016-17, TRS statements were submitted in time after completion of Girdawari only in **44%** sample villages during Autumn, **44%** during Winter, **47%** during Rabi and **27%** during Summer. Further, the cases of submission of TRS statement without completion of Girdawari was of the order of **3%, 7%, 6% and 3%** sample villages during Early Kharif (Autumn), Late Kharif (Winter), Rabi and Summer respectively. Corrective action needs

to be initiated for ensuring submission of TRS statements only after completion of Girdawari. **(Table-7,Para-8.1.4)**

**11.** Maps available with the Patwari workers were found usable in **88%** cases. In **62%** cases, the maps available with the Patwari 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 2016-17, errors in recording crops and crop areas at the time of area enumeration were observed in **29%** of the survey numbers during Autumn, **16%** during Winter, **14%** during Rabi and **8%** during Summer at all India level. These discrepancies observed 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 2016-17 was **85%** for Autumn, **68%** for Winter, **73%** for Rabi and **83%** for Summer. Steps need to be taken by State authority to achieve the target of cent percent supervision of crop cutting experiments at the harvest stage. **(Para-8.2.1)**

**14.** During 2016-17, 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 Patwari workers in the States. **(Para-8.2.3)**

**15.** The high incidence of errors in recording ancillary particulars is a matter of concern especially when such information forms the basis for post stratification analysis. **(Para-8.2.3)**

**16.** Position of supply of equipment for conduct of crop cutting experiments and their use by the Patwari workers needs improvement in almost all the ICS implementing States. **(Para-8.2.4)**

**17.** Delegation of work to others including juniors for conducting crop cutting experiments was found more frequent in Bihar and Uttar Pradesh during 2016-17. Situation is found alarming in Bihar, Jharkhand, Uttar Pradesh and West Bengal where Crop Cutting experiments are being conducted by the untrained workers in larger proportion. **(Para-8.2.5)**

**18.** Instances of substitution of selected villages/fields for crop cutting experiments due to various reasons were observed in some States. The substitution of originally selected village due to non-availability of experimental crop was observed in the range of 3% to 9% cases during 2016-17. These instances need to be reduced by proper selection of sample villages, timely selection of field and proper liaison with cultivators. This aspect needs to be stressed upon at the time of planning of the villages for crop cutting experiments as well as the training of the Patwari workers. **(Para-8.2.6 & 8.2.7)**



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

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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 Agriculture 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 Agriculture 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 second in the existing series and relates to the Agriculture Year 2016-17. 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.

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## 2



## AREA STATISTICS

### 2.1 System of collection

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

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

**2.1.2** In the Land Records States, there exists a primary agency (commonly known as Patwari), in-charge of a village or group of villages to carry out field-to-field crop inspection in each crop season of an agriculture year and to record crop areas and land utilisation. The agency belongs to the Revenue (or Land Records) department and attends to the work along-with the collection of land revenue and other duties. The Patwari is required to note down the details of crop enumeration and land utilisation in a register, commonly known as the “Khasra Register”. After completion of entries for a village in a season, the Patwari prepares an abstract of area sown to various crops and sends a statement of crop abstract (Jinswar statement) to the next higher officer in revenue hierarchy. Similarly, at the end of the year, they prepare a land utilisation statement showing the abstract of area under different utilisations. The crop-wise and utilisation-wise area figures, so compiled for villages are successively aggregated at the circle, tehsil and district levels. The district-wise figures are then reported to the State Agricultural Statistics Authority (SASA), who may either be the Director of Statistical Bureau, the Director of Agriculture or the Director of Land Records. The State level figures compiled by 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 2016-17 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 24 villages in Jharkhand, from 500 survey numbers per village in Assam and Maharashtra to 3100 survey numbers per village in Haryana, from 100 hectares of the geographical area per village in West Bengal to 1500 hectares in Gujarat.

**Table - 2**  
**Workload of Patwari during 2016-17**

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	18	1.4	0.2
4	Chhatisgarh	5	1.2	0.5
5	Gujarat	3	0.7	1.5
6	Haryana	4	3.1	1
7	Himachal Pradesh	11	0.9	0.2
8	Jammu & Kashmir	6	0.8	0.4
9	Jharkhand	24	1.1	0.4
10	Karnataka	5	0.7	1.0
11	Kerala	#	#	#
12	Madhya Pradesh	5	0.7	1.0
13	Maharashtra	4	0.5	0.8
14	Odisha	8	1.0	0.2
15	Punjab	6	2.3	0.6
16	Rajasthan	7	0.8	1.0
17	Tamil Nadu	2	2.6	0.8
18	Telangana	3	1.8	0.7
19	Uttar Pradesh	7	0.7	0.3
20	Uttarakhand	13	1.5	0.2
21	West Bengal	3	1.0	0.1
22	Puducherry	10	1.2	0.4
<b>All India average</b>		<b>7</b>	<b>1.2</b>	<b>0.6</b>

# 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.

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## 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 12,52,113 in number under GCES 2015-16 which formed the basis for sample selection for supervision of Crop Cutting Experiments under the ICS Scheme during agriculture year 2016-17 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. It is worth noting here that the number of experiments planned (1308025) during 2014-15 under GCES has shown decline during 2015-16 due to decrease in planning or non-receipt of relevant data from some State authorities.

**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 2015-16 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 2015-16**

Sl. No.	Crop	Minimum Area (% of the total area under the crop)	Name of State
1.	Rice (Autumn)	2	Kerala
2.	Rice (Winter)	3	Kerala
3.	Rice (Summer)	2	Kerala
4.	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)	50	Maharashtra
9.	Ragi (Kharif-Tra)	29	Karnataka
10.	Ragi (Rabi)	59	Andhra Pradesh
11.	Wheat ( Tra-Irr)	46	Karnataka
12.	Barley	27	Chhattisgarh
13.	Gram	40	Haryana
14.	Redgram /Tur	21	Haryana
15.	Cotton	45	Haryana
16.	Mesta	74	Andhra Pradesh
17.	Jute	90	Meghalaya
18.	Groundnut	68	Chhattisgarh
19.	Groundnut (Rabi)	56	Telangana
20.	Sesamum (Kharif)	46	Chhattisgarh
21.	Sesamum (Rabi)	22	Maharashtra
22.	Castor	80	Telangana
23.	Sugarcane	0.1	Kerala
24.	Linseed	51	Maharashtra
25.	Rape & Mustard	64	Haryana
26.	Chillies (Rabi)	7	Chhattisgarh
27.	Tobacco	28	Telangana

**Note:-**

GES data pertains to the year 2015-16 as this forms the basis for sample selection on Crop Cutting Experiment under ICS scheme 2016-17.



**Table – 4**  
**Status of Pre-Stratification under CES during 2015-16**

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. 2016-17, the four meetings of these committees were held in the States of Bihar, Haryana, Karnataka and Rajasthan. 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 Agriculture 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)**

**4.1.5** 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 2016-17, 24<sup>th</sup> COCSSO was held at Nagpur on 19th and 20th January, 2017.

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## 5



## IMPROVEMENT OF CROP STATISTICS (ICS) SCHEME

**5.1.1** The ICS scheme, which had a modest beginning in the year 1973-74, reached to the optimum coverage in subsequent years as indicated in **Table – 5**. Since then, the scale of sample checks has been more or less stabilized. During 2016-17, 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
2016-17	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.

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# 6



## DESIGN AND SAMPLE SELECTION FOR ICS SCHEME

### 6.1 Sample Check on Area Enumeration

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

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

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## 7



## ANALYSIS OF DATA

### 7.1 Check on Area Enumeration

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

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

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

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

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

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

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

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

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

**7.1.7** The data collected under the scheme are analysed for other purposes as well. An illustration of this is the average workload per Patwari in the various States derived from the ICS data of 2016-17 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.

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## 8



## FINDINGS UNDER ICS SCHEME

### 8.1 Sample Check on Area Enumeration

#### I – Response

**8.1.1 Annex-I** gives the State-wise response achieved (i.e. the percentage of the filled-in Schedules AS 1.0 received) in sample check on enumeration of area under ICS Scheme during 2016-17. The overall response at all India level for all the States/UT covered was cent percent for Central Sample, 58% to 88% for State sample and 79% to 94% for Pooled sample during 2016-17 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 (Summer 97%), Haryana (Summer 99%), Karnataka (Kharif, Rabi & Summer 99%), Punjab (Kharif 99% and Rabi 97%), Tamil Nadu (Early Kharif 99%, Late Kharif 98%), Uttar Pradesh (Zaid 99%). The response for the State sample was below 58% in Bihar (Early Kharif 56%, Late Kharif 52%, Rabi 55%), Gujarat (Summer 55%), Uttar Pradesh (Kharif 19%, Rabi 20% and Summer 10%). 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 2016-17. A summary showing agency wise brief picture of the timeliness in completing area enumeration by primary workers is given below in **Table-6** for 2016-17 and 2015-16. 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 2016-17 are given in **Annex-II**. On comparison of the position of timely completion of area enumeration work during 2016-17 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 45% during Early Kharif, 49% during Late Kharif, 51% during Rabi and 37% during Summer of 2016-17 as against 46%, 50%, 47% and 30% during

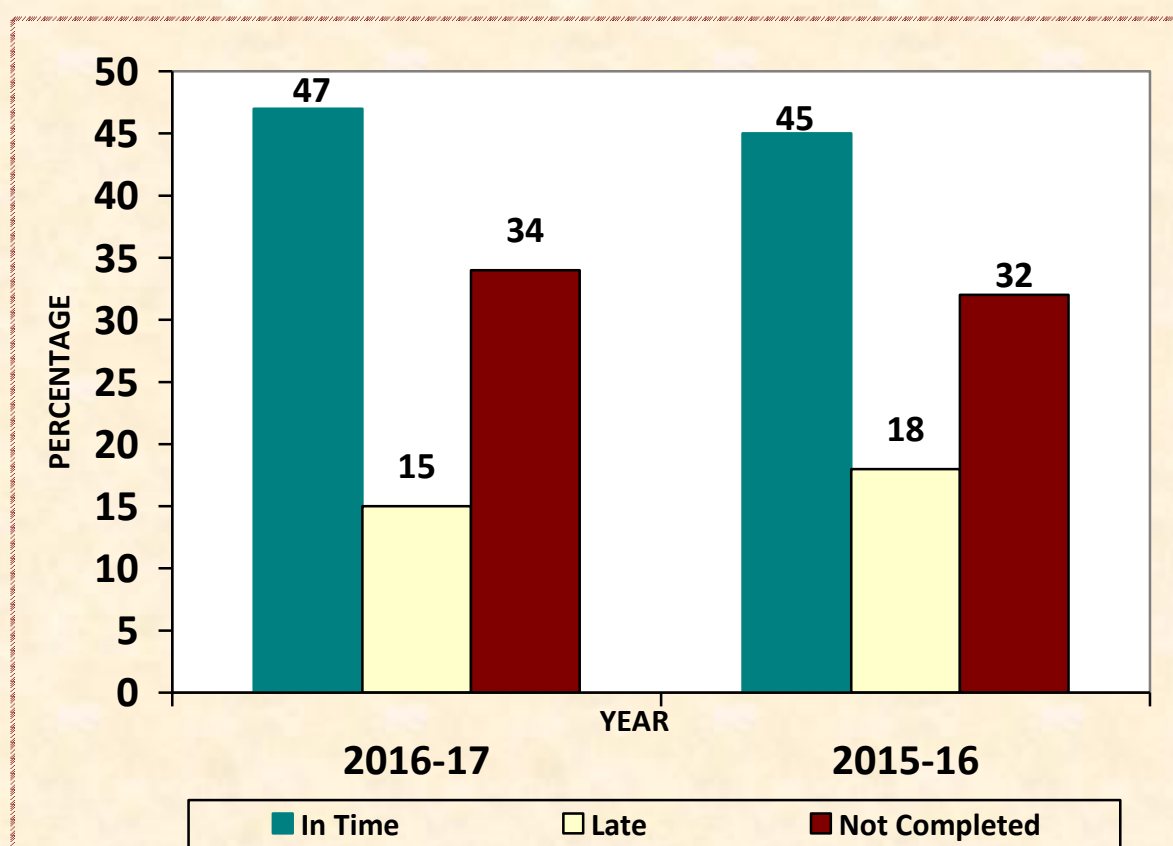
2015-16. The position continues to be unsatisfactory for some of the States. For example, the percentage of delayed and non-completion of area enumeration work was observed to be 78% (Kharif), 49% (Rabi) in Andhra Pradesh, 100%, 97%, 100%, 100% during E.Kharif, L.Kharif, Rabi and Summer seasons respectively in Assam, 94%, 91%, 95% and 90% during E.Kharif, L. Kharif, Rabi and Summer seasons respectively in Bihar, 91%, 87% and 83% Kharif, Rabi and Summer seasons respectively in Gujarat, 51% during Summer in Haryana, 51% during Kharif in Jammu & Kashmir, 78%, 88%, 89% & 98% during E. Kharif, L. Kharif, Rabi and Summer seasons respectively in Jharkhand, 71%, 63% & 77% during Kharif, Rabi & Summer seasons respectively in Maharashtra, 69% and 60% during Kharif & Rabi seasons respectively in Punjab, 77% and 59% during Kharif and Rabi respectively in Telangana, 53% during Kharif in Uttar Pradesh and during E. Kharif 78%, L. Kharif 78%, Rabi 78% and Summer 82% 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 2016-17 and 2015-16**

Status	Percentage of Villages					
	2016-17			2015-16		
	Central	State	Pooled	Central	State	Pooled
<b>Early Kharif</b>						
In time	42	48	45	46	47	46
Late	6	18	12	4	20	12
Not Completed	52	29	40	52	29	40
<b>Late Kharif</b>						
In time	46	52	49	49	52	50
Late	11	26	18	12	25	18
Not Completed	42	15	30	39	18	29
<b>Rabi</b>						
In time	45	58	51	44	51	47
Late	10	20	15	15	28	21
Not Completed	44	15	31	33	16	25
<b>Summer</b>						
In time	33	43	37	31	30	30
Late	8	22	13	9	23	14
Not Completed	59	27	47	61	27	48
<b>All Seasons</b>						
In time	43	52	47	43	47	45
Late	10	22	15	12	25	18
Not Completed	47	19	34	42	20	32

**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 2016-17 & 2015-16.

**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 2016-17 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 6% 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 48% & Rabi 47%), Assam (E. Kharif 12%, Summer 8%), Gujarat (Summer 8%), Jharkhand (Rabi 7%), Tamil Nadu (Phase II 9%, Phase III 8%), and Telangana (Kharif 50%, Rabi 44%). 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 Andhra Pradesh (Kharif, Rabi), Chhattisgarh (Kharif), Haryana (Kharif & Rabi), Himachal Pradesh (Kharif & Rabi), Karnataka (Kharif), Kerala (Kharif, Rabi & Summer), Madhya Pradesh (Kharif & Rabi), Odisha (Autumn, Winter & Summer), Rajasthan (Kharif & Rabi), Tamil Nadu (Phase-I, Phase-II, Phase-III), and Puducherry (Kharif, Rabi I & Rabi II). In 2016-17, TRS statements were submitted in time after completion of Girdawari only in 44% sample villages during Autumn, 44% during Winter, 47% during Rabi and 27% during Summer. Further, the submission of TRS statement without completion of Girdawari was 3%, 7%, 6% and 3% 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 **2016-17** and **2015-16** is presented in **Table-7**.

**Table – 7**

**Status of Submission of TRS/EARAS Statement during 2016-17 and 2015-16**

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				
<b>2016-17</b>								
Early Kharif	2	1	44	8	2	2	31	7
Late Kharif	6	1	44	15	2	6	20	5
Rabi	5	1	47	13	2	5	21	5
Summer	2	1	27	15	2	5	43	5
<b>2015-16</b>								
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

*Note: - \* Excluding percentages of TRS statements submitted but could not be compared with girdawari completion (Item-8) of Annex - VI, State wise Status Report 2016-17 & 2015-16.*

#### IV - Availability and Usability of village maps

**8.1.5** Annex-IV gives the details regarding updation of village maps, their availability and usability. It may be seen that at all India level, maps available with the primary workers were found usable for identification of the survey numbers in 88% cases during 2016-17. Information in respect of updation of the maps reveals that in 62% 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.

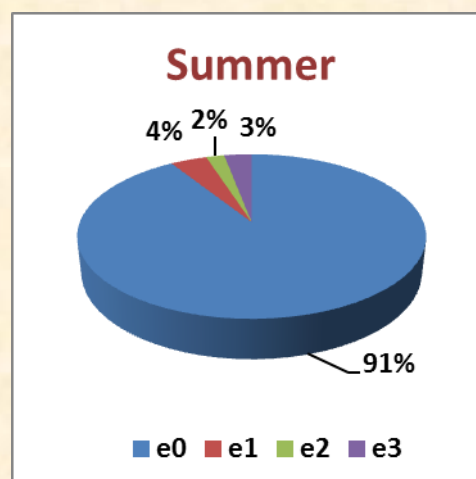
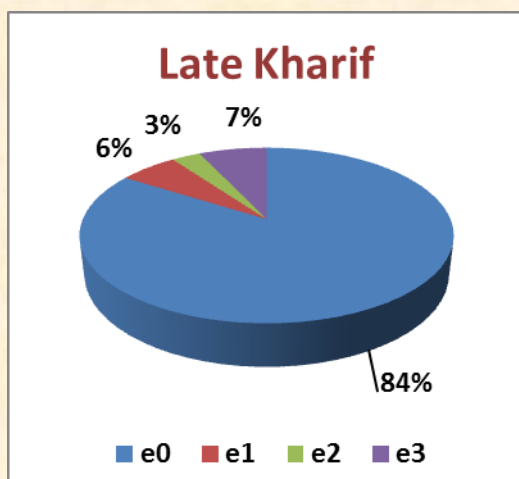
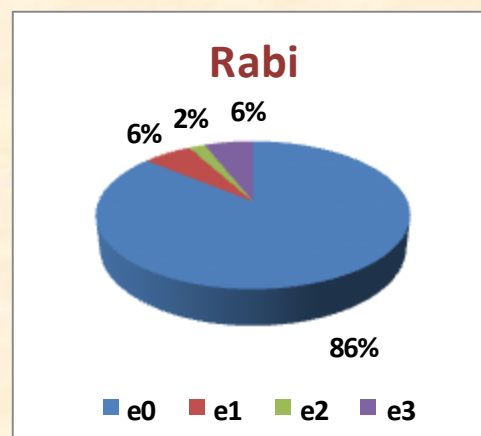
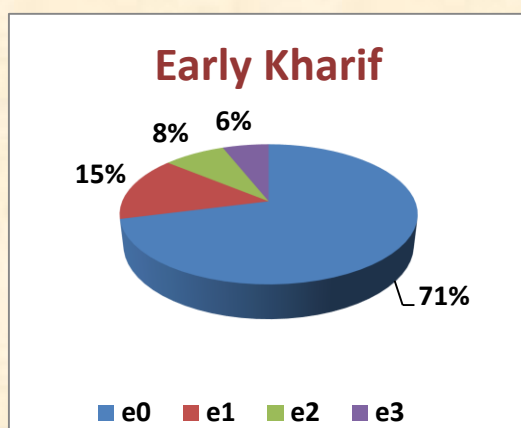
#### V - Accuracy of Girdawari

**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 29% of the selected survey numbers during Autumn, 16% during Winter, 14% during Rabi and 8% during Summer, 2016-17. The magnitude of discrepancies was very high in Bihar (L.Kharif 17% & Rabi 57%), Himachal Pradesh (Rabi 19%), Karnataka (Kharif 25%, Rabi 18% & Summer 23%), Kerala (Autumn 27%), Madhya Pradesh (Kharif 18% & Rabi 15%), Maharashtra (Kharif 29%, Rabi 14% &



Summer 35%), Rajasthan (Rabi 16%), Tamil Nadu (Phase-I 37%, Phase-II 22% & Phase-III 27%), Uttar Pradesh (Kharif 26%, Rabi 18% & Summer 21%), and West Bengal (Aus. 24%, Rabi 33% & Summer 19%). 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 2016-17**



- 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 (Winter 17%, Rabi 57%), Chhattisgarh (Rabi 7%), Karnataka (Kharif 10% & Rabi 10% & Summer 17%), Madhya Pradesh (Kharif 6%), Maharashtra (Kharif 7%, Summer 34%), Rajasthan (Rabi 7%), Tamil Nadu (Phase I 25%, Phase II 12% & Phase III 24%), Uttar Pradesh (Kharif 10%, Rabi 7% & Summer 10%), and West Bengal (Rabi 16% & Summer 10%). **Reporting of crops not actually sown ( $e_2$ ) was the least occurring of the three errors.** It was found mostly in Chhattisgarh (Rabi 4%), Haryana (Kharif 4%), Himachal Pradesh (Rabi 5%), Karnataka (Rabi 3%), Kerala (Early Kharif 19%, Late Kharif 14%), Rajasthan (Rabi 3%), Tamil Nadu (Phase II 7%), Uttar Pradesh (Kharif 5%), West Bengal (Rabi 9%, Summer 5%). **The error of inaccurate assessment of area under crop ( $e_3$ )** was found dominant Himachal Pradesh (Kharif 10%, Rabi 10%), Karnataka (Kharif 11%), Kerala (Autumn 7% & Summer 4%), Madhya Pradesh (Rabi 8%), Maharashtra (Kharif 20% & Rabi 9%), Tamil Nadu (Phase I 7%), Uttar Pradesh (Kharif 12%, Rabi 9% & Summer 9%), West Bengal (Rabi 8% & Summer 4%).

**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), Chhattisgarh (Wheat), Gujarat (Cotton, Groundnut & Wheat), Haryana (Sugarcane & Barley), Jharkhand (Paddy Aut. & Maize), Karnataka (Paddy Summer & Gram), Madhya Pradesh (Jowar), Maharashtra (Jowar Rabi), Tamil Nadu (Paddy III, Jowar Rabi), Telangana (Jowar Rabi) Uttrakhnad (Ragi) & West Bengal (Paddy Aus.).

## 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 2016-17, 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 (Rabi 57%, Summer 75%), Karnataka (Summer 22%), Maharashtra (Summer 34%), Tamil Nadu (Phase-I 31%, Phase-III 26%). 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 (All Seasons), Gujarat (All Seasons) & Jharkhand (All Seasons) the observations in this respect could not either be incorporated as they are not reflecting the true picture because of low completion of area enumeration by the State primary workers. 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 11% of the selected survey numbers. The seed variety differed in more than 25% of the selected survey numbers in Bihar (Rabi 58% & Summer 75%), Maharashtra (Summer 34%), Punjab (Kharif 27% & Rabi 26%), Tamil Nadu (Phase-I 34% & Phase-III 28%) and West Bengal (Aus. 26%). This aspect requires adequate attention of the State Government for controlling the situation. In case of Assam, Bihar (All Seasons), Gujarat (All Seasons) & Jharkhand (All Seasons), the observations in this respect could not be incorporated as they are not reflecting the true picture because of low completion of area enumeration by the State primary workers.

## 8.2 Sample Check on Crop Cutting Experiments

### I – Response

**8.2.1** **Annex-VI** reflects the number of experiments planned and percentage response at harvest stage achieved under the sample checks on crop cutting experiments in each State during different seasons of 2016-17. The response achieved in respect of all the States in different seasons was above 90% except in Assam (Early Kharif 66%, Rabi 81%), Bihar (Early Kharif 58%, Late Kharif 54%, Rabi 53% & Summer 45%), Gujarat (Kharif 60% & Rabi 55%), Haryana (Kharif 85% & Rabi 76%), Himachal Pradesh (Kharif 82% & Rabi 86%), Jammu & Kashmir (Kharif 31% & Rabi 64%), Jharkhand (Early Kharif 73%, Late Kharif 65% & Rabi 69%), Karnataka (Kharif 9%, Rabi 49% & Summer 54%), Madhya Pradesh (Kharif 74% & Rabi 71%), Maharashtra (Kharif 57% & Rabi 62%), Rajasthan (Kharif 77%), Tamil Nadu (Summer 80%), Telangana (Kharif 71% & Rabi 55%), Uttar Pradesh (Kharif 56%, Rabi 57% & Summer 46%), Uttarakhand (Kharif 80%, Rabi 83%) and West Bengal (Rabi 81%, Summer 73%). The overall response at all India level (Pooled) was of the order of 85% for Autumn, 68% for Winter, 73% for Rabi and 83% for Summer during 2016-17 as against 87% for Autumn, 80% for Winter, 76% for Rabi and 91% for Summer in corresponding seasons during 2015-16. The decline is mainly because of the introduction of mobile app in Karnataka State.

### II – Distribution of number of experiments conducted by important inputs

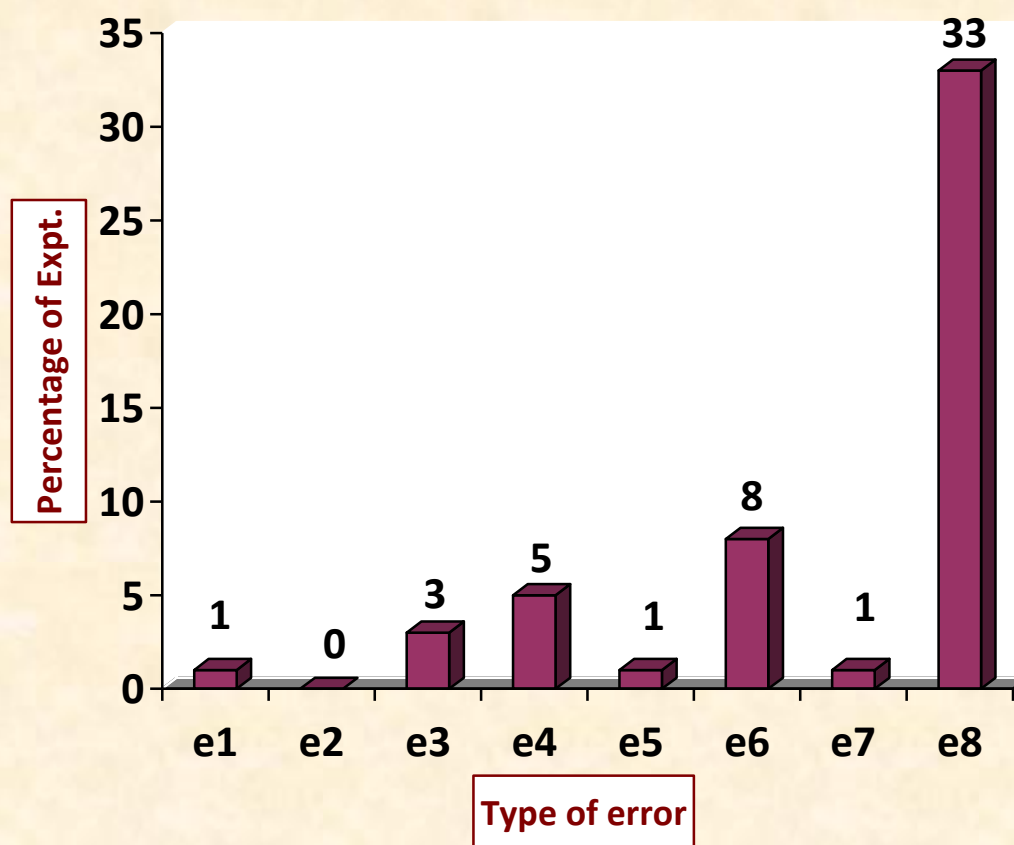
**8.2.2** **Annex-VII** gives details of the crop-wise percentage distribution of experiments according to important inputs viz. Irrigation, High Yielding Varieties of Seeds and Fertilizers applied.

### 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 2016-17. 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 **e<sub>6</sub> error** i.e. reporting of ancillary particulars like irrigation, high yielding varieties of seed, fertilizer and manure used during 2016-17 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 2016 – 17**



*e<sub>1</sub> = Error in selection of survey/sub survey numbers.*

*e<sub>2</sub> = Error in selection of field within survey/sub survey numbers.*

*e<sub>3</sub> = Error in measurement of field.*

*e<sub>4</sub> = Error in selection of random numbers, location & marking of plots.*

*e<sub>5</sub> = Error in weighing of produce.*

*e<sub>6</sub> = Error in reporting ancillary information.*

*e<sub>7</sub> = Inadequate arrangement for storing of produce for drying and incorrect reporting of constituents in crop mixtures.*

*e<sub>8</sub> = Others (Comparison not possible between Supervisor & Primary Worker entries)*

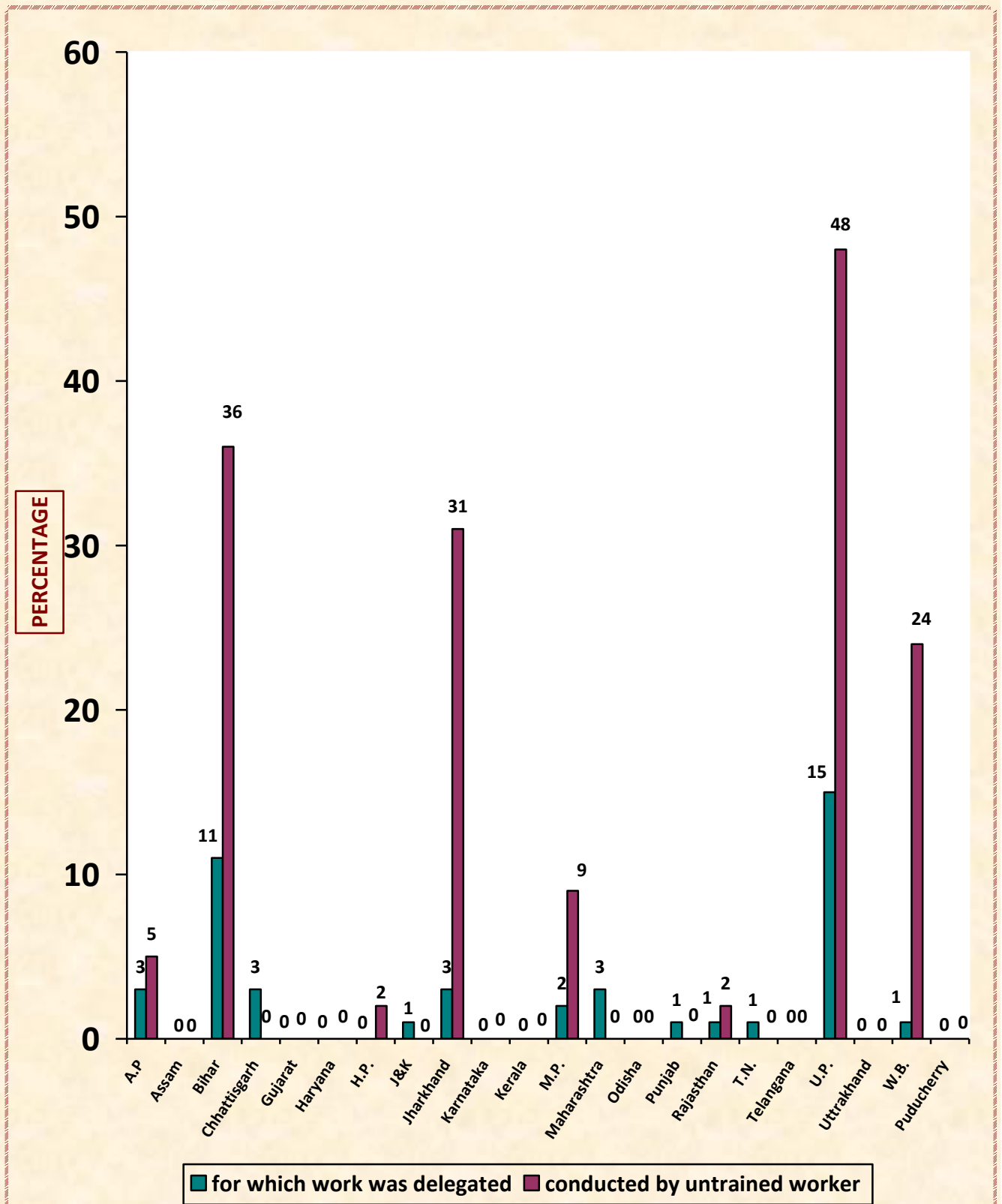
## IV - Supply and Use of Equipment

**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 2016-17, 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%, 62%, 35% and 38% supervised experiments respectively during 2016-17. 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 3%, Bihar 11%, Chhattisgarh 3%, Jammu & Kashmir 1%, Jharkhand 3%, Madhya Pradesh 2%, Maharashtra 3%, Punjab 1%, Rajasthan 1%, Tamil Nadu 1%, Uttar Pradesh 15% and 1% in West Bengal during 2016-17. The percentage of experiments conducted by workers for all the seasons taken together without proper training was 5% in Andhra Pradesh, 36% in Bihar, 2% in Himachal Pradesh, 31% in Jharkhand, 9% in Madhya Pradesh and 2% in Rajasthan, 48% in Uttar Pradesh and 24% in West Bengal during 2016-17. 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**

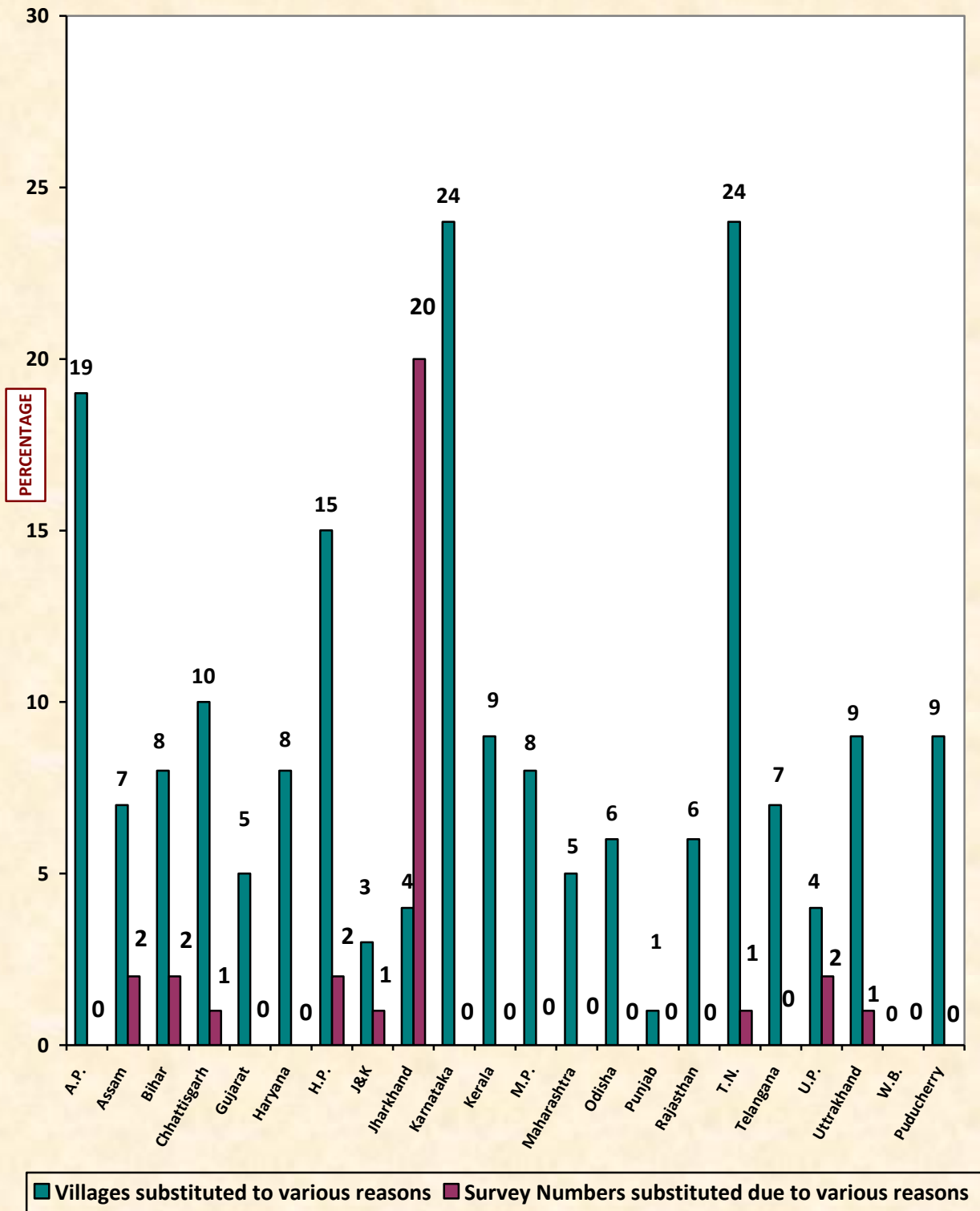


## VI - Substitution of sampling units

**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 is presented in **Annex-XI and Chart V**. Such instances relating to substitution of villages were 8% or more at least in one season due to various reasons in respect of all the States except Gujarat, Jammu & Kashmir, Jharkhand, Maharashtra, Punjab, Rajasthan, Uttar Pradesh, and West Bengal during 2016-17. 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 9%, 9%, 7% and 3% during Early Kharif, Late Kharif, Rabi and Summer during 2016-17 respectively. It varied from 18% to 21% of the experiments conducted in Andhra Pradesh, 0% to 19% in Assam, 1% to 28% in Bihar, 0% to 22% in Chhattisgarh, 0% to 5% in Gujarat, 6% to 8% in Haryana, 11% to 18% in Himachal Pradesh, 0% to 6% in Jammu & Kashmir, 0% to 7% in Jharkhand, 18% to 28% in Karnataka, 0% to 30% in Kerala, 4% to 11% in Madhya Pradesh, 4% in Maharashtra, 0% to 8% in Odisha, 2% in Punjab, 23% in Tamil Nadu, 14% in Telangana, 0% to 3% in Uttar Pradesh, 6% to 10% in Uttarakhand and 0% to 20% in Puducherry in various seasons of 2016-17. 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**



