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भारत में
फसल सांख्यिकी प्रणाली का पुनरावलोकन
REVIEW OF CROP STATISTICS SYSTEM IN INDIA

2017-18

भारत सरकार
सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय
राष्ट्रीय सांख्यिकीय कार्यालय (क्षेत्र संकार्य प्रभाग)
कृषि सांख्यिकी मुख्यालय
फरीदाबाद

GOVERNMENT OF INDIA
MINISTRY OF STATISTICS & PROGRAMME IMPLEMENTATION
NATIONAL STATISTICAL OFFICE
(FIELD OPERATIONS DIVISION)
AGRICULTURE STATISTICS HEADQUARTERS
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विजय कुमार
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 आवृत क्षेत्र एवं गुणवत्ता जैसे पहलुओं को अत्यधिक महत्व देता है। इस मंत्रालय के अंतर्गत राष्ट्रीय सांख्यिकीय कार्यालय (रा॰सां॰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 सांख्यिकीय कार्यालय (क्षेत्र संकार्य प्रभाग) प्रतिवर्ष एक रिपोर्ट **"भारत में फसल सांख्यिकी प्रणाली का पुनरावलोकन"** जारी करता है। यह रिपोर्ट श्रृंखला में 43वीं है जो कि अखिल भारतीय स्तर पर कृषि वर्ष 2017-18 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 आंकडे 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 बी॰एस॰नेगी॰, संयुक्त निदेशक, रा॰सां॰का॰(क्षे॰सं॰प्र॰), कृषि सांख्यिकी मुख्यालय फरीदाबाद व उनकी टीम के अधिकारियों के प्रयासों की सराहना करता हूँ जिनके प्रयासों से उपयोगी रिपोर्ट जारी की गयी है।

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

विजय कुमार

विजय कुमार

नई दिल्ली
सितम्बर, 2019

Vijay Kumar
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 Statistical Office (NSO) 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., NSO (FOD) brings out every year a publication entitled **"Review of Crop Statistics System in India".** This report is 43rd in the series and deals with the findings of the ICS scheme during the Agricultural Year 2017-18 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. B.S.Negi, Joint Director and his team of officers of Agriculture Statistics Headquarters of NSO (FOD) whose efforts have led to compilation of this useful publication.

4. I am sure that this publication will be of immense use to policy makers, agriculturalists, researchers, statisticians and planners for their contribution in overall development of agriculture in participating States.

Vijay Kumar

New Delhi
September, 2019

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 (सा0 फ0 प्रा0 सर्वे0) के माध्यम से किया जाता है।

2. राष्ट्रीय सांख्यिकीय कार्यालय (रा0 सां0 का0), सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय, भारत सरकार की यह समग्र जिम्मेदारी है कि वह विश्वसनीय फसल प्राक्कलन हेतु उचित सर्वेक्षण तकनीक विकसित करने के लिए राज्यों के कर्मचारियों को प्रशिक्षण, तकनीकी सहयोग एवं पर्यवेक्षण का कार्य करे। फसल सांख्यिकी सुधार योजना, जो कि 1973-74 से लागू है, का उद्देश्य राष्ट्रीय सांख्यिकीय कार्यालय तथा राज्य सरकारों के संयुक्त प्रयासों से प्राथमिक क्षेत्र कार्य में तकनीकी पर्यवेक्षण द्वारा राज्यों में प्रचलित फसल सांख्यिकी संग्रहण प्रणाली की कमियों का पता लगाना और प्रणाली में सुधार के लिए उपाय सुझाना है। इसे प्राप्त करने के लिए क्षेत्रफल परिगणना तथा समुच्चयीकरण पर प्रतिदर्श जाँच का कार्य प्रत्येक मौसम में लगभग 10,000 प्रतिदर्श ग्रामों में किया जाता है तथा वर्ष भर में लगभग 32,000 फसल कटाई प्रयोगों का निरीक्षण भी किया जाता है।

3. फसल सांख्यिकी सुधार योजना के निष्कर्ष सभी शामिल राज्यों का समुच्चयन कर "भारत में फसल सांख्यिकी प्रणाली का पुनरावलोकन" के अन्तर्गत प्रतिवेदन के रूप में प्रकाशित किए जाते हैं। यह प्रतिवेदन श्रृंखला में 43वीं है जो कि अखिल भारतीय स्तर पर कृषि वर्ष 2017-18 के दौरान फसल सांख्यिकी सुधार योजना के निष्कर्षों को प्रस्तुत करता है।

4. मैं इस प्रतिवेदन को तैयार करने में श्री बी॰एस॰नेगी, संयुक्त निदेशक, रा॰सां॰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 2017-18 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।

30.9.2019

सितम्बर, 2019

ए.के. टोपरानी
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 Statistical Office (NSO) 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 NSO 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 third in the series and deals with the findings of the ICS scheme during the agricultural year 2017-18 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. B.S.Negi, Joint Director of NSO (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 2017-18.

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

A.K.Toprani
Additional Director General

September,2019

	प्रकाशन से जुड़े अधिकारीगण	
1	श्री बी.एस.नेगी	संयुक्त निदेशक
2	श्री पी॰पी॰पटवारी	सहायक निदेशक
3	श्री विजय भास्कर शर्मा	वरिष्ठ सांख्यिकी अधिकारी
4	सुश्री शिवानी धीमान	वरिष्ठ सांख्यिकी अधिकारी
5	सुश्री गरिमा चानना	कनिष्ठ सांख्यिकी अधिकारी
6	श्री पंकज	कनिष्ठ सांख्यिकी अधिकारी
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CONTENTS

S.NO.	SUBJECT	PAGE NO.
A.	Organisation and Agriculture Statistics	i-iii
B.	Concepts & Definition	iv-vii
C.	Data Processing under ICS Scheme	viii-ix
	कार्य सारांश	x-xiii
	Executive Summary	xiv-xvii
	List of Tables and Charts	xviii
	PART -I	
1.	Introduction	1-2
2.	Area Statistics	3-8
3.	Yield Statistics	9-13
4.	Co-ordination	14-16
5.	Improvement of Crop Statistics (ICS) Scheme	17-19
6.	Design and Sample Selection for ICS Scheme	20-21
7.	Analysis of Data	22-24
8.	Findings under ICS Scheme	25-36
9.	Estimation of Area and Average Yield Rates	37-43
10.	Digitization Of Agriculture Statistics (AS) Schedule	44
	PART -II	
	Annexures	1-90
	PART-III	
	Appendix	1-6
	Abbreviations & Seasons	7

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 Statistical Office (NSO)

The Directorate of National Sample Survey (NSS) established in 1950 was re-structured into the present National Statistical Office(NSO) under the Government of India's Order of 23rd May, 2019. 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 Quality Assurance Division (iii) Survey Coordination 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. Agriculture Surveys under NSO (FOD)

NSO (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. NSO (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. NSO (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 NSO (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 NSO (FOD) and State Agricultural Statistics Authority (SASA) and to suggest remedial measures. NSO (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 Agriculture Statistics (EARAS)

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

*****

B. Concepts & Definitions

1. Area Statistics

1.1 Schedule AS 1.0

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

1.2 Schedule AS 1.1

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

2. Yield Statistics

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

2.2 The Schedule AS 2.0

Schedule AS 2.0 is designed for recording the observations of the supervisory staff by conducting sample check on crop cutting experiments. On the basis of the data collected through schedule AS 2.0, AS Hqrs. prepares estimates of yield rates of the principal crops along-with their percentage standard error. All these estimates mentioned above are expressed in gms / plot, which are converted to Kg / hectare by using suitable conversion factor.

2.3 Standard Error

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

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

2.4 Conversion factor

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

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

3. Reference period

The reference period for a survey is the Agriculture Year (July to June) e.g. agriculture year 2017-18 corresponds to the period starting from July 2017 to June 2018.

4. Seasons

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

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

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

5. Survey Records

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

6. Design of Sample Check

The design for crop survey is generally a composite one without any stratification according to inputs such as irrigation and / or seed. The design adopted for selection of villages for the sample check on area is that of stratified simple random sampling, where a tehshil/ anchal/ sub-division/ block/ taluka or a group of them based on geographical contiguity forms a 'Stratum' except Kerala and West Bengal where District is Stratum. For the supervision of crop cutting experiments, District is the 'Stratum'.

7. Crop mixtures

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

8. Nine Fold Classification of Area

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

i. Forests

Area not available for cultivation

ii. Area under non-agricultural uses

iii.Barren and unculturable land or within cultivated holdings

Other uncultivated land excluding Current fallow

iv. Permanent pastures and other grazing lands

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

vi. Culturable waste

Fallow land

vii. Fallow land other than current fallow

viii. Current fallow

ix. Net area sown

9. Geographical Area

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

10. Net Area Sown

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

11. Gross Cropped Area

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

12. Current Fallow

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

13. Area Sown more than once

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

14. Irrigated Area

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

15. Cropping Intensity

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

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

16. Recovery ratio:

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

i) **Driage ratio**:

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

ii) **Ginning ratio**:

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

iii) **Net weight**:

While reporting the weight of the produce of a crop, when sown in mixture, the percentage of the experimental crop sown in that mixture is also given. In this case, we have to work out the produce, had it been sown pure. In 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 NSO (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 सांख्यिकीय कार्यालय क्षेत्र संकार्य प्रभाग तथा राज्य कृषि सांख्यिकी प्राधिकारों के संयुक्त प्रयास से क्षेत्रफल तथा उपज सांख्यिकी संग्रहण की राज्य प्रणाली की कमियों का पता लगाकर उपचारी कदमों द्वारा क्षेत्रफल तथा उपज सांख्यिकी की गुणवत्ता एवं विश्वसनीयता में सुधार करना है। वर्ष 2017-18 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, तमिलनाडु, तेलंगाना, उत्तर प्रदेश, उत्तराखंड, पश्चिम बंगाल तथा पुडुचेरी। तेलंगाना एक नवनिर्मित राज्य है जो कि आंध्र प्रदेश राज्य से पृथक किया गया है। वर्ष **2017-18** के लिए सम्पूर्ण भारत के स्तर पर योजना के निष्कर्षों की मुख्य बातें निम्न प्रकार हैं:

1. कुछ राज्यों (देश के कुल रिर्पोटिंग 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 **2017-18** के दौरान फसल सांख्यिकी सुधार के अनुसार प्रति प्राथमिक कर्मी का औसत कार्य भार **8** गाँव है जिसमें प्रति गाँव औसतन भौगोलिक क्षेत्रफल **600** हैक्टेयर है, तथा **1300** सर्वेक्षण संख्या निहित है। राष्ट्रीय कृषि आयोग ने सिफारिश की है कि जहां कहीं भी पटवारी का कार्य क्षेत्र वृहद है तो इसे घटा दिया जाना चाहिए। **(सारणी- 2) (पैरा 2.4.1)**

3. छत्तीसगढ़, मध्य प्रदेश, उत्तर प्रदेश तथा उत्तराखंड में अमान्य मिश्रित फसलों के लघु संघटकों के अधीन क्षेत्रफल को नजर अंदाज करके उसके सम्पूर्ण क्षेत्र को मुख्य संघटकों के अन्तर्गत दर्ज किया जाता है जिससे मुख्य फसलों के अन्तर्गत क्षेत्र का आंकलन ज्यादा हो जाता है। इस प्रणाली में सुधार की आवश्यकता है। **(पैरा 2.4.2 iii)**

4. वर्ष **1973-74** के फसल सांख्यिकी सुधार योजना के आरंभ होने के समय सामान्य फसल प्राक्कलन योजना के अंतर्गत **1,73,097** प्रयोग नियोजित किए गए। वर्ष **2016-17** में ये प्रयोग बढ़कर **16,47,802** 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 **2017-18** 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 हैं, जबकि अन्य राज्यों के अन्तर्गत ज्यादा क्षेत्रफल रहने के बावजूद इन फसलों को शामिल नहीं किया जाता है। इस विषमता को दूर करने के लिए इन राज्यों में 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 **2017-18** के दौरान चार राज्यों- छत्तीसगढ़, झारखंड, केरल और मध्य प्रदेश 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. **2017-18** 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 **51** प्रतिशत से **79** 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. **2017-18** के दौरान गिरदावरी की सामयिक संपूर्ति पूर्व खरीफ मौसम में प्रतिदर्श ग्रामों की केवल **45** प्रतिशत, खरीफ मौसम में **54** प्रतिशत, रबी में **46** प्रतिशत तथा ग्रीष्म मौसम में **37** प्रतिशत मामलों में पायी गयी। आंध्र प्रदेश, असम, बिहार, गुजरात, हरियाणा, झारखंड, महाराष्ट्र, पंजाब, राजस्थान, 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. 2017-18 के दौरान टी0 आर0 एस0 विवरण पूर्व खरीफ में 46 प्रतिशत प्रतिदर्श ग्रामों, खरीफ मौसम में 43 प्रतिशत प्रतिदर्श ग्रामों, रबी में 45 प्रतिशत प्रतिदर्श ग्रामों तथा ग्रीष्म में 30 प्रतिशत प्रतिदर्श ग्रामों में ही समय पर प्रस्तुत किया गया। इसके साथ ही वर्ष 2017-18 के दौरान पूर्व खरीफ, खरीफ, रबी तथा ग्रीष्म में क्रमशः 4, 7, 7 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। 63 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 रुप से अद्यतन होना आवश्यक है। **(पैरा 8.1.5)**

12. अखिल भारतीय स्तर पर 2017-18 के दौरान क्षेत्रफल परिगणना के समय फसल तथा फसल क्षेत्रफल को दर्ज करने में विभिन्न राज्यों में पूर्व खरीफ में 28 प्रतिशत, खरीफ में 15 प्रतिशत, रबी में 12 प्रतिशत तथा ग्रीष्म मौसम में 7 प्रतिशत सर्वेक्षण संख्याओं में विसंगतियाँ पाई गयीं। इस तरह की विसंगतियाँ फसल क्षेत्रफल के आँकडों पर पर्याप्त असर ड़ालती हैं। **(पैरा 8.1.6 से 8.1.8)**

13. अखिल भारतीय स्तर (ऐकीकृत प्रतिदर्श) पर समग्र रुप से वर्ष 2017-18 के दौरान कटाई स्तर पर फसल कटाई प्रयोगों का प्रत्युत्तर पूर्व खरीफ में 79 प्रतिशत, खरीफ में 76 प्रतिशत, रबी में 75 प्रतिशत तथा ग्रीष्म में 82 प्रतिशत रहा। कटाई स्तर पर फ़सल कटाई प्रयोगों के शत-प्रतिशत पर्यवेक्षण का लक्ष्य प्राप्त करने के लिए कदम उठाये जाने की आवश्यकता है। **(पैरा 8.2.1)**

14. 2017-18 के दौरान 56 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 त्रुटियां, 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 उत्तर प्रदेश में अधिक रहा। बिहार, झारखंड व उत्तर प्रदेश में स्थिति और चिंताजनक हो जाती है जहां पर अप्रशिक्षित कर्मियों द्वारा प्रयोगों का अधिक संचालन किया गया। **(पैरा 8.2.5)**

18. कुछ राज्यों में विभिन्न कारणों से फसल कटाई प्रयोगों के लिए चयनित गावों / क्षेत्रों का प्रतिस्थापन किया गया। प्रयोगात्मक फसल की अनुपलब्धता के कारण मूल रूप से चयनित गांव का प्रतिस्थापन **2017-18** के दौरान **8%** से **14%** 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)**

20. तकनीकी विकास व आधुनिकीकरण को ध्यान में रखते हुए, फसल सांख्यिकी सुधार योजना के अंतर्गत कृषि वर्ष 2017-18 के रबी मौसम से अनुसूची 2.0 का डिज़ीटलिकरण किया गया है । **(पैरा 10.0.1 एवं 10.1.2)**

21. कृषि वर्ष 2017-18 से तमिलनाडु राज्य में खरीफ व रबी मौसम की अवधारणा को आरम्भ किये जाने तथा फसलों के वर्गीकरण के चलते तमिलनाडु राज्य के आंकंडो को पूर्ण वर्ष के स्थान पर मौसमवार दर्शाया गया है ।

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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 Statistical Office (NSO) 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 2017-18, 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, Telangana, Uttar Pradesh, Uttarakhand, West Bengal and Puducherry. The highlights of the findings of the scheme at all India level for the year 2017-18 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 Primary worker (Patwari) as per ICS scheme during 2017-18 at all India level was found to be 8 villages having 1300 survey numbers and 600 hectares of geographical area per village. National Commission for Agriculture has suggested that there is need to reduce the jurisdiction of Patwari, wherever it is extensive. **(Table-2) (Para–2.4.1)**

3. For unrecognized mixtures, the entire area under minor constituents of crop mixtures in 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 **16,47,802** in number under GCES 2016-17, which formed the basis for sample selection for supervision of Crop Cutting Experiments under the ICS Scheme during agricultural year 2017-18 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 Chhattisgarh, Jharkhand, Kerala and Madhya Pradesh during 2017-18 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 **51%** to **79%** for State sample during 2017-18. 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 2017-18, timely completion of Girdawari was found only in **45%** sample villages during Early Kharif, **54%** during Late Kharif, **46%** during Rabi and **37%** during Summer of 2017-18. **Instances of non-completion of Girdawari in Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Jharkhand, Maharashtra, Punjab, Rajasthan, Telangana, & 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 2017-18, TRS statements were submitted in time after completion of Girdawari only in **46%** sample villages during Autumn, **43%** during Winter, **45%** during Rabi and **30%** during Summer. Further, the cases of submission of TRS statement without completion of Girdawari was of the order of **4%, 7%, 7% 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 **63%** 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 2017-18, errors in recording crops and crop areas at the time of area enumeration were observed in **28%** of the survey numbers during Autumn, **15%** during Winter, **12%** during Rabi and **7%** 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 at all india level (Pooled Sample) for crop cutting experiments at harvest stage during 2017-18 was **79%** for Autumn, **76%** for Winter, **75%** for Rabi and **82%** 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 2017-18, the experiments were found to be conducted according to the prescribed procedures in **56%** 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 **Uttar Pradesh** during 2017-18. Situation is found alarming in **Bihar, Jharkhand and Uttar Pradesh** where Crop Cutting experiments are being conducted by the untrained workers in larger proportion. **(Para-8.2.5)**

18. Instances of substitution of selected villages/fields for crop cutting experiments due to various reasons were observed in some States. The substitution of originally selected village due to non-availability of experimental crop was observed in the range of **8% to 14%** cases during 2017-18. 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)**

20. Digitisation of Schedule AS 2.0 under the scheme of ICS, initiated from Rabi season of Agriculture year 2017-18, keeping in view of technological development and modernization. **(Para- 10.1.1 & 10.1.2)**

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

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LIST OF TABLES AND CHARTS

Table/Chart	Description	Page No.
Table-1	State-wise year of introduction of TRS / EARAS and ICS Scheme	5
Table-2	Work load of Patwari during 2017-18	7
Table-3	Percentage of crop area covered (lowest) under GCES for major crops during 2016-17	12
Table-4	Status of Pre-Stratification under CES during 2016-17	13
Table-5	Sample size for various checks under ICS	17-18
Table-6	All India Status of completion of Girdawari during 2017-18 and 2016-17	26
Table-7	Status of completion of Girdawari during 2017-18 and 2016-17	28
Table-8	Ratio of Area Estimates (A-IV/A-III)	37
Table-9	Ratio of Yield Estimates (ICS/CES)	40
Chart-I	All India Status of completion of Girdawari ICS Scheme	27
Chart-II	Errors observed in Area enumeration during 2017-18	29
Chart-III	Incidence of errors in conduct of crop cutting experiments during 2017-18	32
Chart-IV	Delegation of Work By Primary Workers	34
Chart-V	Substitution of Sampling Units	36
Chart-VI	Ratio of Area Estimates (A-IV/A-III)	38
Chart-VII	Percentage of Irrigated Area under ICS & TRS during 2017-18	39
Chart-VIII(a)	Trend of Yield Rates under ICS & CES – Rice (Kharif)	41
Chart-VIII(b)	Trend of Yield Rates under ICS & CES – Rice (Summer)	41
Chart-VIII(c)	Trend of Yield Rates under ICS & CES – Maize	42
Chart-VIII(d)	Trend of Yield Rates under ICS & CES – Gram	42
Chart-VIII(e)	Trend of Yield Rates under ICS & CES – Wheat	43

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 Statistical Office (NSO) 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 NSO 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 seasonwise i.e Kharif and Rabi. The All India report contains an overall account of the status of estimation of crop production in the country as also the technical details and results relating to the ICS Scheme for the States and UTs covered by it. It provides comparison of estimates based on sample checks under the various schemes viz. ICS, TRS, Final Forecasts and GCES.

1.1.4 The present report is the forty third in the existing series and relates to the Agriculture Year 2017-18. 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 NSO's responsibility for co-ordinating the Central and State agencies in collection of supervised data on Agriculture Statistics. The detailed findings under ICS are discussed in Chapter-8.

****

2

AREA STATISTICS

2.1 System of collection

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

i. The States where Area statistics are collected by complete enumeration (normally known as Land Record States or Temporarily Settled States)

ii. The States where Area statistics are collected on the basis of sample surveys (normally known as Non-land Records States or Permanently Settled States)

iii. The States where satisfactory system of collection of Area statistics is yet to be developed.

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

2.1.3 The system of land records is being followed in 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 roster. The system of land records also exists in Andaman district of Andaman & Nicobar Islands.

2.1.4 In the Non-Land Records States or Permanently Settled States viz., Kerala, Odisha and West Bengal, the area statistics are generated on the basis of sample surveys. After the Establishment of an Agency for Reporting Agriculture 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, NSO (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 npriority 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 Agriculture 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 Agriculture 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 2017-18 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 26 villages in Jharkhand, from 500 survey numbers per village in Assam and Maharashtra to 3300 survey numbers per village in Haryana, from 200 hectares of the geographical area per village in Assam, Bihar, Himachal Pradesh and Uttarakhand to 1800 hectares in Telangana.

Table - 2
Workload of Patwari during 2017-18

Sl.No.	State	No. of villages	Survey / Sub survey Nos. per village('000')	Geographical Area per village ('000' Ha.)
1	Andhra Pradesh	3	1.5	0.9
2	Assam	12	0.5	0.2
3	Bihar	17	1.2	0.2
4	Chhattisgarh	6	1.1	0.4
5	Gujarat	3	0.6	0.9
6	Haryana	4	3.3	1.0
7	Himachal Pradesh	12	0.9	0.2
8	Jammu & Kashmir	6	1.0	0.4
9	Jharkhand	26	1.1	0.3
10	Karnataka	5	0.7	1.0
11	Kerala	#	#	#
12	Madhya Pradesh	5	0.8	0.6
13	Maharashtra	4	0.5	0.7
14	Odisha	7	1.0	0.3
15	Punjab	7	2.2	0.6
16	Rajasthan	8	0.8	1.0
17	Tamil Nadu	2	2.6	1.3
18	Telangana	3	1.9	1.8
19	Uttar Pradesh	7	0.7	0.3
20	Uttarakhand	12	1.8	0.2
21	West Bengal	5	1.0	0.1
22	Puducherry	10	1.3	0.4
All India average		**8**	**1.3**	**0.6**

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

II - Treatment of Crop mixtures

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

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

(ii) States where some major crop mixtures have been identified and area at the field level of the recognised mixtures is recorded as such for the mixtures. Allocation to the constituent crops is done at higher levels on the basis of fixed ratios. For unrecognized mixtures, the allocation of areas to the components is done at field level on the basis of seed ratio/ eye estimation. The States following this procedure are Gujarat, Kangra district of Himachal Pradesh, Jammu & Kashmir, Punjab and Rajasthan.

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

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

****

3

YIELD STATISTICS

3.1 General Crop Estimation Surveys

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

3.1.2 At the time of inception of Improvement of Crop Statistics (ICS) Scheme, during the year 1973-74, a total of 1,73,097 experiments were planned under GCES. These experiments increased to 16,47,802 in number under GCES 2016-17 which formed the basis for sample selection for supervision of Crop Cutting Experiments under the ICS Scheme during agriculture year 2017-18 on various crops covering 19 Land Records States/ UTs, 3 EARAS States of Kerala, Odisha and West Bengal and other States of Goa and Meghalaya and Union Territory of Dadra & Nagar Haveli and Daman & Diu. Crop Estimation Surveys are not conducted in Nagaland and Sikkim as yet.

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

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

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

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

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

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

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

3.1.6 The precision of the estimates of average yield is judged by the standard error of the estimate. The calculation of standard errors and their study is helpful in assessing the adequacy of the sample size, trend of changes in yield rates and in planning other allied studies. NSO 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, Seasamum, 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 2016-17 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 2016-17

Sl. No.	Crop	Minimum Area (% of the total area under the crop)	Name of State
1.	Rice (Autumn)	2	Kerala
2.	Rice (Winter)	3	Kerala
3.	Rice (Summer)	2	Kerala
4.	Rice (Combined)	38	Jammu & Kashmir
5.	Jowar (Kharif HYV- Tra- Combined)	20	Karnataka
6.	Bajra (Kharif)	68	Haryana
7.	Maize	7	Haryana
8.	Maize (Rabi)	50	Maharashtra
9.	Maize (Combined)	40	Jammu & Kashmir
10.	Ragi (Rabi)	61	Andhra Pradesh
11.	Wheat (Tra-Irr & UI)	46	Karnataka
12.	Barley	28	Chhattisgarh
13.	Barley (Kharif)	29	Haryana
14.	Gram	40	Haryana
15.	Redgram /Tur	21	Haryana
16.	Cotton	45	Haryana
17.	Mesta	87	Andhra Pradesh
18.	Jute	65	Meghalaya
19.	Groundnut	68	Andhra Pradesh
20.	Groundnut	70	Chhattisgarh
21.	Groundnut (Rabi)	87	Telangana
22.	Sesamum (Kharif)	55	Chhattisgarh
23.	Sesamum (Rabi)	22	Maharashtra
24.	Castor	76	Telangana
25.	Sugarcane	0.1	Kerala
26.	Linseed	51	Maharashtra
27.	Rape & Mustard	64	Haryana
28.	Chillies (Rabi)	1	Chhattisgarh
29.	Tobacco	49	Telangana

Note:-

CES data pertains to the year 2016-17 as this forms the basis for sample selection on Crop Cutting Experiment under ICS scheme 2017-18.

Table – 4
Status of Pre-Stratification under CES during 2016-17

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.

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4

CO-ORDINATION

4.1. Forums for Coordination

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

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

I – National Statistical Commission:

4.1.2 The National Statistical Commission, set up by the Government in January 2000 under the Chairmanship of Dr. C. Rangarajan, reviewed the statistical system and the entire gamut of Official Statistics in the country. The Rangarajan Commission submitted its report to the Government in August 2001. One of the key recommendations of this Commission was to establish a permanent National Commission on Statistics to serve as a nodal and empowered body for all core statistical activities of the country, evolve, monitor and enforce statistical priorities and standards and to ensure statistical co-ordination among the different agencies involved. In line with the recommendations of the Rangarajan Commission, the Government of India resolved to set up a permanent National Statistical Commission (NSC), vide Notification No. 85 dated 1st June 2005 published in the Gazette of India, Extraordinary, Part-III-Section. The NSC was initially constituted on 12th July 2006. The Commission consists of a part-time Chairman, four part-time Members and Secretary, Planning Commission as an ex-officio Member. The Chief Statistician of India (CSI) is the Secretary to the Commission and also the Secretary to the Government of India in the Ministry of Statistics and Programme Implementation (MOSPI). The NSC took note of the findings and recommendations of all important bodies in the context of the prevailing status of 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, NSO (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. 2017-18, the four meetings of these committees were held in the States of Chhattisgarh, Jharkhand, Kerala and Madhya Pradesh. 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 NSO 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)

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 2017-18, 25th COCSSO was held at Bengaluru on 18th and 19th January, 2018. The theme of conference was “Administrative Statistics”.