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## 9



## ESTIMATION OF AREA AND AVERAGE YIELD RATES

### 9.1 Estimation of Area

**9.1.1** Annex-XII gives State-wise Area Estimates (1.0) based on Patwari's entries (A-III) and Supervisors' observation of crop area in sample village (A-IV) under each major crop. State wise estimates of crop area aggregation (1.1) are not being worked out due to suspension of work of area aggregation check for Central sample with effect from 2008-09. However, the estimates under A-III and A-IV have been compared with the corresponding (latest released) final estimates of area issued by the Ministry of Agriculture & 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:

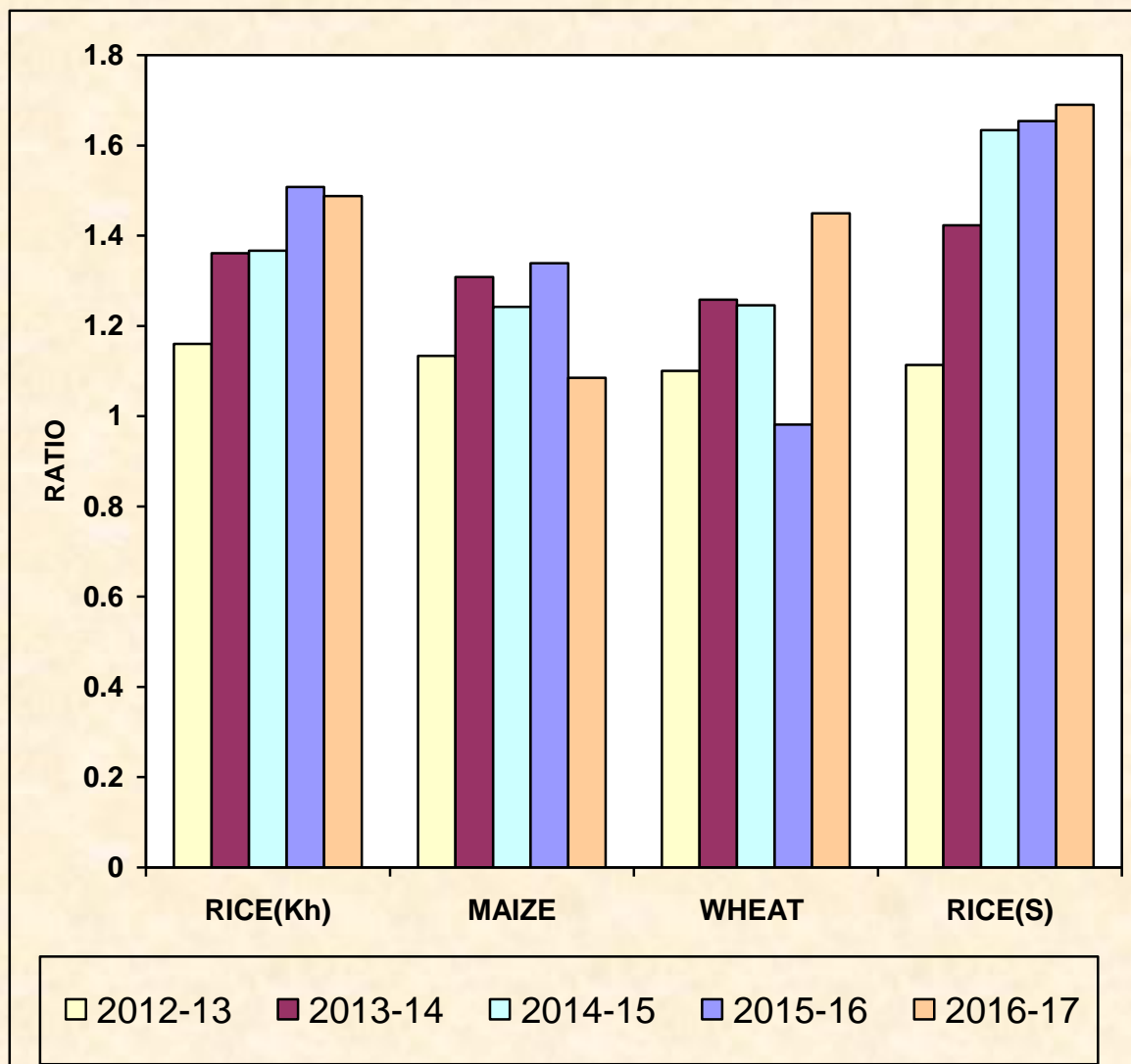
**Table - 8**  
**Ratio of Area Estimates (A-IV/A-III)**

S. NO.	CROP	2016-17	2015-16	2014-15	2013-14	2012-13
1	Rice (Kh)	1.4875	1.5081	1.3667	1.3612	1.1603
2	Rice (Sum)	1.6896	1.6954	1.6340	1.4228	1.1138
3	Jowar (Kh)	1.3339	0.7962	0.7887	0.8444	0.7970
4	Jowar (R)	2.4125	1.8301	1.7178	1.4205	1.1637
5	Bajra	1.3113	1.2625	1.2666	1.1263	1.0501
6	Maize	1.0853	1.3399	1.2423	1.3083	1.1338
7	Ragi	1.1000	1.0242	1.0700	0.9860	0.9651
8	Cotton	1.7315	1.7311	1.7134	1.6443	1.4574
9	Groundnut	1.9809	1.6884	1.8089	1.4452	1.2492
10	Sugarcane	1.2769	1.6054	1.2953	1.1269	1.0452
11	Wheat	1.4493	0.9816	1.2455	1.2583	1.1000
12	Barley	1.1146	0.9773	1.0000	1.0149	0.9933
13	Gram	1.3367	1.2419	1.2125	1.1485	1.0560
14	R & M	1.4193	1.3864	1.3513	1.3021	1.0918

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

**9.1.2** The findings given bring to focus a trend of under reporting of area by the State primary worker for all major crops covered in the analysis during 2016-17. 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 around three fourth of total food grains production in the country. A graphical presentation of the trend in terms of these ratios for the past five years starting from 2012-13 can be seen in **Chart-VI** for Rice (Kharif & Summer), Wheat and Maize. Table-8 clearly shows wide variation between supervisors reporting of area and the area recorded by primary workers which also indicates under-reporting of area figures from primary workers. The concerned State government should take suitable remedial measures for narrowing this gap.

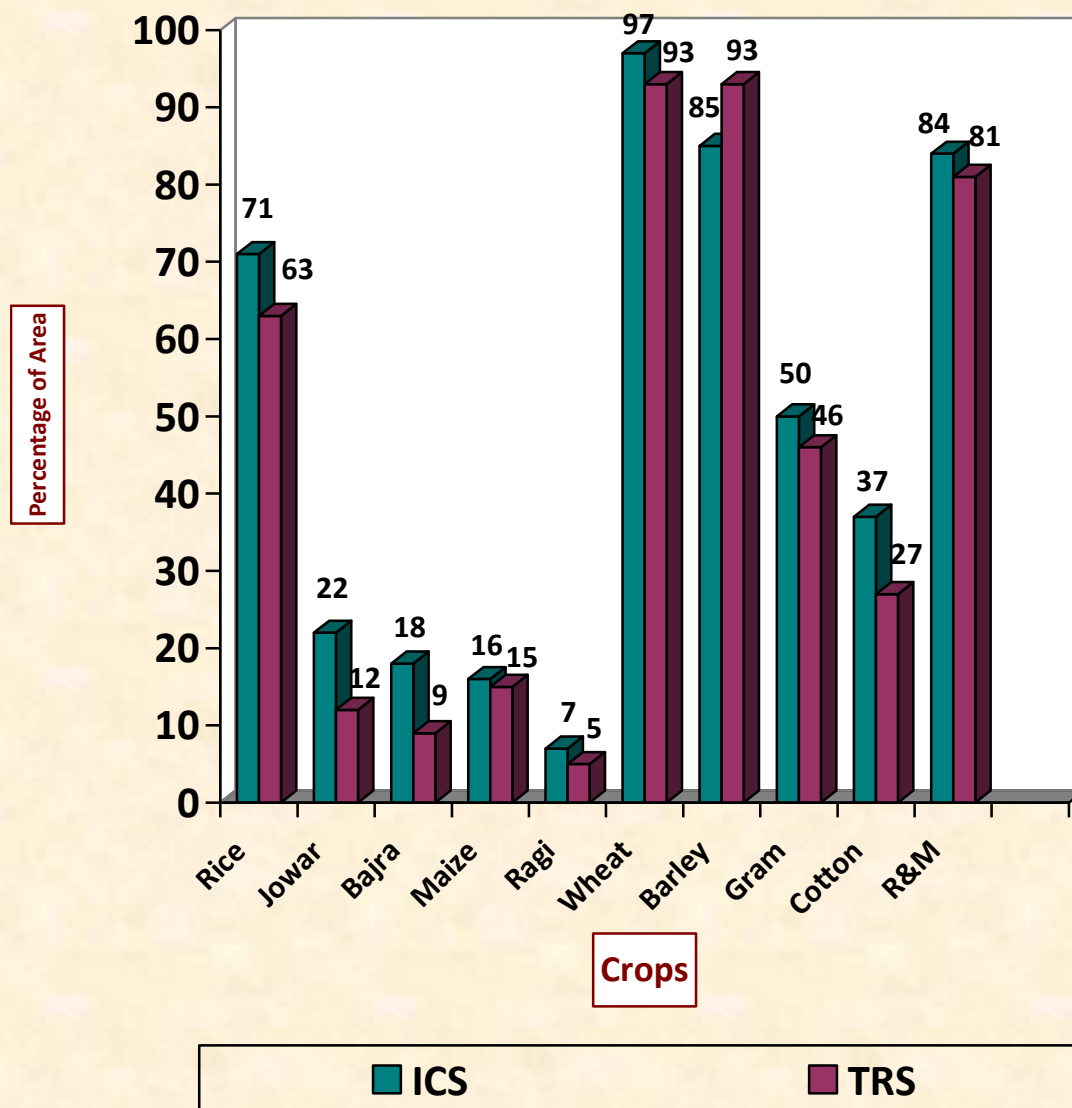
**CHART-VI**  
**RATIO OF AREA ESTIMATES (A-IV/A-III)**



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

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

**CHART-VII**  
**PERCENTAGE OF IRRIGATED AREA UNDER ICS & TRS DURING 2016-17**



## 9.2. Estimation of Yield Rates

**9.2.1** Estimates of yield rates for important crops based on sample check on crop cutting experiments along with the percentage of standard errors and the corresponding CES estimates are presented in **Annex-XIV**. The percentage standard error at all India level for ICS estimates for 14 important crops varies from 0.8% (Wheat in Punjab) to 22.6% (Maize in Rajasthan ) for the year 2016-17. Ratio of estimates of yield rates under ICS and CES at all India level are given in **Table-9** for last five years since 2012-13. The yield rates under ICS Scheme are higher as compared to CES estimates in case of Rice (Kharif), Jowar (Rabi), Bajra, Wheat Gram and R&M crops and lower in the case of Rice (Summer), Jowar (Kharif), Maize, Ragi, Cotton, Groundnut, Sugarcane & Barley crops during 2016-17.

**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 (2012-13 to 2016-17) 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	2016-17	2015-16	2014-15	2013-14	2012-13
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Rice (Kh)	1.0804	0.8492	1.0368	0.9717	1.1791
2	Rice (S)	0.9177	1.1697	0.9220	1.0612	1.0960
3	Jowar (Kh)	0.7841	0.7210	1.0995	0.8271	0.9320
4	Jowar (R)	1.3944	0.7564	0.8325	1.2104	1.2552
5	Bajra	1.0280	0.8637	0.6627	0.7515	0.6571
6	Maize	0.8680	1.0095	1.0572	1.1918	0.9285
7	Ragi	0.2057	0.9078	0.8580	1.1232	0.8633
8	Cotton	0.6441	0.9038	0.5557	0.7808	0.7590
9	Groundnut	0.5247	0.9631	1.2810	1.9174	0.7356
10	Sugarcane	0.9027	1.0086	1.2385	1.2006	0.6500
11	Wheat	1.0901	1.1126	0.7782	0.9428	1.0423
12	Barley	0.9010	0.7443	0.7978	0.9307	0.9601
13	Gram	1.0632	0.8059	1.1286	0.7697	1.3875
14	R & M	1.1681	0.9930	0.8822	0.7911	1.0266

**Note :-** (1) CES data pertains to year 2015-16 in column 3.

(2) CES data pertains to year 2014-15 in column 4.

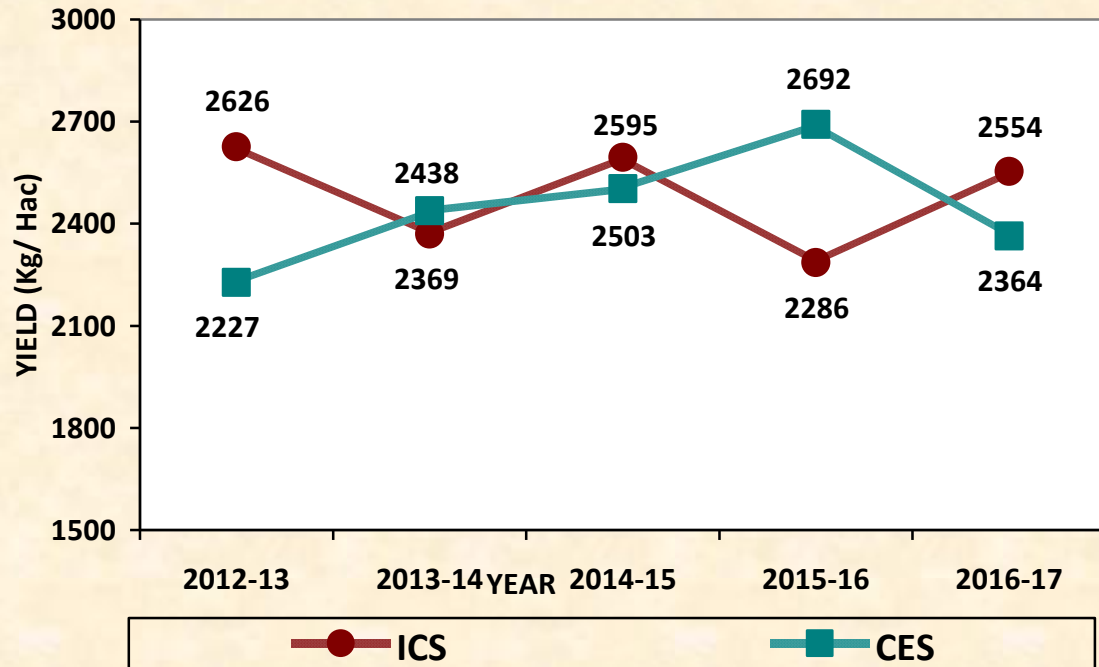
(3) CES data pertains to year 2012-13 in column 5.

(4) CES data pertains to year 2010-11 in column 6.

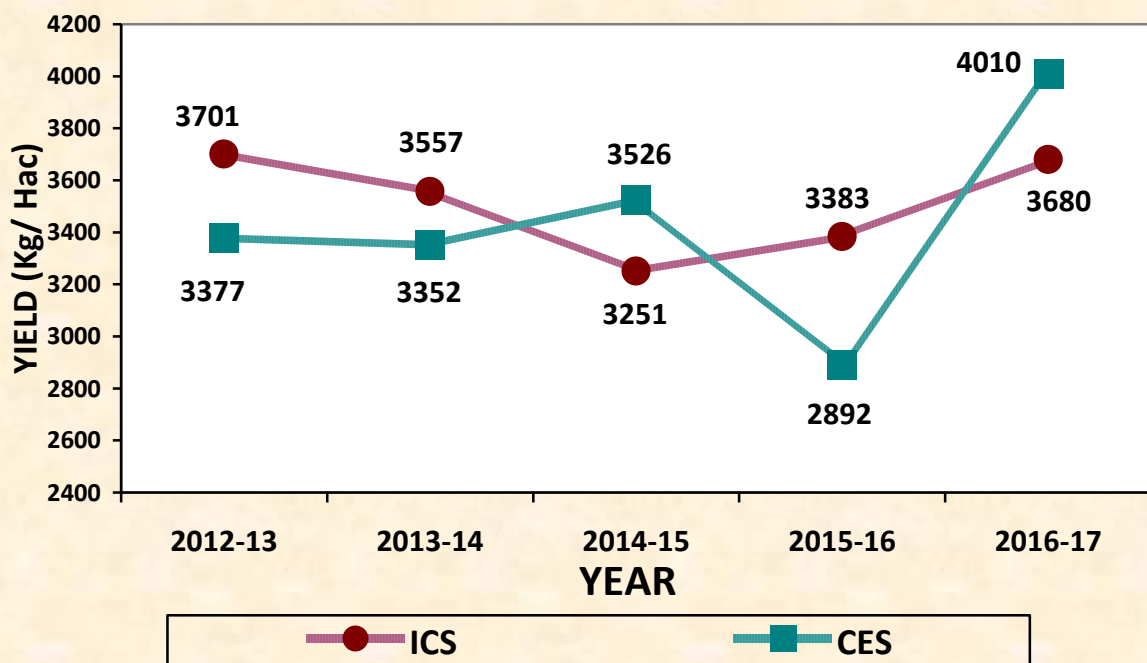
(5) CES data pertains to year 2009-10 in column 7.

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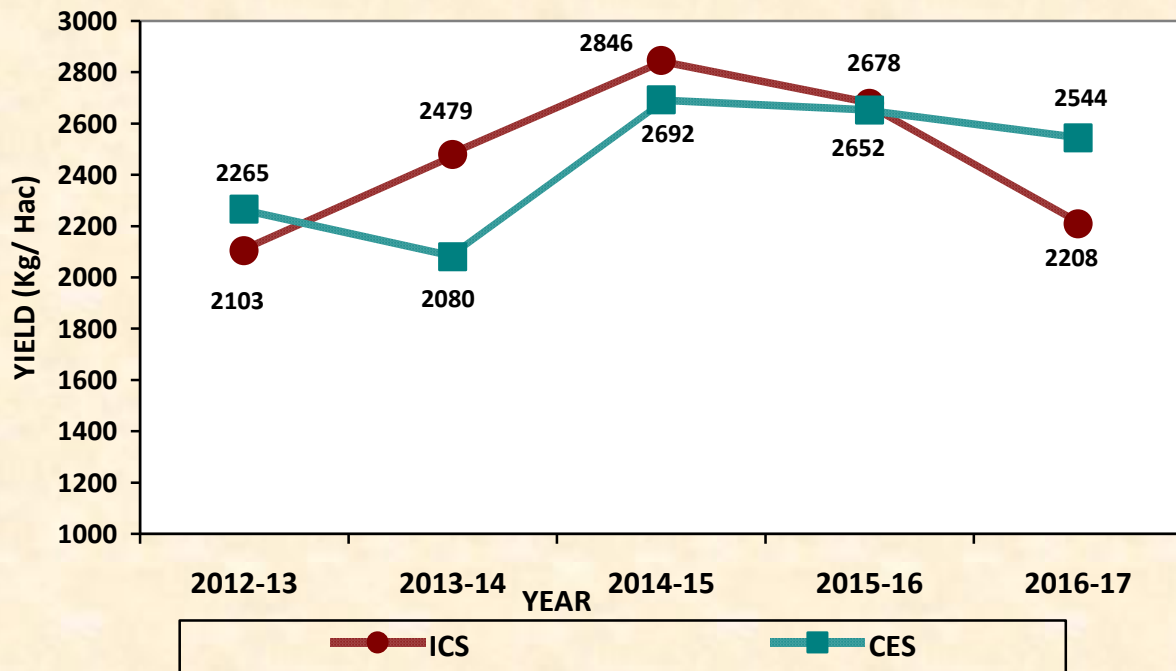
**Chart - VIII (a)**  
Trend of yield rates under ICS & CES  
Rice Kharif



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



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



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

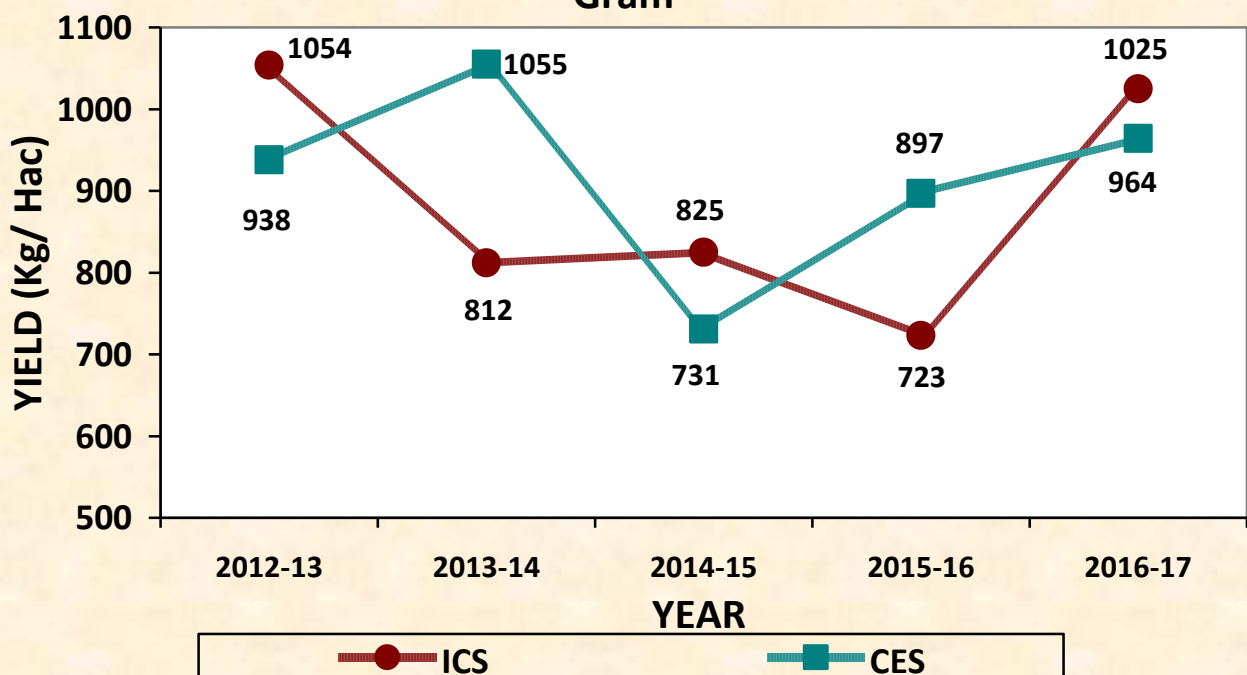
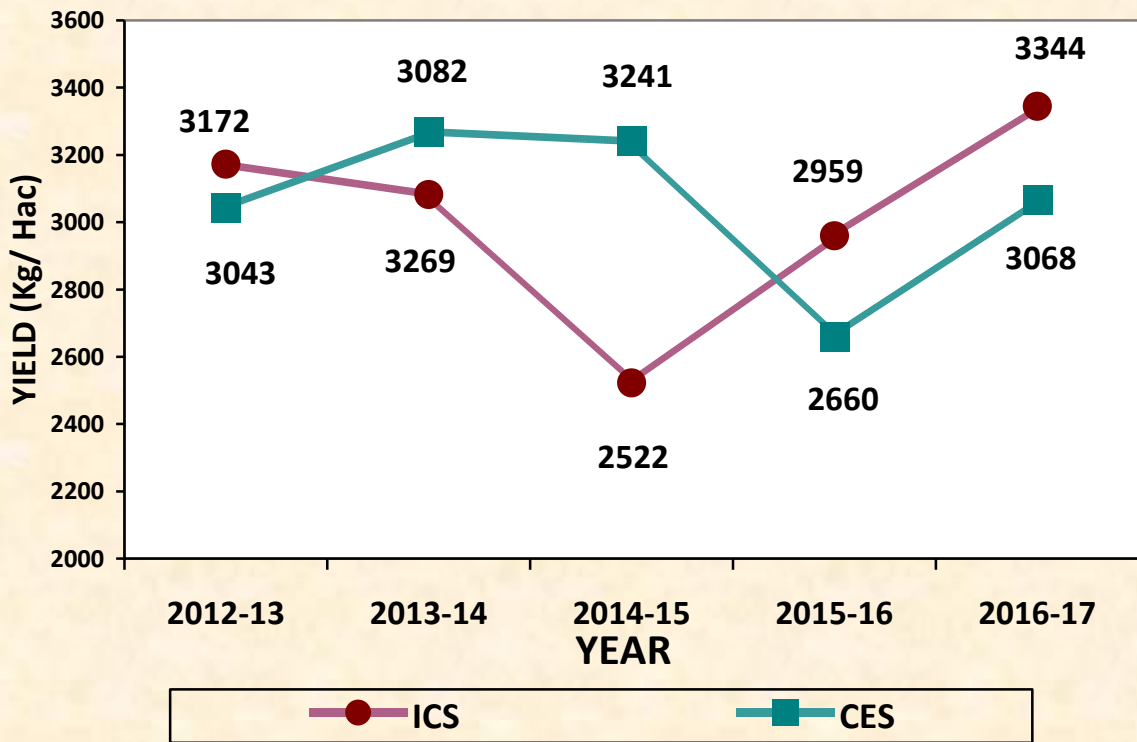


Chart - VIII (e) Trend of yield rates under ICS & CES  
Wheat



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# **PART-II**

# **(ANNEXURES)**





## **ANNEXURES & APPENDIX**

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**RESPONSE IN SAMPLE CHECK ON AREA ENUMERATION  
DURING 2016-17**

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	89	89	93	86
		P	320	95	95	97	93
3	Bihar	C	240	100	100	100	100
		S	240	56	52	55	58
		P	480	78	76	78	79
4	Chhattisgarh	C	100		100	100	
		S	100		100	100	
		P	200		100	100	
5	Gujarat	C	340		100	100	97
		S	340		69	66	55
		P	680		85	83	76
6	Haryana @	C	200		100	100	99
		S	200		70	61	
		P	400		85	80	99
7	Himachal Pradesh	C	140		100	100	
		S	140		99	99	
		P	280		99	99	
8	Jammu & Kashmir	C	100		100	100	
		S	140		84	60	
		P	240		91	77	
9	Jharkhand	C	60	100	100	100	100
		S	60	72	90	85	93
		P	120	86	95	93	97
10	Karnataka	C	300		99	99	99
		S	300		100	99	98
		P	600		100	99	99
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		100	100	
		S	360		83	75	
		P	720		91	88	
13	Maharashtra	C	440		100	100	100
		S	440		88	74	63
		P	880		94	87	81
14	Odisha	C	220	100	100		100
		S	220	100	100		100
		P	440	100	100		100
15	Punjab	C	200		99	97	
		S	200		86	99	
		P	400		92	98	
16	Rajasthan	C	300		100	100	
		S	300		97	99	
		P	600		98	100	
17	Tamil Nadu	C	260	99	98	100	
	§	S	260	100	98	100	
		P	520	99	98	100	
18	Telangana	C	160		100	100	
		S	250		91	93	
		P	410		94	96	
19	Uttar Pradesh	C	690		100	100	99
		S	690		19	20	10
		P	1380		59	60	54
20	Uttarakhand	C	110		100	100	100
		S	110		95	91	75
		P	220		97	95	88
21	West Bengal	C	250	100	100	100	100
		S	400	93	90	88	61
		P	650	95	94	93	76
22	Puducherry	C	9		100	100	100
		S	9		100	100	100
		P	18		100	100	100
For States Covered		C	4939	100	100	100	99
		S	5349	88	79	76	58
		P	10288	94	89	87	79

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 2016-17

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 Pradesh	C				0	0	100	0	0	100				
		S				35	46	19	83	12	5				
		P				22	28	50	51	8	41				
2	Assam	C	0	0	100	0	0	100	0	0	100	0	0	99	
		S	0	6	94	0	0	94	0	0	100	0	0	100	
		P	0	3	97	0	0	97	0	0	100	0	0	100	
3	Bihar	C	0	0	100	0	0	100	1	0	99	0	0	100	
		S	3	8	74	8	16	56	5	18	71	12	9	65	
		P	1	3	91	3	6	85	2	6	89	5	3	87	
4	Chhattisgarh	C				87	6	6	81	15	3				
		S				92	5	2	80	19	0				
		P				89	6	3	80	17	2				
5	Gujarat	C				0	0	100	0	0	100	0	0	100	
		S				0	13	65	13	7	61	6	3	72	
		P				0	5	86	5	3	84	2	1	82	
6	Haryana	C				98	1	2	98	0	3	29	0	71	
	@	S				100	0	0	100	0	0	0	0	0	
		P				99	0	1	98	0	2	29	0	71	
7	Himachal Pradesh	C				98	2	0	98	1	0				
		S				97	3	0	99	1	0				
		P				97	3	0	98	1	0				
8	Jammu & Kashmir	C				52	36	8	53	35	11				
		S				45	55	0	68	24	0				
		P				48	48	3	60	30	6				
9	Jharkhand	C	0	0	100	0	0	100	0	0	100	0	0	100	
		S	26	33	14	15	41	35	25	67	8	4	88	9	
		P	11	14	64	7	19	69	12	31	58	2	42	56	
10	Karnataka	C				61	32	7	50	30	17	47	31	21	
		S				83	17	0	79	19	0	79	15	0	
		P				72	25	4	65	24	8	63	23	11	
11	Kerala	C	100	0	0	99	0	0				100	0	0	
		S	100	0	0	100	0	0				100	0	0	
		P	100	0	0	99	0	0				100	0	0	
12	Madhya Pradesh	C				82	13	1	91	8	1				
		S				89	6	0	79	14	0				
		P				85	9	0	86	10	1				
13	Maharashtra	C				10	8	81	6	1	92	5	3	91	
		S				29	39	10	37	27	7	34	43	5	
		P				19	23	48	18	11	52	16	18	59	
14	Odisha	C	96	4	0	95	5	0				99	1	0	
		S	100	0	0	100	0	0				100	0	0	
		P	98	2	0	98	2	0				99	0	0	
15	Punjab	C				29	68	3	41	59	0				
		S				31	68	0	23	61	0				
		P				30	68	1	32	60	0				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
16	Rajasthan	C				89	11	0	99	1	0				
		S				70	27	0	83	10	2				
		P				79	19	0	91	5	1				
17	Tamil Nadu	C	78	14	8	93	4	4	87	8	5				
		§	S	86	9	5	81	13	6	87	5	7			
		P	82	11	7	87	8	5	87	7	6				
18	Telangana	C	0	0	0	90	0	95	1	6	90				
		S	0	0	0	90	46	18	63	33	0				
		P	0	0	0	90	27	50	38	22	37				
19	Uttar Pradesh	C				47	13	39	50	17	32	55	13	32	
		S				39	52	6	89	7	1	74	26	0	
		P				46	19	34	57	15	27	57	14	29	
20	Uttarakhand	C				67	30	3	88	7	3	81	19	0	
		S				70	28	0	50	44	0	70	30	0	
		P				69	29	1	70	25	1	76	24	0	
21	West Bengal	C	14	12	71	8	12	78	19	10	69	20	15	65	
		S	15	45	29	17	41	29	16	41	37	8	49	35	
		P	15	32	46	14	29	49	17	28	50	14	32	50	
22	Puducherry	C				100	0	0	100	0	0	89	11	0	
		S				100	0	0	100	0	0	67	33	0	
		P				100	0	0	100	0	0	78	22	0	
For States covered	C	42	6	52	46	11	42	45	10	44	33	8	59		
	S	48	18	29	52	26	15	58	20	15	43	22	27		
	P	45	12	40	49	18	30	51	15	31	37	13	47		

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 2016-17

S. No.	State	S E A S O N	A G R I C U L T U R E	Percentage of Villages for which								
				TRS Statement submitted				TRS Statement not Submitted				
				Without completing Girdawari		After completing Girdawari		Information regarding date of submission not known	Though Girdawari completed	Girdawari not completed	Information regarding TRS submission not available	
				By due date	After due date	By Due date	After due date					
1	2	3	4	5	6	7	8	9	10	11	12	
1	Andhra Pradesh	Kharif	C	100	0	0	0	0	0	0	0	0
			S	15	0	82	3	0	0	0	0	
			P	48	0	51	2	0	0	0	0	
		Rabi	C	100	0	0	0	0	0	0	0	0
			S	11	1	87	0	0	0	0	0	
			P	46	1	53	0	0	0	0	0	
2	Assam	E.Kh.	C	3	0	0	1	0	0	97	0	
			S	0	4	0	24	4	0	60	7	
			P	1	2	0	12	2	0	80	3	
		L.Kh.	C	2	0	0	0	0	0	0	98	0
			S	0	0	3	1	25	6	46	9	
			P	1	0	1	1	12	3	74	4	
		Rabi	C	0	0	0	0	0	0	0	100	0
			S	0	10	0	0	25	0	57	9	
			P	0	5	0	0	12	1	79	4	
		Summer	C	1	3	0	0	0	0	0	94	2
			S	4	8	0	0	27	0	47	8	
			P	2	6	0	0	13	0	72	5	
3	Bihar	Bhadhai	C	0	3	0	0	0	0	97	0	
			S	0	2	1	8	23	2	31	29	
			P	0	2	0	3	8	1	74	11	
		Aghani	C	2	0	0	0	0	0	0	98	0
			S	0	7	7	13	15	2	31	27	
			P	1	2	2	4	5	1	75	9	
		Rabi	C	0	0	0	0	0	0	0	100	0
			S	0	0	0	16	10	6	21	39	
			P	0	0	0	6	4	2	72	14	
		Summer	C	0	0	0	0	0	0	0	100	0
			S	0	1	1	19	8	0	53	17	
			P	0	0	0	7	3	0	82	6	
4	Chhattisgarh	Kharif	C	1	1	59	36	0	0	3	0	
			S	0	0	57	39	2	2	0	0	
			P	1	1	58	38	1	1	2	0	
		Rabi	C	1	0	54	38	1	5	1	0	
			S	5	0	46	43	3	2	0	0	
			P	3	0	50	41	2	4	1	0	



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	1	0	12	6	0	41	38		
			P	0	0	0	1	3	0	76	16		
		Rabi	C	0	0	0	0	0	0	1	99	1	
			S	11	0	19	0	1	1	1	43	25	
			P	4	0	7	0	1	1	1	76	10	
		Summer	C	0	0	0	0	0	0	0	100	0	
			S	22	0	11	1	3	0	0	53	10	
			P	8	0	4	1	1	0	0	83	4	
6	Haryana @	Kharif	C	0	0	91	0	0	8	1	0		
			S	0	0	100	0	0	0	0	0		
			P	0	0	95	0	0	4	1	0		
		Rabi	C	1	0	89	0	0	2	2	0	0	
			S	0	0	100	0	0	12	0	0	0	
			P	0	0	93	0	0	6	1	0	0	
		Summer	C	0	0	0	0	0	0	28	71	1	
			S										
			P	0	0	0	0	0	0	28	71	1	
7	Himachal Pradesh	Kharif	C	2	0	42	12	1	44	0	0		
			S	0	0	61	30	0	9	0	0		
			P	1	0	51	21	0	26	0	1		
		Rabi	C	2	0	77	2	0	19	0	0	0	
			S	0	0	88	2	0	8	0	1	1	
			P	1	0	83	2	0	13	0	1	1	
		8	Jammu & Kashmir	Kharif	C	0	0	21	23	0	49	7	0
					S	0	0	26	39	2	14	1	18
					P	0	0	25	34	1	26	3	12
Rabi	C			0	0	38	17	0	38	6	0	0	
	S			0	0	44	19	0	13	0	24	0	
	P			0	0	41	18	0	26	3	11	0	
9	Jharkhand			Bhadhai	C	0	0	0	0	0	0	100	0
					S	0	2	5	7	7	5	16	28
					P	0	1	2	3	3	2	65	12
		Aghani	C	2	0	0	0	0	0	0	98	0	
			S	0	7	4	35	4	0	20	26	0	
			P	1	4	2	17	2	0	61	12	0	
		Rabi	C	3	5	0	0	0	0	0	92	0	
			S	0	4	6	39	0	2	4	39	0	
			P	2	5	3	18	0	1	51	18	0	
		Summer	C	0	0	0	0	0	0	0	100	0	
			S	0	0	4	75	2	11	9	0	0	
			P	0	0	2	36	1	5	56	0	0	
10	Karnataka	Kharif	C	1	0	45	38	0	5	8	1		
			S	1	0	63	34	2	0	0	0		
			P	1	0	54	36	1	3	4	1		
		Rabi	C	1	1	32	32	1	10	15	0	0	
			S	2	0	56	36	4	0	0	1	0	
			P	2	0	44	34	2	5	8	1	0	
		Summer	C	1	1	37	25	0	14	21	0	0	
			S	0	0	58	34	4	0	0	3	0	
			P	1	1	47	29	2	7	10	1	0	