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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 2017-18, 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
2017-18	4939	5349	*	4739	15662	15662

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

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

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

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

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

5.1.3 The sample checks are undertaken by the supervisory staff of NSO (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 (NSO-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 NSO (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, weighment of the produce etc. In addition, the position regarding the supply and use of equipment for conducting the experiments, training received by primary workers, crop condition, use of inputs etc. is also ascertained.

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

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

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

5.1.9 The yield data from the supervised experiments are also used for obtaining the average yield rates and standard errors of specified crops. These estimates are forwarded to the Ministry of Agriculture & 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. 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 2017-18 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 driage experiments, ancillary information on inputs like Irrigation, Seeds, Fertilizers etc. The analysis of data collected through Schedule AS 2.0, therefore, provides an insight of various aspects of crop cutting experiments like availability of basic records, reasons for substitution of sampling units,

types and frequency of various types of mistakes in conducting crop cutting experiments, supply and use of equipment etc.

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

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8

FINDINGS UNDER ICS SCHEME

8.1 Sample Check on Area Enumeration

I – Response

8.1.1 **Annex-I** gives the State-wise response achieved (i.e. the percentage of the filled-in Schedules AS 1.0 received) in sample check on enumeration of area under ICS Scheme during 2017-18. The overall response at all India level for all the States/UT covered was cent percent for Central Sample, 51% to 79% for State sample and 75% to 89% for Pooled sample during 2017-18 in all the seasons as against cent percent for Central Sample, 58% to 88% for State Sample and 79% to 94% for Pooled Sample during 2016-17. 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 (Kharif 99%), Punjab (Kharif 98% and Rabi 99%), Rajasthan (Rabi 89%), Uttar Pradesh (Kharif 99%).The response for the State sample was below 51% in Gujarat (Rabi 50%, Summer 39%), Uttar Pradesh (Kharif 38%, Rabi 23% and Summer 13%) and West Bengal (Early Kharif 43%, Late Kharif 39%, Rabi 27% and Summer 17%). 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 2017-18. A summary showing agency wise brief picture of the timeliness in completing area enumeration by primary workers is given below in **Table-6** for 2017-18 and 2016-17. 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 2017-18 are given in **Annex-II**. On comparison of the position of timely completion of area enumeration work during 2017-18 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, 54% during Late Kharif, 46% during Rabi and 37% during Summer of 2017-18 as against 45%, 49%, 51% and 37% during 2016-17. The position continues to be unsatisfactory for some of the States. For example,

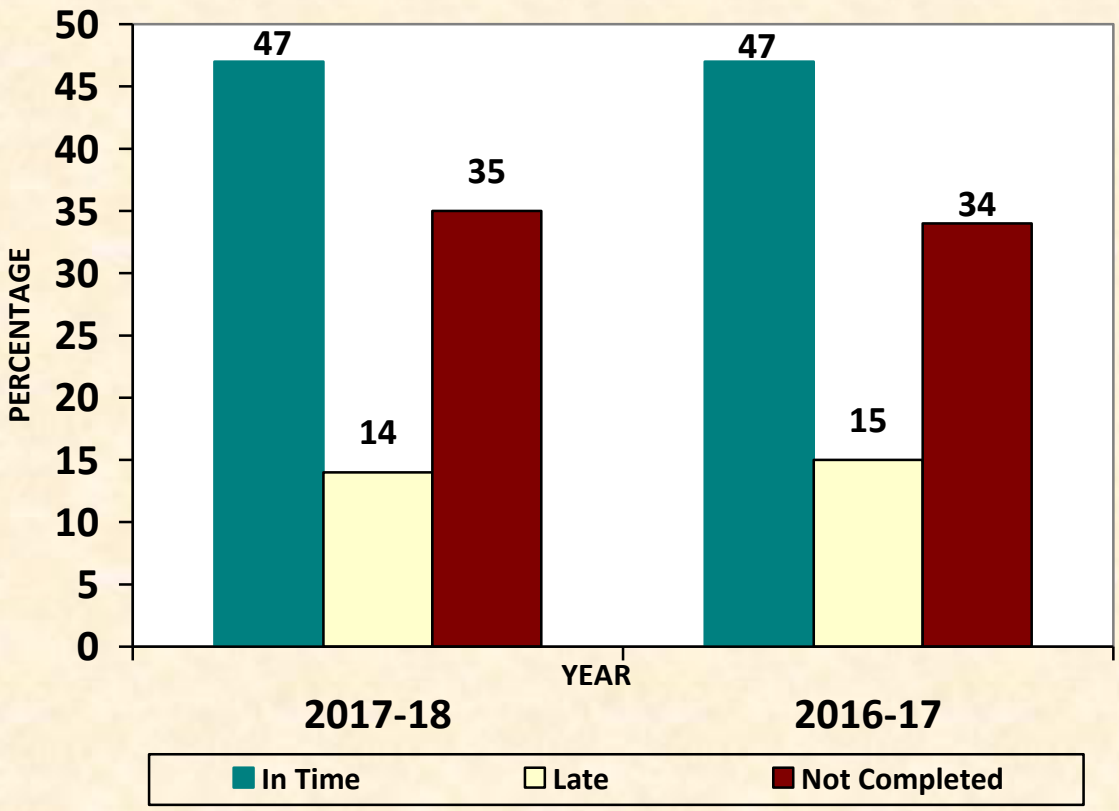
the percentage of delayed and non-completion of area enumeration work was observed to be 65% (Kharif), 57% (Rabi) in Andhra Pradesh, 99%, 100%, 100%, 100% during E.Kharif, L.Kharif, Rabi and Summer seasons respectively in Assam, 78%, 78%, 85% and 89% during E.Kharif, L. Kharif, Rabi and Summer seasons respectively in Bihar, 97% in Kharif and Rabi and 92% Kharif, Rabi and Summer seasons respectively in Gujarat, 68% during Summer in Haryana, 79%, 73%, 80% & 89% during E. Kharif, L. Kharif, Rabi and Summer seasons respectively in Jharkhand, 69%, 69% & 76% during Kharif, Rabi & Summer seasons respectively in Maharashtra, 68% and 65% during Kharif & Rabi seasons respectively in Punjab, 51% in Rabi Season in Rajasthan, 65% during Kharif and Rabi in Telangana, and during E. Kharif 79%, L. Kharif 76%, Rabi 79% and Summer 69% 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 2017-18 and 2016-17

Status	Percentage of Villages					
	2017-18			2016-17		
	Central	State	Pooled	Central	State	Pooled
Early Kharif						
In time	41	51	45	42	48	45
Late	7	13	10	6	18	12
Not Completed	53	25	39	52	29	40
Late Kharif						
In time	49	59	54	46	52	49
Late	10	21	15	11	26	18
Not Completed	40	15	29	42	15	30
Rabi						
In time	40	54	46	45	58	51
Late	14	23	18	10	20	15
Not Completed	46	16	32	44	15	31
Summer						
In time	30	51	37	33	43	37
Late	7	12	9	8	22	13
Not Completed	62	27	51	59	27	47
All Seasons						
In time	41	55	47	43	52	47
Late	10	19	14	10	22	15
Not Completed	48	18	35	47	19	34

Note:- * Excluding information on completion of Girdawari not available (item- 7) and system of Girdawari does not exist (item-8) of Annex-V, State wise Status Report 2017-18 & 2016-17.

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 2017-18 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 45% & Rabi 47%), Assam (E.Kh 14%, L.Kh 13%), Bihar (Rabi 10%, Summer 8%), Gujarat (Summer 8%), Tamil Nadu (Phase I 9%) and Telangana (Kharif 35%, Rabi 49%). 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 52%, Rabi 53%), Chhattisgarh (Rabi 64%), Haryana (Kharif 94% & Rabi 91%), Himachal Pradesh (Kharif 51% & Rabi 74%), Karnataka (Kharif 61%, Rabi 55% and Summer 54%), Kerala (Autumn 100%, Winter 99% & Summer 98%), Madhya Pradesh (Kharif 78% & Rabi 76%), Odisha (Autumn 99%, Winter 99% & Summer 100%), Tamil Nadu (Phase-I 83%, Phase–II 88%, Phase–III 87%), Uttrakhand (Kharif 53% and Rabi 61%) and Puducherry (Kharif 100%,

Rabi I 100% & Rabi II 100%). In 2017-18, TRS statements were submitted in time after completion of Girdawari only in 46% sample villages during Autumn, 43% during Winter, 45% during Rabi and 30% during Summer. Further, the submission of TRS statement without completion of Girdawari was 4%, 7%, 7% 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 **2017-18** and **2016-17** is presented in **Table-7.**

Table – 7

Status of Submission of TRS/EARAS Statement during 2017-18 and 2016-17

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				
2017-18								
Early Kharif	2	2	46	7	1	2	31	8
Late Kharif	6	1	43	17	2	6	20	4
Rabi	5	2	45	17	2	5	19	4
Summer	1	2	30	11	2	4	44	5
2016-17								
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

Note: - * Excluding percentages of TRS statements submitted but could not be compared with girdawari completion (Item-8) of Annex - VI, State wise Status Report 2017-18 & 2016-17.

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 2017-18. Information in respect of updation of the maps reveals that in 63% 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.

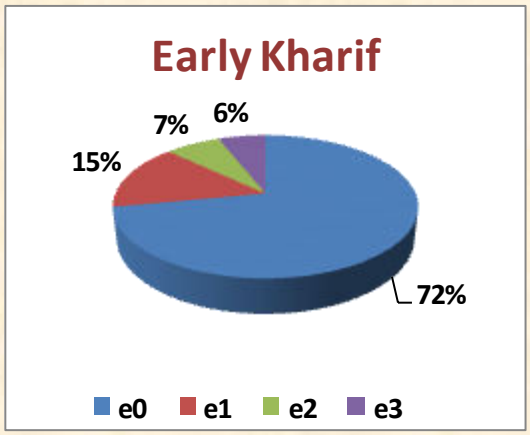
V - Accuracy of Girdawari

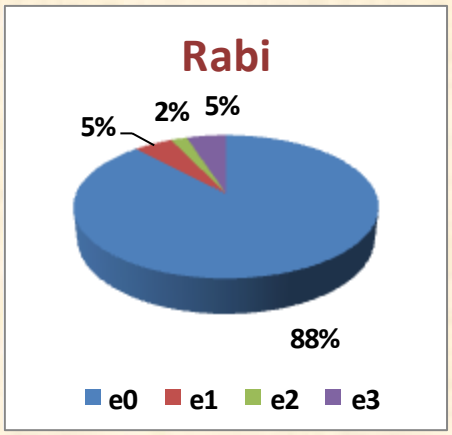
8.1.6 **Annex-IV (a)** and **Chart-II** show the percentage of survey numbers in which the three different types of discrepancies in recording the crop/ crop areas by the State primary workers were noticed (viz. e1, e2 and e3). It can be seen that at all India level, the

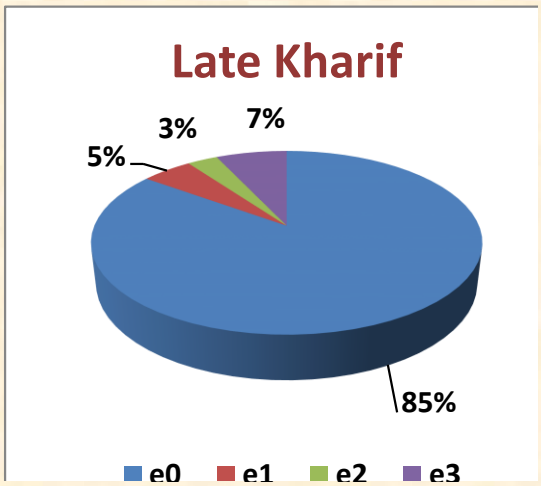
discrepancy of one or the other type was observed in 28% of the selected survey numbers during Early Kharif, 15% during Late Kharif, 12% during Rabi and 7% during Summer, 2017-18. The magnitude of discrepancies was very high in Bihar (L.Kharif 83%), Gujarat (Rabi 22%), Himachal Pradesh (Kharif 18%), Karnataka (Kharif 19%, Rabi 14% & Summer 8%), Kerala (Autumn 26%), Maharashtra (Kharif 26%, Rabi 14% & Summer 32%), Rajasthan (Rabi 13%), Tamil Nadu (Phase-I 35%, & Phase-III 32%), Uttar Pradesh (Kharif 23%, Rabi 26% & Summer 29%), and West Bengal (Rabi 28% & Summer 16%). 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.

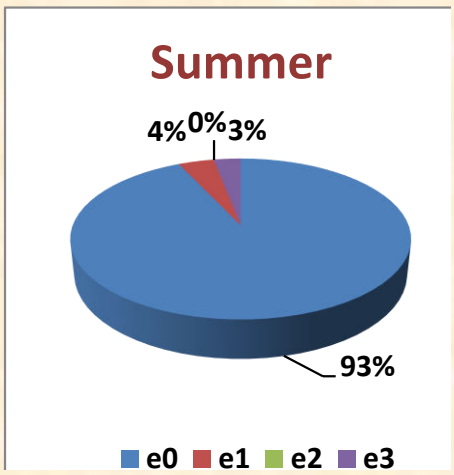
CHART –II

ERRORS OBSERVED IN AREA ENUMERATION DURING 2017-18









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 83%), Gujarat (Rabi 78%) , Himachal Pradesh (Kharif 7%), Karnataka (Kharif 8% & Summer 14%), Maharashtra (Summer 31%), Tamil Nadu (Phase-I 25%, Phase II 19%, Phase III22%), Uttar Pradesh (Kharif 10%, Rabi 12% & Summer 17%), and West Bengal (Early Kharif 12%, Rabi 13% & Summer 6%). **Reporting of crops not actually sown (e_2) was the least occurring of the three errors.** It was found mostly in Gujarat (Kharif 5%), Himachal Pradesh (Kharif 7%, Rabi 5%), Karnataka (Summer 1%), Kerala (E Kharif 18%), Tamil Nadu (Phase III 8%), Uttar Pradesh (Kharif 9% and Summer 1%), West Bengal (Rabi 4% & Summer 4%) and Puducherry (Rabi I 9%). **The error of inaccurate assessment of area under crop (e_3)** was found dominant in Himachal Pradesh (Kharif 7% & Rabi 5%), Karnataka (Kharif 9%, Rabi 6%, Summer 3%), Kerala (E Kharif 8%,Summer 3%), Madhya Pradesh (Rabi 6%), Maharashtra (Kharif 20%, Rabi 8%), Rajasthan (Kharif 9%), Uttar Pradesh (Kharif 9%, Rabi 12% & Summer 11%), and West Bengal (E Kharif 12%, Rabi 11% & Summer 6%).

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 Andhra Pradesh (Paddy Summer, Gram), Bihar (Wheat and Gram), Gujarat (Gram), Madhya Pradesh (Jowar Kharif), Tamil Nadu (Paddy Winter, Bajra, Maize), Telangana (Paddy Autumn), Uttar Pradesh (R&M), Uttrakhand (Wheat,Sugarcane), West Bengal (Paddy Autumn) and Puducherry (Paddy Summer).

VI - Discrepancies in recording Irrigation particulars

8.1. 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 2017-18, 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 Gujarat (Rabi 78%), Kerala (Winter 21%), Maharashtra (Summer 32%), Tamil Nadu (Phase-I 29%, Phase II 26 & Phase-III 31%). The accuracy of crop inspection could not be measured in West Bengal due to non-availability of this information (as the same is not collected by the State primary workers). In case of Central Samples of Assam, Bihar (All Seasons), Gujarat (All Seasons) & Jharkhand (All Seasons) the observations in this respect could not either be incorporated as they are not reflecting the true picture because of low completion of area enumeration by the State primary workers.

VII - Discrepancies in recording variety particulars of seed used

8.1.10 Information on distribution of survey numbers as per the type of seed used is presented in **Annex-IV (d).** 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 Gujarat (Rabi 78%), Maharashtra (Summer 32%), Punjab (Kharif 30% & Rabi 35%) and Tamil Nadu (Phase-I 33, Phase-II 32% & Phase-III 33%). 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 2017-18. The response achieved in respect of all the States in different seasons was above 90% except in Assam (Early Kharif 64%, Late Kharif 87%, Rabi 79%, Summer 88%), Bihar (Early Kharif 61%, Late Kharif 67%, Rabi 66% & Summer 45%), Gujarat (Kharif 60% & Rabi 66%), Himachal Pradesh (Kharif 81% & Rabi 74%), Jammu & Kashmir (Kharif 66% & Rabi 67%), Jharkhand (Early Kharif 65%, Late Kharif 60% & Rabi 83%), Karnataka (Kharif 70%, Rabi 76% & Summer 76%), Madhya Pradesh (Kharif 83 % & Rabi 80%), Maharashtra (Kharif 59% & Rabi 48%), Rajasthan (Kharif 78%, Rabi 85%), Telangana (Kharif 84% &Rabi 88%), Uttar Pradesh (Kharif 63%, Rabi 61% & Summer 54%), Uttarakhand (Kharif 73%, Rabi 79%) and West Bengal (Early Kharif 65%, Late Kharif 66%, Rabi 49%, Summer 57%). The overall response at all India level (Pooled) was of the order of 79% for Autumn, 76% for Winter, 75% for Rabi and 82% for Summer during 2017-18 as against 85% for Autumn, 68% for Winter, 73% for Rabi and 83% for Summer in corresponding seasons during 2016-17.

II – Distribution of number of experiments conducted by important inputs

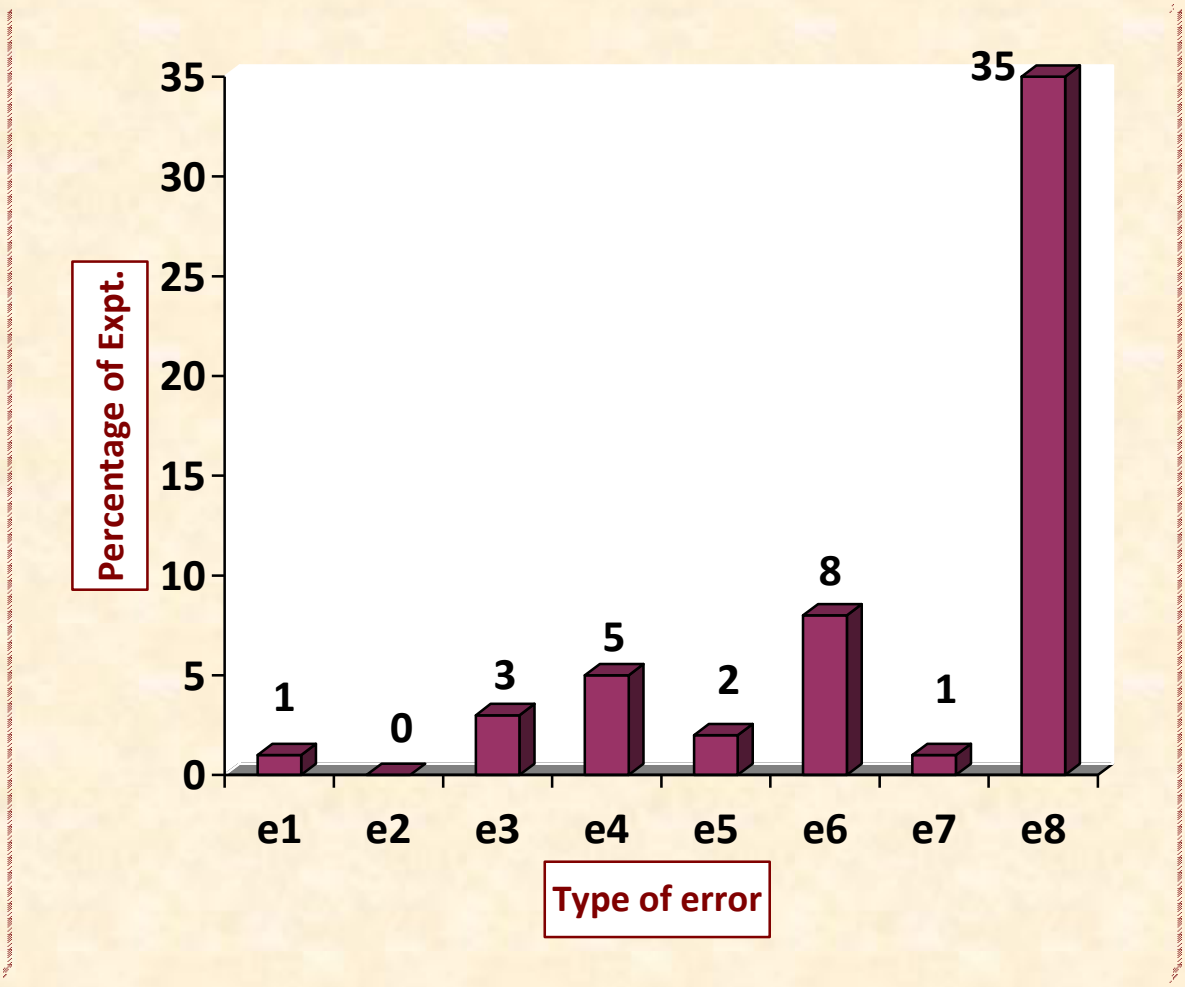
8.2.2 **Annex-VII** gives details of the crop-wise percentage distribution of experiments according to important inputs viz. Irrigation, High Yielding Varieties of Seeds and Fertilizers applied.

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, 56% cases of the experiments (during Autumn, Winter, Rabi and Summer taken together) were conducted in accordance with the prescribed procedures during 2017-18. 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_6 error** i.e. reporting of ancillary particulars like irrigation, high yielding varieties of seed, fertilizer and manure used during 2017-18 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 2017-18



e_1 = Error in selection of survey/sub survey numbers.
e_2 = Error in selection of field within survey/sub survey numbers.
e_3 = Error in measurement of field.
e_4 = Error in selection of random numbers, location & marking of plots.
e_5 = Error in weighment of produce.
e_6 = Error in reporting ancillary information.
e_7 = Inadequate arrangement for storing of produce for driage and incorrect reporting of constituents in crop mixtures.
e_8 = Others (Comparison not possible between Supervisor & Primary Worker entries)

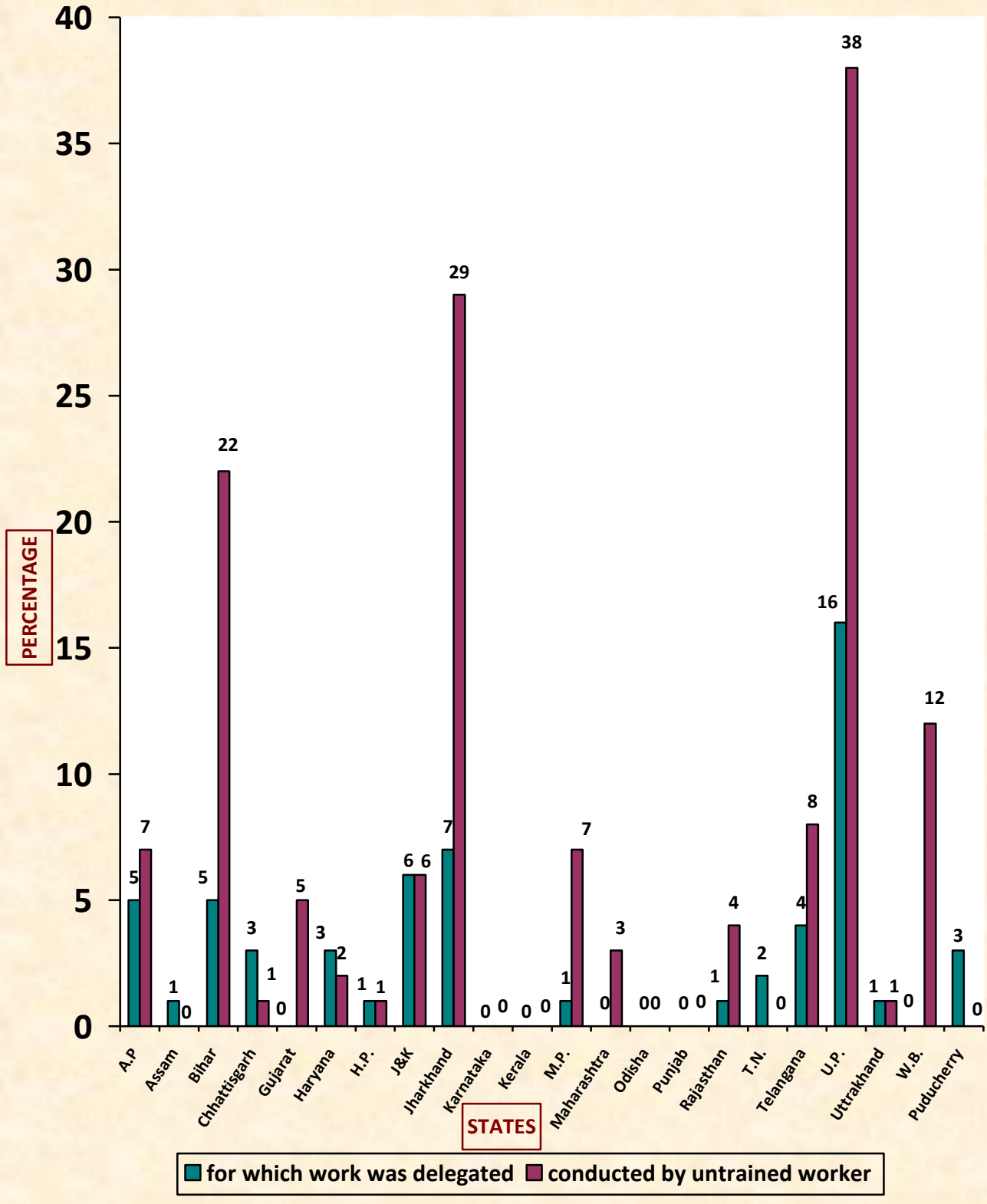
IV - Supply and Use of Equipment

8.2.4 While an untrained or negligent worker cannot conduct the experiments properly, accuracy in their conduct also requires supply of essential equipment and their proper use. Information on these two latter aspects, collected during the sample checks of 2017-18, 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 21%, 64%, 37% and 38% supervised experiments respectively during 2017-18 as against 19%, 62%, 35% & 38% 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 20%, 10%,19%,18% during 2017-18 as against 19%, 9%, 17% & 16% during 2016-17 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 5%, Assam 1%, Bihar 5%, Chhattisgarh 3%, Haryana 3%, Himachal Pradesh 1%, Jammu & Kashmir 6%, Jharkhand 7%, Madhya Pradesh 1%, Rajasthan 1%, Tamil Nadu 2%, Telangana 4%, Uttar Pradesh 16%, Uttrakhand 1% and 2% in Pudcherry during 2017-18. The percentage of experiments conducted by workers for all the seasons taken together without proper training was 7% in Andhra Pradesh, 22% in Bihar, 1% in Chhattisgarh, 5% in Gujarat, 2% in Haryana, 1% in Himachal Pradesh, 6% in Jammu & Kashmir, 29% in Jharkhand, 7% in Madhya Pradesh, 3% in Maharashtra, 4% in Rajasthan, 8% in Telangana, 38% in Uttar Pradesh, 1% in Uttrakhand and 12% in West Bengal during 2017-18. 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