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
			S	0	0	100	0	0	0	0	0
			P	0	0	100	0	0	0	0	0
		Summer	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
12	Madhya Pradesh	Kharif	C	2	0	90	6	1	1	1	0
			S	1	0	82	7	4	0	0	4
			P	2	0	86	7	2	0	0	2
		Rabi	C	1	0	88	6	1	3	1	0
			S	4	0	79	6	8	0	0	2
			P	2	0	84	6	4	2	1	1
13	Maharashtra	Kharif	C	5	2	8	2	2	8	73	0
			S	2	0	37	21	8	0	8	24
			P	4	1	21	11	4	4	43	11
		Rabi	C	2	1	5	0	0	2	80	0
			S	2	0	37	11	11	2	4	31
			P	2	1	19	5	5	2	48	13
		Summer	C	3	1	2	0	1	7	84	0
			S	2	0	16	34	6	1	3	38
			P	3	1	7	13	3	5	54	15
14	Odisha	Autumn	C	0	0	95	5	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	97	3	0	0	0	0
		Winter	C	0	0	95	5	0	0	0	0
			S	1	0	99	0	0	0	0	0
			P	1	0	97	3	0	0	0	0
		Summer	C	0	0	98	1	0	0	0	0
			S	4	0	95	0	0	0	0	0
			P	2	0	97	0	0	0	0	0
15	Punjab	Kharif	C	0	0	10	22	0	66	2	0
			S	0	0	11	73	4	5	0	8
			P	0	0	10	46	2	38	1	4
		Rabi	C	1	0	11	39	1	46	2	0
			S	0	0	11	66	4	1	0	18
			P	0	0	11	53	2	23	1	9
16	Rajasthan	Kharif	C	0	0	73	26	0	0	0	1
			S	0	1	46	41	1	1	0	10
			P	0	1	59	33	0	1	0	6
		Rabi	C	0	0	93	6	0	0	0	1
			S	5	1	70	11	8	0	0	5
			P	3	0	82	8	4	0	0	3
17	Tamil Nadu	Phase-I	C	8	0	86	7	0	0	0	0
			S	5	0	83	7	0	0	0	0
			P	6	0	84	7	0	0	0	0
		Phase-II	C	3	1	91	2	0	2	0	0
			S	11	4	80	3	1	0	0	0
			P	7	2	86	3	0	1	0	0

1	2	3	4	5	6	7	8	9	10	11	12
		Phase-II	C	5	0	88	2	2	0	0	0
			S	11	0	83	6	0	0	0	0
			P	8	0	86	4	1	0	0	0
18	Telangana	Kharif	C	94	1	3	0	2	0	1	0
			S	14	3	68	3	6	0	0	0
			P	46	2	42	2	5	0	0	0
		Rabi	C	33	54	1	6	3	0	4	0
			S	11	3	71	6	8	0	0	0
			P	20	24	42	6	6	0	2	0
19	Uttar Pradesh	Kharif	C	1	1	30	17	0	14	37	0
			S	3	2	22	64	2	1	0	4
			P	1	1	29	25	0	12	31	1
		Rabi	C	0	0	24	30	1	12	30	0
			S	7	1	86	4	1	0	0	1
			P	1	0	35	26	1	10	25	0
		Summer	C	0	1	26	23	1	11	37	0
			S	0	0	16	62	10	1	3	6
			P	0	1	25	27	2	10	34	1
20	Uttrakhand	Kharif	C	0	1	45	41	0	9	5	0
			S	1	0	34	38	7	4	0	1
			P	0	0	39	40	3	7	2	0
		Rabi	C	0	0	51	36	0	10	2	0
			S	0	1	28	58	2	5	0	1
			P	0	0	40	47	1	8	1	0
		Summer	C	0	0	57	51	0	8	2	0
			S	0	0	45	55	0	0	0	0
			P	0	0	52	53	0	4	1	0
21	West Bengal	Aus	C	1	0	11	2	4	14	62	6
			S	0	0	14	22	1	3	10	27
			P	0	0	13	14	2	7	31	19
		Aman	C	0	0	7	0	0	15	73	3
			S	0	0	19	25	3	3	9	29
			P	0	0	14	15	2	8	35	18
		Rabi	C	1	0	13	5	2	10	62	6
			S	0	1	22	29	2	5	10	30
			P	1	1	18	19	2	7	32	20
		Summer	C	1	0	20	6	0	11	61	1
			S	2	2	16	39	2	1	7	30
			P	1	1	18	22	1	6	35	15
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	67	33	0	0	0	0
			P	0	0	83	17	0	0	0	0
FOR STATES COVERED		Early Kharif	C	2	1	43	3	1	3	47	1
			S	1	1	46	12	4	1	14	13
			P	2	1	44	7	2	2	31	7
		Late Kharif	C	9	0	38	11	0	9	32	0
			S	3	1	47	21	4	2	7	10
			P	6	1	44	15	2	6	20	5
		Rabi	C	6	2	39	11	1	7	32	0
			S	4	1	56	15	4	2	6	10
			P	5	1	47	13	2	5	20	5
		Summer	C	1	1	23	9	0	8	58	0
			S	3	1	31	22	5	4	21	12
			P	2	1	26	14	2	6	44	5
	All seasons		C	6	1	35	10	1	7	39	0
			S	3	1	47	18	4	2	10	11
			P	5	1	41	13	2	5	26	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 2016-17**

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	78	90	1	9
2	Assam	84	97	0	2
3	Bihar	99	69	3	27
4	Chhattisgarh	43	98	0	2
5	Gujarat	11	69	7	24
6	Haryana	31	100	0	0
7	Himachal Pradesh	55	95	4	1
8	Jammu & Kashmir	46	68	20	12
9	Jharkhand	84	47	1	52
10	Karnataka	56	72	5	23
11	Kerala	76	98	1	1
12	Madhya Pradesh	36	99	1	1
13	Maharashtra	26	85	5	10
14	Odisha	91	100	0	0
15	Punjab	55	99	1	0
16	Rajasthan	70	98	1	1
17	Tamil Nadu	98	91	4	5
18	Telangana	55	61	14	25
19	Uttar Pradesh	80	98	0	2
20	Uttarakhand	90	98	2	0
21	West Bengal	87	83	0	17
22	Puducherry	83	100	0	0
<b>For States Covered</b>		<b>62</b>	<b>88</b>	<b>3</b>	<b>9</b>

PERCENTAGE OF SURVEY NUMBERS IN WHICH ERRORS IN RECORDING CROP AREA WERE OBSERVED DURING 2016-17																		
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 <sub>0</sub>	e <sub>1</sub>	e <sub>2</sub>	e <sub>3</sub>	e <sub>0</sub>	e <sub>1</sub>	e <sub>2</sub>	e <sub>3</sub>	e <sub>0</sub>	e <sub>1</sub>	e <sub>2</sub>	e <sub>3</sub>	e <sub>0</sub>	e <sub>1</sub>	e <sub>2</sub>	e <sub>3</sub>
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	83	15	0	2				
		S					97	1	0	2	98	1	0	0				
		P					97	1	0	2	98	1	0	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	98	2	0	0	83	17	0	0	43	57	0	0	100	0	0	0
		P	98	2	0	0	83	17	0	0	43	57	0	0	100	0	0	0
4	Chhattisgarh	C					91	6	2	2	80	12	6	2				
		S					97	1	1	1	98	1	1	0				
		P					94	4	1	1	88	7	4	1				
5	Gujarat	C#																
		S					92	0	0	8	100	0	0	0	0	0	0	0
		P					92	0	0	8	100	0	0	0	0	0	0	0
6	Haryana *	C					84	8	6	1	89	6	2	2				
		S					100	0	0	0	100	0	0	0	0	0	0	0
		P					90	5	4	1	93	4	2	1				
7	Himachal Pradesh	C					85	6	6	2	81	8	8	3				
		S					80	1	1	18	81	1	2	16				
		P					83	4	3	10	81	4	5	10				
8	Jammu & Kashmir	C					89	5	2	5	90	5	0	5				
		S					98	0	0	1	100	0	0	0				
		P					95	2	1	2	95	2	1	3				
9	Jharkhand @	C																
		S	99	0	0	1	100	0	0	0	100	0	0	0				
		P	99	0	0	1	100	0	0	0	100	0	0	0				
10	Karnataka	C					54	19	6	20	57	22	7	14	44	40	13	3
		S					98	0	0	2	93	4	1	1	100	0	0	0
		P					75	10	3	11	82	10	3	5	77	17	1	1
11	Kerala	C	71	0	24	5	80	0	16	4					97	0	0	3
		S	75	1	15	9	79	0	13	7					94	0	0	6
		P	73	0	19	7	80	0	14	6					95	1	0	4
12	Madhya Pradesh	C					72	10	5	13	76	8	3	13				
		S					97	1	0	2	99	0	0	1				
		P					82	6	3	8	85	5	2	8				
13	Maharashtra	C					42	15	3	40	64	14	1	21	7	90	0	3
		S					87	2	1	10	92	1	1	6	97	2	0	1
		P					71	7	2	20	86	4	1	9	65	34	0	1

## 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	99	1	0	0	100	0	0	0					99	1	0	0
		S	100	0	0	0	100	0	0	0					98	2	0	0
		P	100	0	0	0	100	0	0	0					99	1	0	0
15	Punjab	C					89	5	4	2	91	4	3	2				
		S					100	0	0	0	99	1	1	0				
		P					94	2	2	1	95	2	2	1				
16	Rajasthan	C					74	10	4	12	71	13	7	10				
		S					99	1	0	0	98	0	0	1				
		P					86	5	2	7	84	7	3	5				
17	Tamil Nadu	C	63	24	4	9	74	13	10	3	65	32	2	1				
		S	63	26	4	6	83	11	4	2	76	21	2	1				
		P	63	25	4	7	78	12	7	2	73	24	2	1				
18	Telangana	C					84	6	0	10	0	0	0	0				
		S					99	0	0	0	99	0	0	0				
		P					99	1	0	1	97	2	0	0				
19	Uttar Pradesh	C					72	11	5	12	78	9	2	12	78	11	1	10
		S					81	7	3	9	100	0	0	0	95	4	0	1
		P					74	10	5	12	82	7	1	9	79	10	1	9
20	Uttarakhand	C					90	5	4	1	92	3	1	4	94	6	0	0
		S					98	1	1	0	99	1	0	0	96	2	2	0
		P					94	3	2	1	95	2	1	2	95	4	1	0
21	West Bengal	C	94	4	2	0	98	2	0	0	95	3	1	1	94	4	1	1
		S	70	18	9	4	89	4	4	3	56	20	12	11	72	15	8	6
		P	76	14	7	3	91	4	3	2	67	16	9	8	81	10	5	4
22	Puducherry	C					100	0	0	0	97	3	0	0	100	0	0	0
		S					95	0	0	5	99	1	0	0	100	0	0	0
		P					97	0	0	3	98	2	0	0	100	0	0	0
For States covered		C	70	15	9	6	72	10	5	13	79	9	3	9	90	5	1	4
		S	72	16	7	6	93	1	1	4	93	3	1	3	92	2	1	5
		P	71	15	8	6	83	5	3	8	86	6	2	6	91	4	1	3

Note:

1.  $e_0$  = No error2.  $e_1$  = Not reporting the crop which is actually grown in the survey numbers .3.  $e_2$  = Recording a crop as sown in the field when actually no crop has been sown in the field.4.  $e_3$  = Under (or) over assessment of the area under the crop sown in the field.

5. @ = Observations are not given due to insufficient data.

6. # = Observations do not reflect true picture of discrepancies in the State since primary worker's entries are not available for comparison for large number of samples.

7.\* = The Field work was not carried out for State sample during Summer season.

## IMPACT OF ERRORS IN RECORDING CROP AREA DURING 2016-17

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	C		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	NA	0.0000	0.0000	0.0000			0.0000		
	Pradesh	S		0.9958	0.9799	0.0000	0.0000	0.9842	0.0000		1.0005	0.9842	1.0874				0.9954	
		P		0.9958	0.9799	0.0000	0.0000	0.9842	0.0000		1.0005	0.9842	1.0874				0.9954	
2	Assam	C																
	@	S																
		P																
3	Bihar	C#	NR	NR	NR									NR		NR	NR	
		S		0.6603										0.4912		0.6590	0.0000	
		P		0.6603										0.4912		0.6590	0.0000	
4	Chhattisgarh	C		0.9949				1.1069						0.8311		1.0361	0.9080	
		S		1.0011				1.0000						0.8136		1.0202	1.0000	
		P		0.9978				1.0326						0.8184		1.0278	0.9826	
5	Gujarat	C#																
		S		1.0000				0.0000	1.0613		0.4224	0.2440		0.6643		0.9528		
		P		1.0000				0.0000	1.0613		0.3469	0.1995		0.6643		0.9528		
6	Haryana	C		1.0260				0.9604	0.0000		1.0083		0.7752	1.0000	0.8168	0.9481	0.9715	
		S		1.0000				0.9927	1.0000		0.9959		1.0000	1.0000	1.0000	1.0000	1.0000	
		P		1.0154				0.9741	1.0000		1.0031		0.8302	1.0000	0.8512	0.9563	0.9821	
7	Himachal Pradesh	C		1.1021					1.3780					1.0435	1.0000			
		S		1.0192					1.0018					0.9930	0.9117			
		P		1.0618					1.2474					1.0143	0.9702			
8	Jammu & Kashmir	C		1.0101					1.0173					1.0033				
		S		1.0000					1.0039					1.0000				
		P		1.0046					1.0088					1.0017				
9	Jharkhand	C																
	@	S	0.7595	1.0000					0.6305									
		P	0.7595	1.0000					0.6305									
10	Karnataka	C		0.9669	0.5941	0.9111	0.7124	0.9084	0.9004	0.9575	1.0518	0.8824	0.9997	0.8764		0.2311		
		S		1.0141	1.0000	1.0047	0.9981	1.0000	1.0015	0.9463	1.0103	1.0041	0.8723	0.9999		0.9980		
		P		0.9880	0.6611	0.9363	0.8905	0.9490	0.9379	0.9515	1.0375	0.9217	0.9952	0.9425		0.5771		
11	Kerala	C	0.9976	0.9995	1.0322													
		S	1.0020	1.1143	1.0000													
		P	1.0004	1.0557	1.0069													
12	Madhya Pradesh	C		1.0304		0.8304			1.0086		1.0583	1.0017		0.9892		1.0034	1.0049	
		S		0.9995		0.9025			0.9918		1.0000	1.1483		0.9674		0.9840	1.0409	
		P		1.0172		0.8494			1.0016		1.0455	1.1222		0.9793		0.9951	1.0240	
13	Maharashtra	C		0.9433		0.9102	0.3359	0.9463			0.9787	1.3786	0.7035	0.8563		0.9045		
		S		0.9407		0.9463	0.9271	0.9051			0.9747	0.9915	0.9135	0.9784		0.9496		
		P		0.9417		0.9315	0.8704	0.9146			0.9762	1.1170	0.8713	0.9443		0.9393		
14	Odisha	C	0.9798	0.9976	0.9785				0.9997									
		S	1.0000	1.0021	1.0000				1.0000									
		P	0.9912	1.0002	0.9831				0.9998									

## 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		1.0049					1.2132		1.1736		0.8264	0.9733	1.0000	1.0000	0.7724	
		S		1.0428					1.0000		0.9127		1.0011	0.9989	1.0000	0.0000	1.0106	
		P		1.0242					1.1370		1.0420		0.9396	0.9866	1.0000	1.0000	0.9101	
16	Rajasthan	C				0.9560		1.0116	0.8960		0.9272	0.0000	0.0000	0.9933	0.7896	0.9945	0.8267	
		S				0.9924		0.9792	0.9753		0.9625	0.0000	0.0000	0.9808	0.9998	0.9975	1.0225	
		P				0.9727		0.9956	0.9334		0.9437	0.0000	0.0000	0.9872	0.8825	0.9960	0.9217	
17	Tamil Nadu	C	1.0102	1.0479	0.5978	0.8599	0.0000	0.8000	1.0087	0.9123	1.2628	0.9538	0.9538					
		S	0.8778	0.8874	0.7275	0.9270	0.5836	1.0367	0.7552	0.8055	0.5071	0.9339	0.9339					
		P	0.9450	0.9817	0.6638	0.8958	0.5836	0.9444	0.8932	0.8706	0.6852	0.9413	1.0624					
18	Telangana	C	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8851	0.0000	0.0000					
		S	0.9729	0.0000	0.9895	1.0000	0.8669	0.0000	0.9983	0.0000	0.9860	1.0000	0.0000					
		P	0.9648	0.0000	0.9745	0.9908	0.7846	0.0000	0.9974	0.0000	0.9782	1.0000	0.0000					
19	Uttar Pradesh	C		0.9900		1.0625		0.9990	0.9763				0.9936	0.9751		1.0147	0.8826	
		S		0.9152		0.9941		0.9503	0.9371				0.8122	0.8849		0.9901	0.8956	
		P		0.9822		1.0391		0.9891	0.9709				0.9495	0.9609		1.0074	0.8852	
20	Uttara-khand	C		1.0443						1.0574			0.0000	1.0115				
		S		0.9803						0.6596			1.0202	0.7215				
		P		1.0184						0.8127			0.9815	0.9085				
21	West Bengal	C	0.7243	0.5429	0.9864									0.5678			0.9106	
		S	1.1727	0.9842	1.0686									1.1873			0.9101	
		P	0.8635	0.8974	1.0339									1.1270			0.9102	
22	Pudu-cherry *	C		1.0000	1.0000													
		S		1.0000	0.9655													
		P		1.0000	0.9806													
For states covered	C	0.9704	0.9899	0.8288	0.9206	0.5945	0.9941	0.9707	0.9551	1.0008	0.9054	0.9683	0.9857	0.5308	0.7246	0.8694		
	S	0.9563	0.9990	0.9911	0.9630	0.9457	0.9665	0.9971	0.9297	0.9714	0.9491	0.9206	0.9557	0.5289	0.9762	1.0055		
	P	0.9602	0.9945	0.9569	0.9417	0.8761	0.9802	0.9834	0.9418	0.9823	0.9407	0.9517	0.9655	0.8890	0.8706	0.9291		

Note:-

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



## DISCREPANCIES IN RECORDING IRRIGATION PARTICULARS DURING 2016-17

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
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
			S	50	48	99	1	0	0	1	0	0	1	1
			P	51	48	99	1	13	1	1	1	0	1	1
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0
			S	56	42	98	1	1	0	2	1	0	1	2
			P	55	43	98	1	1	0	2	1	0	1	2
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	31	67	98	2	0	0	2	0	0	2	2
			P^	31	67	98	2	0	0	2	0	0	2	2
		Aghani	C	NR										
			S	83	1	83	11	5	0	17	0	0	17	17
			P^	83	1	83	11	5	0	17	0	0	17	17
		Rabi	C	NR										
			S	30	12	43	50	7	0	57	0	0	57	57
			P^	30	12	43	50	7	0	57	0	0	57	57
		Summer	C	NR										
			S	25	0	25	0	75	0	75	75	0	0	75
			P^	25	0	25	0	75	0	75	75	0	0	75
4	Chhattisgarh	Kharif	C	68	21	89	7	2	2	11	1	4	6	11
			S	68	29	98	0	1	1	2	1	0	1	2
			P	68	25	93	4	1	2	7	1	2	3	7
		Rabi	C	27	52	79	10	4	6	21	1	7	12	21
			S	33	63	97	1	0	2	3	1	1	1	3
			P	30	57	87	6	2	5	13	1	4	7	13
5	Gujarat	Kharif	C	NR										
			S	30	70	100	0	0	0	0	0	0	0	0
			P^	30	70	100	0	0	0	0	0	0	0	0
		Rabi	C	NR										
			S	56	44	100	0	0	0	0	0	0	0	0
			P^	56	44	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	75	10	85	8	1	6	15	6	1	8	15	
			S	89	10	100	0	0	0	0	0	0	0	0	0
			P	81	10	91	5	1	4	9	3	1	5	9	
		Rabi	C	90	1	91	6	0	2	9	2	0	6	9	
			S	99	1	100	0	0	0	0	0	0	0	0	0
			P	93	1	95	4	0	2	5	2	0	4	5	
		Summer	C	0	0	0	0	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	0	0	0	0	0	0	0
7	Himachal Pradesh	Kharif	C	18	70	87	1	6	6	13	1	5	7	13	
			S	17	80	97	0	2	1	3	0	1	2	3	
			P	17	75	92	1	4	4	8	1	3	4	8	
		Rabi	C	20	65	84	2	6	8	16	0	8	7	16	
			S	12	84	96	0	1	2	4	0	2	1	4	
			P	16	75	90	1	4	5	9	0	5	4	9	
8	Jammu & Kashmir	Kharif	C	36	57	94	0	4	2	6	0	2	5	6	
			S	46	53	99	0	0	0	1	0	0	0	1	
			P	43	55	97	0	2	1	2	0	1	2	2	
		Rabi	C	49	46	95	2	2	0	5	0	0	5	5	
			S	60	40	100	0	0	0	0	0	0	0	0	
			P	54	43	98	1	1	1	2	0	1	2	2	
9	Jharkhand @	E. Kharif	C	NR											
			S	19	76	95	5	0	0	5	0	5	0	5	
			P^	19	76	95	5	0	0	5	0	5	0	5	
		L. Kharif	C	NR											
			S	7	93	100	0	0	0	0	0	0	0	0	
			P^	7	93	100	0	0	0	0	0	0	0	0	
		Rabi	C	NR											
			S	47	53	100	0	0	0	0	0	0	0	0	
			P^	47	53	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	
10	Karnataka	Kharif	C	24	49	74	9	11	6	26	2	5	19	26	
			S	29	70	99	0	0	0	1	0	0	0	1	
			P	27	59	86	5	6	3	14	1	3	10	14	
		Rabi	C	29	42	70	12	11	7	30	3	4	22	30	
			S	32	62	94	4	0	1	6	2	0	4	6	
			P	31	55	87	6	4	3	13	2	1	10	13	
		Summer	C	44	3	47	33	7	13	53	7	6	40	53	
			S	88	12	100	0	0	0	0	0	0	0	0	
			P	70	8	78	14	3	1	22	1	2	17	22	
11	Kerala	Autumn	C	10	65	75	0	0	25	25	0	25	0	25	
			S	16	69	85	0	0	14	0	0	14	1	15	
			P	13	67	81	0	0	19	19	1	19	0	19	
		Winter	C	23	62	84	0	0	16	16	0	16	0	16	
			S	24	62	87	0	0	13	13	0	13	0	13	
			P	23	62	85	0	0	14	15	0	14	0	15	
		Summer	C	18	82	100	0	0	0	0	0	0	0	0	
			S	24	76	100	0	0	0	0	0	0	0	0	
			P	21	79	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	8	76	84	1	9	5	16	1	5	10	16
			S	7	92	99	0	1	0	1	0	0	1	1
			P	7	83	90	1	6	3	10	1	3	6	10
		Rabi	C	79	9	88	7	2	3	12	2	1	8	12
			S	81	19	99	0	0	0	1	0	0	0	1
			P	79	13	93	5	1	2	7	2	1	5	7
13	Maharashtra	Kharif	C	17	65	82	5	10	3	18	1	3	15	18
			S	23	74	97	1	2	0	3	0	1	2	3
			P	21	71	92	2	5	1	8	0	1	7	8
		Rabi	C	64	21	85	9	6	1	15	1	0	14	15
			S	43	56	98	0	1	1	2	0	1	1	2
			P	47	49	95	2	2	1	5	0	0	4	5
		Summer	C	10	0	10	84	6	0	90	0	0	90	90
			S	81	16	97	2	1	0	3	0	1	2	3
			P	56	11	66	31	3	0	34	0	0	33	34
14	Odisha	Autumn	C	6	93	99	1	0	0	1	0	0	1	1
			S	5	94	100	0	0	0	0	0	0	0	0
			P	6	94	99	0	0	0	1	0	0	1	1
		Winter	C	30	70	100	0	0	0	0	0	0	0	0
			S	26	73	100	0	0	0	0	0	0	0	0
			P	28	71	100	0	0	0	0	0	0	0	0
		Summer	C	49	50	99	0	1	0	1	0	0	1	1
			S	80	17	97	0	3	0	3	0	0	3	3
			P	62	36	98	0	2	0	2	0	0	2	2
15	Punjab	Kharif	C	91	1	91	5	0	4	9	4	0	5	9
			S	99	1	99	0	0	0	1	0	0	0	1
			P	94	1	95	3	0	2	5	2	0	3	5
		Rabi	C	93	0	93	4	0	3	7	3	0	4	7
			S	98	0	99	1	0	1	1	1	0	1	1
			P	96	0	96	2	0	2	4	2	0	2	4
16	Rajasthan	Kharif	C	12	73	86	2	9	4	14	1	4	10	14
			S	15	84	99	0	1	0	1	0	0	1	1
			P	14	78	92	1	5	2	8	1	2	6	8
		Rabi	C	79	10	89	7	1	3	11	3	1	8	11
			S	84	15	99	1	0	0	1	0	0	1	1
			P	81	12	94	4	0	2	6	2	1	4	6
17	Tamil Nadu	Phase-I	C	46	25	71	10	15	4	29	3	2	24	29
			S	38	29	67	11	18	4	33	2	3	28	33
			P	42	27	69	10	16	4	31	2	3	26	31
		Phase-II	C	51	26	76	8	6	10	24	6	4	13	24
			S	57	27	84	9	3	4	16	2	3	11	16
			P	54	26	80	8	5	7	20	4	4	12	20
Phase-III	C	35	31	66	25	8	2	34	0	2	32	34		
	S	58	19	77	13	8	2	23	2	1	20	23		
	P	51	23	74	17	8	2	26	1	1	24	26		
18	Telangana	Kharif	C	20	70	90	0	10	0	10	0	0	10	10
			S	43	56	99	0	0	0	1	0	0	0	1
			P	43	56	99	0	0	0	1	0	0	1	1
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0
			S	90	9	99	0	0	0	1	0	0	1	1
			P	89	9	97	2	0	0	3	0	0	3	3
19	Uttar Pradesh	Kharif	C	52	29	81	9	5	5	19	4	4	11	19
			S	62	29	90	3	3	3	9	2	1	6	10
			P	53	29	83	8	5	5	17	3	4	10	17
		Rabi	C	83	5	89	9	1	2	11	2	0	9	11
			S	81	8	89	8	2	1	11	1	0	9	11
			P	83	6	89	8	1	2	11	2	0	9	11
Summer	C	83	5	87	10	0	2	13	2	0	11	13		
	S	94	2	96	4	0	0	4	0	0	4	4		
	P	84	4	88	10	0	2	12	2	0	10	12		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
20	Uttarakhand	Kharif	C	49	42	91	2	4	4	9	1	3	5	9	
			S	57	41	98	0	1	1	2	0	1	1	2	
			P	52	42	94	1	2	2	6	0	2	3	6	
		Rabi	C	68	28	96	2	1	1	4	0	1	3	4	4
			S	74	25	99	1	0	0	1	0	0	1	1	1
			P	70	27	97	1	1	1	3	0	1	2	3	3
		Summer	C	85	9	94	6	0	0	6	0	0	6	6	6
			S	96	0	96	2	0	2	4	2	0	2	4	4
			P	90	5	95	4	0	1	5	1	1	4	5	5
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	58	42	100	0	0	0	0	0	0	0	0	
			S	31	69	100	0	0	0	0	0	0	0	0	
			P	44	56	100	0	0	0	0	0	0	0	0	
		Rabi-I	C	95	2	97	3	0	0	3	0	0	3	3	
			S	82	16	99	0	1	0	1	0	0	1	1	
			P	88	9	98	2	1	0	2	0	0	2	2	
		Rabi-II	C	97	3	100	0	0	0	0	0	0	0	0	
			S	57	43	100	0	0	0	0	0	0	0	0	
			P	73	27	100	0	0	0	0	0	0	0	0	
FOR STATES COVERED	Early Kharif	C	30	44	74	6	11	9	26	2	8	16	26		
		S	31	46	77	7	9	7	19	2	5	16	23		
		P	31	45	76	6	10	8	24	2	6	16	24		
	Late Kharif	C	34	50	84	5	6	5	16	2	4	10	16		
		S	37	60	97	1	1	1	3	0	1	1	3		
		P	36	55	91	3	3	3	9	1	2	5	9		
	Rabi	C	75	14	89	7	2	3	11	2	1	8	11		
		S	67	28	95	3	1	1	5	1	0	3	5		
		P	71	21	92	5	1	2	8	1	1	6	8		
	Summer	C	30	63	94	5	1	1	6	0	0	6	6		
		S	38	59	96	2	1	1	4	1	0	2	4		
		P	34	61	95	3	1	1	5	1	0	4	5		
	All seasons	C	45	41	86	5	5	4	14	2	3	9	14		
		S	45	50	95	2	2	2	5	1	1	3	5		
		P	45	45	91	4	3	3	9	1	2	6	9		

## Note:

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

## DISCREPANCIES IN RECORDING SEED VARIETY PARTICULARS DURING 2016-17

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	78	20	99	1	0	0	1	0	0	1	1		
			P	79	20	99	1	4	1	1	2	0	1	1		
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0	0	
			S	80	19	99	0	1	0	1	0	0	1	1		
			P	78	20	98	1	1	0	2	0	0	1	2		
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	17	81	98	2	0	0	2	0	0	2	2		
			P^	17	81	98	2	0	0	2	0	0	2	2		
		Aghani	C													
			S	71	13	83	13	3	0	17	0	0	17	17		
			P^	71	13	83	13	3	0	17	0	0	17	17		
		Rabi	C													
			S	28	11	39	28	8	0	58	1	0	57	58		
			P^	28	11	39	28	8	0	58	1	0	57	58		
		Summer	C													
			S	0	25	25	0	75	0	75	75	0	0	75		
			P^	0	25	25	0	75	0	75	75	0	0	75		
		4	Chhattisgarh	Kharif	C	68	21	89	7	2	2	11	1	4	6	11
					S	68	29	98	0	1	1	2	1	0	1	2
					P	68	25	93	4	1	2	7	1	2	3	7
				Rabi	C	27	51	78	10	5	7	22	0	10	12	22
					S	41	56	97	1	0	2	3	2	0	1	3
					P	34	53	87	6	3	1	13	1	1	7	13
5	Gujarat			Kharif	C											
					S	30	70	100	0	0	0	0	0	0	0	0
					P^	30	70	100	0	0	0	0	0	0	0	0
		Rabi	C													
			S	24	76	100	0	0	0	0	0	0	0	0		
			P^	24	76	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	82	4	85	8	0	6	15	6	0	8	15
					S	90	10	100	0	0	0	0	0	0	0	0
					P	85	6	91	5	1	4	9	4	0	5	9
Rabi	C			90	1	91	6	0	2	9	2	0	6	9		
	S			99	1	100	0	0	0	0	0	0	0	0		
	P			93	1	94	4	0	2	6	1	0	4	6		
Summer	C			0	0	0	0	0	0	0	0	0	0	0		
	S			0	0	0	0	0	0	0	0	0	0	0		
	P			0	0	0	0	0	0	0	0	0	0	0		
7	Himachal Pradesh	Kharif	C	35	41	76	14	4	6	24	3	14	7	24		
			S	54	42	96	3	0	1	4	1	2	2	4		
			P	44	42	86	9	2	4	14	2	8	4	14		
		Rabi	C	39	34	73	15	4	8	27	2	17	7	27		
			S	64	32	96	1	0	2	4	1	1	1	4		
			P	52	33	85	8	2	5	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	37	52	89	5	4	2	11	0	6	5	11		
			S	41	58	99	0	0	0	1	0	0	0	1		
			P	40	56	96	2	2	1	4	0	2	2	4		
		Rabi	C	41	50	91	5	4	0	9	0	4	5	9		
			S	52	48	100	0	0	0	0	0	0	0	0		
			P	47	49	96	2	2	1	4	0	2	2	4		
9	Jharkhand @	Early Kharif	C	NR												
			S	19	76	95	5	0	0	5	0	5	0	5		
			P^	19	76	95	5	0	0	5	0	5	0	5		
		Late Kharif	C	NR												
			S	30	70	100	0	0	0	0	0	0	0	0		
			P^	30	70	100	0	0	0	0	0	0	0	0		
		Rabi	C	NR												
			S	42	58	100	0	0	0	0	0	0	0	0		
			P^	42	58	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		
10	Karnataka	Kharif	C	65	9	74	15	5	6	26	5	1	19	26		
			S	81	18	99	0	0	0	1	0	0	0	1		
			P	72	14	86	8	3	3	14	3	1	10	14		
		Rabi	C	59	11	70	18	5	7	30	6	2	22	30		
			S	74	20	94	4	0	1	6	1	0	4	6		
			P	69	17	86	9	2	3	13	3	1	10	13		
		Summer	C	45	2	47	39	1	13	53	10	3	40	53		
			S	71	29	100	0	0	0	0	0	0	0	0		
			P	60	18	78	16	1	1	22	4	1	17	22		
		11	Kerala	Autumn	C	9	66	75	0	0	25	25	0	25	0	25
					S	11	74	85	0	1	14	15	0	14	1	15
					P	10	70	80	0	0	19	20	1	19	0	20
Winter	C			12	72	84	0	0	16	16	0	16	0	16		
	S			9	78	87	0	0	13	13	0	13	0	13		
	P			10	75	85	0	0	14	15	0	14	0	15		
Summer	C			2	97	100	0	0	0	0	0	0	0	0		
	S			3	97	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	50	83	4	7	5	16	1	6	10	17
					S	47	52	99	0	1	0	1	0	0	1	1
					P	39	51	90	2	5	3	10	1	3	6	10
		Rabi	C	50	38	88	3	6	3	12	1	3	8	12		
			S	61	38	99	0	0	0	1	0	0	0	1		
			P	54	38	93	2	4	2	7	1	2	5	7		
13	Maharashtra	Kharif	C	70	12	82	12	3	3	18	2	1	15	18		
			S	77	19	96	3	1	0	4	0	1	2	4		
			P	75	17	91	6	1	1	9	1	1	7	9		
		Rabi	C	80	5	85	14	0	1	15	0	0	14	15		
			S	70	27	97	1	1	1	3	1	1	1	3		
			P	72	23	95	4	0	1	5	1	1	4	5		
		Summer	C	9	1	10	82	7	0	90	0	0	90	90		
			S	76	22	98	2	0	0	2	0	1	2	2		
			P	52	15	66	31	3	0	34	0	0	33	34		
		14	Odisha	Autumn	C	59	40	99	1	0	0	1	0	0	1	1
					S	49	51	100	0	0	0	0	0	0	0	0
					P	53	46	99	0	0	0	1	0	0	1	1
Winter	C			77	23	100	0	0	0	0	0	0	0	0		
	S			73	27	100	0	0	0	0	0	0	0	0		
	P			75	25	100	0	0	0	0	0	0	0	0		
Summer	C			47	52	99	0	1	0	1	0	0	1	1		
	S			68	29	97	0	3	0	3	0	0	3	3		
	P			56	43	98	0	2	0	2	0	0	2	2		
15	Punjab			Kharif	C	50	5	55	41	1	4	45	2	39	5	45
					S	124	1	125	1	0	0	1	0	0	1	1
					P	81	3	84	24	0	3	27	1	23	3	27
		Rabi	C	44	5	49	48	0	3	51	1	46	4	51		
			S	98	0	99	1	0	1	1	1	0	1	1		
			P	71	3	74	25	1	2	26	1	23	2	26		
16	Rajasthan	Kharif	C	46	38	84	8	4	4	16	3	4	10	16		
			S	45	53	98	1	0	0	2	0	1	1	2		
			P	46	45	90	5	2	2	10	2	3	6	10		
		Rabi	C	63	25	88	7	2	3	12	2	2	8	12		
			S	62	35	97	3	0	0	3	0	2	1	3		
			P	62	30	93	5	1	2	7	1	2	4	7		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
17	Tamil Nadu	Phase-I	C	45	20	65	16	14	4	35	3	8	24	35		
			S	55	12	67	13	16	4	33	4	1	29	33		
			P	50	16	66	15	15	4	34	3	4	26	34		
		Phase-II	C	58	9	67	21	2	10	33	7	12	13	33		
			S	71	14	85	8	3	4	15	3	1	11	15		
			P	64	12	76	15	2	7	24	5	7	12	24		
		Phase-III	C	39	22	61	30	8	1	39	5	1	33	39		
			S	65	12	77	18	3	2	23	2	0	21	23		
			P	58	15	72	22	4	2	28	3	0	24	28		
18	Telangana	Kharif	C	60	30	90	4	6	0	10	0	0	10	10		
			S	89	10	99	0	0	0	1	0	0	0	1		
			P	88	11	99	1	0	0	1	0	0	1	1		
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0	0	
			S	94	5	99	1	0	0	1	0	0	1	1		
			P	93	5	97	3	0	0	3	0	0	3	3		
		19	Uttar Pradesh	Kharif	C	68	16	84	8	3	5	16	4	1	11	16
					S	72	18	91	4	2	3	9	2	1	6	9
					P	69	16	85	7	3	5	15	4	1	10	15
Rabi	C			80	9	89	8	1	2	11	2	0	9	11		
	S			78	12	89	7	2	1	11	1	0	9	11		
	P			79	9	89	8	2	2	11	2	0	9	11		
Zaid Rabi	C			77	11	88	10	1	2	13	2	0	11	13		
	S			85	11	96	4	0	0	4	0	0	4	4		
	P			78	11	88	9	1	2	12	2	0	10	12		
20	Uttarakhand	Kharif	C	40	51	91	1	7	4	12	0	3	5	9		
			S	59	39	98	0	0	1	2	0	1	1	2		
			P	49	45	94	1	4	2	7	0	2	3	6		
		Rabi	C	52	44	96	2	1	1	4	0	1	3	4		
			S	68	31	99	1	0	0	1	0	0	1	1		
			P	60	38	97	1	1	1	3	0	1	2	3		
		Summer	C	57	36	83	3	3	0	7	1	0	6	7		
			S	86	9	96	2	0	2	4	2	0	2	4		
			P	70	25	94	3	2	1	6	1	0	4	6		
21	West Bengal	Aus	C	14	47	61	0	37	2	39	0	2	37	39		
			S	58	21	79	7	4	10	21	9	1	11	21		
			P	47	28	74	5	12	8	26	7	1	17	26		
		Aman	C	8	90	98	0	2	0	2	0	0	2	2		
			S	70	22	91	4	1	4	9	2	3	4	9		
			P	55	37	93	3	2	3	7	2	2	3	7		
		Rabi	C	9	88	96	0	3	1	4	0	1	3	4		
			S	50	17	67	13	8	12	33	7	6	20	33		
			P	39	36	75	9	6	9	25	5	4	15	25		
Summer	C	4	92	96	0	3	1	4	0	1	3	4				
	S	63	15	78	11	3	8	22	6	2	14	22				
	P	39	46	85	6	3	5	15	4	2	9	15				
22	Puducherry	Kharif	C	73	27	100	0	0	0	0	0	0	0	0		
			S	31	69	100	0	0	0	0	0	0	0	0		
			P	50	50	100	0	0	0	0	0	0	0	0		
		Rabi-I	C	95	2	97	3	0	0	3	0	0	3	3		
			S	82	16	99	0	1	0	1	0	0	1	1		
			P	88	9	98	2	1	0	2	0	0	2	2		
		Rabi-II	C	97	3	100	0	0	0	0	0	0	0	0		
			S	57	43	100	0	0	0	0	0	0	0	0		
			P	73	27	100	0	0	0	0	0	0	0	0		
FOR STATES COVERED	Early Kharif	C	35	36	71	10	10	9	29	2	11	16	29			
		S	43	34	77	8	8	7	23	3	4	16	23			
		P	39	35	74	9	9	8	26	3	7	16	26			
	Late Kharif	C	55	26	81	10	3	5	19	3	6	10	19			
		S	69	29	98	1	1	1	3	0	1	1	3			
		P	63	28	90	6	2	3	10	2	3	5	10			
	Rabi	C	63	21	83	11	2	3	17	2	7	8	17			
		S	72	23	95	3	1	1	5	1	1	3	5			
		P	68	22	89	7	2	2	11	1	4	6	11			
	Summer	C	18	75	93	5	1	1	7	1	0	6	7			
		S	20	76	96	2	1	1	4	1	0	2	4			
		P	19	76	95	3	1	1	5	1	0	4	5			
	All seasons	C	52	31	83	10	3	4	17	2	6	9	17			
		S	62	33	95	2	1	2	5	1	1	3	5			
		P	57	32	89	6	2	3	11	1	3	6	11			