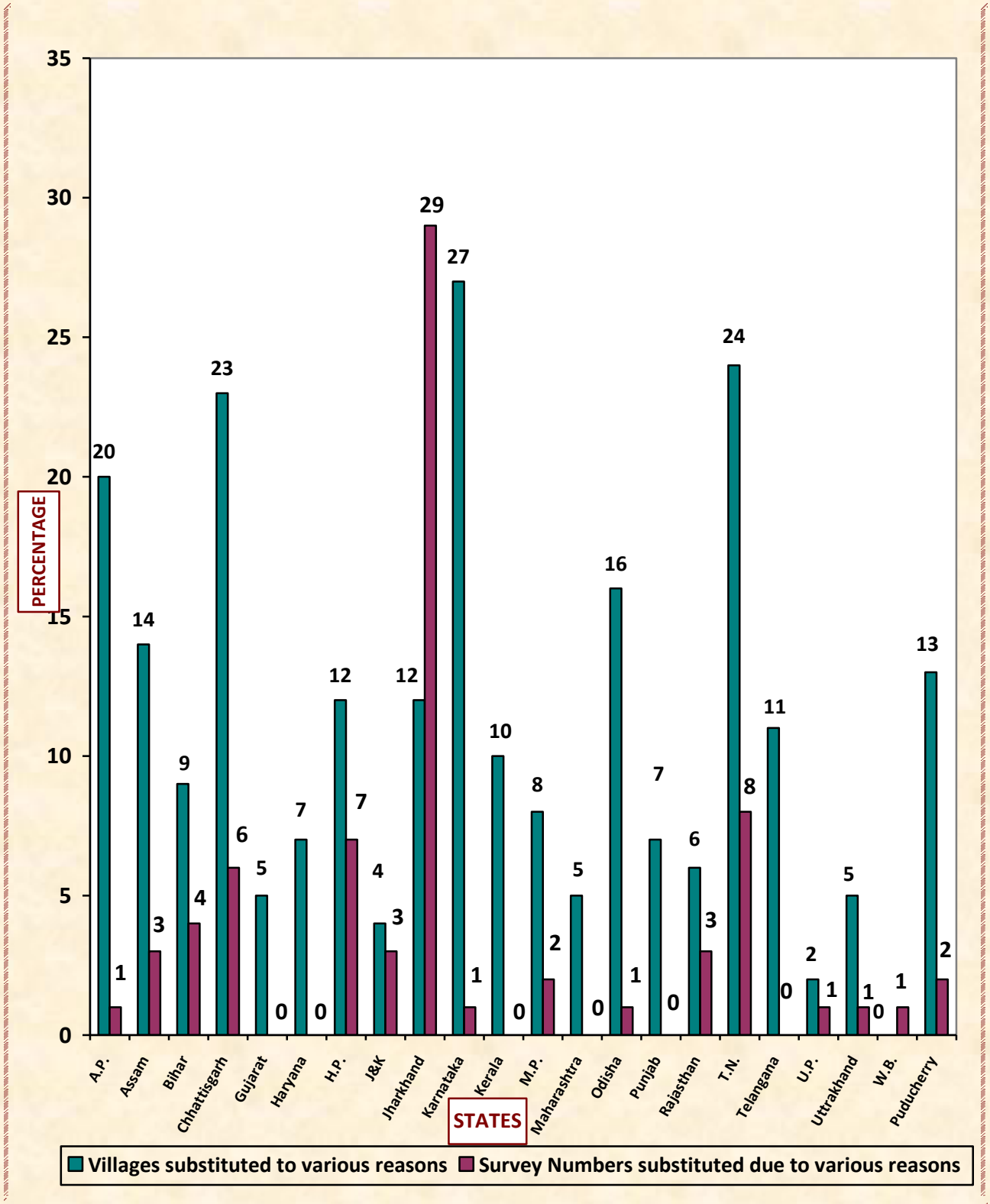


VI - Substitution of sampling units

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 10% or more at least in one season due to various reasons in respect of all the States except Gujarat, Jammu & Kashmir, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Telangana, Uttar Pradesh, Uttrakhand and West Bengal during 2017-18. 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 12%, 10%, 8% and 14% during Early Kharif, Late Kharif, Rabi and Summer during 2017-18 respectively. It varied from 20% to 21% of the experiments conducted in Andhra Pradesh, 4% to 23% in Assam, 1% to 21% in Bihar, 13% to 36% in Chhattisgarh, 0% to 7% in Gujarat, 3% to 12% in Haryana, 4% to 18% in Himachal Pradesh, 2% in Jammu & Kashmir, 0% to 9% in Jharkhand, 22% to 25% in Karnataka, 0% to 29% in Kerala, 6% to 7% in Madhya Pradesh, 0% to 6% in Maharashtra, 5% to 47% in Odisha, 2% in Punjab, 7% in Rajasthan, 21% to 26% in Tamil Nadu, 6% in Telangana, 0% to 2% in Uttar Pradesh, 0% to 8% in Uttarakhand and 0% to 10% in Puducherry in various seasons of 2017-18. There is a need to look into this aspect in all the States which are showing this trend and take corrective action.

CHART- V
SUBSTIUTION 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:

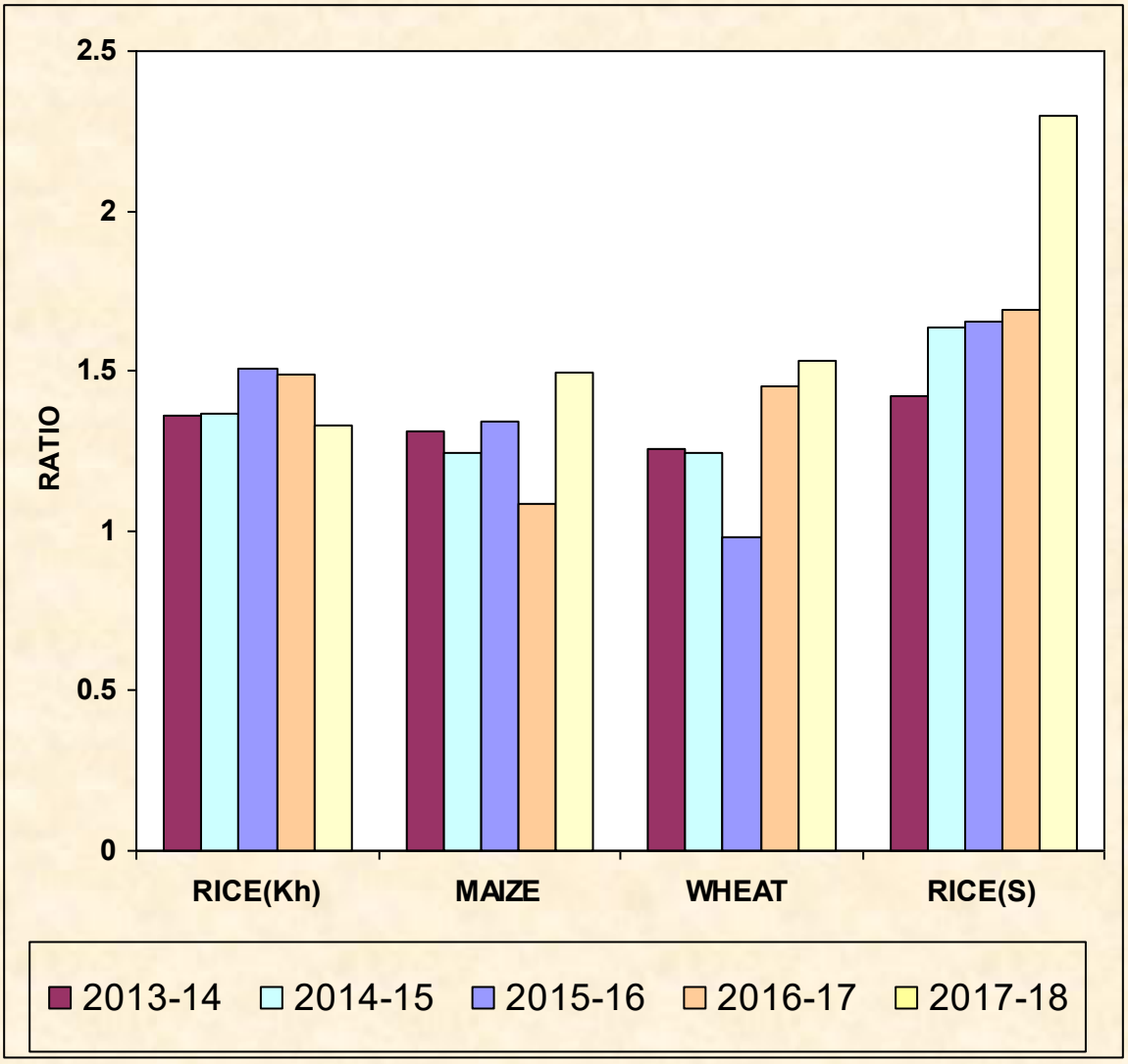
Table - 8
Ratio of Area Estimates (A-IV/A-III)

S. NO.	CROP	2017-18	2016-17	2015-16	2014-15	2013-14
1	Rice (Kh)	1.3279	1.4875	1.5081	1.3667	1.3612
2	Rice (Sum)	2.2977	1.6896	1.6954	1.6340	1.4228
3	Jowar (Kh)	1.2485	1.3339	0.7962	0.7887	0.8444
4	Jowar (R)	2.4622	2.4125	1.8301	1.7178	1.4205
5	Bajra	1.3868	1.3113	1.2625	1.2666	1.1263
6	Maize	1.4962	1.0853	1.3399	1.2423	1.3083
7	Ragi	1.0721	1.1000	1.0242	1.0700	0.9860
8	Cotton	1.7712	1.7315	1.7311	1.7134	1.6443
9	Groundnut	2.3101	1.9809	1.6884	1.8089	1.4452
10	Sugarcane	1.8223	1.2769	1.6054	1.2953	1.1269
11	Wheat	1.5335	1.4493	0.9816	1.2455	1.2583
12	Barley	1.0556	1.1146	0.9773	1.0000	1.0149
13	Gram	1.3831	1.3367	1.2419	1.2125	1.1485
14	R & M	1.6108	1.4193	1.3864	1.3513	1.3021

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 2017-18. Therefore, the trend of under estimation of area under these crops requires serious consideration by the State and Central Government authorities for taking suitable remedial measures. Rice and Wheat account for more than sixty percent of the total cropped area under food grains and around three fourth of total food grains production in the country. A graphical presentation of the trend in terms of these ratios for the past five years starting from 2013-14 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.

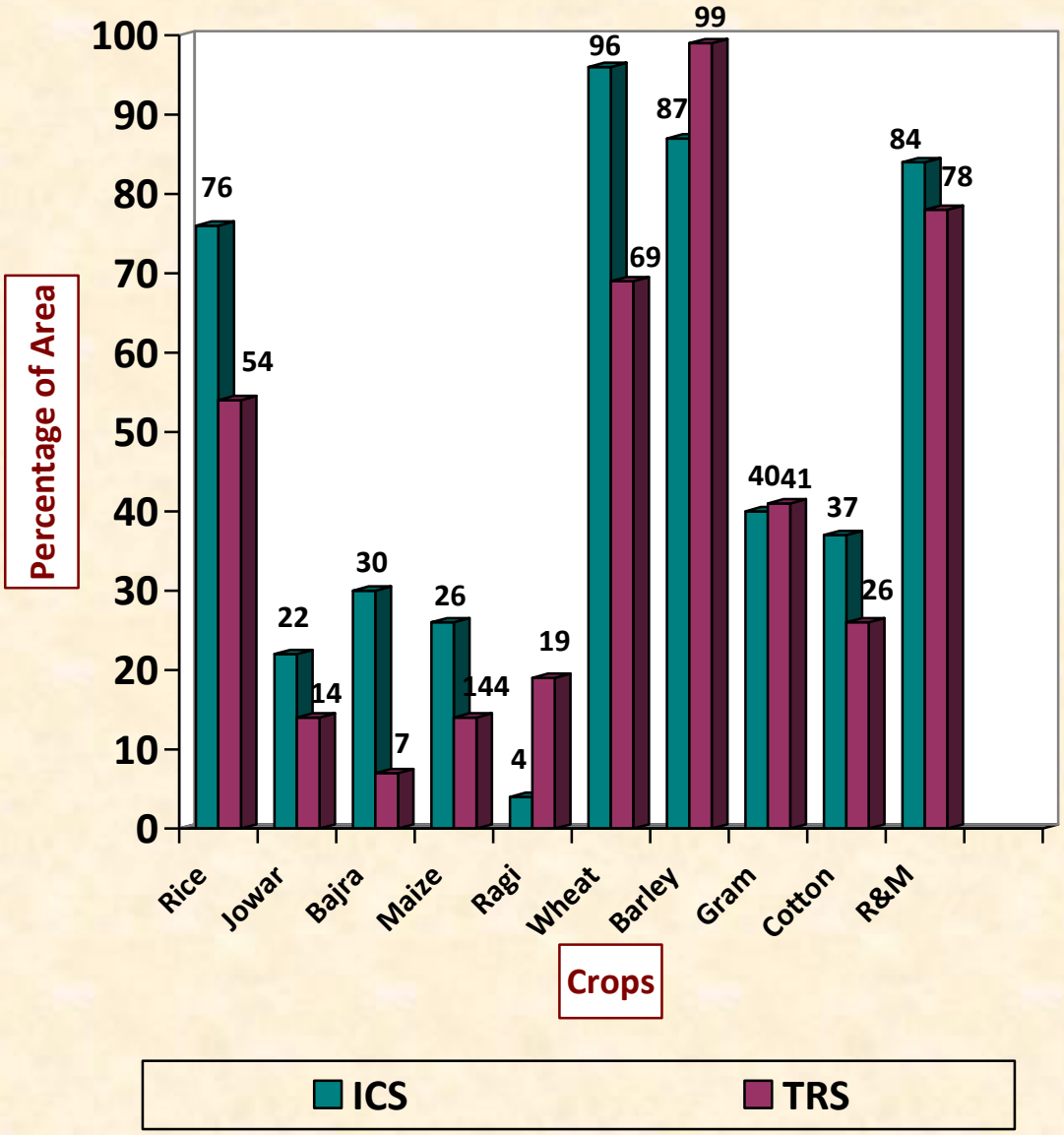
CHART-VI
RATIO OF AREA ESTIMATES (A-IV/A-III)



***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 2017-18



9.2. Estimation of Yield Rates

9.2.1 Estimates of yield rates for important crops based on sample check on crop cutting experiments along with the percentage of standard errors and the corresponding CES estimates are presented in **Annex-XIV**. The percentage standard error at all India level for ICS estimates for 14 important crops varies from 1.1% (Rice & wheat in Punjab) to 21.5% (Maize in Jharkhand) for the year 2017-18. Ratio of estimates of yield rates under ICS and CES at all India level are given in **Table-9** for last five years since 2013-14. The yield rates under ICS Scheme are higher as compared to CES estimates in case of Jowar (Kharif), Jowar (Rabi),Maize, Ragi, Groundnut, Sugarcane, Gram and R&M crops and lower in the case of Rice (Kharif & Summer), Bajra, Cotton, Wheat, & Barley crops during 2017-18.

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 (2013-14 to 2017-18) 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	2017-18	2016-17	2015-16	2014-15	2013-14
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Rice (Kh)	0.9252	1.0804	0.8492	1.0368	0.9717
2	Rice (S)	0.9323	0.9177	1.1697	0.9220	1.0612
3	Jowar (Kh)	1.1801	0.7841	0.7210	1.0995	0.8271
4	Jowar (R)	1.1759	1.3944	0.7564	0.8325	1.2104
5	Bajra	0.8024	1.0280	0.8637	0.6627	0.7515
6	Maize	1.1754	0.8680	1.0095	1.0572	1.1918
7	Ragi	1.2466	0.2057	0.9078	0.8580	1.1232
8	Cotton	0.7148	0.6441	0.9038	0.5557	0.7808
9	Groundnut	1.5874	0.5247	0.9631	1.2810	1.9174
10	Sugarcane	1.1046	0.9027	1.0086	1.2385	1.2006
11	Wheat	0.9855	1.0901	1.1126	0.7782	0.9428
12	Barley	0.8393	0.9010	0.7443	0.7978	0.9307
13	Gram	1.0189	1.0632	0.8059	1.1286	0.7697
14	R & M	1.1124	1.1681	0.9930	0.8822	0.7911

Note :- (1) *CES data pertains to year 2016-17 in column 3.*
(2) *CES data pertains to year 2015-16 in column 4.*
(3) *CES data pertains to year 2013-14 in column 5.*
(4) *CES data pertains to year 2011-12 in column 6.*
(5) *CES data pertains to year 2010-11 in column 7.*

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

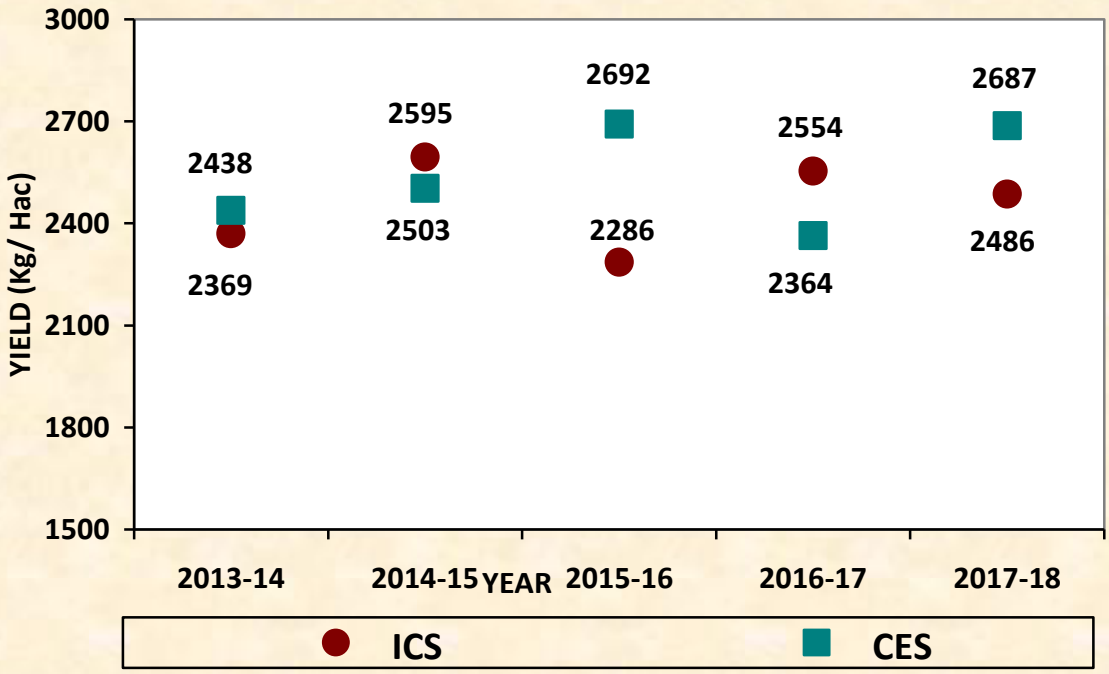


Chart - VIII (b)
Trend of yield rates under ICS & CES
Rice Summer

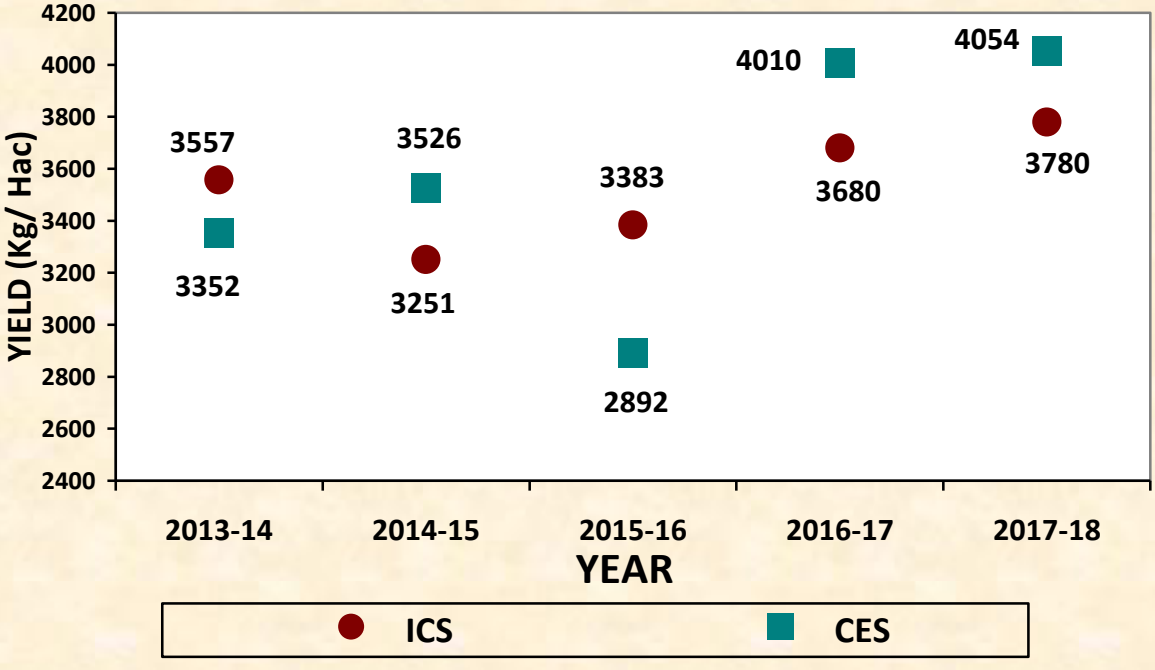


Chart-VIII(c)
Trend of yield rates under ICS & CES
Maize

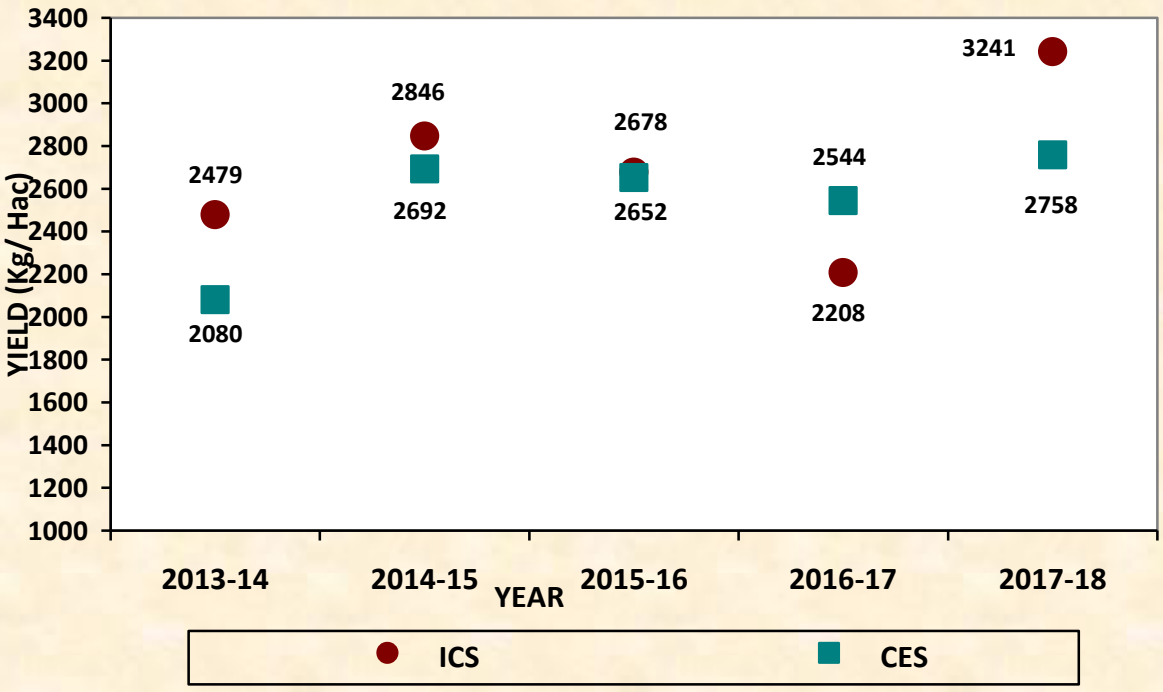


Chart - VIII (d)
Trend of yield rates under ICS & CES
Gram

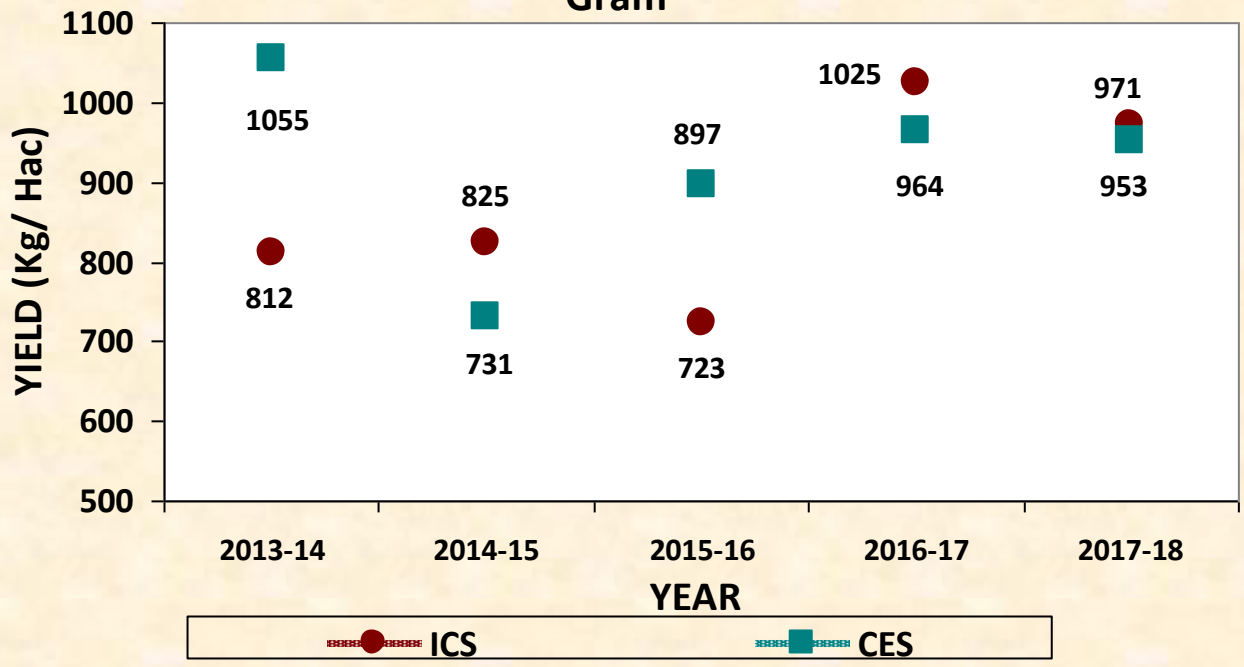
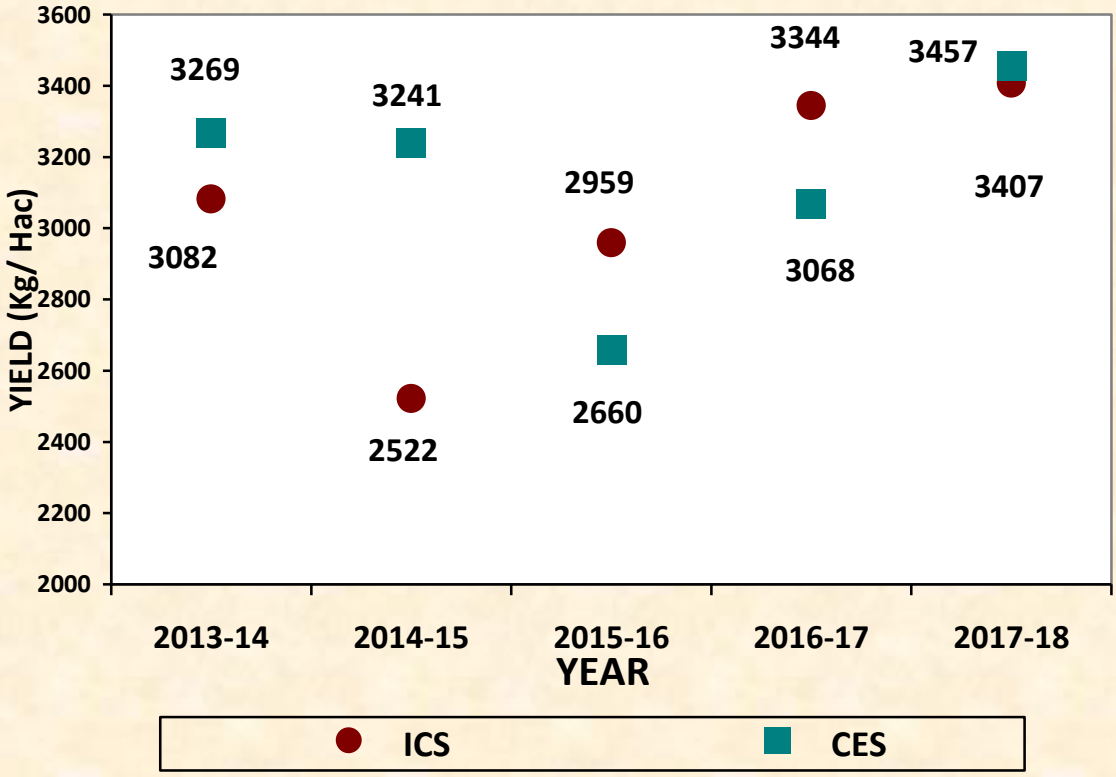