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 2016-17 (At Harvest stage only)**

Sl. No.	State	A G E N C Y	Kharif				Rabi/ Summer				Grand Total of Planning	
			Early Kharif		Late Kharif		Rabi		Summer			
			No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response		
1	2	3	4	5	6	7	8	9	10	11	12	
1	Andhra	C			500	99	180	97				680
	Pradesh	S			500	100	180	96				680
		P			1000	99	360	96				1360
2	Assam	C	170	75	120	98	190	87	40	100		520
		S	170	58	120	90	190	75	40	80		520
		P	340	66	240	94	380	81	80	90		1040
3	Bihar	C	120	85	240	79	350	80	40	80		750
		S	120	30	240	30	350	25	40	10		750
		P	240	58	480	54	700	53	80	45		1500
4	Chhattisgarh	C			200	100	150	97				350
		S			200	95	150	95				350
		P			400	97	300	96				700
5	Gujarat	C			750	79	240	78				990
		S			750	42	240	32				990
		P			1500	60	480	55				1980
6	Haryana	C			320	99	380	99				700
		S			320	71	380	53				700
		P			640	85	760	76				1400
7	Himachal Pradesh	C			150	83	150	89				300
		S			150	81	150	83				300
		P			300	82	300	86				600
8	Jammu & Kashmir	C			160	45	120	95				280
		S			160	16	120	33				280
		P			320	31	240	64				560
9	Jharkhand	C	40	100	80	95	100	100				220
		S	40	45	80	35	100	38				220
		P	80	73	160	65	200	69				440
10	Karnataka	C			620	5	200	12	80	35		900
		S			620	13	200	86	80	74		900
		P			1240	9	400	49	160	54		1800
11	Kerala	C	100	100	100	100			320	100		520
		S	100	100	100	99			320	100		520
		P	200	100	200	100			640	100		1040
12	Madhya Pradesh	C			628	96	524	96				1152
		S			628	51	524	45				1152
		P			1256	74	1048	71				2304
13	Maharashtra	C			850	70	450	78				1300
		S			850	45	450	46				1300
		P			1700	57	900	62				2600
14	Odisha	C	260	98	390	98			180	99		830
		S	260	99	390	98			180	97		830
		P	520	98	780	98			360	98		1660
15	Punjab	C			380	99	320	100				700
		S			380	91	320	91				700
		P			760	95	640	96				1400



1	2	3	4	5	6	7	8	9	10	11	12
16	Rajasthan	C			520	84	420	93			940
		S			520	70	420	87			940
		P			1040	77	840	90			1880
17	Tamil Nadu #	C	60	95	120	99	560	93	40	100	780
		S	60	100	120	98	560	93	40	100	780
		P	120	98	240	99	1120	93	80	100	1560
18	Telangana	C			360	95	120	93			480
		S			360	46	120	17			480
		P			720	71	240	55			960
19	Uttar Pradesh	C			1380	96	840	97	80	93	2300
		S			1380	15	840	17	80	0	2300
		P			2760	56	1680	57	160	46	4600
20	Uttarakhand	C			130	92	60	83			190
		S			130	68	60	83			190
		P			260	80	120	83			380
21	West Bengal	C	180	97	160	100	220	99	190	86	750
		S	180	89	160	80	220	64	190	59	750
		P	360	93	320	90	440	81	380	73	1500
22	Puducherry	C			10	100	10	100	10	100	30
		S			10	100	10	100	10	100	30
		P			20	100	20	100	20	100	60
For States		C	930	92	8168	83	5584	89	980	90	15662
covered		S	930	79	8168	52	5584	57	980	77	15662
		P	1860	85	16336	68	11168	73	1960	83	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 2016-17**

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
<b>Paddy-Autumn</b>						
1	Assam	C	H	20.29	5.80	34.78
		S		23.21	3.57	33.93
		P		21.60	4.80	34.40
		C	T	14.00	4.00	24.00
		S		23.21	3.57	33.93
		P		17.31	3.85	27.56
2	Bihar	C	H	5.56	11.11	66.67
		S		22.22	11.11	66.67
		P		11.11	11.11	66.67
		C	T	5.00	10.00	60.00
		S		22.22	11.11	66.67
		P		10.34	10.34	62.07
3	Jharkhand	C	H	5.00	0.00	55.00
		S		0.00	0.00	50.00
		P		14.29	17.86	46.43
		C	T	5.00	0.00	55.00
		S		0.00	0.00	44.44
		P		14.29	17.86	46.43
4	Kerala	C	H	38.00	81.00	76.00
		S		38.00	91.00	61.00
		P		38.00	86.00	68.50
		C	T	38.00	81.00	76.00
		S		38.00	91.00	61.00
		P		38.00	86.00	68.50
5	Odisha	C	H	4.67	88.32	83.64
		S		8.64	86.36	81.36
		P		6.68	87.33	82.49
		C	T	4.59	86.70	82.11
		S		8.64	86.36	81.36
		P		6.62	86.53	81.74
6	Tamil Nadu	C	H	100.00	100.00	96.67
		S		100.00	100.00	95.00
		P		100.00	100.00	95.83
		C	T	100.00	100.00	96.67
		S		100.00	100.00	95.00
		P		100.00	100.00	95.83
7	West Bengal	C	H	77.66	94.68	92.55
		S		82.29	95.83	92.71
		P		80.00	95.26	92.63
		C	T	76.04	92.71	90.63
		S		82.29	95.83	92.71
		P		79.17	94.27	91.67
<b>Paddy-Winter</b>						
1	Andhra Pradesh	C	H	95.53	100.00	99.44
		S		94.38	98.88	97.75
		P		94.96	99.44	98.60
		C	T	95.00	99.44	98.89
		S		93.33	97.78	96.67
		P		94.17	98.61	97.78

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	1.69	4.24	26.27
		S		0.00	0.00	0.00
		P		0.88	7.96	28.32
		C	T	1.67	4.17	25.83
		S		0.00	0.00	0.00
		P		0.88	7.89	28.07
3	Bihar	C	H	62.19	59.70	95.02
		S		70.11	56.32	90.80
		P		64.58	58.68	93.75
		C	T	52.08	50.00	79.58
		S		67.78	54.44	87.78
		P		56.36	51.21	81.82
4	Chhattisgarh	C	H	50.00	82.50	90.00
		S		48.05	85.71	83.12
		P		49.04	84.08	86.62
		C	T	50.00	82.50	90.00
		S		46.84	83.54	81.01
		P		48.43	83.02	85.53
5	Gujarat	C	H	60.00	65.71	100.00
		S		33.33	39.39	98.48
		P		47.06	52.94	99.26
		C	T	52.50	57.50	87.50
		S		33.33	39.39	98.48
		P		43.84	49.32	92.47
6	Haryana	C	H	100.00	100.00	100.00
		S		100.00	95.31	100.00
		P		100.00	98.05	100.00
		C	T	100.00	100.00	100.00
		S		100.00	95.31	100.00
		P		100.00	98.05	100.00
7	Himachal Pradesh	C	H	70.45	52.27	63.64
		S		55.56	37.04	66.67
		P		62.24	43.88	65.31
		C	T	53.45	39.66	48.28
		S		51.72	34.48	62.07
		P		52.59	37.07	55.17
8	Jammu & Kashmir	C	H	96.67	73.33	90.00
		S		84.21	36.84	94.74
		P		89.71	52.94	92.65
		C	T	41.43	31.43	38.57
		S		84.21	36.84	94.74
		P		56.48	33.33	58.33
9	Jharkhand	C	H	5.00	0.00	55.00
		S		0.00	0.00	50.00
		P		2.78	0.00	52.78
		C	T	5.00	0.00	55.00
		S		0.00	0.00	44.44
		P		2.63	0.00	50.00
10	Karnataka	C	H	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0	0.00

1	2	3	4	5	6	7
11	Kerala	C	H	74.00	68.00	78.00
		S		75.76	76.77	74.75
		P		74.87	72.36	76.38
		C	T	74.00	68.00	78.00
		S		75.00	76.00	74.00
		P		74.50	72.00	76.00
12	Madhya Pradesh	C	H	34.00	62.00	78.00
		S		27.03	67.57	78.38
		P		31.03	64.37	78.16
		C	T	34.00	62.00	78.00
		S		27.03	67.57	78.38
		P		31.03	64.37	78.16
13	Maharashtra	C	H	26.98	71.43	88.89
		S		32.14	55.36	89.29
		P		29.41	63.87	89.08
		C	T	20.73	54.88	68.29
		S		28.13	48.44	78.13
		P		23.97	52.05	72.60
14	Odisha	C	H	31.58	94.74	87.59
		S		29.17	89.77	90.91
		P		30.38	92.26	89.25
		C	T	31.11	93.33	86.30
		S		28.52	87.78	88.89
		P		29.81	90.56	87.59
15	Punjab	C	H	98.94	97.34	100.00
		S		100.00	100.00	100.00
		P		99.46	98.65	100.00
		C	T	97.89	96.32	98.95
		S		98.91	98.91	98.91
		P		98.40	97.59	98.93
16	Tamil Nadu	C	H	84.87	95.80	80.67
		S		84.75	96.61	95.76
		P		84.81	96.20	88.19
		C	T	84.87	95.80	80.67
		S		84.75	96.61	95.76
		P		84.81	96.20	88.19
17	Telangana	C	H	87.76	100.00	100.00
		S		91.18	98.53	100.00
		P		89.16	99.40	100.00
		C	T	87.76	100.00	100.00
		S		91.18	98.53	100.00
		P		89.16	99.40	100.00
18	Uttar Pradesh	C	H	96.95	90.24	99.54
		S		93.27	78.85	99.04
		P		96.45	88.68	99.47
		C	T	96.95	90.24	99.54
		S		93.27	78.85	99.04
		P		96.45	88.68	99.47
19	Uttarakhand	C	H	71.11	40.00	58.00
		S		72.00	46.00	64.00
		P		71.58	43.16	63.16
		C	T	71.11	40.00	58.00
		S		72.00	46.00	64.00
		P		72	43.16	63.16

1	2	3	4	5	6	7
20	West Bengal	C	H	53.75	93.13	95.63
		S		54.69	85.69	85.16
		P		54.17	89.93	90.97
		C	T	53.75	93.13	95.63
		S		54.69	85.69	85.16
		P		54.17	89.93	90.97
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
<b>Paddy-Rabi/Summer</b>						
1	Andhra Pradesh	C	H	100.00	100.00	97.78
		S		100.00	96.34	98.78
		P		100.00	98.26	98.26
		C	T	100.00	100.00	97.78
		S		95.35	91.86	94.19
		P		97.73	96.02	96.02
2	Assam	C	H	50.00	30.00	80.00
		S		58.82	32.35	100.00
		P		54.05	31.08	89.19
		C	T	50.00	30.00	80.00
		S		58.82	32.35	100.00
		P		54.05	31.08	89.19
3	Bihar	C	H	100.00	62.50	100.00
		S		50.00	0.00	0.00
		P		94.44	55.56	88.89
		C	T	80.00	50.00	80.00
		S		50.00	0.00	0.00
		P		77.27	45.45	72.73
4	Karnataka	C	H	100.00	100.00	93.75
		S		92.59	88.89	92.59
		P		95.35	93.02	93.02
		C	T	42.11	42.11	39.47
		S		78.13	75.00	78.13
		P		58.57	57.14	57.14
5	Kerala	C	H	96.97	91.92	83.84
		S		89.00	95.00	91.00
		P		92.96	93.47	87.44
		C	T	96.00	91.00	83.00
		S		89.00	95.00	91.00
		P		92.50	93.00	87.00
6	Odisha	C	H	95.65	94.93	94.20
		S		100.00	100.00	98.51
		P		97.79	97.43	96.32
		C	T	94.29	93.57	92.86
		S		97.10	97.10	95.65
		P		95.68	95.32	94.24
7	Tamil Nadu	C	H	100.00	100.00	100.00
		S		100.00	97.50	92.50
		P		100.00	98.75	96.25
		C	T	100.00	100.00	100.00
		S		100.00	97.50	92.50
		P		100.00	98.75	96.25

1	2	3	4	5	6	7
8	Telangana	C	H	94.74	96.05	98.68
		S		93.75	50.00	100.00
		P		94.57	88.04	98.91
		C	T	94.74	96.05	98.68
		S		93.75	50.00	100.00
		P		94.57	88.04	98.91
9	Puducherry Rabi-I	C	H	100.00	100.00	80.00
		S		100.00	100.00	100.00
		P		100.00	100.00	90.00
		C	T	100.00	100.00	80.00
		S		100.00	100.00	100.00
		P		100.00	100.00	90.00
	Rabi-II	C	H	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
10	West Bengal	C	H	96.77	95.16	98.39
		S		100.00	95.15	94.87
		P		98.02	95.54	97.03
		C	T	95.24	93.65	96.83
		S		100.00	95.15	94.87
		P		97.06	94.61	96.08
<b>Jowar- Kharif</b>						
1	Karnataka	C	H	0.00	0.00	0.00
		S		33.33	100.00	100.00
		P		33.33	100.00	100.00
		C	T	0.00	0.00	0.00
		S		33.33	100.00	100.00
		P		33.33	100.00	100.00
2	Madhya Pradesh	C	H	0.00	41.49	63.83
		S		0.00	17.65	47.06
		P		0.00	35.16	59.38
		C	T	0.00	40.63	62.50
		S		0.00	17.65	47.06
		P		0.00	34.62	58.46
3	Maharashtra	C	H	3.13	93.75	93.75
		S		0.00	87.50	78.13
		P		2.08	91.67	88.54
		C	T	2.56	76.92	76.92
		S		0.00	63.64	56.82
		P		1.64	72.13	69.67
4	Rajasthan	C	H	0.00	8.00	56.00
		S		0.00	25.00	33.33
		P		0.00	16.33	44.90
		C	T	0.00	6.67	46.67
		S		0.00	20.00	26.67
		P		0.00	13.33	36.67
5	Tamil Nadu (Whole Year)	C	H	16.95	86.44	27.12
		S		13.79	82.76	37.93
		P		15.38	84.62	32.48
		C	T	16.95	86.44	27.12
		S		13.79	82.76	37.93
		P		15.38	84.62	32.48

1	2	3	4	5	6	7
6	Telangana	C	H	0.00	32.00	90.00
		S		0.00	50.00	100.00
		P		0.00	33.33	90.74
		C	T	0.00	32.00	90.00
		S		0.00	50.00	100.00
		P		0.00	33.33	90.74
7	Uttar Pradesh	C	H	10.00	0.00	10.00
		S		0.00	0.00	0.00
		P		8.70	0.00	8.70
		C	T	10.00	0.00	10.00
		S		0.00	0.00	0.00
		P		8.70	0.00	8.70
<b>Jowar-Rabi</b>						
1	Karnataka	C	H	8.33	16.67	37.50
		S		21.21	68.18	34.85
		P		17.78	54.44	35.56
		C	T	2.94	5.88	13.24
		S		21.21	68.18	34.85
		P		26.09	81.16	86.23
2	Maharashtra	C	H	41.84	64.54	62.41
		S		47.17	45.28	72.64
		P		44.13	56.28	66.80
		C	T	39.33	60.67	58.67
		S		46.30	44.44	71.30
		P		42.25	53.88	63.95
3	Telangana	C	H	16.67	11.11	50.00
		S		50.00	50.00	100.00
		P		20.00	15.00	55.00
		C	T	16.67	11.11	50.00
		S		50.00	50.00	100.00
		P		20.00	15.00	55.00
<b>BAJRA</b>						
1	Andhra Pradesh	C	H	0.00	50.00	50.00
		S		25.00	50.00	65.00
		P		12.50	50.00	57.50
		C	T	0.00	50.00	50.00
		S		25.00	50.00	65.00
		P		12.50	50.00	57.50
2	Gujarat	C	H	28.41	94.32	87.50
		S		18.18	65.15	80.30
		P		24.03	81.82	84.42
		C	T	22.73	75.45	70.00
		S		18.18	65.15	80.30
		P		21.02	71.59	73.86
3	Haryana	C	H	70.00	94.00	91.00
		S		86.75	93.98	86.75
		P		77.60	93.99	89.07
		C	T	67.31	90.38	87.50
		S		85.71	92.86	85.71
		P		75.53	91.49	86.70
4	Karnataka	C	H	0.00	0.00	0.00
		S		0.00	100.00	100.00
		P		0.00	100.00	100.00
		C	T	0.00	0.00	0.00
		S		0.00	100.00	100.00
		P		0.00	100.00	100.00

1	2	3	4	5	6	7
5	Maharashtra	C	H	26.92	90.38	76.92
		S		19.44	86.11	66.67
		P		23.86	88.64	72.73
		C	T	24.14	81.03	68.97
		S		16.67	73.81	57.14
		P		21.00	78.00	64.00
6	Rajasthan	C	H	1.72	58.62	51.72
		S		8.00	42.00	56.00
		P		4.63	50.93	53.70
		C	T	1.67	56.67	50.00
		S		6.90	36.21	48.28
		P		4.24	46.61	49.15
7	Tamil Nadu (Whole Year)	C	H	9.38	84.38	68.75
		S		11.76	94.12	64.71
		P		10.61	89.39	66.67
		C	T	7.50	67.50	55.00
		S		11.76	94.12	64.71
		P		9.46	79.73	59.46
8	Uttar Pradesh	C	H	48.00	71.33	84.67
		S		27.27	90.91	100.00
		P		45.35	73.84	86.63
		C	T	48.00	71.33	84.67
		S		27.27	90.91	100.00
		P		45.35	73.84	86.63
<b>Maize</b>						
1.00	Bihar	C	H	36.84	36.84	100.00
		S		66.67	44.44	100.00
		P		46.43	39.29	100.00
		C	T	35.00	35.00	95.00
		S		66.67	44.44	100.00
		P		44.83	37.93	96.55
2	Chhattisgarh	C	H	0.00	40.00	40.00
		S		0.00	27.50	35.00
		P		0.00	33.75	37.50
		C	T	0.00	27.50	35.00
		S		0.00	33.75	37.50
		P		0.00	27.50	35.00
3	Gujarat	C	H	3.85	61.54	100.00
		S		7.14	50.00	100.00
		P		5.56	55.56	100.00
		C	T	2.50	40.00	65.00
		S		6.25	43.75	87.50
		P		4.17	41.67	75.00
4	Haryana	C	H	80.00	40.00	100.00
		S		50.00	70.00	70.00
		P		70.00	50.00	90.00
		C	T	80.00	40.00	100.00
		S		50.00	70.00	70.00
		P		70.00	50.00	90.00
5	Himachal Pradesh	C	H	5.00	38.75	72.50
		S		7.32	32.93	69.51
		P		6.17	35.80	70.99
		C	T	4.44	34.44	64.44
		S		7.14	32.14	67.86
		P		5.75	33.33	66.09



1	2	3	4	5	6	7
6	Jammu & Kashmir	C	H	0.00	36.00	72.00
		S		6.00	20.00	68.00
		P		3.00	28.00	70.00
		C	T	0.00	20.00	40.00
		S		4.69	15.63	53.13
		P		1.95	18.18	45.45
7	Jharkhand	C	H	10.00	15.00	65.00
		S		25.00	25.00	0.00
		P		14.29	17.86	46.43
		C	T	10.00	15.00	65.00
		S		25.00	25.00	0.00
		P		14.29	17.86	46.43
8	Karnataka	C	H	0.00	0.00	0.00
		S		75.00	100.00	75.00
		P		75.00	100.00	75.00
		C	T	0.00	0.00	0.00
		S		75.00	100.00	75.00
		P		75.00	100.00	75.00
9	Madhya Pradesh	C	H	6.25	50.00	72.50
		S		0.00	24.00	60.00
		P		3.85	40.00	67.69
		C	T	6.25	50.00	72.50
		S		0.00	24.00	60.00
		P		3.85	40.00	67.69
10	Odisha	C	H	0.00	77.50	72.50
		S		0.00	85.00	67.50
		P		0.00	81.25	70.00
		C	T	0.00	77.50	72.50
		S		0.00	85.00	67.50
		P		0.00	81.25	70.00
11	Punjab	C	H	62.50	93.75	91.67
		S		73.68	84.21	100.00
		P		67.44	89.53	95.35
		C	T	62.50	93.75	91.67
		S		73.68	84.21	100.00
		P		67.44	89.53	95.35
12	Rajasthan	C	H	4.00	38.00	74.00
		S		0.00	22.92	75.00
		P		2.04	30.61	74.49
		C	T	4.00	38.00	74.00
		S		0.00	22.00	72.00
		P		2.00	30.00	73.00
13	Tamil Nadu	C	H	52.63	100.00	84.21
		S		48.65	94.59	81.08
		P		50.67	97.33	82.67
		C	T	52.63	100.00	84.21
		S		46.15	89.74	76.92
		P		49.35	94.81	80.52
14	Telangana	C	H	56.00	100.00	100.00
		S		41.67	100.00	100.00
		P		51.35	100.00	100.00
		C	T	56.00	100.00	100.00
		S		41.67	100.00	100.00
		P		51.35	100.00	100.00

1	2	3	4	5	6	7
15	Uttar Pradesh	C	H	51.97	61.84	88.82
		S		25.00	31.25	100.00
		P		47.28	56.52	90.76
		C	T	47.02	55.95	80.36
		S		25.00	31.25	100.00
		P		43.50	52.00	83.50
<b>Ragi</b>						
1	Karnataka	C	H	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
2	Tamil Nadu (Whole Year)	C	H	63.16	100.00	86.84
		S		45.00	95.00	75.00
		P		53.85	97.44	80.77
		C	T	63.16	100.00	86.84
		S		45.00	95.00	75.00
		P		53.85	97.44	80.77
3	Uttarakhand	C	H	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
<b>Cotton</b>						
1	Andhra Pradesh	C	H	22.50	100.00	100.00
		S		10.00	100.00	100.00
		P		16.25	100.00	100.00
		C	T	22.50	100.00	100.00
		S		10.00	100.00	100.00
		P		16.25	100.00	100.00
2	Gujarat	C	H	48.52	85.80	86.39
		S		47.22	56.94	80.56
		P		48.13	77.18	84.65
		C	T	39.23	69.38	69.86
		S		43.59	52.56	74.36
		P		40.42	64.81	71.08
3	Haryana	C	H	89.29	98.21	96.43
		S		100.00	94.00	100.00
		P		94.34	96.23	98.11
		C	T	89.29	98.21	96.43
		S		100.00	94.00	100.00
		P		94.34	96.23	98.11
4	Karnataka	C	H	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
5	Madhya Pradesh	C	H	87.50	100.00	91.67
		S		0.00	0.00	0.00
		P		87.50	100.00	91.67
		C	T	87.50	100.00	91.67
		S		0.00	0.00	0.00
		P		87.50	100.00	91.67

1	2	3	4	5	6	7
6	Maharashtra	C	H	47.06	100.00	100.00
		S		48.39	96.77	100.00
		P		47.47	98.99	100.00
		C	T	45.71	97.14	97.14
		S		41.67	83.33	86.11
		P		44.34	92.45	93.40
7	Punjab	C	H	100.00	100.00	98.61
		S		100.00	100.00	98.61
		P		100.00	100.00	98.61
		C	T	100.00	100.00	98.61
		S		100.00	100.00	98.61
		P		100.00	100.00	98.61
8	Rajasthan	C	H	100.00	100.00	94.44
		S		100.00	58.82	88.24
		P		100.00	80.00	91.43
		C	T	90.00	90.00	85.00
		S		94.44	55.56	83.33
		P		92.11	73.68	84.21
9	Tamil Nadu	C	H	27.17	100.00	81.52
		S		25.53	100.00	87.23
		P		26.34	100.00	84.41
		C	T	25.51	93.88	76.53
		S		25.53	100.00	87.23
		P		25.52	96.88	81.77
10	Telangana	C	H	32.50	100.00	100.00
		S		31.82	100.00	100.00
		P		32.26	100.00	100.00
		C	T	32.50	100.00	100.00
		S		31.82	100.00	100.00
		P		32.26	100.00	100.00
<b>Groundnut</b>						
1	Andhra Pradesh	C	H	2.17	95.65	87.68
		S		3.57	93.57	89.29
		P		2.88	94.60	88.49
		C	T	2.14	94.29	86.43
		S		3.57	93.57	89.29
		P		2.86	93.93	87.86
2	Gujarat	C	H	69.83	88.79	94.83
		S		66.67	72.92	89.58
		P		68.90	84.15	93.29
		C	T	54.00	68.67	73.33
		S		56.14	61.40	75.44
		P		54.59	66.67	73.91
3	Karnataka	C	H	0.00	0.00	0.00
		S		0.00	100.00	50.00
		P		0.00	100.00	50.00
		C	T	0.00	0.00	0.00
		S		0.00	100.00	50.00
		P		0.00	100.00	50.00
4	Madhya Pradesh	C	H	10.00	5.00	50.00
		S		5.56	66.67	50.00
		P		8.62	24.14	50.00
		C	T	10.00	5.00	50.00
		S		5.56	66.67	50.00
		P		8.62	24.14	50.00

1	2	3	4	5	6	7
5	Maharashtra	C	H	25.00	67.86	80.36
		S		23.68	63.16	73.68
		P		24.47	65.96	77.66
		C	T	24.14	65.52	77..59
		S		21.43	57.14	66.67
		P		23.00	62.00	73.00
6	Rajasthan	C	H	42.31	46.15	80.77
		S		46.88	31.25	59.38
		P		44.83	37.93	68.97
		C	T	32.35	35.29	61.76
		S		37.50	25.00	47.50
		P		35.14	29.73	54.05
7	Tamil Nadu (Whole Year)	C	H	41.67	97.92	55.21
		S		32.98	93.62	64.89
		P		37.37	95.79	60.00
		C	T	40.82	95.92	54.08
		S		32.98	93.62	64.89
		P		36.98	94.79	59.38
8	Telangana	C	H	0.00	63.89	83.33
		S		0.00	50.00	95.00
		P		0.00	58.93	87.50
		C	T	0.00	63.89	83.33
		S		0.00	50.00	95.00
		P		0.00	58.93	87.50
<b>Sugarcane</b>						
1	Andhra Pradesh	C	H	96.67	91.67	90.00
		S		98.33	90.00	96.67
		P		97.50	90.83	93.33
		C	T	96.67	91.67	90.00
		S		98.33	90.00	96.67
		P		97.50	90.83	93.33
2	Assam	C	H	0.00	0.00	30.77
		S		0.00	0.00	13.33
		P		0.00	0.00	21.43
		C	T	0.00	0.00	30.77
		S		0.00	0.00	11.43
		P		0.00	0.00	19.67
3	Bihar	C	H	44.44	61.11	91.67
		S		37.50	25.00	75.00
		P		42.31	50.00	86.54
		C	T	40.00	55.00	82.50
		S		37.50	25.00	75.00
		P		39.29	46.43	80.36
4	Haryana	C	H	98.00	82.00	98.00
		S		100.00	85.00	100.00
		P		98.57	82.86	98.57
		C	T	98.00	82.00	98.00
		S		100.00	85.00	100.00
		P		98.57	82.86	98.57
5	Karnataka	C	H	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00
		C	T	0.00	0.00	0.00
		S		0.00	0.00	0.00
		P		0.00	0.00	0.00

1	2	3	4	5	6	7
6	Maharashtra	C	H	100.00	80.00	100.00
		S		83.33	88.89	55.56
		P		95.59	82.35	88.24
		C	T	92.59	74.07	92.59
		S		83.33	88.89	55.56
		P		90.28	77.78	83.33
7	Punjab	C	H	100.00	92.86	98.57
		S		96.55	100.00	100.00
		P		98.44	96.09	99.22
		C	T	100.00	92.86	98.57
		S		96.55	100.00	100.00
		P		98.44	96.09	99.22
8	Rajasthan	C	H	94.44	58.33	83.33
		S		91.43	5.71	80.00
		P		92.96	32.39	81.69
		C	T	85.00	52.50	75.00
		S		82.05	5.13	71.79
		P		83.54	29.11	73.42
9	Tamil Nadu	C	H	100.00	100.00	87.50
		S		85.42	93.75	72.92
		P		92.71	96.88	80.21
		C	T	96.00	96.00	84.00
		S		85.42	93.75	72.92
		P		90.82	94.90	78.57
10	Uttar Pradesh	C	H	99.46	92.47	99.46
		S		92.31	84.62	100.00
		P		98.58	91.51	99.53
		C	T	99.46	92.47	99.46
		S		92.31	84.62	100.00
		P		98.58	91.51	99.53
11	Uttarakhand	C	H	100.00	62.50	100.00
		S		100.00	100.00	100.00
		P		100.00	65.91	100.00
		C	T	100.00	62.50	100.00
		S		100.00	100.00	100.00
		P		100.00	65.91	100.00
<b>Wheat</b>						
1	Assam	C	H	5.26	15.79	68.42
		S		34.21	39.47	52.63
		P		19.74	27.63	60.53
		C	T	4.00	12.00	52.00
		S		34.21	39.47	52.63
		P		17.05	23.86	52.27
2	Bihar	C	H	93.24	60.39	98.07
		S		97.12	75.00	91.35
		P		94.53	65.27	95.82
		C	T	84.28	54.59	88.65
		S		97.12	75.00	91.35
		P		88.29	60.96	89.49
3	Chhattisgarh	C	H	50.00	75.00	90.00
		S		50.00	94.44	83.33
		P		50.00	84.21	86.84
		C	T	50.00	75.00	90.00
		S		45.00	85.00	75.00
		P		47.50	80.00	82.50

1	2	3	4	5	6	7
4	Gujarat	C	H	84.43	86.89	97.54
		S		79.17	56.25	60.42
		P		82.94	78.24	87.06
		C	T	68.67	70.67	79.33
		S		61.29	43.55	46.77
		P		66.51	62.74	69.81
5	Haryana	C	H	98.89	95.56	100.00
		S		100.00	94.44	100.00
		P		99.21	95.24	100.00
		C	T	98.89	95.56	100.00
		S		100.00	94.44	100.00
		P		99.21	95.24	100.00
6	Himachal Pradesh	C	H	18.00	49.00	68.00
		S		8.51	28.72	65.96
		P		13.40	39.18	67.01
		C	T	16.36	44.55	61.82
		S		7.69	25.96	59.62
		P		12.15	35.51	60.75
7	Jammu & Kashmir	C	H	36.21	63.79	87.93
		S		32.08	60.38	92.45
		P		34.23	62.16	90.09
		C	T	35.00	61.67	85.00
		S		30.36	57.14	87.50
		P		32.76	59.48	86.21
8	Jharkhand	C	H	90.00	25.00	80.00
		S		9.09	9.09	45.45
		P		61.29	19.35	67.74
		C	T	90.00	25.00	80.00
		S		7.69	7.69	38.46
		P		57.58	18.18	63.64
9	Karnataka	C	H	37.04	51.85	55.56
		S		45.83	81.25	16.67
		P		42.67	70.67	30.67
		C	T	20.00	28.00	30.00
		S		44.00	78.00	16.00
		P		32.00	53.00	23.00
10	Madhya Pradesh	C	H	74.07	49.79	88.89
		S		73.21	61.61	80.36
		P		73.80	53.52	86.20
		C	T	74.07	49.79	88.89
		S		73.21	61.61	80.36
		P		73.80	53.52	86.20
11	Maharashtra	C	H	88.73	88.73	98.59
		S		82.22	65.56	97.78
		P		86.21	79.74	98.28
		C	T	85.14	85.14	94.59
		S		75.51	60.20	89.80
		P		81.30	75.20	92.68
12	Punjab	C	H	99.55	99.55	99.09
		S		98.47	97.45	100.00
		P		99.04	98.56	99.52
		C	T	99.55	99.55	99.09
		S		98.47	97.45	100.00
		P		99.04	98.56	99.52

1	2	3	4	5	6	7
13	Rajasthan	C	H	100.00	67.19	89.06
		S		96.72	40.98	83.61
		P		98.40	54.40	86.40
		C	T	98.46	66.15	87.69
		S		92.19	39.06	79.69
		P		95.35	52.71	83.72
14	Uttar Pradesh	C	H	99.47	94.74	100.00
		S		100.00	100.00	97.96
		P		99.55	95.51	99.70
		C	T	99.47	94.74	100.00
		S		100.00	100.00	97.96
		P		99.55	95.51	99.70
15	Uttarakhand	C	H	61.11	46.30	59.26
		S		55.77	26.92	50.00
		P		58.49	36.79	54.72
		C	T	56.90	43.10	55.17
		S		55.77	26.92	50.00
		P		56.36	35.45	52.73
16	West Bengal	C	H	99.07	82.24	98.13
		S		100.00	96.15	98.08
		P		99.37	86.79	98.11
		C	T	99.07	82.24	98.13
		S		100.00	96.15	98.08
		P		99.37	86.79	98.11
<b>Barley</b>						
1	Haryana	C	H	100.00	88.46	100.00
		S		100.00	100.00	83.33
		P		100.00	93.18	93.18
		C	T	86.67	76.67	86.67
		S		100.00	100.00	83.33
		P		91.67	85.42	85.42
2	Himachal Pradesh	C	H	14.71	0.00	29.41
		S		0.00	0.00	33.33
		P		7.81	0.00	31.25
		C	T	12.50	0.00	25.00
		S		0.00	0.00	27.78
		P		6.58	0.00	26.32
3	Punjab	C	H	100.00	100.00	96.67
		S		100.00	96.67	100.00
		P		100.00	98.33	98.33
		C	T	100.00	100.00	96.67
		S		100.00	96.67	100.00
		P		100.00	98.33	98.33
4	Rajasthan	C	H	100.00	56.96	91.14
		S		95.00	45.00	75.00
		P		97.48	50.94	83.02
		C	T	100.00	56.96	91.14
		S		95.00	45.00	75.00
		P		97.48	50.94	83.02
<b>Gram</b>						
1	Andhra Pradesh	C	H	22.50	90.00	97.50
		S		7.50	90.00	100.00
		P		15.00	90.00	98.75
		C	T	22.50	90.00	97.50
		S		7.50	90.00	100.00
		P		15.00	90.00	98.75