Chart - VIII (e) Trend of yield rates under ICS & CES
Wheat



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10

Digitization of Agriculture Statistics (A.S.) Schedules

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

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

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

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

PART-II
(ANNEXURES)

ANNEXURES & APPENDIX

Annex no.	TITLE	Page no.
I	Response in Sample check on Area Enumeration during 2017-18	1-2
II	Timeliness in completion of Girdawari during 2017-18	3-4
III	Timeliness in submission of TRS statement during 2017-18	5-8
IV	Information regarding Updation of Village maps and their Usability during 2017-18	9
IV(a)	Percentage of Survey numbers in which errors in recording crop areas were observed during 2017-18	10-11
IV (b)	Impact of errors in recording crop area during 2017-18	12-13
IV (c)	Discrepancies in recording Irrigation Particulars during 2017-18	14-17
IV (d)	Discrepancies in recording Seed Variety Particulars during 2017-18	18-20
VI	Response in sample check on crop cutting experiments during 2017-18 (at Harvest stage only)	21-22
VII	Distribution of percentage of experiments according to important inputs during 2017-18	23-39
VIII	Incidence of errors in conducting crop cutting experiments during 2017-18	40-43
IX	Supply & use of equipment for crop cutting experiments during 2017-18	44-46
X	Delegation of work and conduct of crop cutting experiments by untrained workers during 2017-18	47-48
XI	Substitution of sampling units observed during sample check on crop cutting experiments under ICS during 2017-18	49-50
XII	Comparison of estimates of crop areas based on ICS/TRS & Final estimates (for 14 crops) during 2017-18	51-58
XIII	Comparison of percentage of area under different inputs as estimated under ICS/TRS during 2017-18	59-66
XIV	Comparison of Estimate of Yield Rate under ICS & CES (for 14 crops) during 2017-18	67-73
XV	Estimates of Yield Rate according to Irrigation and Seed Variety under ICS during 2017-18 (for 14 crops)	74-80
XVI	Estimates of Yield Rate according to use of fertilizers, manure and unmanured under ICS during 2017-18 (for 14 crops)	81-90
	Appendix	
	Procedure for estimation of crop area and yield rate	1-6
	Abbreviations & State-wise seasons covered	7

ANNEX - I

RESPONSE IN SAMPLE CHECK ON AREA ENUMERATION DURING 2017-18

Sl. No.	State	AGENCY	Sample Size	Percentage Response			
				Kharif		Rabi	
				Early Kharif	Late Kharif	Rabi	Summer
1	2	3	4	5	6	7	8
1	Andhra	C	220		100	100	
	Pradesh	S	350		100	100	
		P	570		100	100	
2	Assam	C	160	100	100	100	100
		S	160	95	88	84	82
		P	320	98	94	92	91
3	Bihar	C	240	100	100	100	100
		S	240	56	52	77	78
		P	480	78	76	89	89
4	Chhattisgarh	C	100		100	100	
		S	100		100	100	
		P	200		100	100	
5	Gujarat	C	340		99	100	100
		S	340		69	50	39
		P	680		85	75	69
6	Haryana	C	200		100	100	99
	@	S	200		99	91	
		P	400		99	96	99
7	Himachal	C	140		100	100	
	Pradesh	S	140		100	99	
		P	280		100	99	
8	Jammu &	C	100		100	100	
	Kashmir	S	140		73	76	
		P	240		84	86	
9	Jharkhand	C	60	100	100	100	100
		S	60	72	90	87	75
		P	120	86	95	93	88
10	Karnataka	C	300		100	100	99
		S	300		89	98	100
		P	600		95	99	99
11	Kerala	C	80	100	100		100
		S	80	100	100		100
		P	160	100	100		100

Annex-I (Contd……)

Sl. No.	State	AGENCY	Sample Size	Percentage Response			
				Kharif		Rabi	
				Early Kharif	Late Kharif	Rabi	Summer
1	2	3	4	5	6	7	8
12	Madhya	C	360		100	100	
	Pradesh	S	360		83	75	
		P	720		91	88	
13	Maharashtra	C	440		100	100	100
		S	440		78	68	49
		P	880		89	84	74
14	Odisha	C	220	100	100		100
		S	220	100	100		100
		P	440	100	100		100
15	Punjab	C	200		98	99	
		S	200		88	77	
		P	400		93	88	
16	Rajasthan	C	300		100	89	
		S	300		99	93	
		P	600		99	91	
17	Tamil Nadu	C	260	100	100	99	
	$	S	260	99	99	100	
		P	520	99	100	100	
18	Telangana	C	160		100	100	
		S	250		91	94	
		P	410		94	96	
19	Uttar	C	690		99	100	100
	Pradesh	S	690		38	23	13
		P	1380		69	61	57
20	Uttarakhand	C	110		100	100	100
		S	110		95	97	72
		P	220		97	99	86
21	West Bengal	C	250	100	100	100	100
		S	400	43	39	27	17
		P	650	65	62	55	49
22	Puducherry	C	9		100	100	100
		S	9		100	100	100
		P	18		100	100	100
For States Covered		C	4939	100	100	99	100
		S	5349	79	77	71	51
		P	10288	89	88	85	75

Note:

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

ANNEX - II

TIMELINESS IN COMPLETION OF GIRDAWARI DURING 2017-18

Sl. No.	State	AGENCY	Percentage of villages where Girdawari was completed during											
			Early Kharif			Late Kharif			Rabi			Summer		
			In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra	C				12	1	87	0	0	99			
	Pradesh	S				50	33	17	70	17	13			
		P				35	21	44	43	11	46			
2	Assam	C	0	0	100	0	0	100	0	0	100	0	0	100
		S	0	0	99	0	0	100	0	0	100	0	0	100
		P	0	0	99	0	0	100	0	0	100	0	0	100
3	Bihar	C	0	0	100	0	0	100	0	0	100	0	0	100
		S	2	26	25	10	5	49	0	4	62	0	8	68
		P	1	11	67	4	2	76	0	2	83	0	3	86
4	Chhattisgarh	C				90	8	2	79	18	2			
		S				95	5	0	78	18	0			
		P				92	7	3	78	18	1			
5	Gujarat	C				0	0	100	0	0	100	0	0	100
		S				3	3	90	5	1	92	0	0	99
		P				1	1	96	2	0	97	0	0	92
6	Haryana	C				100	0	0	99	1	1	17	0	68
	@	S				99	1	0	100	0	0	0	0	0
		P				99	1	0	99	0	0	17	0	68
7	Himachal	C				94	6	0	99	1	0			
	Pradesh	S				98	1	0	96	1	1			
		P				96	4	0	98	1	0			
8	Jammu &	C				70	30	0	62	31	4			
	Kashmir	S				50	41	1	68	22	1			
		P				60	36	0	65	26	2			
9	Jharkhand	C	0	0	100	0	0	100	0	0	100	0	0	100
		S	21	34	21	22	18	24	13	31	27	0	47	27
		P	10	16	63	10	8	65	6	14	66	0	20	69
10	Karnataka	C				60	25	14	54	30	15	45	28	27
		S				88	12	0	81	17	0	76	20	0
		P				73	19	7	68	24	8	60	24	13
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	C				90	10	0	85	13	1			
	Pradesh	S				87	11	0	80	18	0			
		P				89	10	0	83	15	0			
13	Maharashtra	C				18	5	76	3	2	94	1	0	99
		S				36	41	11	32	29	11	44	28	3
		P				25	21	48	14	12	57	15	9	67
14	Odisha	C	96	4	0	100	0	0				100	0	0
		S	100	0	0	100	0	0				100	0	0
		P	98	2	0	100	0	0				100	0	0
15	Punjab	C				35	62	3	36	60	4			
		S				27	71	0	32	66	1			
		P				31	66	2	35	63	2			

Sl. No.	State	AGENCY	Percentage of villages where Girdawari was completed during											
			Early Kharif			Late Kharif			Rabi			Summer		
			In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit	In time	Late	Not completed till Sample check visit
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	Rajasthan	C				86	13	0	52	45	1			
		S				74	21	0	39	54	0			
		P				80	17	0	45	50	1			
17	Tamil Nadu	C	70	15	14	78	8	13	76	12	12			
	$	S	91	2	8	88	9	3	84	10	6			
		P	80	9	11	83	8	8	80	11	9			
18	Telangana	C	0	0	0	90	0	98	1	0	96			
		S	0	0	0	90	26	15	47	30	14			
		P	0	0	0	90	15	50	28	18	47			
19	Uttar	C				49	13	38	47	17	35	48	14	37
	Pradesh	S				47	41	8	45	34	5	70	17	0
		P				49	21	29	47	20	30	51	14	33
20	Uttarakhand	C				92	5	4	86	11	3	66	22	4
		S				71	24	0	66	29	3	83	17	0
		P				82	14	2	76	20	3	73	20	2
21	West Bengal	C	15	15	69	18	12	67	15	14	70	19	4	76
		S	13	41	29	22	46	25	9	62	6	68	12	17
		P	14	26	53	19	25	51	14	28	51	30	6	63
22	Puducherry	C				67	33	0	100	0	0	100	0	0
		S				100	0	0	100	0	0	100	0	0
		P				83	17	0	100	0	0	100	0	0
For States		C	41	7	53	49	10	40	40	14	46	30	7	62
covered		S	51	13	25	59	21	15	54	23	16	51	12	27
		P	45	10	39	54	15	29	46	18	32	37	9	51

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.

ANNEX - III

TIMELINESS IN SUBMISSION OF TRS/ EARAS STATEMENT DURING 2017-18

S. No.	State	SEASON	AGENCY	Percentage of Villages for which							
				TRS Statement submitted					TRS Statement not Submitted		
				Without completing Girdawari		After completing Girdawari		Information regarding date of submission not known	Though Girdawari completed	Girdawari not completed	Information regarding TRS submission not available
				By due date	After due date	By Due date	After due date				
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra	Kharif	C	95	0	1	4	0	0	0	0
	Pradesh		S	13	0	84	0	0	2	0	0
			P	45	0	52	1	0	1	0	0
		Rabi	C	100	0	0	0	0	0	0	0
			S	13	0	86	0	1	0	0	0
			P	47	0	53	0	1	0	0	0
2	Assam	E.Kh.	C	4	3	0	0	0	0	88	6
			S	1	19	1	0	11	0	53	14
			P	3	11	1	0	6	0	70	10
		L.Kh.	C	7	2	0	0	0	0	82	9
			S	3	15	0	0	0	0	79	4
			P	5	8	0	0	0	0	80	6
		Rabi	C	0	0	0	0	0	0	100	0
			S	0	4	0	4	0	0	91	0
			P	0	2	0	2	0	1	96	0
		Summer	C	0	0	3	0	0	0	97	0
			S	0	8	0	0	0	0	92	0
			P	0	3	1	0	0	0	95	0
3	Bihar	Bhadhai	C	0	0	0	0	0	0	100	0
			S	0	9	2	17	5	1	14	52
			P	0	4	1	7	2	0	63	23
		Aghani	C	0	0	0	0	0	0	100	0
			S	3	3	19	4	2	8	20	32
			P	1	1	9	2	1	4	63	15
		Rabi	C	0	0	0	0	0	0	100	0
			S	0	23	0	3	9	5	16	39
			P	0	10	0	1	4	2	63	17
		Summer	C	0	0	0	0	0	0	100	0
			S	3	17	0	4	9	3	20	41
			P	1	7	0	2	4	1	65	18
4	Chhattisgarh	Kharif	C	0	0	47	49	1	1	1	0
			S	1	0	49	45	4	1	0	0
			P	1	0	48	47	3	1	1	0
		Rabi	C	1	0	67	25	3	2	2	0
			S	0	0	61	35	2	0	0	2
			P	1	0	64	30	3	1	1	1
5	Gujarat	Kharif	C	0	0	89	0	0	11	1	0
			S	0	0	0	0	1	0	99	0
			P	4	0	13	1	2	1	66	10
		Rabi	C	2	0	6	0	1	0	85	4
			S	0	0	0	0	0	0	100	0
			P	0	1	4	1	10	4	73	7
		Summer	C	0	0	1	0	3	1	91	2
			S	0	0	0	0	0	0	100	0
			P	6	2	2	1	4	1	82	2

Annex-III (Contd….)