1	2	3	4	5	6	7
2	Bihar	C	H	20.00	12.50	47.50
		S		25.00	0.00	37.50
		P		21.43	8.93	44.64
		C	T	20.00	12.50	47.50
		S		25.00	0.00	37.50
		P		21.43	8.93	44.64
3	Chhattisgarh	C	H	30.00	15.00	60.00
		S		52.63	10.53	47.37
		P		41.03	12.82	53.85
		C	T	30.00	15.00	60.00
		S		50.00	10.00	45.00
		P		40.00	12.50	52.50
4	Gujarat	C	H	37.50	59.38	56.25
		S		10.00	60.00	60.00
		P		30.95	59.52	57.14
		C	T	30.00	47.50	45.00
		S		10.00	60.00	60.00
		P		26.00	50.00	48.00
5	Haryana	C	H	42.86	68.57	50.00
		S		62.50	78.57	66.07
		P		51.59	73.02	57.14
		C	T	42.86	68.57	50.00
		S		62.50	78.57	66.07
		P		51.59	73.02	57.14
6	Jharkhand	C	H	50.00	0.00	45.00
		S		0.00	16.67	16.67
		P		31.25	6.25	34.38
		C	T	50.00	0.00	45.00
		S		0.00	16.67	16.67
		P		31.25	6.25	34.38
7	Karnataka	C	H	26.32	26.32	52.63
		S		31.58	73.68	26.32
		P		29.82	57.89	35.09
		C	T	13.89	13.89	27.78
		S		31.58	73.68	26.32
		P		22.97	44.59	27.03
8	Madhya Pradesh	C	H	51.43	15.00	78.57
		S		62.16	35.14	72.97
		P		55.14	21.96	76.64
		C	T	51.43	15.00	78.57
		S		62.16	35.14	72.97
		P		55.14	21.96	76.64
9	Maharashtra	C	H	53.33	73.33	65.56
		S		59.09	81.82	75.76
		P		55.77	76.92	69.87
		C	T	48.00	66.00	59.00
		S		55.71	77.14	71.43
		P		51.18	70.59	64.12
10	Punjab	C	H	96.67	96.67	50.00
		S		100.00	100.00	66.67
		P		98.33	98.33	58.33
		C	T	96.67	96.67	50.00
		S		100.00	100.00	66.67
		P		98.33	98.33	58.33



1	2	3	4	5	6	7
11	Rajasthan	C	H	58.18	23.64	39.09
		S		56.14	17.54	38.60
		P		57.14	20.54	38.84
		C	T	54.70	22.22	36.75
		S		54.24	16.95	37.29
		P		54.47	19.57	37.02
12	Uttar Pradesh	C	H	38.00	4.00	48.00
		S		12.50	50.00	25.00
		P		34.48	10.34	44.83
		C	T	38.00	4.00	48.00
		S		12.50	50.00	25.00
		P		34.48	10.34	44.83
<b>Rape &amp; Mustard</b>						
1	Assam	C	H	0.00	4.55	42.42
		S		0.00	0.00	52.00
		P		0.00	2.59	46.55
		C	T	0.00	4.29	40.00
		S		0.00	0.00	50.00
		P		0.00	2.50	45.00
2	Bihar	C	H	60.00	17.50	72.50
		S		100.00	60.00	60.00
		P		68.00	26.00	70.00
		C	T	60.00	17.50	72.50
		S		100.00	60.00	60.00
		P		68.00	26.00	70.00
3	Chhattisgarh	C	H	0.00	0.00	6.67
		S		0.00	0.00	0.00
		P		0.00	0.00	3.33
		C	T	0.00	0.00	6.67
		S		0.00	0.00	0.00
		P		0.00	0.00	3.33
4	Gujarat	C	H	100.00	72.73	97.73
		S		93.33	100.00	60.00
		P		97.30	83.78	82.43
		C	T	88.00	64.00	86.00
		S		93.33	100.00	60.00
		P		90.00	77.50	76.25
5	Haryana	C	H	95.00	94.00	96.00
		S		96.30	100.00	96.30
		P		95.45	96.10	96.10
		C	T	95.00	94.00	96.00
		S		96.30	100.00	96.30
		P		95.45	96.10	96.10
6	Jharkhand	C	H	85.00	0.00	75.00
		S		0.00	0.00	42.86
		P		50.00	0.00	61.76
		C	T	85.00	0.00	75.00
		S		0.00	0.00	42.86
		P		50.00	0.00	61.76
7	Madhya Pradesh	C	H	58.62	36.21	58.62
		S		60.00	65.00	75.00
		P		59.18	47.96	65.31
		C	T	58.62	36.21	58.62
		S		60.00	65.00	75.00
		P		59.18	47.96	65.31

1	2	3	4	5	6	7
8	Punjab	C	H	90.00	85.00	87.50
		S		100.00	94.44	94.44
		P		94.74	89.47	90.79
		C	T	90.00	85.00	87.50
		S		100.00	94.44	94.44
		P		94.74	89.47	90.79
9	Rajasthan	C	H	92.68	69.51	89.02
		S		90.91	42.05	75.00
		P		91.76	55.29	81.76
		C	T	86.36	64.77	82.95
		S		88.89	41.15	73.33
		P		87.64	52.81	78.09
10	Uttar Pradesh	C	H	92.94	65.88	92.94
		S		94.44	100.00	100.00
		P		93.20	71.84	94.17
		C	T	92.94	65.88	92.94
		S		94.44	100.00	100.00
		P		93.20	71.84	94.17
11	West Bengal	C	H	82.73	79.09	96.36
		S		85.23	81.82	98.86
		P		83.84	80.30	97.47
		C	T	82.73	79.09	96.36
		S		85.23	81.82	98.86
		P		83.84	80.30	97.47

**INCIDENCE OF ERRORS IN CONDUCTING CROP CUTTING EXPERIMENTS  
DURING 2016-17**

S. No.	State	Season	A G E N C Y	% of Expts. where no error noticed	Percentage of experiments where errors noticed								
					e <sub>1</sub>	e <sub>2</sub>	e <sub>3</sub>	e <sub>4</sub>	e <sub>5</sub>	e <sub>6</sub>	e <sub>7</sub>	e <sub>8</sub>	
1	2	3	4	5	6	7	8	9	10	11	12	13	
1	Andhra Pradesh	Kharif	C	83	0	0	3	2	0	4	0	9	
			S	40	0	0	8	1	0	6	0	52	
			P	62	0	0	5	2	0	5	0	30	
		Rabi	C	92	0	0	2	0	0	7	1	2	
			S	42	0	0	7	6	2	7	1	47	
			P	67	0	0	5	3	1	7	1	24	
2	Assam	Early Kharif	C	94	0	0	0	0	0	0	0	6	
			S	20	0	0	0	0	0	0	0	80	
			P	62	0	0	0	0	0	0	0	38	
		Late Kharif	C	73	0	0	0	0	0	0	0	0	27
			S	48	0	0	0	0	0	0	0	0	52
			P	61	0	0	0	0	0	0	0	0	39
		Rabi	C	78	0	0	0	0	0	0	0	0	22
			S	40	0	0	0	4	0	1	0	60	
			P	60	0	0	0	2	0	1	0	40	
		Summer	C	93	0	0	0	0	0	0	0	0	8
			S	41	0	0	0	0	0	0	0	0	59
			P	69	0	0	0	0	0	0	0	0	31
3	Bihar	Autumn (Bhadai)	C	78	0	0	0	2	0	1	0	19	
			S	0	0	0	0	4	0	0	4	100	
			P	53	0	0	0	2	0	1	1	45	
		Winter (Agahani)	C	80	1	1	0	0	0	3	0	17	
			S	10	0	0	0	0	3	1	0	89	
			P	59	1	1	0	0	1	2	0	39	
		Rabi	C	87	1	0	0	0	0	2	0	12	
			S	13	0	0	0	0	0	5	0	87	
			P	64	0	0	0	0	0	3	0	35	
		Summer	C	94	0	0	0	0	0	0	0	0	6
			S	0	0	0	50	0	0	50	50	100	
			P	83	0	0	6	0	0	6	6	17	
4	Chhattisgarh	Kharif	C	93	1	1	2	7	1	7	0	0	
			S	100	0	0	0	0	0	0	0	0	
			P	96	1	1	1	3	1	4	0	0	
		Rabi	C	89	1	1	0	0	0	1	0	8	
			S	99	0	0	0	0	0	0	0	1	
			P	94	1	1	0	0	0	1	0	5	
5	Gujarat	Kharif	C	73	0	0	0	1	0	2	0	24	
			S	27	0	0	0	1	0	1	1	73	
			P	56	0	0	0	1	0	2	0	42	
		Rabi	C	87	0	0	0	0	0	5	0	9	
			S	27	0	0	0	0	0	0	1	73	
			P	69	0	0	0	0	0	3	0	28	
6	Haryana	Kharif	C	78	0	0	0	7	1	4	0	16	
			S	61	0	0	0	0	1	1	1	37	
			P	71	0	0	0	4	1	3	0	25	
		Rabi	C	86	0	0	0	0	1	3	0	12	
			S	76	0	0	0	0	0	1	0	23	
			P	83	0	0	0	0	1	2	0	16	
7	Himachal Pradesh	Kharif	C	63	2	0	1	4	3	19	0	15	
			S	57	0	0	4	1	7	19	1	26	
			P	60	1	0	3	3	5	19	1	21	
		Rabi	C	72	0	0	1	3	1	13	0	13	
			S	65	2	2	2	0	5	12	0	24	
			P	69	1	1	2	2	3	12	0	19	

## ANNEX VIII (Contd.....)

1	2	3	4	5	6	7	8	9	10	11	12	13			
8	Jammu & Kashmir	Kharif	C	31	8	0	6	28	9	8	0	44			
			S	23	9	7	23	20	0	9	0	66			
			P	27	8	4	15	24	4	8	0	55			
		Rabi	C	15	0	0	0	9	2	2	0	84			
			S	21	0	0	23	0	0	16	0	79			
			P^	18	0	0	11	5	1	9	0	82			
9	Jharkhand	Early Kharif (Bhadai)	C	78	0	0	0	3	0	0	0	20			
			S	17	0	0	0	0	0	8	0	75			
			P	55	0	0	0	2	0	3	0	41			
		Late Kharif (Agahani)	C	90	0	0	0	3	0	0	3	8			
			S	33	0	0	0	7	0	0	0	67			
			P	66	0	0	0	4	0	0	1	33			
		Rabi	C	85	0	0	0	1	0	0	0	14			
			S	6	0	0	0	0	0	0	0	94			
			P	54	0	0	0	1	0	0	0	45			
10	Karnataka	Kharif	C	94	0	0	0	0	0	0	0	33			
			S	58	0	0	0	0	0	3	0	49			
			P	69	0	0	0	0	0	2	0	44			
		Rabi	C	56	0	0	0	0	0	27	0	40			
			S	38	0	0	2	3	0	10	0	61			
			P	43	0	0	1	2	0	15	0	54			
		Summer	C	59	12	12	0	0	0	24	0	29			
			S	10	0	0	0	0	0	0	0	90			
			P	27	4	4	0	0	0	8	0	68			
			11	Kerala	Autumn	C	95	0	0	0	0	0	1	0	4
S	77	0				0	0	0	0	0	0	23			
P	86	0				0	0	0	0	1	0	14			
Winter	C	92			0	0	0	0	0	0	0	8			
	S	84			0	0	0	0	0	0	0	16			
	P	88			0	0	0	0	0	0	0	12			
Summer	C	81			0	0	0	0	0	3	0	16			
	S	28			0	0	0	0	0	0	0	72			
	P	54			0	0	0	0	0	2	0	44			
	12	Madhya Pradesh			Kharif	C	81	1	1	1	9	5	5	0	8
						S	51	0	0	0	0	0	0	0	49
P			71	1		0	1	6	3	3	0	22			
Rabi			C	83	0	0	0	10	4	4	0	4			
			S	56	0	0	0	0	0	3	0	42			
			P	75	0	0	0	7	3	4	0	16			
13			Maharashtra	Kharif	C	48	5	4	14	53	0	28	5	13	
					S	6	3	3	2	7	1	5	1	94	
					P	31	4	3	9	35	0	19	4	44	
				Rabi	C	55	3	3	8	26	1	24	8	13	
					S	15	0	0	2	6	1	2	2	85	
					P	38	2	2	5	17	1	15	6	44	
14	Odisha	Autumn	C	89	0	0	0	0	1	1	0	9			
			S	99	0	0	0	0	0	0	0	1			
			P	94	0	0	0	0	1	1	0	5			
		Winter	C	96	0	0	0	0	0	1	0	3			
			S	98	0	0	0	0	0	0	0	1			
			P	97	0	0	0	0	0	0	0	2			
		Summer	C	95	0	0	0	0	0	0	0	5			
			S	98	0	0	0	0	0	2	0	1			
			P	97	0	0	0	0	0	1	0	3			

1	2	3	4	5	6	7	8	9	10	11	12	13
15	Punjab	Kharif	C	43	0	0	8	1	2	21	0	44
			S	26	0	0	1	0	0	0	0	74
			P	35	0	0	5	1	1	11	0	58
		Rabi	C	52	0	0	5	1	1	15	0	40
			S	14	0	0	1	1	0	0	0	86
			P	34	0	0	3	1	0	8	0	62
16	Rajasthan	Kharif	C	60	0	0	0	2	0	37	1	13
			S	41	0	0	1	0	0	3	0	59
			P	50	0	0	1	1	0	20	0	36
		Rabi	C	44	0	0	8	5	0	51	0	19
			S	45	0	0	0	0	0	2	0	54
			P	44	0	0	4	2	0	26	0	37
17	Tamil Nadu	Total @	C	82	1	1	0	1	0	8	0	10
			S	33	0	1	0	1	2	5	1	64
			P	58	0	1	0	1	1	7	1	37
18	Telangana	Kharif	C	85	0	0	0	11	1	0	0	13
			S	48	0	0	4	0	0	3	0	48
			P	73	0	0	2	8	0	1	0	25
		Rabi	C	85	0	0	0	1	0	0	0	14
			S	0	0	0	0	0	0	0	0	100
			P	72	0	0	0	1	0	0	0	27
19	Uttar Pradesh	Kharif	C	51	1	1	13	12	1	18	2	29
			S	32	0	1	3	4	1	6	0	66
			P	49	1	1	11	11	1	16	2	34
		Rabi	C	45	1	1	18	16	0	22	0	33
			S	53	0	0	8	13	0	1	0	43
			P	47	1	1	17	16	0	19	0	34
		Zaid Rabi	C	65	0	0	11	15	0	23	0	14
			S	Insufficient Data								
			P	65	0	0	11	15	0	23	0	14
20	Uttarakhand	Kharif	C	46	0	0	1	1	0	23	0	34
			S	31	0	0	0	5	0	9	0	60
			P	40	0	0	0	2	0	17	0	45
		Rabi	C	33	0	0	0	0	0	19	0	48
			S	27	0	0	0	23	0	4	0	69
			P	30	0	0	0	11	0	11	0	58
21	West Bengal	Aus	C	94	0	0	0	0	1	0	0	6
			S	61	0	0	0	0	1	0	0	37
			P	78	0	0	0	0	1	0	0	21
		Aman	C	53	0	0	0	0	0	0	0	48
			S	47	0	0	0	0	0	0	0	53
			P	50	0	0	0	0	0	0	0	50
		Rabi	C	65	0	0	0	0	0	2	0	34
			S	54	0	0	0	0	1	1	1	45
			P	61	0	0	0	0	1	2	1	38
		Summer	C	29	0	0	0	0	0	1	1	71
			S	54	0	0	0	0	0	1	3	46
			P	39	0	0	0	0	0	1	2	61
22	Puducherry	Kharif	C	70	0	0	0	0	0	10	0	30
			S	40	0	0	0	0	0	0	0	60
			P	55	0	0	0	0	0	5	0	45
		Rabi-I	C	100	0	0	0	0	0	0	0	0
			S	80	0	0	0	0	0	0	0	20
			P	90	0	0	0	0	0	0	0	10
		Rabi-II	C	100	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0	100
			P	50	0	0	0	0	0	0	0	50

1	2	3	4	5	6	7	8	9	10	11	12	13
For States covered	Early Kharif	C	61	0	0	0	0	1	0	0	3	19
		S	29	0	0	0	0	0	0	0	1	48
		P	46	0	0	0	1	0	0	2	25	
	Late Kharif	C	68	1	1	4	10	1	12	1	18	
		S	43	0	1	2	2	1	3	0	55	
		P	58	1	1	3	7	1	8	1	33	
	Rabi	C	66	0	0	5	7	1	14	1	21	
		S	41	0	0	2	3	1	3	0	57	
		P	56	0	0	4	5	1	10	1	35	
	Summer	C	73	0	0	1	1	0	4	0	24	
		S	48	0	0	0	0	0	1	1	52	
		P	61	0	0	1	1	0	3	1	37	
	All Seasons	C	67	1	1	4	8	1	11	1	20	
		S	42	0	0	2	2	1	3	0	55	
		P	57	1	0	3	5	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 drriage 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 2016-17**

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 Pradesh	Kharif	C	1	100	1	1	2	0	2	2
			S	0	77	0	0	8	14	9	6
			P	1	88	1	1	5	7	6	4
		Rabi	C	0	100	0	0	4	0	4	4
			S	0	72	0	0	13	15	13	13
			P	0	86	0	0	9	7	9	9
2	Assam	Early Kharif	C	0	95	0	0	20	2	20	20
			S	0	65	0	0	2	12	2	6
			P	0	82	0	0	12	6	12	14
		Late Kharif	C	0	100	2	8	28	0	31	28
			S	0	74	0	0	0	11	0	2
			P	0	88	1	4	15	5	16	15
		Rabi	C	5	90	1	2	20	5	18	18
			S	0	60	0	0	5	8	3	5
			P	3	76	1	1	13	6	11	12
		Summer	C	0	85	0	0	55	15	55	48
			S	0	65	0	0	6	12	6	6
			P	0	76	0	0	32	14	32	28
3	Bihar	Autumn (Bhadai)	C	100	100	100	100	0	0	0	0
			S	35	38	42	46	35	23	27	23
			P	79	80	81	83	11	7	9	7
		Winter (Aghani)	C	100	100	100	100	0	0	0	0
			S	24	21	23	17	33	16	34	33
			P	77	76	76	75	10	5	10	10
		Rabi	C	100	99	100	100	0	0	0	0
			S	22	27	23	27	36	19	33	27
			P	76	77	77	78	11	6	10	8
		Summer	C	100	100	100	100	0	0	0	0
			S	0	0	0	0	0	0	0	0
			P	89	89	89	89	0	0	0	0
4	Chhattisgarh	Kharif	C	2	98	45	72	61	2	54	27
			S	0	31	0	0	12	1	30	30
			P	1	65	23	36	37	1	42	29
		Rabi	C	15	97	47	72	45	1	53	28
			S	0	14	0	0	3	0	11	11
			P	7	56	24	37	24	1	33	20
5	Gujarat	Kharif	C	7	98	35	35	33	1	30	29
			S	2	68	6	6	72	7	72	72
			P	5	87	24	25	47	3	45	45
		Rabi	C	17	100	47	48	45	0	40	39
			S	0	57	7	7	80	16	80	82
			P	12	87	35	36	56	5	52	52
6	Haryana	Kharif	C	37	100	76	91	4	0	2	0
			S	0	69	55	61	71	22	40	33
			P	22	87	67	79	32	9	18	14
		Rabi	C	28	100	63	72	10	0	4	3
			S	0	83	57	65	52	15	32	32
			P	18	94	61	70	24	5	14	13
7	Himachal Pradesh	Kharif	C	8	100	19	19	11	0	15	15
			S	7	59	43	56	46	37	53	44
			P	8	78	32	38	29	19	35	30
		Rabi	C	19	100	33	37	19	0	30	27
			S	2	68	16	53	56	27	84	37
			P	11	84	25	45	37	13	56	32
8	Jammu & Kashmir	Kharif	C	93	100	100	100	5	0	0	0
			S	59	84	59	59	27	5	27	27
			P	75	92	79	79	17	2	14	14
		Rabi	C	88	100	100	100	12	0	0	0
			S	58	81	58	58	25	6	25	25
			P*	74	91	80	80	18	3	12	12

1	2	3	4	5	6	7	8	9	10	11	12		
9	Jharkhand	Early Kharif	C	55	85	85	85	25	15	15	15		
			S	33	33	33	33	17	17	17	17		
			P	47	66	66	66	22	16	16	16		
		Late Kharif	C	68	98	98	98	30	0	0	0	0	
			S	43	53	47	50	10	0	3	0	0	
			P	57	79	76	77	21	0	1	0	0	
		Rabi	C	66	100	98	98	16	0	2	2	2	
			S	56	56	56	56	0	0	0	0	0	
			P	62	83	82	82	10	0	1	1	1	
10	Karnataka	Kharif	C	56	94	56	56	17	0	17	17		
			S	10	64	10	10	21	15	21	21		
			P	25	74	25	25	19	11	19	19		
		Rabi	C	77	77	77	77	5	3	5	5		
			S	37	63	43	44	26	7	19	18		
			P	49	67	53	54	19	5	15	14		
		Summer	C	41	91	53	53	24	6	18	18		
			S	10	33	10	10	33	23	33	33		
			P	21	54	25	25	29	17	27	27		
11	Kerala S & *	Autumn	C	0	36	1	27	4	26	18	14		
			S	0	7	0	0	0	0	0	0		
			P	0	22	1	14	2	13	9	7		
		Winter	C	3	36	3	21	2	30	12	10		
			S	0	3	0	8	0	0	0	0		
			P	2	20	2	15	1	15	6	5		
		Summer	C	7	31	2	24	4	10	9	6		
			S	0	3	0	6	0	0	0	0		
			P	3	17	1	15	2	5	5	3		
12	Madhya Pradesh	Kharif	C	6	82	50	51	28	16	47	45		
			S	0	1	0	0	19	31	23	25		
			P	4	54	32	34	25	22	39	38		
		Rabi	C	5	83	54	54	33	16	43	44		
			S	0	6	6	6	37	29	27	27		
			P	3	58	38	39	34	20	37	38		
		13	Maharastra	Kharif	C	80	99	96	95	14	0	3	2
					S	6	8	6	6	22	16	21	21
					P	51	64	61	60	17	6	10	9
Rabi	C			76	99	94	98	14	0	2	1		
	S			4	7	4	5	30	27	30	33		
	P			46	61	56	59	21	11	14	14		
14	Odisha			Autumn	C	1	1	1	1	17	24	17	18
					S	0	0	0	0	0	0	0	0
					P	0	0	0	0	9	12	9	9
		Winter	C	0	0	0	0	5	7	5	5		
			S	0	0	0	0	0	0	0	0		
			P	0	0	0	0	3	4	3	3		
		Summer	C	0	1	0	0	12	20	13	13		
			S	0	0	0	0	0	0	0	0		
			P	0	1	0	0	6	10	7	7		
15	Punjab	Kharif	C	44	100	97	94	14	0	3	1		
			S	26	73	78	78	24	10	6	6		
			P	35	87	88	86	19	5	5	4		
		Rabi	C	54	99	99	99	12	0	1	0		
			S	18	72	77	77	8	3	4	3		
			P	37	86	89	89	10	1	3	1		
		16	Rajasthan	Kharif	C	50	99	99	98	25	0	1	2
					S	34	43	36	35	43	29	42	44
					P	42	71	68	67	34	21	21	23
Rabi	C			61	99	95	96	18	1	5	4		
	S			25	33	26	26	46	39	48	55		
	P			43	66	61	61	32	20	26	30		
17	Tamil Nadu			#	C	0	14	3	2	4	33	12	8
					S	1	2	1	2	20	24	22	21
					P	1	8	2	2	12	28	17	15
18	Telangana	Kharif	C	3	93	6	7	13	1	12	12		
			S	1	84	2	3	3	1	3	3		
			P	3	90	5	6	10	1	9	9		
		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	21	92	72	78	22	4	16	14		
			S	7	29	7	7	15	9	31	15		
			P	19	83	63	68	21	5	18	14		
		Rabi	C	22	98	76	77	34	2	23	22		
			S	13	21	13	13	8	0	8	8		
			P	21	86	66	68	30	2	21	20		
		Summer	C	27	97	81	81	46	0	19	19		
			S	0	0	0	0	0	0	0	0		
			P	27	97	81	81	46	0	19	19		
20	Uttarakhand	Kharif	C	5	80	8	41	2	2	9	11		
			S	0	7	0	5	32	32	36	32		
			P	3	50	5	26	14	14	20	19		
		Rabi	C	0	48	22	22	15	22	22	22		
			S	0	12	0	0	23	23	23	23		
			P	0	30	11	11	19	23	23	23		
		21	West Bengal @	Autumn	C	0	89	0	0	15	0	16	16
					S	0	60	0	0	0	0	0	0
					P	0	75	0	0	8	0	8	8
				Winter	C	6	79	0	0	9	0	9	9
S	0				66	0	0	0	0	0	0		
P	3				73	0	0	5	0	5	5		
Rabi	C			10	95	1	1	6	0	6	6		
	S			0	64	0	1	0	1	0	0		
	P			6	100	1	1	3	0	3	3		
Summer	C			6	75	1	2	2	4	2	3		
	S	0	77	0	2	0	2	0	0				
	P	4	76	1	2	1	3	1	2				
22	Puducherry	Kharif	C	0	30	0	0	0	0	0	0		
			S	0	40	0	0	0	0	0	0		
			P	0	35	0	0	0	0	0	0		
		Rabi-I	C	0	0	0	70	0	0	0	0		
			S	0	40	0	0	0	0	0	0		
			P	0	20	0	35	0	0	0	0		
		Rabi-II	C	0	20	0	60	0	0	0	0		
			S	0	0	0	0	0	0	0	0		
			P	0	10	0	30	0	0	0	0		
		For States Covered		Early Kharif	C	17	57	18	21	14	12	15	15
S	4				28	4	5	3	4	3	3		
P	11				44	12	14	9	8	9	9		
Late Kharif	C			24	81	50	53	17	6	14	12		
	S			8	38	15	16	24	15	24	22		
	P			18	63	36	38	20	10	18	16		
Rabi	C			33	88	59	63	19	4	15	14		
	S			11	39	21	24	24	14	23	22		
	P			24	69	44	47	21	8	18	17		
Summer	C			11	46	14	23	12	9	12	10		
	S			1	19	1	4	3	3	3	3		
	P			7	34	8	14	8	6	8	7		
All Seasons	C	26	80	49	53	17	6	15	13				
	S	8	36	15	17	21	13	20	19				
	P	19	62	35	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 2016-17**

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	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
1	Andhra Pradesh	C							0	0	3	1	97	0	0	0	0	0	100	1							
		S							1	0	0	0	98	7	7	2	0	0	95	9							
		P							1	0	2	0	98	4	3	1	0	0	98	5							
2	Assam	C	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	
		S	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	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	0	0	0	0	100	0	
3	Bihar	C	0	0	2	0	98	35	0	0	11	6	89	15	2	0	9	6	90	16	0	0	0	0	100	6	
		S	0	0	0	0	100	0	0	0	32	32	68	56	0	0	13	13	87	63	0	0	0	0	100	100	
		P	0	0	1	0	99	23	0	0	17	14	83	28	1	0	10	8	89	30	0	0	0	0	100	17	
4	Chhattisgarh	C							0	0	7	0	93	0	0	0	0	0	100	0							
		S							0	0	2	0	98	0	0	0	0	0	100	0							
		P							0	0	5	0	95	0	0	0	0	0	100	0							
5	Gujarat	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							
6	Haryana	C							0	0	0	0	100	0	0	0	0	0	100	0							
		S							1	0	0	0	99	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	0	0	0	0	0	100	9							
		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	5							
8	Jammu & Kashmir	C							3	0	0	0	98	0	0	0	2	0	100	0							
		S							1	0	0	0	99	0	0	0	0	0	100	0							
		P							2	0	0	0	98	0	0	0	1	0	100	0							
9	Jharkhand	C	0	0	5	0	95	65	0	0	3	3	98	38	0	0	8	4	92	44							
		S	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	13							
		P	0	0	3	0	97	41	0	0	1	1	99	21	0	0	5	2	95	32							
10	Karnataka	C							0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	
		S							0	0	0	0	100	0	0	0	0	0	100	0	3	0	0	0	97	0	
		P							0	0	0	0	100	0	0	0	0	0	100	0	2	0	0	0	98	0	
11	Kerala @	C	0	0	0	0	100	0	0	0	0	0	100	0							1	0	0	0	99	0	
		S	0	0	0	0	100	0	1	0	0	0	99	0							0	0	0	0	100	0	
		P	0	0	0	0	100	0	1	0	0	0	99	0							1	0	0	0	99	0	
12	Madhya Pradesh	C							1	0	1	0	98	7	0	0	2	0	98	3							
		S							0	0	2	1	98	17	1	0	0	0	99	12							
		P							0	0	2	1	98	10	0	0	1	0	99	6							

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	0	1	0	0	0	99	0							
		S							2	0	6	0	92	0	1	0	1	0	98	0							
		P							1	0	3	0	97	0	1	0	1	0	99	0							
14	Odisha	C	0	0	0	0	100	0	0	0	0	0	100	0							0	0	0	0	100	0	
		S	0	0	0	0	100	0	0	0	0	0	100	0							0	0	0	0	100	0	
		P	0	0	0	0	100	0	0	0	0	0	100	0							0	0	0	0	100	0	
15	Punjab	C							1	0	2	1	97	0	2	0	0	0	98	0							
		S							0	0	0	0	100	0	0	0	0	0	100	0							
		P							1	0	1	1	98	0	1	0	0	0	99	0							
16	Rajasthan	C							1	0	0	0	99	0	1	0	0	0	100	4							
		S							1	0	0	0	98	2	0	0	0	0	100	2							
		P							1	0	0	0	99	1	1	0	0	0	100	3							
17	Tamil Nadu	C	0	0	0	0	100	0	0	0	0	0	100	0	1	0	2	0	107	0							
		S	0	0	0	0	100	0	0	0	0	0	100	0	1	0	0	0	108	0							
		#	0	0	0	0	100	0	0	0	0	0	100	0	1	0	1	0	107	0							
18	Telangana	C							0	0	0	0	100	0	0	0	0	0	100	0							
		S							0	0	1	0	99	0	0	0	0	0	100	0							
		P							0	0	0	0	100	0	0	0	0	0	100	0							
19	Uttar Pradesh	C							1	0	15	13	83	37	0	0	14	11	86	45	3	0	0	38	59	24	
		S							0	0	2	0	98	33	1	0	13	0	86	1	0	0	0	0	0	0	
		P							1	0	14	11	85	37	0	0	14	9	86	39	3	0	0	38	59	24	
20	Uttarakhand	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							
21	West Bengal	C	0	0	0	0	100	36	0	0	0	0	100	50	0	0	0	0	100	21	0	0	0	0	100	27	
		S	0	0	0	0	100	14	0	0	0	0	100	30	0	0	0	0	100	6	14	0	0	0	86	2	
		P	0	0	0	0	100	25	0	0	0	0	100	41	0	0	0	0	100	15	6	0	0	0	94	17	
22	Pudu-cherry	C							0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	
		S							0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	
		P							0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	
For States Covered		C	0	0	0	0	100	15	1	0	4	3	96	10	0	0	3	2	97	10	1	0	4	4	96	9	
		S	0	0	0	0	100	3	1	0	2	1	98	6	1	0	1	1	100	5	3	0	0	0	97	1	
		P	0	0	0	0	100	9	1	0	3	2	96	8	1	0	2	1	98	8	2	0	2	2	96	5	

## 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 2016-17**

Sl. No.	State	Season	Percentage of experiments for which substitution was done in respect of							
			Selected villages due to reason *				Selected survey nos. due to reason \$			
Reason Code			1	2	3	9	1	2	3	9
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	Kharif	18	0	0	0	0	0	0	0
		Rabi	21	0	0	0	0	0	0	0
2	Assam	Early Kharif	2	0	0	0	1	0	0	4
		Late Kharif	0	0	0	0	0	0	0	0
		Rabi	10	0	0	2	1	0	0	0
		Summer	19	0	0	5	0	0	0	0
3	Bihar	Bhadai	17	4	0	0	2	0	0	0
		Aghani	1	0	0	0	0	0	0	0
		Rabi	5	0	0	1	1	0	0	3
		Summer	28	0	0	0	0	0	0	0
4	Chhattisgarh	Kharif	0	0	0	0	0	0	0	3
		Rabi	22	1	0	0	0	0	0	0
5	Gujarat	Kharif	5	0	0	1	0	0	0	0
		Rabi	0	0	0	0	1	0	0	0
6	Haryana	Kharif	8	0	0	1	0	0	0	0
		Rabi	6	0	0	0	0	0	0	1
7	Himachal Pradesh	Kharif	18	0	0	2	0	0	0	2
		Rabi	11	0	0	0	0	0	0	1
8	Jammu & Kashmir	Kharif	6	1	0	0	0	1	0	0
		Rabi	0	0	0	0	0	0	0	1
9	Jharkhand	Early Kharif	0	0	0	0	0	6	0	28
		Late Kharif	0	0	0	0	3	6	1	14
		Rabi	7	0	0	2	0	1	0	10
10	Karnataka	Kharif	28	2	0	0	0	0	0	0
		Rabi	18	1	0	0	0	0	0	0
		Summer	28	2	0	0	0	0	0	0
11	Kerala	Autumn	30	0	0	0	0	0	0	0
		Winter	16	0	0	1	0	0	0	0
		Summer@	0	0	0	0	0	0	0	0
12	Madhya Pradesh	Kharif	11	0	0	0	0	0	0	0
		Rabi	4	0	0	0	0	0	0	0
13	Maharashtra	Kharif	4	0	0	0	0	0	0	0
		Rabi	4	0	0	1	0	0	0	0
14	Odisha	Autumn	8	0	0	0	0	0	0	0
		Winter	8	0	0	0	0	0	0	0
		Summer	0	0	0	0	1	0	0	0
15	Punjab	Kharif	2	0	0	0	0	0	0	0
		Rabi	2	0	0	0	0	0	0	0
16	Rajasthan	Kharif	0	0	0	0	1	0	0	0
		Rabi	0	0	0	0	1	0	0	0
17	Tamil Nadu #	Total	23	1	0	0	0	0	0	0

## ANNEX- XI (Contd.....)

1	2	3	4	5	6	7	8	9	10	11
18	Telangana	Kharif	14	0	0	0	0	0	0	0
		Rabi	14	0	0	0	0	0	0	0
19	Uttar Pradesh	Kharif	3	2	2	0	0	1	0	0
		Rabi	0	0	0	0	1	2	0	0
		Summer	0	0	0	0	0	3	0	0
20	Uttarakhand	Kharif	10	0	0	0	0	0	0	1
		Rabi	6	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	1	0	0
		Summer	0	0	0	0	0	0	0	0
22	Puducherry	Kharif	20	0	0	0	0	0	0	0
		Rabi-I	0	0	0	0	0	0	0	0
		Rabi-II	0	0	0	0	0	0	0	0
	For States covered	Early Kharif	9	0	0	0	0	0	0	2
		Late Kharif	9	0	0	0	0	0	0	0
		Rabi	7	0	0	0	0	0	0	0
		Summer	3	0	0	0	0	0	0	0
		All Seasons	8	0	0	0	0	0	0	0

## 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 &amp; FINAL ESTIMATES : 2016-17

Sl No	State	A G E N C Y	Area		Estimated area as per TRS (in '000' ha)	Final Estimates of Area (in '000' ha)	Ratio of Area Estimates		
			A-III	A-IV			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
<b>RICE-KHARIF</b>									
1	Andhra	C	50	1956					
	Pradesh	S	2070	2207					
		P <sup>A</sup>	1290	2110	1453	1520	0.9559	0.8489	1.3882
2	Assam	C		269					
	(Autumn)	S		30					
	*	P <sup>A</sup>		159	188	196	0.9592		0.8116
	Assam	C		457					
	(Winter)	S		489					
	*	P <sup>A</sup>		472	146	1883	0.0775		0.2508
3	Bihar	C		173					
	(Bhadai)	S		345					
		P		235	559	581			0.4042
	Bihar	C	NR	5425					
	(Aghani)	S	186	1822					
		P	63	4201	550	2600		0.0243	1.6157
4	Chhattisgarh	C	4195	4316					
		S	4741	4739					
		P	4468	4528	3939	3830	1.0285	1.1666	1.1821
5	Gujarat	C	NR	916					
		S	109	638					
		P <sup>A</sup>	45	802	133	782	0.1701	0.0570	1.0261
6	Haryana	C	1264	1242					
		S	857	857					
		P	1097	1084	1359	1386		0.7912	0.7819
7	Himachal Pradesh	C	87	71					
		S	53	51					
		P <sup>A</sup>	70	61	71	75	0.9467	0.9333	0.8133
8	Jammu & Kashmir	C	139	138					
		S	185	185					
	@	P	169	169	302	283	1.0671	0.5980	0.5968
9	Jharkhand	C	NR	444					
	(Bhadai)\$	S	312	670					
		P <sup>A</sup>	130	538	106	341			
	(Aghani)\$	C	NR	188					
	*	S	1165	1363					
		P <sup>A</sup>	552	745	850	1366		0.4040	0.5451
10	Karnataka	C	1114	1159					
		S	1703	1700					
		P	1409	1430	927	942	0.9841	1.4957	1.5180
11	Kerala	C	1	1					
	(Autumn)	S	1	1					
	@	P	1	1	0	55		0.0182	0.0182
	Kerala	C	2	2					
	(Winter)	S	2	2					
	@	P	2	2		127		0.0157	0.0157
12	Madhya Pradesh	C	2236	2224					
		S	1496	1612					
		P	1901	1947	2176	2260	0.9628	0.8414	0.8617
13	Maharashtra	C	1200	2255					
		S	1272	1453					
		P	1234	1880	1466	1466	1.0000	0.8415	1.2822
14	Odisha	C	381	384					
	(Autumn)	S	558	558					
	@	P	470	471		545		0.8615	0.8642
	Odisha	C	2556	2564					
	(Winter)	S	3436	3434					
	@	P	2996	2999		3085		0.9712	0.9721
15	Punjab	C	3572	3532					
	@	S	3632	3587					
		P	3600	3557		2898		1.2422	1.2276
16	Tamil Nadu	C	1719	1800					
	#	S	1249	1491					
		P	1482	1644	1551	1443	1.0748	1.0268	1.1393

1	2	3	4	5	6	7	8	9	10
17	Telangana	C	0	1457					
		S	1544	1582					
		P	920	1531	764	889			
18	Uttar Pradesh	C	4038	7188					
		S	534	782					
		P	3485	6178	5966	5966	1.0000	0.5842	1.0355
19	Uttar- akhand	C	272	273					
		S	277	276					
	@	P	274	274	246	246	1.0000	1.1156	1.1157
20	W.Bengal	C	143	331					
	(Autumn)	S	121	309					
	@	P	130	318		164		0.7918	
	(Winter)	C	401	2899					
	@	S	1872	2922					
		P	1271	2913		4048		0.3139	0.7195
21	Puducherry	C	1	1					
		S	4	4					
		P^A	1	1	3	12	0.2500	0.0833	0.0833
For states covered			27060	40250	22755	38989		0.6940	1.0323
RICE (RABI/ SUMMER)									
1	Andhra Pradesh	C	0	854					
		S	885	892					
		P	543	877	757	585	1.2940	0.9279	1.4997
2	Assam	C		136					
	*	S		129					
	@	P^A		133	417	408	1.0221		0.3253
3	Bihar	C		143					
	*	S		233					
		P		176	84	84			2.0974
4	Karnataka	C	74	74					
		S	29	29					
		P	52	52	20	92	0.2174	0.5614	0.5614
5	Kerala	C	1	1					
	@	S	2	2					
		P	2	2		39		0.0385	0.0385
6	Odisha	C	517	520					
	@	S	145	145					
		P^A	331	333		225		1.4711	1.4778
7	Telangana	C	0	1685					
	@	S	1879	1889					
		P	1110	1806		793		1.3999	2.2768
7	West Bengal	C	903	1749					
		S	725	1080					
	@	P	796	1348		1285		0.6197	1.0491
8	Puducherry	C	6	6					
	Rabi-I	S	12	13					
	\$	P	9	10					
	Rabi-II	C	2	2					
	@	S	4	4					
		P	3	3	6	4	1.5000	0.7500	0.7500
For states covered			1735	2932	1284	2722		0.6375	1.0773
JOWAR(KHARIF)									
2	Karnataka	C	209	239					
		S	83	82					
		P	146	160	95	837	0.1135	0.1743	0.1916
3	Madhya Pradesh	C	91	110					
		S	35	37					
		P	66	77	182	220	0.8273	0.2986	0.3500
4	Maharashtra	C	226	855					
		S	465	411					
		P	338	647	604	604	1.0000	0.5593	1.0716
5	Rajasthan	C	184	196					
		S	151	163					
		P	168	180	600	579	1.0363	0.2898	0.3105
6	Tamil Nadu	C	308	333					
	#	S	300	379					
		P	304	356	365	268	1.3619	1.1342	1.3292
7	Telangana	C	1	71					
		S	96	96					
		P	58	86	18	62	0.2903	0.9293	1.3855
8	Uttar Pradesh	C	194	193					
		S	44	44					
		P	170	170	183	183	1.0000	0.9308	0.9262
For states covered			1192	1590	2029	2691	0.7540	0.4428	0.5909

1	2	3	4	5	6	7	8	9	10
<b>JOWAR(RABI)</b>									
3	Karnataka	C	525	726					
		S	781	781					
		P	653	754	834	837	0.9964	0.7802	0.9002
4	Maharashtra	C	86	2929					
		S	1164	1426					
		P	590	2226	3012	2447		0.2413	0.9095
7	Telangana	C	0	209					
		S	81	89					
		P	48	137	19	28	0.6786	1.7240	4.9102
For states covered			1292	3117	3865	3312		0.3900	0.9410
<b>BAJRA</b>									
1	Andhra Pradesh	C	0	105					
		S	161	161					
		P	99	139	41	42	0.9762	2.3538	3.3187
2	Gujarat	C	NR	349					
		S	3	190					
		P <sup>A</sup>	1	284	28	4	7.7778	0.3406	78.8937
3	Haryana	C	600	619					
\$\$		S	343	347					
		P	494	507	372	478		1.0341	1.0610
4	Karnataka	C	354	385					
		S	249	249					
		P	301	317	252	242	1.0413	1.2455	1.3094
5	Maharashtra	C	259	979					
		S	889	1021					
		P	554	999	837	837	1.0000	0.6617	1.1931
6	Rajasthan	C	708	715					
		S	883	921					
		P	794	816	4034	4150	0.9720	0.1913	0.1967
7	Tamil Nadu #	C	82	94					
		S	70	70					
		P	76	82	52	50	1.0400	1.5188	1.6377
8	Uttar Pradesh	C	1245	1533					
		S	419	429					
		P	1115	1359	907	907	1.0000	1.2290	1.4982
For states covered			3434	4503	6523	6710		0.5119	0.6711
<b>MAIZE</b>									
2	Bihar @	C		389					
		S		484					
		P		423	269	242			1.7485
3	Chhattisgarh	C	52	63					
		S	124	124					
		P	88	94	122	120	1.0167	0.7333	0.7792
4	Gujarat @	C	NR	323					
		S	163	238					
		P <sup>A</sup>	195	288	63	322	0.1957	0.6056	0.8952
5	Haryana \$\$	C	2	2					
		S	6	6					
		P <sup>A</sup>	4	4	16	5		0.7290	0.7290
6	Himachal Pradesh	C	1226	355					
		S	270	267					
		P <sup>A</sup>	1147	348	297	294	1.0102	3.9022	1.1828
7	Jammu & Kashmir	C	229	226					
		S	256	255					
		P	247	245	296	295	1.0034	0.8364	0.8307
8	Jharkhand	C	NR	265					
		S	127	215					
		P <sup>A</sup>	53	244	208	285		0.1860	0.8566
9	Karnataka	C	1759	2062					
		S	1310	1308					
		P	1534	1684	1233	1265	0.9747	1.2127	1.3315



1	2	3	4	5	6	7	8	9	10
10	Madhya Pradesh	C	862	849					
		S	3070	3078					
		P	1860	1857	919	1263	0.7276	1.4728	1.4700
11	Odisha @	C	48	48					
		S	73	73					
		P^	61	61		70		0.8643	0.8643
12	Punjab @	C	102	76					
		S	87	87					
		P	95	81		116		0.8194	0.6991
13	Rajasthan	C	155	155					
		S	325	332					
		P	239	242	933	919	1.0152	0.2596	0.2633
14	Tamil Nadu	C	347	319					
		S	295	273					
		P	321	296	1	315		1.0182	0.9390
14	Telngana	C	0	1080					
		S	765	766					
		P	456	893	557	636		0.7168	1.4039
15	Uttar Pradesh	C	612	749					
		S	63	103					
		P	525	647	727	727	1.0000	0.7227	0.8901
For states covered			6824	7406	5641	6874		0.9927	1.0774
RAGI									
2	Karnataka @	C	550	556					
		S	389	426					
		P	469	491	551	598	0.9214	0.7849	0.8209
4	Tamil Nadu #	C	50	72					
		S	40	41					
		P	45	56	130	61	2.1311	0.7369	0.9237
5	Uttarakhand @	C	89	84					
		S	62	121					
		P	76	102	107	107	1.0000	0.7091	0.9531
For states covered			590	649	788	766		0.7705	0.8475
COTTON									
1	Andhra Pradesh	C	0	411					
		S	708	708					
		P	435	593	448	472	0.9492	0.9211	1.2571
2	Gujarat @	C	NR	2728					
		S	10	1954					
		P^	4	2412	321	2382	0.1348	0.0017	1.0125
3	Haryana	C	547	528					
		S	441	446					
		P	503	494		570		0.8832	0.8672
4	Karnataka	C	874	764					
		S	955	952					
		P	915	858	466	510	0.9137	1.7933	1.6827
5	Madhya Pradesh	C	271	262					
		S	44	44					
		P	168	163	494	599	0.8247	0.2811	0.2729
6	Maharashtra	C	2025	4014					
		S	3577	4039					
		P	2751	4026	4214	3800	1.1089	0.7240	1.0594
7	Punjab @	C	270	236					
		S	212	220					
		P	243	229		285		0.8531	0.8021
8	Rajasthan	C	75	78					
		S	99	106					
		P	87	92	461	471	0.9788	0.1843	0.1948
9	Tamil Nadu #	C	187	199					
		S	177	377					
		P	182	289	152	142	1.0704	1.2813	2.0343
14	Telngana	C	90	2105					
		S	1797	1811					
		P	1107	1930	1480	1409		0.7859	1.3696
For states covered			5288	9156	6556	9231		0.5729	0.9919

1	2	3	4	5	6	7	8	9	10
<b>GROUNDNUT</b>									
1	Andhra Pradesh	C	0	713					
		S	797	825					
		P^	489	782	934	933	1.0011	0.5245	0.8379
2	Gujarat	C	NR	1384					
		S	112	817					
		P^	46	1152	205	1696	0.1209	0.0270	0.6794
3	Karnataka	C	485	494					
		S	181	180					
		P	333	337	470	497	0.9457	0.6695	0.6775
4	Madhya Pradesh	C	53	52					
		S	273	245					
		P	152	139	206	255	0.8078	0.5979	0.5461
5	Maharashtra	C	62	151					
		S	145	165					
		P	101	158	249	235	1.0596	0.4291	0.6704
6	Rajasthan	C	113	121					
		S	143	141					
		P	128	131	561	556	1.0090	0.2298	0.2353
7	Tamil Nadu #	C	304	305					
		S	243	327					
		P	273	316	349	283	1.2332	0.9654	1.1170
14	Telngana	C	0	63					
		S	31	31					
		P	18	44	19	26		0.7106	1.6896
For states covered			1522	3015	2974	4455	0.6676	0.3417	0.6767
<b>SUGARCANE</b>									
1	Andhra Pradesh	C	0	27					
		S	147	136					
		P^	90	94	104	103	1.0097	0.8763	0.9119
2	Assam *	C		0					
		S		11					
		P^		5	17	31	0.5484		0.1678
3	Bihar @	C		101					
		S		68					
		P^		89	242	240		0.0000	0.3714
4	Haryana \$\$	C	66	82					
		S	25	25					
		P	49	59	95	102		0.4818	0.5741
5	Karnataka	C	1003	994					
		S	89	93					
		P	545	543	497	397	1.2519	1.3734	1.3671
6	Maharashtra @	C	259	912					
		S	645	775					
		P	440	848		633	0.0000	0.6945	1.3395
7	Punjab @	C	46	61					
		S	107	107					
		P	74	82		88		0.8438	0.9353
8	Rajasthan	C		NR					
		S		NR					
		P^			7	7	1.0000	0.0000	
9	Tamil Nadu #	C	322	331					
		S	412	393					
		P	367	362	259	218	1.1881	1.6855	1.6619
10	Uttar Pradesh	C	1897	2379					
		S	490	638					
		P	1675	2104	2160	2160	1.0000	0.7755	0.9743
11	Uttarakhand @	C	144	148					
		S	157	138					
		P	150	143	93	93	1.0000	1.6163	1.5391
For states covered			3391	4330	3474	4072	0.8531	0.8329	1.0633
<b>WHEAT</b>									
1	Assam * \$\$	C		0					
		S		4					
		P^		2	22	18	0.0000		
2	Bihar @	C	NR	5114					
		S	344	2352					
		P^	120	4153	2151	2106		0.0568	1.9720
3	Chhattisgarh	C	155	173					
		S	382	428					
		P	269	301	86	115	0.7478	2.3348	2.6130

1	2	3	4	5	6	7	8	9	10	
4	Gujarat	C	NR	1990						
		S		50	1188					
		P^A		20	1671	177	995	0.1779	0.0200	1.6790
5	Haryana	C		2364	2387					
		S		1535	1535					
		P		2052	2066	0	2558	0.0000	0.8020	0.8076
6	Himachal Pradesh	C		415	393					
		S		380	371					
		P^A		398	382	328	346	0.9480	1.1492	1.1043
7	Jammu & Kashmir	C		313	310					
		S		195	195					
		P^A		259	257	316	290	1.0897	0.8915	0.8859
8	Jharkhand *	C		222	222					
		S	NR		529					
		P^A			363	670	212	3.1604		1.7125
9	Karnataka	C		155	185					
		S		144	144					
		P		150	165	165	168	0.9821	0.8899	0.9792
10	Madhya Pradesh	C		7377	7597					
		S		6832	6979					
		P		7143	7332	6611	6028	1.0967	1.1850	1.2163
11	Maharashtra @	C		381	1506					
		S		1019	1099					
		P		651	1334	1272	1272		0.5119	1.0485
12	Punjab @	C		3791	3905					
		S		4167	4178					
		P		3981	4043		3495		1.1390	1.1568
13	Rajasthan	C		689	711					
		S		775	779					
		P		732	745	3260	2830	1.1519	0.2586	0.2632
14	Uttar Pradesh	C		9623	14199					
		S		1735	1999					
		P		8316	12178	9645	9655	0.9990	0.8613	1.2613
15	Uttarakhand	C		430	426					
		S		304	391					
		P		370	409	468	341	1.3724	1.0850	1.2004
16	West Bengal @	C		10	126					
		S		101	152					
		P		63	141		322		0.1968	0.4387
For states covered				24522	35540	25171	30751	0.8185	0.7974	1.1557
BARLEY										
1	Haryana	C		15	15					
		S		1	1					
		P		10	10		20	0.0000	0.4861	0.4861
2	Himachal Pradesh	C		39	40					
		S		11	15					
		P^A		25	28	18	20	0.9000	1.2550	1.3795
3	Punjab @	C		5	5					
		S		1	1					
		P		3	3		8		0.3724	0.3724
4	Rajasthan	C		71	90					
		S		45	44					
		P		58	67	270	276		0.2104	0.2432
For states covered				96	107	288	324		0.2959	0.3315
GRAM										
1	Andhra Pradesh	C		0	338					
		S		523	529					
		P^A		321	455	421	397	1.0605	0.8080	1.1465
2	Bihar @	C		NR	132					
		S		33	61					
		P		11	107	59	59		0.1946	1.8186
3	Chhattisgarh	C		267	276					
		S		471	463					
		P		369	370	273	307	0.8893	1.2020	1.2036
4	Gujarat	C		NR	222					
		S		12	218					
		P^A		5	220	33	164	0.2012	0.0291	1.3439
5	Haryana	C		16	19					
		S		2	2					
		P		11	13		37	0.0000	0.2898	0.3403

1	2	3	4	5	6	7	8	9	10
6	Jharkhand	C	NR	55					
	*	S		27					
		P <sup>A</sup>		42	18	211	0.0853		0.1997
7	Karnataka	C	405	1386					
		S	967	968					
		P	686	1177	1120	1003	1.1167	0.6839	1.1735
8	Madhya Pradesh	C	2661	2643					
		S	1275	1297					
		P	2066	2065	2259	3222	0.7011	0.6411	0.6409
9	Maharashtra	C	545	1575					
	@	S	1260	1406					
		P	848	1503	1929	1929		0.4394	0.7794
10	Punjab	C	8	8					
	@	S	1	NR					
		P	4	4		2		2.2321	2.2321
11	Rajasthan	C	440	444					
		S	263	264					
		P	352	354	1580	1548	1.0207	0.2274	0.2290
12	Uttar Pradesh	C	225	229					
		S	99	101					
		P	204	208	263	562	0.4680	0.3632	0.3697
For states covered			4877	6519	7955	9441		0.5165	0.6905
<b>RAPE &amp; MUSTARD</b>									
1	Assam	C	NR	69					
	@	S		48					
	\$\$	P <sup>A</sup>		59	274	294	0.9320		0.2000
2	Bihar	C	NR	288					
	@	S	0	58					
		P <sup>A</sup>	0	208		83		0.0000	2.5057
3	Chhattisgarh	C	19	23					
		S	169	169					
		P	94	96	44	51	0.8627	1.8431	1.8824
4	Gujarat	C	NR	282					
		S	0	263					
		P <sup>A</sup>	0	274	45	201	0.2239	0.0000	1.3653
5	Haryana	C	503	603					
		S	320	320					
		P	434	496		510	0.0000	0.8510	0.9732
6	Jharkhand	C	NR	45					
	* @ & \$	S		43					
		P <sup>A</sup>		44		273	0.0000		0.1615
8	Madhya Pradesh	C	650	644					
	@ \$ \$	S	818	783					
		P	726	707	568	708	0.8023	1.0253	0.9984
9	Punjab	C	14	19					
	@	S	26	28					
		P	20	24		32		0.6269	0.7358
10	Rajasthan	C	643	710					
		S	631	617					
		P	637	664	2554	2564	0.9961	0.2485	0.2589
11	Uttar Pradesh	C	1161	1585					
		S	273	305					
		P	1014	1373	594	689	0.8621	1.4715	1.9927

1	2	3	4	5	6	7	8	9	10
12	West	C	131	521					
	Bengal	S	232	445					
	@	P	190	476		459		0.4144	1.0380
For states covered			3115	4421	4079	5864		0.5312	0.7539

Source:- (1) TRS information collected in prescribed format from Shashtri Bhawan, New Delhi.

(2) Final Estimates collected from DES, M/o Agriculture, New Delhi.

Note:-

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

## COMPARISON OF PERCENTAGE OF AREA UNDER DIFFERENT INPUTS AS ESTIMATED

## UNDER ICS &amp; TRS : 2016-17

Sl. No.	State	S E A S O N	Percentage of Area under different categories													T O T A L
			As per Sample check						T O T A L	As per T.R.S. @						
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
4	5	6	7	8	9	10	11	12	13	14	15	16	17			
<b>RICE</b>																
1	Andhra	Kharif	92.49	1.46	93.95	4.89	1.16	6.05	100	0.00	0.00	95.46	0.00	0.00	4.54	100
	Pradesh	Rabi	99.35	0.26	99.61	0.39	0.00	0.39	100	0.00	0.00	100.00	0.00	0.00	0.00	100
2	Assam	Autumn	0.00	30.55	30.55	0.27	69.18	69.45	100	0.00	0.00	2.66	0.00	0.00	97.34	100
		Winter	0.00	10.34	10.34	1.59	88.07	89.66	100	0.00	0.00	0.00	0.00	0.00	0.00	0
		Summer	26.09	10.14	36.23	3.76	60.01	63.77	100	Data not available						
3	Bihar	Autumn	67.65	3.30	70.95	3.80	25.25	29.05	100	0.00	0.00	37.03	0.00	0.00	62.97	100
		Winter	54.47	24.36	78.84	13.57	7.59	21.16	100	0.00	0.00	39.45	0.00	0.00	60.55	100
		Summer	71.24	10.74	81.99	0.00	18.01	18.01	100	0.00	0.00	90.48	0.00	0.00	9.52	100
4	Chattisgarh	Kharif	30.21	0.02	30.23	44.39	25.38	69.77	100	30.52	4.00	34.51	39.63	25.86	65.49	100
5	Gujarat	Kharif	69.53	2.70	72.23	19.41	8.36	27.77	100	0.00	0.00	64.66	0.00	0.00	35.34	100
6	Haryana	Kharif	99.95	0.05	100.00	-	-	-	100	0.00	0.00	100.00	0.00	0.00	0.00	100
7	Himachal Pradesh	Kharif	37.82	20.38	58.20	20.90	20.90	41.80	100	43.66	15.49	59.15	25.35	15.49	40.85	100
8	Jammu & Kashmir	Kharif	61.84	31.56	93.40	1.27	5.33	6.60	100	62.58	25.83	88.41	6.62	4.97	11.59	100
9	Jharkhand	Autumn	0.00	0.00	0.00	0.00	100.00	100.00	100	0.00	0.00	0.00	0.00	100.00	100.00	100
		Winter	2.50	2.42	4.92	50.51	44.57	95.08	100	4.59	14.24	18.82	1.06	80.12	81.18	100
		Summer	Data Not Available													
10	Karnataka	Kharif	79.13	0.25	79.37	17.45	3.18	20.63	100	56.47	3.23	59.70	24.46	15.84	40.30	100
		Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	100.00	0.00	100.00	0.00	0.00	0.00	100
11	Kerala	Autumn	0.00	0.00	0.00	100.00	0.00	100.00	100	TRS NOT APPLICABLE						
		Winter	100.00	0.00	100.00	0.00	0.00	0.00	100							
		Summer	100.00	0.00	100.00	0.00	0.00	0.00	100							
12	Madhya Pradesh	Kharif	20.71	7.34	28.06	35.44	36.51	71.94	100	31.39	8.92	40.30	20.82	22.33	59.70	100
13	Maharashtra	Kharif	25.39	8.69	34.08	50.02	15.90	65.92	100	20.46	0.00	20.46	79.54	0.00	79.54	100
14	Odisha	Autumn	0.53	0.11	0.64	72.90	26.46	99.36	100	TRS NOT APPLICABLE						
		Winter	24.11	0.20	24.31	70.47	5.22	75.69	100							
		Summer	89.46	0.00	89.46	10.54	0.00	10.54	100							
15	Punjab	Kharif	98.48	1.52	100.00	0.00	0.00	0.00	100	Data not available						
16	Tamil Nadu	#	94.79	0.42	95.21	2.49	2.30	4.79	100	0.00	0.00	90.38	0.00	0.00	9.62	100
17	Telangana	Kharif	90.19	2.86	93.05	4.96	1.99	6.95	100	0.00	0.00	95.55	0.00	0.00	4.45	100
		Rabi	96.42	1.78	98.20	1.64	0.16	1.80	100	0.00	0.00	100.00	0.00	0.00	0.00	100
18	Uttar Pradesh	Kharif	97.65	0.95	98.60	0.78	0.61	1.40	100	79.53	3.15	82.69	16.46	0.85	17.31	100
19	Uttarakhand	Kharif	65.08	14.22	79.30	1.97	18.73	20.70	100	56.10	12.60	68.70	31.30	0.00	31.30	100
20	West Bengal	Autumn	Data Not Available						TRS NOT APPLICABLE							
		Winter	25.92	7.48	33.40	20.60	46.00	66.60							100	
		Summer	37.18	2.85	40.03	1.22	58.74	59.97							100	
21	Puducherry	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	0.00	0.00	100.00	100.00	100
		Rabi-I	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
		Rabi-II	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	0.00	0.00	100.00	100.00	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			67.01	4.18	71.19	16.30	12.51	28.81	100	32.34	3.33	62.87	18.54	10.37	37.13	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			75.25	2.59	77.84	13.27	8.88	22.16	100	34.18	3.01	65.66	39.38	8.00	34.34	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			67.02	3.02	70.04	19.08	10.88	29.96	100	45.60	3.85	58.94	26.22	10.21	41.06	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
<b>JOWAR</b>																
1	Karnataka	Kharif	10.25	0.00	10.25	75.77	13.98	89.75	100	16.84	1.05	17.89	73.68	8.42	82.11	100
		Rabi	9.81	2.92	12.72	76.87	10.40	87.28	100	11.27	3.12	14.39	67.87	17.75	85.61	100
2	Madhya Pradesh	Kharif	0.00	0.00	0.00	50.07	49.93	100.00	100	0.00	0.00	0.00	44.51	55.49	100.00	100
3	Maharashtra	Kharif	5.82	1.44	7.27	75.26	17.48	92.73	100	0.00	0.00	1.49	0.00	0.00	98.51	100
		Rabi	21.66	10.61	32.28	57.08	10.65	67.72	100	Data Not Available						
4	Rajasthan	Kharif	0.28	0.00	0.28	40.22	59.50	99.72	100	0.00	0.33	0.00	0.00	99.67	100	100
5	Tamil Nadu	#	33.84	2.38	36.22	46.33	17.44	63.78	100			15.34			84.66	100
6	Telangana	Kharif	0.00	0.00	0.00	29.62	70.38	100.00	100			0.00			100.00	100
		Rabi	21.29	5.58	26.87	25.72	47.41	73.13	100			57.89			42.11	100
7	Uttar Pradesh	Kharif	1.09	0.50	1.58	4.47	93.95	98.42	100			3.83			96.17	100
TOTAL FOR			15.87	6.32	22.19	58.96	18.85	77.81	100	1.86	0.46	12.18	12.13	4.35	87.82	100
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			15.87	6.32	22.19	58.96	18.85	77.81	100	1.92	0.47	12.57	11.10	2.72	87.43	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			9.05	2.20	11.25	74.43	14.32	88.75	100	2.67	0.65	15.40	17.39	6.23	84.60	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																
<b>BAJRA</b>																
1	Andhra Pradesh	Kharif	4.47	1.38	5.85	89.74	4.41	94.15	100	0.00	0.00	17.07	0.00	0.00	82.93	100
2	Gujarat	Kharif	30.71	0.62	31.33	63.13	5.54	68.67	100	0.00	0.00	21.43	0.00	0.00	78.57	100
3	Haryana	Kharif	69.65	0.08	69.73	29.92	0.35	30.27	100	0.00	0.00	53.76	0.00	0.00	46.24	100
4	Karnataka	Kharif	6.93	0.16	7.09	92.59	0.32	92.91	100	7.54	0.00	7.54	91.67	0.79	92.46	100
5	Maharashtra	Kharif	14.50	1.22	15.72	67.45	16.84	84.28	100	0.00	0.00	4.42	0.00	0.00	95.58	100
6	Rajasthan	Kharif	2.53	0.55	3.08	65.80	31.12	96.92	100	0.00	0.00	4.54	0.00	0.00	95.46	100
7	Tamil Nadu	#	5.41	0.61	6.02	69.89	24.09	93.98	100	0.00	0.00	15.38	0.00	0.00	84.62	100
8	Uttar Pradesh	Kharif	18.85	0.00	18.85	72.30	8.86	81.15	100	0.00	0.00	13.01	0.00	0.00	86.99	100
TOTAL FOR			17.29	0.51	17.80	68.78	13.42	82.20	100	0.29	0.00	8.86	3.54	0.03	91.14	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			14.19	0.53	14.72	71.08	14.20	85.28	100	0.29	0.00	8.86	3.54	0.03	91.14	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			6.93	0.16	7.09	92.59	0.32	92.91	100	7.54	0.00	7.54	91.67	0.79	92.46	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
<b>RAGI</b>																
1	Karnataka	Kharif	0.92	0.00	0.92	82.68	16.40	99.08	100	4.17	0.36	4.54	93.65	1.81	95.46	100.00
2	Tamil Nadu	#	41.59	32.51	74.10	23.26	2.64	25.90	100	0.00	0.00	13.08	0.00	0.00	86.92	100.00
3	Uttarakhand	Kharif	-	-	-	0.48	98.57	99.05	100	0.00	0.00	0.00	0.00	0.00	100.00	100.00
TOTAL FOR STATES COVERED UNDER ICS SCHEME			4.28	2.79	7.07	72.45	20.48	92.93	100	2.92	0.25	5.33	65.48	1.27	94.67	100.00
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			4.28	2.79	7.07	72.45	20.48	92.93	100	3.38	0.29	6.17	75.77	1.47	93.83	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			0.92	0.00	0.92	82.68	16.40	99.08	100	4.17	0.36	4.54	93.65	1.81	95.46	100.00
<b>MAIZE</b>																
1	Bihar	Kharif	19.27	15.47	34.74	21.91	43.35	65.26	100	Data not available						
2	Chattisgarh	Kharif	0.00	0.00	0.00	52.69	63.44	100.00	100	2.46	0.00	2.46	53.28	44.26	97.54	100
3	Gujarat	Kharif	11.93	3.68	15.61	27.58	56.81	84.39	100	0.00	0.00	12.70	0.00	0.00	87.30	100
4	Haryana	Kharif	52.32	21.52	73.84	0.00	26.16	26.16	100	0.00	0.00	56.25	0.00	0.00	43.75	100
5	Himachal Pradesh	Kharif	11.11	2.74	13.85	59.74	26.41	86.15	100	#DIV/0!	0.00	0.00	0.00	0.00	0	0
6	Jharkhand	Kharif	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	13.94	13.94	0.00	86.06	86.06	100
7	Jammu & Kashmir	Kharif	0.80	1.61	2.41	19.40	78.19	97.59	100	1.35	7.43	8.78	20.27	70.95	91.22	100
8	Karnataka	Kharif	22.47	1.46	23.93	66.47	9.60	76.07	100	26.85	0.16	27.01	72.99	0.00	72.99	100
9	Madhya Pradesh	Kharif	0.27	0.00	0.27	12.81	86.92	99.73	100	3.48	0.44	3.92	50.60	45.48	96.08	100
10	Odisha	Kharif	0.83	0.00	0.83	76.03	23.14	99.17	100	Not applicable						
11	Punjab	Kharif	83.78	1.32	85.09	9.08	5.83	14.91	100	Data not available						
12	Rajasthan	Kharif	0.00	0.00	0.00	31.49	68.51	100.00	100	0.00	0.00	0.54	0.00	0.00	99.46	100
13	Tamil Nadu #	Kharif	36.88	2.02	38.89	39.81	21.29	61.11	100	Data not available						
14	Telangana	Kharif	12.39	0.07	12.45	83.71	3.84	87.55	100	0.00	0.00	15.26	0.00	0.00	84.74	100
15	Uttar Pradesh	Kharif	30.32	0.00	30.32	56.05	13.63	69.68	100	0.00	0.00	37.55	0.00	0.00	62.45	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			14.54	1.31	15.85	43.00	41.23	84.15	100	6.92	1.07	15.10	27.89	16.11	84.90	100.00
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			14.69	1.29	15.98	42.41	41.69	84.02	100	7.21	0.55	15.15	29.02	13.28	84.85	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			10.03	0.67	10.70	36.83	52.61	89.30	100	13.82	2.15	15.96	53.65	30.38	84.04	100



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<b>COTTON</b>																
1	Andhra Pradesh	Kharif	16.32	0.00	16.32	81.40	2.28	83.68	100	0.00	0.00	16.52	0.00	0.00	83.48	100
2	Gujarat	Kharif	63.73	5.94	69.67	19.28	11.05	30.33	100	0.00	0.00	60.12	0.00	0.00	39.88	100
3	Haryana	Kharif	96.69	2.20	98.89	0.87	0.24	1.11	100	0.00	0.00	98.96	0.00	0.00	1.04	100
4	Karnataka	Kharif	37.67	0.00	37.67	61.98	0.35	62.33	100	20.82	0.43	21.24	71.89	6.87	78.76	100
5	Madhya Pradesh	Kharif	61.52	0.00	61.52	18.00	20.48	38.48	100	0.00	0.00	67.41	0.00	0.00	32.59	100
6	Maharashtra	Kharif	24.75	0.31	25.06	74.10	0.84	74.94	100	0.00	0.00	9.28	0.00	0.00	90.72	100
7	Punjab	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
8	Rajasthan	Kharif	79.37	11.91	91.28	8.72	0.00	8.72	100	0.00	0.00	95.88	0.00	0.00	4.12	100
9	Tamil Nadu	#	51.81	0.62	52.42	38.55	9.03	47.58	100	0.00	0.00	26.97	0.00	0.00	73.03	100
10	Telangana	Kharif	7.29	0.25	7.54	86.57	5.89	92.46	100	0.00	0.00	14.05	0.00	0.00	85.95	100
TOTAL FOR			35.55	1.54	37.10	58.93	3.97	62.90	100	1.13	0.02	27.30	3.89	0.37	72.70	100
STATES COVERED UNDER ICS SCHEME																
TOTAL FOR			33.21	1.55	34.76	61.13	4.11	65.24	100	1.13	0.02	27.30	3.89	0.37	72.70	100
STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED																
TOTAL FOR			16.32	0.00	16.32	81.40	2.28	83.68	100	20.82	0.43	21.24	71.89	6.87	78.76	100
STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL																
<b>GROUNDNUT</b>																
1	Andhra Pradesh	Kharif	7.58	0.67	8.25	63.29	28.46	91.75	100	0.00	0.00	5.46	0.00	0.00	94.54	100
2	Gujarat	Kharif	55.15	9.55	64.70	28.25	7.06	35.30	100	-	-	27.32	-	-	72.68	100
3	Karnataka	Kharif	5.19	0.00	5.19	90.96	3.86	94.81	100	8.94	0.21	9.15	80.00	10.85	90.85	100
4	Madhya Pradesh	Kharif	0.00	1.58	1.58	66.96	31.46	98.42	100	-	-	9.22	-	-	90.78	100
5	Maharashtra	Kharif	10.71	0.63	11.34	72.97	15.69	88.66	100	0.00	0.00	5.62	0.00	0.00	94.38	100
6	Rajasthan	Kharif	40.32	33.30	73.62	7.15	19.23	26.38	100	-	-	87.88	-	-	12.12	100
7	Tamil Nadu	#	36.33	0.63	36.95	56.63	6.42	63.05	100	-	-	43.27	-	-	56.73	100
8	Telangana	Kharif	34.38	0.00	34.38	65.62	0.00	65.62	100	-	-	15.79	-	-	84.21	100
TOTAL FOR			29.07	5.34	34.41	51.28	14.31	65.59	100	1.40	0.03	27.73	12.56	1.70	72.27	100
STATES COVERED UNDER ICS SCHEME																
TOTAL FOR			29.07	5.34	34.41	51.28	14.31	65.59	100	1.40	0.03	27.73	12.56	1.70	72.27	100
STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED																
TOTAL FOR			5.19	0.00	5.19	90.96	3.86	94.81	100	8.94	0.21	9.15	80.00	10.85	90.85	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
<b>SUGARCANE</b>																
1	Andhra Pradesh	Khariif	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	92.31	0.00	0.00	7.69	100
2	Assam	Khariif	0.00	0.00	0.00	0.00	0.00	0.00	0	Data not available						
3	Bihar	Khariif	66.14	3.75	69.90	5.50	24.60	30.10	100	0.00	0.00	79.34	0.00	0.00	20.66	100
4	Haryana	Khariif	98.60	1.40	100.00	0.00	0.00	0.00	100	0.00	0.00	100.00	0.00	0.00	0.00	100
5	Karnataka @	Khariif	92.73	3.68	96.41	3.59	0.00	3.59	100	95.57	4.43	100.00	0.00	0.00	0.00	100
6	Maharashtra	Khariif	87.64	9.39	97.03	1.66	1.31	2.97	100	Data not available						
7	Punjab	Khariif	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
8	Rajasthan	Khariif	Not Tabulated							-	-	100.00	-	-	0.00	100
9	Tamil Nadu	#	94.95	5.05	100.00	0.00	0.00	0.00	100	-	-	100.00	-	-	0.00	100
10	Uttar Pradesh	Khariif	98.14	1.70	99.84	0.08	0.08	0.16	100	-	-	94.35	-	-	5.65	100
11	Uttarakhand	Khariif	95.11	2.15	97.26	2.74	0.00	2.74	100	-	-	98.92	-	-	1.08	100
TOTAL FOR			94.66	3.82	98.48	0.88	0.64	1.52	100	13.67	0.63	94.30	0.00	0.00	5.70	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			96.65	2.23	98.88	0.67	0.46	1.12	100	13.74	0.64	94.76	0.00	0.00	5.24	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
<b>WHEAT</b>																
1	Assam	Rabi	16.67	0.00	16.67	16.67	66.67	83.33	100	0.00	0.00	0.00	0.00	0.00	100.00	100
2	Bihar	Rabi	77.52	19.79	97.32	0.14	2.54	2.68	100	71.41	23.66	95.07	2.28	2.70	4.93	100
3	Chhattisgarh	Rabi	65.28	10.96	76.25	11.13	12.62	23.75	100	0.00	0.00	82.56	0.00	0.00	17.44	100
4	Gujarat	Rabi	81.60	13.83	95.43	2.86	1.71	4.57	100	0.00	0.00	95.48	0.00	0.00	4.52	100
5	Haryana	Rabi	99.91	0.03	99.94	0.00	0.06	0.06	100	0.00	0.00	0.00	0.00	0.00	0.00	0
6	Himachal Pradesh	Rabi	21.54	1.58	23.11	42.24	34.65	76.89	100	21.04	4.27	25.30	60.67	14.02	74.70	100
7	Jammu & Kashmir	Rabi	28.80	9.58	38.38	19.46	42.16	61.62	100	Data not available						
8	Jharkhand	Rabi	66.33	17.20	83.53	0.91	15.57	16.47	100	35.82	32.84	68.66	26.87	4.48	31.34	100
9	Karnataka	Rabi	62.42	7.58	70.00	19.70	10.30	30.00	100	50.91	17.58	68.48	23.03	8.48	31.52	100
10	Madhya Pradesh	Rabi	83.32	13.70	97.02	0.93	2.05	2.98	100	75.24	19.39	94.63	1.18	4.19	5.37	100
11	Maharashtra	Rabi	77.37	8.96	86.32	13.16	0.52	13.68	100	0.00	0.00	72.01	0.00	0.00	27.99	100
12	Punjab	Rabi	97.96	1.76	99.73	0.27	0.00	0.27	100	Data not available						
13	Rajasthan	Rabi	79.74	17.25	96.99	2.00	1.00	3.01	100	0.00	0.00	99.08	0.00	0.00	0.92	100
14	Uttar Pradesh	Rabi	99.57	0.26	99.83	0.13	0.04	0.17	100	98.65	0.28	98.93	0.87	0.20	1.07	100
15	Uttarakhand	Rabi	52.59	17.89	70.48	1.75	27.77	29.52	100			70.09			29.91	100
16	West Bengal	Rabi	61.86	0.42	62.27	0.83	36.90	37.73	100	TRS not applicable						
TOTAL FOR STATES COVERED UNDER ICS SCHEME			90.91	6.22	97.13	1.47	1.40	2.87	100	67.00	8.44	93.29	2.33	2.63	6.71	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			80.84	13.21	94.05	3.39	2.56	5.95	100	67.06	8.45	93.38	2.33	2.63	6.62	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			81.70	13.64	95.34	1.50	3.16	4.66	100	84.46	9.95	94.41	2.94	2.66	5.59	100

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<b>BARLEY</b>																
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	1.80	0.00	1.80	9.05	89.15	98.20	100	-	-	0.00	-	-	0.00	0
3	Punjab	Rabi	83.39	16.61	100.00	0.00	0.00	0.00	100	Data not available						
4	Rajasthan	Rabi	63.11	36.89	100.00	0.00	0.00	0.00	100	0.00	0.00	98.15	0.00	0.00	1.85	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			56.70	28.74	85.44	1.34	13.22	14.56	100	-	-	92.71	-	-	7.29	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			63.11	36.89	100.00	0.00	0.00	0.00	100	-	-	92.71	-	-	7.29	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY-WISE TRS ESTIMATES NOT AVAILABLE													
<b>GRAM</b>																
1	Andhra Pradesh	Rabi	1.15	0.00	1.15	70.42	28.43	98.85	100	0.00	0.00	0.71	0.00	0.00	99.29	100
2	Bihar	Rabi	0.00	48.01	48.01	0.00	51.99	51.99	100	0.00	0.00	0.00	0.00	0.00	100.00	100
3	Chhattisgarh	Rabi	32.75	26.39	59.13	4.60	36.27	40.87	100	-	-	49.08	-	-	50.92	100
4	Gujarat	Rabi	26.73	46.73	73.46	18.61	7.93	26.54	100	-	-	45.45	-	-	54.55	100
5	Haryana	Rabi	34.64	0.00	34.64	65.36	0.00	65.36	100	-	-	0.00	-	-	0.00	0
6	Jharkhand	Rabi	5.12	46.93	52.05	3.84	44.11	47.95	100	-	-	5.56	-	-	94.44	100
7	Karnataka	Rabi	9.89	1.78	11.68	37.28	51.04	88.32	100	21.16	10.63	31.79	61.43	6.79	68.21	100
8	Madhya Pradesh	Rabi	43.41	40.72	84.12	3.99	11.89	15.88	100	-	-	67.77	-	-	32.23	100
9	Maharashtra	Rabi	36.95	8.83	45.78	42.81	11.40	54.22	100	0.00	0.00	40.64	0.00	0.00	59.36	100
10	Punjab	Rabi	11.32	0.00	11.32	88.68	0.00	88.68	100	Data not available						
11	Rajasthan	Rabi	10.32	33.35	43.67	30.11	26.22	56.33	100	-	-	50.38	-	-	49.62	100
12	Uttar Pradesh	Rabi	5.21	37.65	42.87	22.89	34.25	57.13	100	-	-	22.81	-	-	77.19	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			28.50	21.73	50.22	27.74	22.04	49.78	100			46.26			53.74	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			22.82	10.47	33.29	40.67	26.04	66.71	100	-	-	46.61	-	-	53.39	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			9.89	1.78	11.68	37.28	51.04	88.32	100	7.77	3.90	37.39	22.56	2.49	62.61	100

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
<b>RAPE &amp; MUSTARD</b>																	
1	Assam	Rabi	0.00	18.54	18.54	4.16	77.30	81.46	100	-	-	0.00	-	-	100.00	100	
2	Bihar	Rabi	38.13	18.87	57.00	11.14	31.87	43.00	100	Data Not available							
3	Chattisgarh	Rabi	0.00	3.65	3.65	0.00	96.35	96.35	100	-	-	11.36	-	-	88.64	100	
4	Gujarat	Rabi	78.20	21.80	100.00	0.00	0.00	0.00	100	-	-	97.78	-	-	2.22	100	
5	Haryana @	Rabi	96.77	0.00	96.77	3.23	0.00	3.23	100	-	-	0.00	-	-	0.00	0	
6	Jharkhand	Rabi	8.13	28.37	36.50	1.24	62.26	63.50	100	-	-	0.00	-	-	0.00	0	
7	Madhya Pradesh	Rabi	73.12	10.78	83.90	3.36	12.74	16.10	100	-	-	61.27	-	-	38.73	100	
8	Punjab	Rabi	95.66	2.15	97.81	2.19	0.00	2.19	100	Data Not available							
9	Rajasthan	Rabi	63.36	24.27	87.63	10.87	1.51	12.37	100	-	-	92.83	-	-	7.17	100	
10	Uttar Pradesh	Rabi	77.29	15.59	92.88	3.40	3.72	7.12	100	-	-	91.61	-	-	8.39	100	
11	West Bengal	Rabi	41.12	4.06	45.18	6.26	48.56	54.82	100	TRS Not applicable							
TOTAL FOR STATES COVERED UNDER ICS SCHEME			69.70	14.30	84.00	4.78	11.22	16.00	100	-	-	81.08	-	-	18.92	100	
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			65.29	22.91	88.20	7.55	4.25	11.80	100	-	-	86.99	-	-	13.01	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 2016-17

Sl. No.	State	A G E N C Y	ICS				C.E.S. \$				% Diff. (Col.6- Col.10/ Col.10 x 100)	Coeffi- cient of Varia- tion
			No. of Expts.		Estimated Yield Rate Kg/Hac	% SE	No. of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
RICE (KHARIF)												
1	Andhra Pradesh *	C	180	179	3380	2.7						36
		S	180	178	N.P.							N.C.
		P	360	357	3310	2.0	4272	4272	4403	0.6	-24.82	38
2	Assam (Aut)	C	100	69	1575	5.5						46
		S	100	56	0	0.0						0
		P	200	125	1575	5.5	2000	1348	1364	1.3	15.47	61
	Assam (Wint)	C	120	118	2038	4.2						46
		S	120	108	0	0.0						0
	*	P	240	226	2038	4.2	3000	2932	2003	0.6	1.75	63
3	Bihar (Aut/ Bhadai)	C	40	32	1793	8.6						49
		S	40	14	N.P.							N.C.
	*	P	80	46	1793	8.6	840	596	1701	NR	5.41	58
	Bihar (Wint/Winter)	C	240	189	2887	3.2						44
		S	240	71	N.P.							N.C.
	*	P	480	260	2887	3.2	10480	10186	3387	0.0	-14.76	52
4	Chhattisgarh	C	80	80	2344	7.6						68
		S	80	73	2386	5.0						43
		P	160	153	2373	4.2	1390	1110	1305	2.5	81.84	52
5	Gujarat	C	80	70	2265	5.1						43
		S	80	66	0	0.0						N.C.
		P	160	136	2265	5.1	1988	1988	2137	9.1	5.99	59
6	Haryana	C	90	90	3420	4.3						41
		S	90	64	3340	3.9						31
		P	180	154	3375	2.9	990	864	3298	1.6	2.33	36
7	Himachal Pradesh	C	60	44	1669	9.3						62
		S	60	48	N.P.							N.C.
	*	P	120	92	1743	6.8	990	713	1968	3.4	-11.43	65
8	Jammu & Kashmir	C	70	30	2033	5.2						28
		S	70	20	N.P.							N.C.
	*	P	140	50	2033	5.2	1230	930	1780	6.0	14.21	36
9	Jharkhand (Aut/E. Kharif)	C	20	20	1598	19.5						87
		S	20	10	N.P.							N.C.
		P	40	30	1598	19.5	720	594	909	0.0	75.80	107
	Jharkhand (Wint/L. Kharif)	C	80	76	1743	9.9						86
		S	80	28	N.P.							N.C.
	*	P	160	104	1743	9.9	8490	7944	2088	0.0	-16.52	101
10	Karnataka	C	144	0	0	0.0						0
		S	144	0	0	0.0						0
		P	288	0	0	0.0	7906	7790	3282	1.8	-100.00	0
11	Kerala (Aut)	C	100	100	2642	11.1						111
		S	100	100	2647	9.1						91
		P	200	200	2645	7.1	2356	2356	2663	2.1	-0.68	100
	Kerala (Wint)	C	100	100	2359	10.8						108
		S	100	99	2219	11.5						114
		P	200	199	2289	7.9	3167	3167	2734	1.4	-16.28	111
12	Madhya Pradesh	C	100	98	2242	6.3						62
		S	100	74	0	0.0						0
		P	200	172	2242	6.3	2760	2316	1127	10.0	98.94	83
13	Maharashtra *	C	82	62	1968	5.7						45
		S	82	52	N.P.							N.C.
		P	164	114	1968	5.7	5030	4551	1731	0.9	13.69	61
14	Odisha (Aut)	C	220	214	1179	5.5						80
		S	220	218	1191	4.0						59
		P	440	432	1185	6.5	6706	6706	719	1.3	64.81	135
	Odisha (Wint)	C	270	266	2318	2.8						46
		S	270	264	2307	3.4						55
		P	540	530	2313	2.2	10702	10688	1485	0.7	55.76	51
15	Punjab	C	190	188	4373	1.9						26
		S	190	180	4406	1.9						25
		P	380	368	4389	1.4	1980	1978	3974	NR	10.44	27
16	Tamil Nadu (Phase-I)	C	60	57	4264	2.4						18
		S	60	60								0
		P	120	117	4264	2.4	428	420	4458	0.8	-4.35	26
	Tamil Nadu (Phase-II)	C	120	119	2334	7.3						80
		S	120	118	2270	7.3						79
		P	240	237	2301	5.2	1260	1260	3418	0.7	-32.68	80

1	2	3	4	5	6	7	8	9	10	11	12	13
17	Telangana	C	100	96	3609	2.4						24
		S	100	68								0
		P	200	164	3609	2.4	2508	2508	2934	0.7	23.01	31
18	Uttar Pradesh	C	660	656	2573	2.0						50
		S	660	104	N.P.							N.C.
	*	P	1320	760	2573	2.0	172100	169689	2130	NR	20.80	54
19	Uttarakhand	C	50	42	2591	8.2						53
	*	S	50	50	N.P.							N.C.
		P	100	92	2591	8.2	2972	2930	3189	0.8	-18.75	78
20	West Bengal	C	100	94	2396	3.6						35
	E. Kharif	S	100	96	2512	3.5						34
		P	200	190	2453	2.5	2685	2354	2598	1.1	-5.58	34
	L. Kharif	C	160	160	2716	2.6						33
		S	160	128	2815	3.1						35
		P	320	288	2756	2.0	13318	9625	2743	0.6	0.47	34
20	Puducherry (Kh.)	C	10	10	3773	10.7						34
		S	10	10	N.P.							13
		P	20	20	3025	3.8	90	90	3348	3.1	-9.65	17
For states covered			7252	5616	2554	1.1	272358	261905	2364	0.4	8.04	85
RICE (SUMMER)												
1	Andhra Pradesh	C	90	88	4185	3.7						35
		S	90	82								34
		P	180	170	4322	2.7	2994	2736	6660	0.5	-35.11	35
2	Assam	C	40	40	3163	5.0						31
	*	S	40	32	N.P.							N.C.
		P	80	72	3162	5.0	1500	1316	2818	1.3	12.21	42
3	Bihar	C	40	32	2711	14.3						81
	*	S	40	4	N.P.							N.C.
		P	80	36	2711	14.3	440	158	2472	NR	9.67	86
4	Karnataka	C	40	15	3117	14.7						57
	*	S	40	27	3319	13.5						70
		P	80	42	3214	9.6	670	540	2576	6.1	24.77	62
5	Kerala	C	100	100	2331	11.1						111
		S	100	99	2788	10.0						99
		P	200	199	2542	7.5	1522	1518	3057	2.2	-16.85	106
6	Odisha	C	140	138	3125	5.8						68
		S	140	134	3109	5.5						64
		P	280	272	3116	4.0	3781	3781	3356	1.5	-7.15	66
7	Tamil Nadu	C	40	40	3859	4.5						28
		S	40	40	3216	8.8						56
		P	80	80	3682	4.1	300	300	4113	1.1	-10.48	37
8	Telangana	C	80	75	3970	3.7						32
		S	80	16	3850	7.3						29
		P	160	91	3944	3.3	2430	2430	2858	0.7	0.00	31
9	West Bengal	C	140	118	3234	2.8						30
		S	140	76	3258	1.9						17
		P	280	194	3250	1.6	11356	9291	3376	0.6	-3.73	22
10	Puducherry (Rabi-I)	C	10	10	3090	6.1						19
		S	10	10	N.P.							N.C.
		P	20	20	2918	5.7	140	140	2355	3.0	23.91	25
	Puducherry (Rabi-II)	C	10	10	3724	4.2						13
	*	S	10	10	0	0.0						0
		P	20	20	3724	4.2	70	70	3240	4.0	14.94	19
For states covered			1460	1196	3680	1.6	25203	22280	4010	0.3	-8.23	54
JOWAR (KHARIF)												
1	Karnataka	C	50	0	0	0.0						0
		S	50	12	0	0.0						0
		P	100	12	1131	11.2	3720	3248	1420	2.5	-20.35	39
2	Madhya Pradesh	C	100	94	1145	9.9						96
		S	100	34	0	0.0						0
		P	200	128	1145	9.9	1746	1378	1491	2.2	-23.21	112
3	Maharashtra	C	80	64	749	17.0						136
	*	S	80	25	N.P.							N.C.
		P	160	89	749	17.0	5042	4519	1082	0.8	-30.78	160
4	Rajasthan	C	60	50	593	15.9						112
		S	60	39	486	11.6						72
		P	120	89	514	9.4	5868	5656	545	1.9	-5.69	89
5	Tamil Nadu #	C	60	59	762	14.8						114
		S	60	58	647	21.9						167
		P	120	117	718	12.3	1080	1066	1301	2.0	-44.81	133
6	Telangana	C	50	50	702	20.6						146
		S	50	4	0	0.0						0
		P	100	54	702	20.6	628	588	1119	4.0	0.00	151
7	Uttar Pradesh	C	40	40	937	16.0						101
	*	S	40	6	N.P.							N.C.
		P	80	46	937	16.0	7216	6844	677	NR	38.40	109
For states covered			880	535	788	7.2	25300	23299	1006	0.6	-21.59	167

1	2	3	4	5	6	7	8	9	10	11	12	13
<b>JOWAR(RABI)</b>												
1	Karnataka	C	70	10	0	0.0						0
		S	70	64	1144	11.8						94
		P	140	74	1144	11.8	5078	4908	1068	2.2	7.12	102
2	Maharashtra	C	150	123	912	11.3						125
	*	S	150	88	N.P.							N.C.
		P	300	211	912	11.3	8848	8436	687	0.7	32.75	164
3	Telangana	C	40	36	1358	15.5						93
	*	S	40	4	0	0.0						0
		P	80	40	1358	15.5	564	532	807	4.8	0.00	98
For states covered			520	325	1083	7.9	14490	13876	776	0.8	39.44	142
<b>BAJRA</b>												
1	Andhra Pradesh	C	40	40	1740	16.9						107
		S	40	40	N.P.							128
		P	80	80	1727	13.0	462	456	1768	4.0	-2.32	116
2	Gujarat	C	110	84	1440	6.0						55
	*	S	110	56	N.P.							N.C.
		P	220	140	1440	6.0	2038	1828	1668	0.0	-13.67	71
3	Haryana	C	104	100	2262	9.6						96
		S	104	83	0	0.0						0
		P	208	183	2262	9.6	1532	1438	1762	1.0	28.38	129
4	Karnataka	C	50	0	0	0.0						0
		S	50	6	0	0.0						0
		P	100	6	0	0.0	2790	2680	1057	3.4	-100.00	0
5	Maharashtra	C	60	45								78
	*	S	60	28	N.P.							N.C.
		P	120	73			3900	3704	1086	NR	-3.87	100
6	Rajasthan	C	60	58	1414	10.5						80
		S	60	41	1241	22.4						143
		P	120	99	1376	9.5	10450	9750	794	1.4	73.30	95
7	Tamil Nadu	C	40	32	1732	14.7						83
	#	S	40	34	1731	7.0						41
		P	80	66	1731	6.3	444	434	2616	2.8	-33.83	51
8	Uttar Pradesh	C	150	146	2139	5.5						66
	*	S	150	22	N.P.							N.C.
		P	300	168	2139	5.5	35200	34176	1821	NR	17.46	71
For states covered			1228	815	1111	3.9	56816	54466	1081	0.6	2.80	112
<b>MAIZE</b>												
2	Bihar	C	40	38	2253	7.5						46
	*	S	40	6	N.P.							N.C.
		P	80	44	2253	7.5	840	762	2558	NR	-11.92	50
3	Chhattisgarh	C	40	40	2294	8.9						56
	*	S	40	38	1560	15.4						95
		P	80	78	1984	7.9	490	401	1881	3.3	5.48	70
4	Gujarat	C	40	26	1450	6.7						34
	**	S	40	28	N.P.							N.C.
		P	80	54	1573	11.7	1060	1040	1323	0.0	18.90	86
5	Haryana	C	20	20								43
		S	20	10	N.P.							0
		P	40	30			144	88	3000	12.6	#REF!	52
6	Himachal Pradesh	C	90	80	2897	7.5						67
	*	S	90	74	3111	4.6						40
		P	180	154	3046	4.0	1604	1431	2672	1.3	14.00	50
7	Jammu & Kashmir	C	90	42	1779	6.3						41
	*	S	90	6	N.P.							32
		P	180	48	1779	6.3	1454	1158	1236	5.0	43.93	44
8	Jharkhand	C	20	20	2472	13.0						58
		S	20	8								0
		P	40	28	2472	13.0	720	592	1145	0.0	115.90	69
9	Karnatka	C	50	0	0	0.0						0
		S	50	8	0	0.0						0
		P	100	8	0	0.0	6406	6352	3294	2.1	-100.00	0
10	Madhya Pradesh	C	80	76	2797	6.6						58
	@	S	80	50	0	0.0						0
		P	160	126	2797	6.6	1928	1768	2308	1.7	21.19	74
11	Odisha	C	40	40	3305	3.2						20
		S	40	40	3069	4.4						28
		P	80	80	3216	2.6	2786	2786	1968	2.3	63.41	23
12	Punjab	C	48	48	3523	7.1						49
	*	S	48	36	0	0.0						0
		P	96	84	3523	7.1	364	364	3683	NR	-4.34	65
13	Rajasthan	C	50	50	1837	22.6						160
		S	50	42	1368	16.7						108
		P	100	92	1837	22.6	6174	6160	1318	1.5	39.38	217
14	Tamil Nadu	C	40	38	7769	6.3						39
	*	S	40	37	6369	7.8						47
		P	80	75	7080	4.9	432	424	7133	1.4	-0.74	42
15	Telangana	C	50	45	3255	9.3						62
		S	50	18	0	0.0						0
		P	100	63	3255	9.3	814	814	2556	2.3	0.00	74



1	2	3	4	5	6	7	8	9	10	11	12	13
16	Uttar Pradesh	C	170	152	2420	4.2						52
	*	S	170	32	N.P.							N.C.
		P	340	184	2420	4.2	30244	29456	1849	NR	30.88	57
For states covered			1736	1148	2208	2.5	55460	53596	2544	0.7	-13.20	86
RAGI												
1	Karnataka	C	40	0	0	0.0						0
		S	40	0	0	0.0						0
		P	80	0	0	0.0	4810	4784	1887	2.2	-100.00	0
2	Tamil Nadu	C	40	38	3363	11.4						70
	*	S	40	40	N.P.							85
		P	80	78	2430	8.9	360	360	3130	2.5	-22.36	79
3	Uttarakhand	C	40	38	1242	10.5						65
	*	S	40	34	N.P.							N.C.
		P	80	72	1242	10.5	1104	1055	1466	1.0	-15.28	89
For states covered			240	150	405	6.8	6274	6199	1968	1.7	-79.43	84
COTTON												
1	Andhra Pradesh	C	40	40								
		S	40	40								
		P	80	80	561	11.4	840	832	1339	2.4	-58.10	102
2	Gujarat	C	220	169								
		S	220	64								
		P	440	233	436	5.8	3848	3828	1309	0.9	0.00	89
3	Haryana	C	56	56								
		S	56	50								
		P	112	106	500	5.0	940	908	275	0.0	81.82	52
4	Karnataka	C	56	0								
		S	56	0								
		P	112	0	0	0.0	1880	1750	493	3.4	-100.00	0
5	Madhya Pradesh	C	48	48								
		S	48	0								
		P	96	48	0	0.0	962	819	1227	2.1	-100.00	0
6	Maharashtra	C	140	132	682	6.8						78
		S	140	50								
		P	280	182	682	6.8	8674	8194	322	0.4	111.80	92
7	Punjab	C	72	72								
		S	72	72								
		P	144	144	693	3.3	702	702	197	NR	251.78	40
8	Rajasthan	C	40	36								
		S	40	34								
		P	80	70	593	6.2	1936	1868	1384	1.7	-57.15	52
9	Tamil Nadu	C	100	92								
		S	100	92								
		P	200	184	287	7.4	820	792	446	2.3	-35.65	100
10	Telangana	C	40	40								
		S	40	20								
		P	80	60	572	9.2	1300	1300	1063	1.5	0.00	71
For states covered			1624	1107	521	3.9	20602	19693	809	0.5	-35.59	129
GROUNDNUT												
1	Andhra Pradesh	C	140	137	369	19.7						231
		S	140	140	N.P.							172
		P	280	277	401	11.7	2626	2530	877	2.0	-54.28	195
2	Gujarat *	C	150	116	1032	11.9						128
		S	150	39	0	0.0						0
		P	300	155	473	14.4	2112	2059	1428	2.5	-66.88	179
3	Karnataka	C	70	0	0	0.0						0
		S	70	0	0	0.0						0
		P	140	0	0	0.0	5338	5140	850	2.9	-100.00	0
4	Madhya Pradesh	C	40	40	1249	10.8						68
		S	40	18	0	0.0						0
		P	80	58	1249	10.8	954	792	1141	3.2	9.47	82
5	Maharashtra *	C	60	46								77
		S	60	32	N.P.							N.C.
		P	120	78			3030	2827	1256	1.0	-0.64	100
6	Rajasthan	C	40	26	2808	12.7						65
		S	40	30	2089	16.2						89
		P	80	56	2428	10.1	2862	2434	2029	1.5	19.66	76
7	Tamil Nadu	C	100	96	2145	6.9						68
		S	100	94	1838	8.2						80
		P	200	190	1994	5.3	1160	1160	2575	1.3	-22.56	73
8	Telangana	C	40	36	2163	10.2						61
		S	40	20	0	0.0						0
		P	80	56	2136	10.2	508	408	1596	3.3	0.00	76
For states covered			1280	870	744	4.5	18590	17350	1418	1.0	-47.53	133

1	2	3	4	5	6	7	8	9	10	11	12	13
SUGARCANE												
1	Andhra Pradesh	C	60	57	82518	2.5						19
		S	60	60	N.P.							16
		P	120	117	81633	3.9	1602	1590	77475	0.9	5.37	42
2	Assam **	C	40	30	32404	6.2						34
		S	40	26	N.P.							N.C.
		P	80	56	32404	6.2	700	548	35246	0.1	-8.06	46
3	Bihar *	C	40	32	64887	9.8						55
		S	40	16	N.P.							N.C.
		P	80	48	64887	9.8	740	611	48826	NR	32.89	68
4	Haryana *	C	50	50	78921	3.6						25
		S	50	20	0	0.0						0
		P	100	70	78921	3.6	1070	850	75183	0.0	4.97	30
5	Karnataka	C	40	0	0	0.0						0
		S	40	0	0	0.0						0
		P	80	0	0	0.0	1060	1060	97000	5.5	-100.00	0
6	Maharashtra *	C	68	48	87143	8.4						58
		S	68	12	N.P.							N.C.
		P	136	60	87143	8.4	10278	8492	89000	0.4	-2.09	65
7	Punjab *	C	70	70	93273	5.0						42
		S	70	58	0	0.0						0
		P	140	128	93278	5.0	706	662	73408	NR	27.07	57
8	Rajasthan	C	40	34	79619	9.6						56
		S	40	29	60643	5.3						29
		P	80	63	63438	4.7	450	408	86511	2.5	-26.67	37
9	Tamil Nadu	C	50	48	94186	5.7						39
		S	50	48	91011	8.1						56
		P	100	96	93070	4.7	468	468	101058	1.1	-7.90	46
10	Uttar Pradesh	C	200	186	75789	4.3						59
		S	200	26	N.P.							N.C.
		P	400	212	75789	4.3	9488	9324	67032	NR	13.06	63
11	Uttarakhand *	C	40	40	71709	8.5	0					54
		S	40	4	N.P.		0					N.C.
		P	80	44	71709	8.5	0	0	0	0	0	57
For states covered			1396	894	68271	3.2	26562	24013	75632	0.6	0.00	96
WHEAT												
1	Assam np	C	50	38	1176	6.7						42
		S	50	36	N.P.							N.C.
		P	100	74	0	0.0	850	630	1167	1.6	-100.00	0
2	Bihar *	C	230	178	2699	4.9						65
		S	230	73	N.P.							N.C.
		P	460	251	2699	4.9	10620	10261	2244	NR	20.28	78
3	Chhattisgarh @	C	40	40	1475	14.7						93
		S	40	36	1192	4.9						29
		P	80	76	1211	4.6	850	692	1384	1.8	-12.50	40
4	Gujarat *	C	150	112	2824	3.5						37
		S	150	46	N.P.							N.C.
		P	300	158	2824	3.5	4740	4632	2700	0.0	4.59	44
5	Haryana *	C	180	180	4975	3.9						52
		S	180	72	0	0.0						0
		P	360	252	4975	3.9	2200	2182	4407	0.7	12.89	62
6	Himachal Pradesh	C	110	100	1628	7.7						77
		S	110	94	2150	6.7						65
		P	220	194	1853	5.1	1784	1575	2033	1.4	-8.85	71
7	Jammu & Kashmir *	C	120	114	1681	5.2						55
		S	120	40	N.P.							0
		P	240	154	1761	3.8	1938	1430	1004	4.0	75.40	47
8	Jharkhand *	C	40	40	1887	13.8						87
		S	40	10	N.P.							N.C.
		P	80	50	1887	13.8	7770	7350	1448	0.0	30.32	98
9	Karnataka *	C	50	7	0	0.0						0
		S	50	44	1431	20.8						138
		P	100	51	1431	20.8	2792	2726	1099	3.5	30.21	149
10	Madhya Pradesh *	C	250	239	2976	3.5						54
		S	250	106	0	0.0						0
		P	500	345	2976	3.5	5830	5146	2896	0.6	2.76	65
11	Maharashtra *	C	150	135	1986	6.7						78
		S	150	59	N.P.							N.C.
		P	300	194	1986	6.7	8708	8208	1757	0.5	13.03	93
12	Punjab	C	220	220	5016	1.0						15
		S	220	196	4936	1.5						21
		P	440	416	4993	0.8	2334	2333	4583	NR	8.95	16
13	Rajasthan	C	130	126	3550	6.1						68
		S	130	109	3341	5.0						52
		P	260	235	3420	3.9	17914	17318	3367	0.6	1.57	60
14	Uttar Pradesh *	C	570	570	3417	1.3						31
		S	570	98	N.P.							N.C.
		P	1140	668	3417	1.3	207280	206015	2786	NR	22.65	34

1	2	3	4	5	6	7	8	9	10	11	12	13
15	Uttarakhand*	C	60	50	2435	8.2						58
		S	60	50	N.P.							N.C.
		P	120	100	2480	6.3	2968	2961	2299	1.1	7.87	63
16	West Bengal	C	110	107	2697	2.2						23
		S	110	52	2856	3.5						25
		P	220	159	2739	1.9	2818	2516	2320	0.8	18.06	24
For states covered			4920	3377	3344	1.0	281396	275975	3068	0.2	9.01	59
BARLEY												
1	Haryana	C	30	25	2986	8.2						41
	*	S	30	14	0	0.0						0
		P	60	39	2986	8.2	516	355	3414	1.6	-12.54	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	528	1753	2.6	-5.31	83
3	Punjab	C	30	30	3419	4.4						24
	*	S	30	30	3906	7.0						38
		P	60	60	3686	3.7	240	236	3696	NR	-0.27	29
4	Rajasthan	C	80	79	2970	8.0						71
		S	80	80	3051	6.3						56
		P	160	159	3019	4.9	3100	3078	2993	1.1	0.87	62
For states covered			360	322	2682	3.9	4514	4197	2977	0.9	-9.90	70
GRAM												
1	Andhra Pradesh	C	40	40	875	13.5						85
	*	S	40	40	N.P.							N.C.
		P	80	80	812	9.6	1310	1310	1061	1.4	-23.47	86
2	Bihar	C	40	36	895	12.5						75
	*	S	40	10	N.P.							N.C.
		P	80	46	895	12.5	800	732	986	0.0	-9.23	85
3	Chhattisgarh	C	40	40	846	24.7						156
		S	40	38	1234	7.1						44
		P	80	78	1176	6.8	488	392	779	3.3	50.96	60
4	Gujarat	C	40	32	1130	7.9						45
	*	S	40	10	N.P.							N.C.
		P	80	42	1130	7.9	1324	1114	887	0.0	27.40	51
5	Haryana	C	70	70	1027	10.8						90
	*	S	70	56	1208	7.1						53
		P	140	126	1140	5.9	562	512	619	0.0	84.17	66
6	Jharkhand	C	20	20	732	15.1						68
	*	S	20	8	N.P.							N.C.
		P	40	28	732	15.1	720	622	880	NR	-16.82	80
7	Karnataka	C	40	6	0	0.0						0
		S	40	38	829	14.9						92
		P	80	44	829	14.9	4880	4834	794	2.1	4.41	99
8	Madhya Pradesh	C	140	134	1336	4.8						56
	*	S	140	74	0	0.0						0
		P	280	208	1336	4.8	5330	4306	1115	0.8	19.82	69
9	Maharashtra	C	100	81	835	10.1						91
	*	S	100	46	N.P.							N.C.
		P	200	127	835	10.1	5456	5224	918	9.9	-9.04	114
10	Punjab	C	30	30	1255	5.9						32
	*	S	30	30	1362	4.6						25
		P	60	60	1318	3.6	74	74	1282	NR	2.81	28
11	Rajasthan	C	120	108	731	20.6						214
		S	120	93	1026	13.3						128
		P	240	201	892	11.3	8254	6483	892	2.1	0.00	160
12	Uttar Pradesh	C	50	50	836	11.9						84
	*	S	50	8	N.P.							N.C.
		P	100	58	836	11.9	15050	14635	611	NR	36.82	91
13	West Bengal	C										N.C.
	**	S			Not Planned							N.C.
		P					915	797	798	3.0	-100.0	N.C.
For states covered			1460	1098	1025	3.6	45163	41035	964	1.3	6.32	121
RAPE & MUSTARD												
1	Assam	C	70	66	713	6.6						54
	*	S	70	48	N.P.							N.C.
		P	140	114	713	6.6	1250	1090	698	1.0	2.15	70
2	Bihar	C	40	37	1081	11.4						69
	*	S	40	0	N.P.							N.C.
		P	80	37	1081	11.4	900	830	1053	NR	2.66	69
3	Chhattisgarh	C	30	28	370	10.3						55
		S	30	30	435	10.8						59
		P	60	58	396	7.5	440	332	561	2.9	-29.41	57
4	Gujarat	C	50	44	1752	5.2						34
	*	S	50	20	N.P.							N.C.
		P	100	64	1752	5.2	1080	1017	1453	1.1	20.58	42
5	Haryana	C	100	100	1628	4.2						42
	*	S	100	54	0	0.0						0
		P	200	154	1628	4.2	1040	990	1434	0.5	13.53	52

1	2	3	4	5	6	7	8	9	10	11	12	13
6	Jharkhand	C	20	20	576	3.9						17
	*	S	20	10	N.P.							N.C.
		P	40	30	576	3.9	720	584	937	NR	-38.53	21
7	Madhya Pradesh	C	60	54	1524	11.1						82
		S	60	38	0	0.0						0
	*	P	120	92	1524	11.1	1116	996	1178	2.0	29.37	106
8	Punjab	C	40	40	1573	3.3						21
	*	S	40	36	1367	2.6						16
		P	80	76	1503	2.1	582	577	1348	NR	11.50	18
9	Rajasthan	C	90	78	1073	13.3						117
		S	90	82	1134	7.7						70
		P	180	160	1118	6.6	13410	12629	1287	0.6	-13.13	83
10	Uttar Pradesh	C	100	85	1414	4.5						42
	*	S	100	18	N.P.							N.C.
		P	200	103	1414	4.5	26276	25411	1016	NR	39.17	46
11	West Bengal	C	110	110	1047	4.3						45
	*	S	110	88	N.P.							N.C.
		P	220	198	1093	2.8	4960	4304	458	1.0	138.65	39
For states covered			1420	1086	1343	2.8	51774	48760	1149	0.4	16.81	91

- 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





Table with 22 columns (1-22) and multiple rows. Columns include state names (e.g., Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Andhra Pradesh, Gujarat, Haryana, Karnataka, Andhra Pradesh), crop types (C, S, P), and seasons (Kh., Rabi, Kharif). The table contains numerical data for various crops and regions, with sub-sections for 'BAJRA' and 'MAIZE'. It lists quantities for different states and crops, with some cells containing zeros and others containing numerical values.









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	0	0	2	170	2	170	19	797	29	975	48	905	19	797	31	923	50	875
		S		1	724	3	1258	4	1125	0	0	4	878	4	878	1	724	7	1041	8	1001
		P		1	724	5	823	6	806	19	797	33	963	52	903	20	793	38	945	58	893
For States Covered		C	Rabi	136	1191	118	2645	254	1866	176	1227	217	954	393	1072	312	1211	335	1550	647	1386
		S		140	1473	94	976	234	1273	102	1369	115	987	217	1127	242	1429	209	982	451	1222
		P		276	1334	212	1905	488	1582	278	1279	332	966	610	1092	554	1306	544	1332	1098	1319
<b>RAPE &amp; MUSTARD</b>																					
1	Assam	C	Rabi	0	0	3	794	3	794	0	0	62	652	62	652	0	0	66	658	66	658
		S		0	0	0	0	0	0	0	0	48	628	48	628	0	0	48	628	48	628
		P		0	0	3	0	3	794	0	0	110	642	110	642	0	0	114	645	114	645
2	Bihar	C	Rabi	3	1321	3	435	6	0	21	836	10	1465	31	1039	24	896	13	1227	37	1012
		S		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		P		3	0	3	0	6	0	21	836	10	1465	31	1039	24	896	13	1227	37	1012
3	Chhattisgarh	C	Rabi	0	0	0	0	0	0	0	0	28	308	28	308	0	0	28	308	28	308
		S		0	0	0	0	0	0	0	0	0	30	421	30	421	0	0	30	421	30
		P		0	0	0	0	0	0	0	0	58	366	58	366	0	0	58	366	58	366
4	Gujarat	C	Rabi	32	1761	0	0	32	1761	12	1577	0	0	12	1577	44	1711	0	0	44	1711
		S		18	1931	2	2030	20	1941	0	0	0	0	0	18	1931	2	2030	20	1941	
		P		50	1822	2	2030	52	1830	12	1577	0	0	12	1577	62	1775	2	2030	64	1783
5	Haryana	C	Rabi	89	1615	5	1108	94	1588	6	1293	0	0	6	1293	95	1595	5	1108	100	1571
		S		52	1591	2	1622	54	1592	0	0	0	0	0	52	1591	2	1622	54	1592	
		P		141	1606	7	1255	148	1590	6	1293	0	0	6	1293	147	1594	7	1255	154	1578
6	Jharkhand	C	Rabi	0	0	0	0	0	0	17	679	3	621	20	670	17	679	3	621	20	670
		S		0	0	0	0	0	0	0	0	10	891	10	891	0	0	10	891	10	891
		P		0	0	0	0	0	0	17	679	13	829	30	744	17	679	13	829	30	744
7	Madhya Pradesh	C	Rabi	19	1646	2	2058	21	1685	15	1710	18	602	33	1106	34	1674	20	748	54	1331
		S		18	1752	8	1409	26	1646	6	1038	6	517	12	778	24	1574	14	1026	38	1372
		P		37	1698	10	1539	47	1664	21	1518	24	581	45	1018	58	1633	34	862	92	1348
8	Punjab	C	Rabi	32	1619	2	1791	34	1629	4	1238	2	513	6	996	36	1577	4	1152	40	1535
		S		34	1396	0	0	34	1396	2	677	0	0	2	677	36	1356	0	0	36	1356
		P		66	1504	2	0	68	1513	6	1051	2	513	8	917	72	1467	4	1152	76	1450
9	Rajasthan	C	Rabi	53	1532	2	230	55	1485	19	1229	4	1129	23	1212	72	1453	6	829	78	1405
		S		33	1606	3	926	36	1549	43	1206	3	904	46	1186	76	1380	6	915	82	1346
		P		86	1560	5	648	91	1510	62	1213	7	1033	69	1195	148	1416	12	872	160	1375
10	Uttar Pradesh	C	Rabi	56	1562	0	0	56	1562	23	1081	6	1197	29	1105	79	1422	6	1197	85	1406
		S		17	1702	1	1324	18	1681	0	0	0	0	0	17	1702	1	1324	18	1681	
		P		73	1595	1	0	74	1591	23	1081	6	1197	29	1105	96	1472	7	1215	103	1454
11	West Bengal	C	Rabi	79	1125	8	641	87	1080	12	871	11	768	23	822	91	1091	19	715	110	1026
		S		65	1141	7	758	72	1104	10	884	6	903	16	891	75	1107	13	825	88	1065
		P		144	1132	15	696	159	1091	22	877	17	816	39	850	166	1098	32	760	198	1044
For States Covered		C		363	449	25	417	388	447	129	150	144	96	273	121	492	371	170	143	662	1224
		S		237	2298	23	979	260	2161	61	2378	103	947	164	1479	298	2315	126	958	424	1207
		P		600	1495	48	1052	648	1454	190	1123	247	650	437	855	790	1406	296	715	1086	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 2016-17**

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	
<b>PADDY</b>														
1	Andhra	Kharif	C	96	3270	1	2787	82	3336	0	0	179	3298	
			S	98	3513	2	952	76	3296	2	960	178	3363	
	Pradesh	Summer	P	194	3393	3	0	158	3317	2	960	357	3330	
			C	51	4020	1	4566	35	3544	1	5108	88	3849	
			S	58	4957	0	0	23	4053	1	3643	82	4687	
			P	109	4519	1	0	58	3746	2	4376	170	4254	
2	Assam	Early	C	14	2156	23	1439	10	1933	22	1356	69	1630	
			S	16	1599	3	1929	3	2175	34	1533	56	1607	
			P	30	1859	26	1496	13	1989	56	1463	125	1620	
	Kharif	Late	C	20	2122	30	1901	11	1959	57	2035	118	2009	
			S	26	2340	7	1916	7	2577	68	2060	108	2152	
			P	46	2245	37	1904	18	2199	125	2049	226	2077	
			C	18	3146	6	2209	14	3054	2	1156	40	2874	
	Summer	S	S	25	3538	0	0	7	2784	0	0	32	3373	
			P	43	3374	6	2209	21	2964	2	1156	72	3096	
			C	12	4245	0	0	10	5680	10	5342	32	5036	
3	Bihar	Bhadai	S	8	838	2	1312	0	0	4	1131	14	989	
			P	20	2882	2	0	2	2532	14	4139	46	3805	
			Aghani	C	136	4277	4	4250	43	4488	6	3272	189	4293
				S	61	4414	0	0	9	3950	1	2480	71	4328
				P	197	4319	4	0	52	4395	7	3159	260	4302
			Summer	C	C	22	2543	0	0	10	2702	0	0	32
	S	0			0	0	0	0	0	4	1379	4	1379	
	P	22			2543	0	0	10	2702	4	1379	36	2458	
	C	42			2500	2	761	30	2672	6	1737	80	2464	
	4	Chhattisgarh	Kharif	S	40	2653	6	2166	20	2828	7	1137	73	2516
P				82	2575	8	1815	50	2734	13	1414	153	2488	
C				31	2103	0	0	39	2128	0	0	70	2117	
5	Gujarat	Kharif	S	41	1578	0	0	24	1594	1	1132	66	1577	
			P	72	1804	0	0	63	1925	1	1132	136	1855	
			C	79	3342	0	0	11	2897	0	0	90	3288	
6	Haryana	Kharif	S	58	4592	0	0	6	2423	0	0	64	4389	
			P	137	3871	0	0	17	2730	0	0	154	3745	
			C	16	2128	12	1747	12	1795	4	1721	44	1896	
7	Himachal Pradesh	Kharif	S	6	1574	10	1544	30	1996	2	1265	48	1819	
			P	22	1977	22	1655	42	1939	6	1569	92	1856	
			C	8	2021	3	1061	19	2079	0	0	30	1962	
8	Jammu & Kashmir	Kharif	S	14	2114	0	0	6	1016	0	0	20	1785	
			P	22	2080	3	1061	25	1824	0	0	50	1891	
			C	4	2929	8	1240	7	1503	1	639	20	1640	
9	Jharkhand	Bhadai	S	2	1303	6	1823	2	2412	0	0	10	1837	
			P	6	2387	14	1490	9	1705	1	639	30	1705	
			C	37	4487	10	2274	29	2828	0	0	76	3563	
		Aghani	C	S	2	1580	6	2867	0	0	20	2784	28	2716
				P	39	4338	16	2496	29	2828	20	2784	104	3335
				C	12	4245	0	0	10	5680	10	5342	32	5036

1	2	3	4	5	6	7	8	9	10	11	12	13	14
10	Karnataka	Kharif	C	0	0	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	0	0	0	0	0
		Summer	C	4	2882	1	2968	10	3209	0	0	15	3106
			S	10	3035	0	0	15	3754	2	3008	27	3432
			P	14	2991	1	2968	25	3536	2	3008	42	3316
11	Kerala	Autumn	C	20	2490	19	1790	56	2685	5	169	100	2350
			S	14	2774	26	2093	47	2769	13	1744	100	2461
			P	34	2607	45	1965	103	2723	18	1307	200	2405
		Winter	C	19	2696	20	1257	59	2326	2	934	100	2155
			S	31	2203	21	1204	43	2432	4	614	99	2026
			P	50	2390	41	1230	102	2371	6	721	199	2091
		Summer	C	32	2609	9	1496	59	2258	0	0	100	2302
			S	31	2654	13	1931	52	2758	3	1206	99	2570
			P	63	2631	22	1753	111	2492	3	1206	199	2435
12	Madhya Pradesh	Kharif	C	62	2346	12	1703	16	2519	8	1091	98	2193
			S	42	2776	4	2604	16	2141	12	1611	74	2440
			P	104	2520	16	1928	32	2330	20	1403	172	2300
13	Maharashtra	Kharif	C	17	1593	5	1292	38	2049	2	1312	62	1839
			S	33	1947	0	0	15	2517	4	734	52	2018
			P	50	1827	5	0	53	2181	6	927	114	1921
14	Odisha	Autumn	C	79	1196	7	1065	100	1397	28	707	214	1222
			S	80	1223	19	1052	99	1342	20	504	218	1196
			P	159	1210	26	1056	199	1370	48	622	432	1209
		Winter	C	86	2425	19	1906	147	2377	14	1645	266	2320
			S	80	2439	6	1242	160	2412	18	1253	264	2315
			P	166	2432	25	1747	307	2395	32	1425	530	2317
		Summer	C	87	3245	2	1982	43	2985	6	1766	138	3081
			S	96	3014	0	0	36	3107	2	1748	134	3020
			P	183	3124	2	0	79	3041	8	1762	272	3051
15	Punjab	Kharif	C	172	4504	0	0	16	4819	0	0	188	4531
			S	180	4383	0	0	0	0	0	0	180	4383
			P	352	4442	0	0	16	4819	0	0	368	4459
16	Tamil Nadu	Phase-I	C	12	3762	2	3868	43	4728	0	0	57	4494
			S	22	3349	2	4387	35	4044	1	5970	60	3833
			P	34	3495	4	4128	78	4421	1	0	117	4155
		Phase-II	C	28	2586	12	282	68	2982	11	267	119	2366
			S	18	400	5	3075	95	2445	0	0	118	2160
			P	46	1731	17	1103	163	2669	11	267	237	2263
		Phase-III	C	7	3533	0	0	33	3928	0	0	40	3859
			S	3	4237	3	3907	34	10925	0	0	40	9897
			P	10	3744	3	3907	67	7479	0	0	80	6878
17	Telangana	Kharif	C	69	3510	0	0	27	3648	0	0	96	3549
			S	41	3759	0	0	27	3604	0	0	68	3697
			P	110	3603	0	0	54	3626	0	0	164	3610
		Rabi	C	54	3998	1	3603	20	3578	0	0	75	3881
			S	12	3594	0	0	4	2990	0	0	16	3443
			P	66	3925	1	3603	24	3480	0	0	91	3804
18	Uttar Pradesh	Kharif	C	572	3995	0	0	81	4208	3	1789	656	4011
			S	83	3915	0	0	20	3661	1	2955	104	3857
			P	655	3985	0	0	101	4100	4	2081	760	3990

1	2	3	4	5	6	7	8	9	10	11	12	13	14		
19	Uttarakhand	Kharif	C	17	2831	15	1496	10	2436	0	0	42	2260		
			S	24	2112	18	1317	8	2461	0	0	50	1882		
			P	41	2410	33	1398	18	2447	0	0	92	2054		
20	West Bengal	Aus	C	68	2551	2	2747	19	2177	5	1439	94	2420		
			S	65	2585	0	0	24	2454	7	2338	96	2534		
			P	133	2568	2	2747	43	2332	12	1963	190	2478		
		Aman		C	97	265	2	155	56	292	5	149	160	269	
				S	68	287	3	229	41	306	16	233	128	285	
				P	165	274	5	199	97	298	21	213	288	276	
		Summer		C	77	3220	0	0	40	3140	1	2693	118	3188	
				S	54	3242	0	0	18	3367	4	2663	76	3241	
				P	131	3229	0	0	58	3210	5	2669	194	3209	
21	Puducherry	Kharif	C	1	3545	0	0	9	3386	0	0	10	3402		
			S	2	2359	0	0	8	2644	0	0	10	2587		
			P	3	2754	0	0	17	3037	0	0	20	2994		
			Rabi-I		C	0	0	2	3134	8	3100	0	0	10	3107
					S	2	4277	0	0	8	2092	0	0	10	2529
					P	2	4277	2	3134	16	2596	0	0	20	2818
			Rabi-II		C	2	2671	0	0	8	3684	0	0	10	3481
					S	6	4374	0	0	4	3739	0	0	10	4120
					P	8	3948	0	0	12	3702	0	0	20	3801
For states covered			C	2168	3283	230	1676	1328	2795	199	1662	3925	2941		
			S	1452	3034	162	1748	1022	2811	251	1635	2887	2761		
			P	3620	3183	392	1706	2342	2811	450	1647	6812	2865		
JOWAR															
1	Karnataka	Kharif	C	0	0	0	0	0	0	0	0	0	0		
			S	6	1875	0	0	6	2685	0	0	12	2280		
			P	6	1875	0	0	6	2685	0	0	12	0		
			Rabi		C	0	0	1	1151	5	759	4	1860	10	1239
					S	21	786	1	997	2	0	40	910	64	842
					P	21	786	2	1074	7	542	44	996	74	896
2	Madhya Pradesh	Kharif	C	53	1214	10	847	7	1168	24	807	94	1068		
			S	16	809	4	1181	0	0	14	1171	34	1002		
			P	69	1120	14	942	7	1168	38	941	128	1050		
3	Maha-rashtra	Kharif	C	46	673	0	0	14	470	4	797	64	636		
			S	14	1101	0	0	6	621	5	1362	25	1038		
			P	60	773	0	0	20	515	9	1111	89	749		
			Rabi		C	59	1246	10	852	19	1327	35	445	123	999
					S	52	913	2	471	11	1222	23	562	88	850
					P	111	1090	12	789	30	1289	58	491	211	937
4	Rajasthan	Kharif	C	24	729	6	568	4	440	16	520	50	620		
			S	14	575	0	0	0	0	25	395	39	460		
			P	38	672	6	568	4	440	41	444	89	550		
5	Tamil Nadu	@	C	4	76	34	239	12	278	9	12	59	201		
			S	7	407	21	288	15	885	15	744	58	575		
			P	11	287	55	258	27	615	24	470	117	386		
6	Telangana	Kharif	C	27	886	2	529	18	507	3	0	50	682		
			S	2	559	0	0	2	576	0	0	4	568		
			P	29	863	2	529	20	514	3	0	54	674		
			Rabi		C	17	1246	6	893	1	3034	12	1363	36	1276
					S	4	1132	0	0	0	0	0	0	4	1132
					P	21	1224	6	893	1	3034	12	1363	40	1261

1	2	3	4	5	6	7	8	9	10	11	12	13	14
7	Uttar	Kharif	C	4	538	2	152	0	0	34	483	40	472
	Pradesh		S	0	0	0	0	0	0	6	1248	6	1248
			P	4	538	2	152	0	0	40	598	46	573
For states covered			C	234	6608	71	5231	80	7983	141	6287	526	7192
			S	136	8157	28	2937	42	5989	128	6392	334	9994
			P	370	9229	99	5205	122	10802	269	6414	860	7076
BAJRA													
1	Andhra	Kharif	C	11	1965	15	1555	9	2127	5	569	40	1673
	Pradesh		S	19	1795	9	1198	7	2008	5	518	40	1538
			P	30	1857	24	1421	16	2075	10	544	80	1606
2	Gujarat	Kharif	C	35	1370	6	1564	38	1569	5	914	84	1447
			S	34	1929	0	0	11	1809	11	1094	56	1741
			P	69	1645	6	1564	49	1623	16	1038	140	1565
3	Haryana	Kharif	C	89	2171	1	2301	2	2676	8	1925	100	2163
			S	68	1971	1	1370	4	2452	10	1869	83	1975
			P	157	2084	2	1836	6	2527	18	1894	183	2077
4	Karnataka	Kharif	C	0	0	0	0	0	0	0	0	0	0
			S	6	865	0	0	0	0	0	0	6	865
			P	6	865	0	0	0	0	0	0	6	865
5	Mahara- shtra	Kharif	C	34	1552	2	481	3	1388	6	1329	45	1464
			S	16	971	0	0	2	864	10	1285	28	1076
			P	50	1366	2	0	5	1178	16	1302	73	1315
6	Rajasthan	Kharif	C	22	1894	3	2805	8	2043	25	724	58	1457
			S	24	1496	4	973	0	0	13	812	41	1228
			P	46	1686	7	1758	8	2043	38	754	99	1362
7	Tamil Nadu	@	C	12	100	5	1304	10	1306	5	37	32	655
			S	13	1246	4	2508	9	1658	8	3079	34	1935
			P	25	696	9	1839	19	1473	13	1909	66	1314
8	Uttar Pradesh	Kharif	C	105	3777	5	2083	18	3905	18	1614	146	3468
			S	22	4383	0	0	0	0	0	0	22	4383
			P	127	3882	5	2083	18	3905	18	1614	168	3588
For states covered			C	308	2451	37	1657	88	2136	72	1085	505	2143
			S	202	1995	18	1449	33	1831	57	1427	310	1841
			P	510	2271	55	1589	121	2053	129	1236	815	2029
MAIZE													
1	Bihar	Kharif	C	30	4120	0	0	8	7678	0	0	38	4869
			S	4	1919	0	0	2	1843	0	0	6	1894
			P	34	3861	0	0	10	6511	0	0	44	4463
2	Chhattisgarh	Kharif	C	13	3245	16	1499	3	2216	8	1449	40	2110
			S	6	2477	16	1784	8	2561	8	792	38	1848
			P	19	3002	32	1642	11	2467	16	1121	78	1983
3	Gujarat	Kharif	C	4	1593	0	0	22	1471	0	0	26	1490
			S	15	2163	0	0	13	1239	0	0	28	1734
			P	19	2043	0	0	35	1385	0	0	54	1616
4	Haryana	Kharif	C	12	2004	0	0	8	2731	0	0	20	2295
			S	6	2656	0	0	1	5785	3	1503	10	2623
			P	18	2221	0	0	9	3070	3	1503	30	2404
5	Himachal Pradesh	Kharif	C	4	1598	22	3364	54	2781	0	0	80	2882
			S	1	4502	21	2552	48	2894	4	2689	74	2808
			P	5	2179	43	2967	102	2834	4	2689	154	2846

1	2	3	4	5	6	7	8	9	10	11	12	13	14
6	Jammu & Kashmir	Kharif	C	0	0	12	1563	30	1814	0	0	42	1742
			S	4	1554	0	0	2	1536	0	0	6	1548
			P	4	1554	12	1563	32	1797	0	0	48	1718
7	Jharkhand	Kharif	C	8	3031	4	2094	5	1816	3	2758	20	2499
			S	0	0	0	0	0	0	8	2504	8	2504
			P	8	3031	4	2094	5	1816	11	2573	28	2500
8	Karnataka	Kharif	C	0	0	0	0	0	0	0	0	0	0
			S	4	3412	0	0	2	4193	2	1604	8	3155
			P	4	3412	0	0	2	4193	2	1604	8	3155
9	Madhya Pradesh	Kharif	C	31	1998	14	1125	25	3003	6	1671	76	2142
			S	26	1191	4	573	4	537	16	876	50	988
			P	57	1630	18	1002	29	2663	22	1093	126	1684
10	Odisha	Kharif	C	19	3587	9	1662	10	3404	2	724	40	2965
			S	13	3869	10	1506	14	3299	3	1244	40	2882
			P	32	3702	19	1580	24	3343	5	1036	80	2923
11	Punjab	Kharif	C	32	4199	3	2722	12	5523	1	1241	48	4376
			S	36	3799	0	0	0	0	0	0	36	3799
			P	68	3987	3	2722	12	5523	1	1241	84	4129
12	Rajasthan	Kharif	C	27	1684	5	1449	10	2009	8	2302	50	1824
			S	34	849	2	1677	0	0	6	1664	42	1005
			P	61	1219	7	1514	10	2009	14	2029	92	1450
13	Tamil Nadu	@	C	2	7595	3	5153	30	5948	3	3343	38	5766
			S	7	6622	7	3298	23	4808	0	0	37	4866
			P	9	6838	10	3855	53	5453	3	3343	75	5322
14	Telangana	Kharif	C	29	3406	0	0	16	2858	0	0	45	3211
			S	8	3697	0	0	10	4129	0	0	18	3937
			P	37	3469	0	0	26	3347	0	0	63	3419
15	Uttar Pradesh	Kharif	C	115	2783	3	1578	20	2518	14	701	152	2533
			S	28	1780	0	0	4	1700	0	0	32	1770
			P	143	2587	3	1578	24	2382	14	701	184	2400
For states covered			C	326	2978	91	2104	253	3186	45	1574	715	2852
			S	192	2437	60	2099	131	3080	50	1451	433	2471
			P	518	2777	151	2102	384	3150	95	1510	1148	2708
RAGI													
1	Karnataka	Kharif	C	0	0	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	0	0	0	0	0
2	Tamil Nadu	@	C	4	1670	2	3290	29	3541	3	2074	38	3215
			S	18	4541	8	2356	12	2087	2	275	40	3155
			P	22	4019	10	2543	41	3115	5	1354	78	3184
3	Uttarakhand	Kharif	C	0	0	38	1429	0	0	0	0	38	1429
			S	0	0	30	1450	0	0	4	1575	34	1465
			P	0	0	68	1438	0	0	4	1575	72	1446
For states covered			C	4	1670	40	1522	29	3541	3	0	76	2322
			S	18	4541	38	1641	12	2087	6	1142	74	2378
			P	22	4019	78	1580	41	3115	9	1452	150	2350



1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>GROUNDNUT</b>													
1	Andhra	Kharif	C	35	1130	14	1180	85	578	3	73	137	769
	Pradesh		S	35	668	10	724	90	790	5	578	140	747
			P	70	899	24	990	175	687	8	389	277	758
2	Gujarat	Kharif	C	48	2192	0	0	62	2081	6	1867	116	2116
			S	17	1621	1	4251	17	2959	4	1636	39	2273
			P	65	2043	1	4251	79	2270	10	1775	155	2155
3	Karnataka	Kharif	C	0	0	0	0	0	0	0	0	0	0
			S	0	0	0	0	2	816	2	1028	4	922
			P	0	0	0	0	2	816	2	1028	4	922
4	Madhya Pradesh	Kharif	C	20	1246	7	980	0	0	13	1319	40	1223
			S	9	1650	4	1842	0	0	5	863	18	1474
			P	29	1371	11	1293	0	0	18	1192	58	1301
5	Maharashtra	Kharif	C	25	1463	2	1563	14	901	5	1606	46	1312
			S	14	2531	2	1460	10	899	6	932	32	1654
			P	39	1846	4	1512	24	900	11	1238	78	1452
6	Rajasthan	Kharif	C	7	2881	0	0	14	2532	5	2042	26	2532
			S	15	1531	4	1980	3	3310	8	1025	30	1634
			P	22	1961	4	1980	17	2669	13	1416	56	2051
7	Tamil Nadu	@	C	6	191	21	201	47	279	22	119	96	220
			S	10	1255	22	1307	51	2276	11	1225	94	1818
			P	16	856	43	767	98	1318	33	488	190	1010
8	Telangana	Kharif	C	17	2639	0	0	13	1403	6	1792	36	2052
			S	12	2264	0	0	7	1852	1	1921	20	2103
			P	29	2484	0	0	20	1560	7	1810	56	2070
For States Covered			C	158	1724	44	698	235	1096	60	1003	497	1249
			S	112	1463	43	1359	180	1506	42	1071	377	1428
			P	270	1616	87	1025	415	1274	102	1031	874	1326
<b>SUGARCANE</b>													
1	Andhra Pradesh	Kharif	C	26	72474	6	52400	25	81916	0	0	57	74502
			S	18	88940	2	69000	40	78696	0	0	60	81446
			P	44	79210	8	56550	65	79934	0	0	117	78063
2	Assam	Kharif	C	0	0	22	14632	4	46600	4	24670	30	20233
			S	2	40300	4	36300	6	31967	14	34222	26	34489
			P	2	40300	26	17966	10	37820	18	32099	56	26852
3	Bihar	Kharif	C	18	72804	1	86280	13	72695	0	0	32	73181
			S	10	60114	0	0	2	64520	4	33570	16	54029
			P	28	68272	1	0	15	71605	4	33570	48	66797
4	Haryana	Kharif	C	35	71202	0	0	14	78139	1	71880	50	73158
			S	20	75380	0	0	0	0	0	0	20	75380
			P	55	72721	0	0	14	78139	1	71880	70	73793
5	Karnataka	Kharif	C	0	0	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	0	0	0	0	0
6	Maharashtra	Kharif	C	16	76591	0	0	32	99064	0	0	48	91573
			S	4	47940	0	0	5	83666	3	91720	12	73771
			P	20	70861	0	0	37	96983	3	91720	60	88013
7	Punjab	Kharif	C	59	86507	1	52800	10	98256	0	0	70	87704
			S	57	81001	1	73200	0	0	0	0	58	80867
			P	116	83801	2	63000	10	98256	0	0	128	84606
8	Rajasthan	Kharif	C	22	87738	2	66000	8	55155	2	53200	34	76761
			S	18	59120	2	68600	8	63870	1	86000	29	62011
			P	40	74860	4	67300	16	59513	3	64133	63	69971

1	2	3	4	5	6	7	8	9	10	11	12	13	14
9	Tamil Nadu	@	C	15	81357	5	69800	27	82455	1	13800	48	79363
			S	6	68800	9	99809	29	102235	4	49100	48	93173
			P	21	77769	14	89092	56	92698	5	42040	96	86268
10	Uttar Pradesh	Kharif	C	160	73081	0	0	25	82016	1	48000	186	74147
			S	26	95154	0	0	0	0	0	0	26	95154
			P	186	76166	0	0	25	82016	1	48000	212	76723
11	Uttarakhand	Kharif	C	18	60444	0	0	22	79600	0	0	40	70980
			S	4	62150	0	0	0	0	0	0	4	62150
			P	22	60754	0	0	22	79600	0	0	44	70177
For States covered			C	369	75739	37	33956	180	82750	9	37640	595	74686
			S	165	77568	18	77327	90	81809	26	45036	299	76001
			P	534	76304	55	48150	270	82436	35	43135	894	75125
WHEAT													
1	Assam	Rabi	C	18	1131	7	1196	8	1465	5	1130	38	1213
			S	10	1473	4	859	10	1004	12	1337	36	1229
			P	28	1253	11	1073	18	1209	17	1276	74	1221
2	Bihar	Rabi	C	142	2898	2	2780	34	3036	0	0	178	2923
			S	44	2459	0	0	24	2875	5	3506	73	2667
			P	186	2794	2	2780	58	2969	5	3506	251	2849
3	Chattisgarh	Rabi	C	34	1262	0	0	2	2830	4	285	40	1243
			S	24	912	2	1423	6	1566	4	1505	36	1115
			P	58	1117	2	0	8	1882	8	895	76	1182
4	Gujarat	Rabi	C	77	2411	1	1853	32	2894	2	2779	112	2551
			S	25	3109	3	2890	4	2636	14	2129	46	2755
			P	102	2582	4	2631	36	2865	16	2210	158	2610
5	Haryana	Rabi	C	173	4882	0	0	7	5161	0	0	180	4893
			S	66	4829	0	0	6	4307	0	0	72	4786
			P	239	4867	0	0	13	4767	0	0	252	4862
6	Himachal Pradesh	Rabi	C	9	1103	32	1406	59	1818	0	0	100	1622
			S	4	2685	26	2225	58	2147	6	2068	94	2186
			P	13	1590	58	1773	117	1981	6	2068	194	1895
7	Jammu & Kashmir	Rabi	C	27	1968	14	1227	73	1939	0	0	114	1858
			S	22	1892	4	711	12	1409	2	982	40	1584
			P^	49	1934	18	1112	85	1864	2	982	154	1787
8	Jharkhand	Rabi	C	20	2292	6	830	12	1540	2	1730	40	1819
			S	8	1792	2	2100	0	0	0	0	10	1854
			P	28	2149	8	1148	12	1540	2	1730	50	1826
9	Karnataka	Rabi	C	6	1599	0	0	1	281	0	0	7	1411
			S	6	170	0	0	0	0	38	416	44	382
			P	12	885	0	0	1	281	38	416	51	524
10	Madhya Pradesh	Rabi	C	175	2695	12	1792	37	3066	15	1436	239	2628
			S	79	3120	4	2349	5	2924	18	1959	106	2885
			P	254	2827	16	1931	42	3049	33	1721	345	2707
11	Maha-rashtra	Rabi	C	95	1969	0	0	38	1868	2	446	135	1918
			S	41	1989	0	0	18	1873	0	0	59	1954
			P	136	1975	0	0	56	1870	2	446	194	1929
12	Punjab	Rabi	C	199	5037	0	0	19	4628	2	4154	220	4994
			S	190	5020	0	0	6	3385	0	0	196	4970
			P	389	5029	0	0	25	4330	2	4154	416	4982

1	2	3	4	5	6	7	8	9	10	11	12	13	14
13	Rajasthan	Rabi	C	77	3460	6	1582	35	3765	8	2900	126	3420
			S	92	3417	9	2580	3	1996	5	3825	109	3327
			P	169	3437	15	2181	38	3625	13	3256	235	3377
14	Uttar Pradesh	Rabi	C	522	3493	0	0	48	3490	0	0	570	3493
			S	86	4114	0	0	10	3950	2	2962	98	4074
			P	608	3581	0	0	58	3569	2	2962	668	3578
15	Uttarakhand	Rabi	C	23	3669	18	1705	9	3161	0	0	50	2871
			S	22	3587	22	1756	4	2865	2	2438	50	2678
			P	45	3629	40	1733	13	3070	2	2438	100	2774
16	West Bengal	Rabi	C	77	2925	1	3845	28	2195	1	2306	107	2737
			S	28	3183	1	1097	23	2462	0	0	52	2824
			P	105	2994	2	0	51	2315	1	2306	159	2765
For states covered			C	1674	3395	99	1500	442	2666	41	1757	2256	3140
			S	747	3651	77	1977	189	2373	108	1526	1121	3115
			P	2421	3474	176	1708	631	2578	149	1589	3377	3132
BARLEY													
1	Haryana	Rabi	C	25	3208	0	0	1	4218	0	0	26	3247
			S	15	3992	0	0	0	0	3	3549	18	3918
			P	40	3502	0	0	1	4218	3	3549	44	3521
2	Himachal Pradesh	Rabi	C	0	0	24	1501	10	1237	0	0	34	1423
			S	2	1762	16	2450	8	1676	4	1465	30	2066
			P	2	1762	40	1881	18	1432	4	1465	64	1725
3	Punjab	Rabi	C	29	3381	1	4123	0	0	0	0	30	3406
			S	30	3869	0	0	0	0	0	0	30	3869
			P	59	3629	1	4123	0	0	0	0	60	3637
4	Rajasthan	Rabi	C	55	2759	3	2134	17	2416	4	2414	79	2644
			S	54	3316	12	2476	6	3438	8	2647	80	3132
			P	109	3035	15	2408	23	2683	12	2569	159	2890
For states covered			C	109	3027	28	1662	28	2059	4	2414	169	2626
			S	101	3550	28	2461	14	2431	15	2512	158	3159
			P	210	3279	56	2062	42	2183	19	2492	327	2884
GRAM													
1	Andhra Pradesh	Rabi	C	15	1039	1	768	24	1114	0	0	40	1077
			S	28	1173	0	0	12	649	0	0	40	1016
			P	43	1126	1	768	36	959	0	0	80	1047
2	Bihar	Rabi	C	19	1261	2	1625	0	0	15	804	36	1091
			S	4	2235	0	0	0	0	6	1057	10	1528
			P	23	1430	2	1625	0	0	21	876	46	1186
3	Chattisgarh	Rabi	C	20	884	2	735	4	737	14	1211	40	976
			S	18	1147	8	1002	0	0	12	1047	38	1085
			P	38	1009	10	1737	4	737	26	1135	78	1029
4	Gujarat	Rabi	C	10	972	3	818	8	1391	11	1035	32	1084
			S	6	840	0	0	0	0	4	729	10	796
			P	16	923	3	818	8	1391	15	953	42	1015
5	Haryana	Rabi	C	35	1238	2	1871	0	0	33	1042	70	1164
			S	37	1295	0	0	0	0	19	1158	56	1249
			P	72	1267	2	1871	0	0	52	1084	126	1201
6	Jharkhand	Rabi	C	5	1192	10	652	4	900	1	860	20	847
			S	2	1220	0	0	0	0	6	836	8	932
			P	7	1200	10	652	4	900	7	839	28	871

7	Karnataka	Rabi	C	3	742	0	0	1	1169	2	245	6	648
			S	7	540	2	0	3	2125	26	845	38	845
			P	10	601	2	0	4	1886	28	802	44	818
8	Madhya Pradesh	Rabi	C	85	1319	10	1314	19	1449	20	922	134	1278
			S	50	1364	6	1490	4	2394	14	1259	74	1410
			P	135	1336	16	1380	23	1613	34	1061	208	1325
9	Maha-rashtra	Rabi	C	42	931	10	714	12	654	17	722	81	819
			S	26	1358	0	0	8	1323	12	484	46	1124
			P	68	1094	10	714	20	922	29	624	127	930
10	Punjab	Rabi	C	15	1175	0	0	0	0	15	1323	30	1249
			S	20	1327	0	0	0	0	10	2831	30	1828
			P	35	1262	0	0	0	0	25	1926	60	1539
11	Rajasthan	Rabi	C	36	1062	8	953	7	742	57	4716	108	2962
			S	40	1325	7	1351	2	2258	44	1149	93	1264
			P	76	1200	15	1139	9	1079	101	3162	201	2176
12	Uttar Pradesh	Rabi	C	24	745	4	617	0	0	22	1063	50	875
			S	2	954	0	0	0	0	6	1017	8	1001
			P	26	761	4	617	0	0	28	1053	58	892
For states covered			C	309	1111	52	934	79	1091	207	2024	647	1386
			S	240	1277	23	1148	29	1339	159	1127	451	1222
			P	549	1184	75	1000	108	1157	366	1634	1098	1319
<b>RAPE &amp; MUSTARD</b>													
1	Assam	Rabi	C	16	630	21	627	12	763	17	649	66	658
			S	16	653	12	540	8	870	12	522	48	628
			P	32	642	33	595	20	806	29	596	114	646
2	Bihar	Rabi	C	21	915	3	313	7	1278	6	1394	37	1013
			S	0	0	0	0	0	0	0	0	0	0
			P	21	915	3	313	7	1278	6	1394	37	1013
3	Chattisgarh	Rabi	C	0	0	5	346	2	340	21	296	28	308
			S	0	0	18	422	0	0	12	420	30	421
			P	0	0	23	405	2	340	33	341	58	367
4	Gujarat	Rabi	C	29	1741	0	0	14	1650	1	1700	44	1711
			S	16	1969	2	2030	0	0	2	1630	20	1941
			P	45	1822	2	0	14	1650	3	1653	64	1783
5	Haryana	Rabi	C	94	1602	0	0	2	1024	4	1096	100	1570
			S	52	1607	0	0	0	0	2	1206	54	1592
			P	146	1604	0	0	2	1024	6	1133	154	1578
6	Jharkhand	Rabi	C	2	1278	5	606	13	601	0	0	20	670
			S	4	995	0	0	0	0	6	822	10	891
			P	6	1089	5	606	13	601	6	822	30	744
7	Madhya Pradesh	Rabi	C	29	1723	2	1300	5	1641	18	617	54	1331
			S	28	1461	0	0	2	3058	8	639	38	1372
			P	57	1594	2	1300	7	2046	26	624	92	1348
8	Punjab	Rabi	C	34	1617	2	1218	1	1586	3	793	40	1534
			S	32	1383	0	0	2	1189	2	1095	36	1356
			P	66	1504	2	1218	3	1321	5	914	76	1450
9	Rajasthan	Rabi	C	53	1523	7	1007	16	1332	2	230	78	1404
			S	54	1426	8	839	8	1357	12	1315	82	1346
			P	107	1474	15	917	24	1340	14	1160	160	1374

1	2	3	4	5	6	7	8	9	10	11	12	13	14
10	Uttar	Rabi	C	74	1413	3	883	5	1666	3	1339	85	1407
	Pradesh		S	16	1704	0	0	2	1496	0	0	18	1681
			P	90	1465	3	883	7	1617	3	1339	103	1455
11	West	Rabi	C	90	1074	1	741	16	819	3	779	110	1026
	Bengal		S	68	1104	0	0	19	959	1	424	88	1065
			P	158	1087	1	741	35	895	4	690	198	1043
For States Covered			C	442	1402	49	701	93	1121	78	667	662	1224
			S	286	1378	40	621	41	1159	57	797	424	1207
			P	728	1393	89	665	134	1133	135	722	1086	1218

**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  $i^{\text{th}}$  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  $i^{\text{th}}$  stratum

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

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

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

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

$N_i$  = Total number of revenue villages in the  $i^{\text{th}}$  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  $j^{\text{th}}$  sample village of  $i^{\text{th}}$  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  $j^{\text{th}}$  sample village in  $i^{\text{th}}$  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  $k^{\text{th}}$  experimental plot of  $j^{\text{th}}$  sample village in the  $i^{\text{th}}$  district,

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

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

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

$m_i$  = number of sample villages in which experiments are analysed in the  $i^{\text{th}}$  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  $i^{\text{th}}$  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