S. No.	State	SEASON	AGENCY	Percentage of Villages for which							
				TRS Statement submitted					TRS Statement not Submitted		
				Without completing Girdawari		After completing Girdawari		Information regarding date of submission not known	Though Girdawari completed	Girdawari not completed	Information regarding TRS submission not available
				By due date	After due date	By Due date	After due date				
1	2	3	4	5	6	7	8	9	10	11	12
6	Haryana	Kharif	C	2	1	0	0	1	0	95	1
	@		S	0	0	100	0	0	0	0	0
			P	0	0	94	0	0	5	0	0
		Rabi	C	0	6	83	5	0	7	0	0
			S	0	0	100	0	0	0	0	0
			P	0	3	91	2	0	3	0	0
		Summer	C	0	0	4	0	0	13	68	15
			S								
			P	0	0	4	0	0	13	68	16
7	Himachal	Kharif	C	0	0	40	17	0	43	0	0
	Pradesh		S	1	0	63	19	2	13	0	2
			P	0	0	51	18	1	28	0	1
		Rabi	C	1	0	64	8	0	26	0	0
			S	0	1	83	1	3	8	0	1
			P	1	0	74	5	1	17	0	0
8	Jammu &	Kharif	C	0	0	42	32	0	23	2	0
	Kashmir		S	3	0	36	21	4	17	1	19
			P	1	0	39	26	2	20	1	9
		Rabi	C	0	0	45	25	0	25	3	0
			S	0	0	34	27	8	13	1	17
			P	0	0	40	26	4	19	2	9
9	Jharkhand	Bhadhai	C	0	0	0	0	0	0	100	0
			S	0	4	4	40	0	15	21	9
			P	0	2	2	19	0	7	63	4
		Aghani	C	0	2	0	0	0	0	98	0
			S	0	0	0	26	0	12	16	30
			P	0	1	0	12	0	5	61	14
		Rabi	C	0	3	0	0	0	3	93	0
			S	2	6	0	33	0	12	19	29
			P	1	4	0	15	0	7	59	13
		Summer	C	0	0	0	0	0	0	100	0
			S	0	4	0	33	0	27	9	9
			P	0	2	0	14	0	11	61	4
10	Karnataka	Kharif	C	1	0	54	25	0	6	14	0
			S	0	0	70	22	8	0	0	0
			P	1	0	61	24	4	3	8	0
		Rabi	C	2	0	47	28	1	7	13	0
			S	0	0	64	32	2	0	0	0
			P	1	0	55	30	2	3	7	0
		Summer	C	1	0	41	24	1	6	26	0
			S	0	0	67	27	1	0	0	5
			P	1	0	54	26	1	3	13	2
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	98	0	0	0	0	3
			S	0	0	100	0	0	0	0	0
			P	0	0	99	0	0	0	0	1
		Summer	C	0	0	100	0	0	0	0	0
			S	4	0	96	0	0	0	0	0
			P	2	0	98	0	0	0	0	0

Annex-III (Contd….)

S. No.	State	SEASON	AGENCY	Percentage of Villages for which							
				TRS Statement submitted					TRS Statement not Submitted		
				Without completing Girdawari		After completing Girdawari		Information regarding date of submission not known	Though Girdawari completed	Girdawari not completed	Information regarding TRS submission not available
				By due date	After due date	By Due date	After due date				
1	2	3	4	5	6	7	8	9	10	11	12
12	Madhya Pradesh	Kharif	C	0	0	82	14	1	2	0	0
			S	1	0	72	13	8	1	0	3
			P	0	0	78	13	4	1	0	1
		Rabi	C	0	0	83	7	1	8	1	1
			S	3	1	67	18	6	1	0	4
			P	1	0	76	12	3	5	0	2
13	Mahara-shtra	Kharif	C	2	3	4	3	2	4	80	1
			S	2	1	31	22	9	5	13	15
			P	2	2	16	11	5	4	51	7
		Rabi	C	2	0	0	0	0	3	94	0
			S	0	2	18	32	7	1	2	36
			P	1	1	7	13	3	2	57	15
		Summer	C	0	0	0	0	0	1	99	0
			S	0	13	14	21	9	3	1	37
			P	0	4	5	7	3	2	67	12
14	Odisha	Autumn	C	0	0	97	3	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	99	1	0	0	0	0
		Winter	C	0	0	100	0	0	0	0	0
			S	2	0	98	0	0	0	0	0
			P	1	0	99	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
15	Punjab	Kharif	C	0	0	11	32	1	44	12	0
			S	1	0	12	75	3	1	0	9
			P	0	0	11	52	2	24	6	4
		Rabi	C	0	0	10	29	0	56	4	0
			S	0	0	18	72	0	6	1	4
			P	0	0	13	48	0	34	3	2
16	Rajasthan	Kharif	C	0	0	43	55	0	1	0	0
			S	0	0	48	40	7	0	1	3
			P	0	0	45	47	4	1	1	2
		Rabi	C	1	0	42	52	3	0	2	0
			S	0	0	34	58	6	1	1	0
			P	0	0	38	55	4	1	1	0
17	Tamil Nadu	Phase-I	C	12	2	83	4	0	0	0	0
			S	5	0	83	10	0	2	0	0
			P	8	1	83	7	0	1	0	0
		Phase-II	C	5	1	79	7	1	7	0	0
			S	0	0	98	0	0	2	0	0
			P	3	1	88	4	0	4	0	0
		Phase-III	C	5	0	85	1	1	7	0	0
			S	6	0	88	6	0	0	0	0
			P	6	0	87	3	1	4	0	0
18	Telangana	Kharif	C	66	0	9	0	0	24	1	0
			S	13	0	70	5	4	5	0	3
			P	35	0	44	3	2	13	0	2
		Rabi	C	54	41	3	0	2	0	0	0
			S	18	0	74	0	3	0	1	2
			P	32	17	45	0	3	0	1	1

ANNEX III (Contd.....)

S. No.	State	SEASON	AGENCY	Percentage of Villages for which							
				TRS Statement submitted					TRS Statement not Submitted		
				Without completing Girdawari		After completing Girdawari		Information regarding date of submission not known	Though Girdawari completed	Girdawari not completed	Information regarding TRS submission not available
				By due date	After due date	By Due date	After due date				
1	2	3	4	5	6	7	8	9	10	11	12
19	Uttar	Kharif	C	2	1	29	19	1	10	37	1
	Pradesh		S	0	10	20	43	7	2	2	12
			P	1	4	27	26	2	8	27	4
		Rabi	C	1	3	22	28	1	9	35	0
			S	1	9	17	49	9	1	1	8
			P	1	4	21	32	2	8	29	2
		Summer	C	0	3	22	20	1	11	41	1
			S	0	0	28	52	16	0	1	0
			P	0	1	23	24	3	10	37	1
20	Uttrakhand	Kharif	C	1	0	61	25	0	8	5	0
			S	0	0	44	47	3	0	0	5
			P	0	0	53	36	1	4	2	2
		Rabi	C	1	0	70	21	0	5	4	0
			S	0	0	52	36	6	3	0	1
			P	0	0	61	29	3	4	2	0
		Summer	C	0	0	44	40	0	4	4	6
			S	3	0	47	50	0	0	0	0
			P	1	0	45	44	0	2	2	3
21	West	E.Kharif	C	1	0	13	4	2	11	67	2
	Bengal		S	1	0	15	36	1	0	15	31
			P	1	0	14	17	2	6	46	14
		L.Kharif	C	0	0	12	2	2	14	68	1
			S	0	0	31	36	0	2	6	25
			P	0	0	19	15	1	9	45	10
		Rabi	C	0	0	9	5	0	21	62	2
			S	0	0	22	48	0	0	6	24
			P	0	0	13	18	0	14	45	9
		Summer	C	0	0	8	1	2	13	75	1
			S	5	0	64	12	0	0	0	20
			P	1	0	20	3	1	10	59	5
22	Puducherry	Kharif	C	0	0	100	0	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	100	0	0	0	0	0
		Rabi-I	C	0	0	100	0	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	100	0	0	0	0	0
		Rabi-II	C	0	0	100	0	0	0	0	0
			S	0	0	100	0	0	0	0	0
			P	0	0	100	0	0	0	0	0
FOR STATES		Early	C	3	1	43	2	0	2	48	1
COVERED		Kharif	S	1	4	49	13	3	1	13	16
			P	2	2	46	7	1	2	31	8
		Late	C	7	1	35	13	1	8	34	1
		Kharif	S	2	1	48	18	3	2	13	6
			P	6	1	43	17	2	6	20	4
		Rabi	C	7	2	35	12	1	8	34	1
			S	3	2	51	19	3	2	13	7
			P	5	2	45	17	2	5	19	4
		Summer	C	0	1	20	7	1	5	64	2
			S	1	4	36	13	3	1	29	11
			P	1	2	30	11	2	4	44	5
All seasons			C	5	1	32	11	1	7	42	1
			S	2	2	47	17	3	2	15	8
			P	4	2	42	15	2	5	25	4

Note:

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

ANNEX - IV

INFORMATION REGARDING UPDATION OF VILLAGE MAPS AND THEIR USABILITY DURING 2017-18

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	75	91	2	7
2	Assam	81	93	4	3
3	Bihar	94	78	1	21
4	Chhattisgarh	48	92	6	2
5	Gujarat	9	64	9	27
6	Haryana	38	99	1	0
7	Himachal Pradesh	52	95	5	0
8	Jammu & Kashmir	54	80	13	7
9	Jharkhand	79	51	7	42
10	Karnataka	64	79	5	16
11	Kerala	76	98	0	2
12	Madhya Pradesh	37	99	1	0
13	Maharashtra	29	82	6	12
14	Odisha	94	100	0	0
15	Punjab	59	97	2	1
16	Rajasthan	59	95	2	3
17	Tamil Nadu	93	91	4	5
18	Telangana	58	61	18	21
19	Uttar Pradesh	82	93	4	3
20	Uttarakhand	88	96	4	0
21	West Bengal	90	91	0	9
22	Puducherry	100	100	0	0
For States Covered		63	88	4	8

ANNEX - IV (a)

PERCENTAGE OF SURVEY NUMBERS IN WHICH ERRORS IN RECORDING CROP AREA WERE OBSERVED DURING 2017-18

Sl. No.	State	AGENCY	Percentage of survey numbers with different types of errors in enumeration of area during															
			KHARIF								RABI							
			Early Kharif				Late Kharif				RABI				SUMMER			
			e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Andhra Pradesh	C					0	0	0	0	55	0	45	0				
		S					99	1	0	0	99	1	0	0				
		P					98	1	0	1	99	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	100	0	0	0	17	83	0	0	100	0	0	0	100	0	0	0
		P	100	0	0	0	17	83	0	0	100	0	0	0	100	0	0	0
4	Chhattisgarh	C					87	9	1	3	97	1	0	2				
		S					99	0	0	1	98	1	1	0				
		P					93	5	0	2	97	1	1	1				
5	Gujarat	C#																
		S					99	1	0	0	22	78	0	0	0	0	0	0
		P					99	1	0	0	22	78	0	0	0	0	0	0
6	Haryana	C					85	8	5	3	88	6	3	3	100	0	0	0
	*	S					100	0	0	0	100	0	0	0	0	0	0	0
		P					92	4	3	1	93	3	2	2	100	0	0	0
7	Himachal Pradesh	C					72	12	12	4	81	7	8	4				
		S					97	2	1	0	97	2	1	0				
		P					84	7	7	2	89	4	5	2				
8	Jammu & Kashmir	C					89	4	3	4	89	3	4	5				
		S					96	1	2	1	100	0	0	0				
		P					93	2	2	2	95	1	1	2				
9	Jharkhand	C																
	@	S	100	0	0	0	100	0	0	0	100	0	0	0				
		P	100	0	0	0	100	0	0	0	100	0	0	0				
10	Karnataka	C					66	15	4	16	66	13	6	15	63	25	7	5
		S					99	1	0	0	99	0	0	1	100	0	0	0
		P					81	8	2	9	86	5	2	6	79	14	1	3
11	Kerala	C	74	0	21	5	80	0	16	3					98	0	0	2
		S	74	0	16	10	68	0	25	6					96	0	0	3
		P	74	0	18	8	74	0	21	5					97	1	0	3
12	Madhya Pradesh	C					77	8	3	11	81	6	2	10				
		S					99	0	0	0	99	0	0	0				
		P					86	5	2	7	89	4	1	6				
13	Maharashtra	C					48	10	3	40	69	6	1	24	13	86	0	1
		S					87	2	0	10	94	2	0	3	99	1	0	0
		P					74	5	1	20	89	3	0	8	68	31	0	1

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

Sl. No.	State	AGENCY	Percentage of survey numbers with different types of errors in enumeration of area during															
			KHARIF								RABI							
			Early Kharif				Late Kharif				RABI				SUMMER			
			e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3	e_0	e_1	e_2	e_3
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
14	Odisha	C	100	0	0	0	100	0	0	0					100	0	0	0
		S	100	0	0	0	100	0	0	0					100	0	0	0
		P	100	0	0	0	100	0	0	0					100	0	0	0
15	Punjab	C					94	3	2	1	96	2	1	0				
		S					100	0	0	0	99	0	1	0				
		P					97	2	1	1	98	1	1	0				
16	Rajasthan	C					73	9	5	12	77	9	4	9				
		S					97	1	1	1	97	2	0	1				
		P					85	5	3	7	87	5	2	5				
17	Tamil Nadu	C	60	26	4	10	66	24	6	5	50	36	11	4				
		S	70	24	4	3	77	16	5	2	75	17	8	0				
		P	65	25	4	6	73	19	5	3	68	22	8	1				
18	Telangana	C					0	0	0	0	0	0	0	0				
		S					100	0	0	0	99	0	0	0				
		P					100	0	0	0	99	0	0	0				
19	Uttar	C					72	12	4	12	73	12	2	13	71	16	2	12
	Pradesh	S					90	6	1	3	78	11	3	8	71	23	1	6
		P					77	10	3	9	74	12	2	12	71	17	1	11
20	Uttarakhand	C					95	2	3	0	99	0	1	0	98	2	0	0
		S					97	1	1	0	97	2	1	1	95	5	0	0
		P					96	2	2	0	98	1	1	1	96	4	0	0
21	West	C	86	11	1	2	95	2	1	2	96	3	0	0	96	1	2	1
	Bengal	S	64	12	8	16	87	4	3	6	59	18	7	17	73	11	5	10
		P	70	12	6	12	90	3	2	4	72	13	4	11	84	6	4	6
22	Puducherry	C					91	5	2	2	77	0	23	0	100	0	0	0
		S					97	0	0	3	100	0	0	0	100	0	0	0
		P					94	3	1	3	91	0	9	0	100	0	0	0
For States		C	69	16	8	7	75	9	4	12	81	8	3	9	90	6	1	3
covered		S	75	14	7	5	94	2	2	3	94	3	1	2	94	3	0	3
		P	72	15	7	6	85	5	3	7	88	5	2	5	92	4	0	3

Note:

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

IMPACT OF ERRORS IN RECORDING CROP AREA DURING 2017-18

Sl. No.	State	AGENCY	Ratio of area based on Patwari's & Superviser's entries in sample clusters														
			Paddy			Jowar		Bajra	Maize	Ragi	Cotton	Ground-nut	Sugar-cane	Wheat	Barley	Gram	Rape & Mustard
			Aut.	Wint.	Sum.	Kharif	Rabi										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Andhra	C		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000	
	Pradesh	S		0.9904	0.7909	0.0000	0.0000	1.0000	0.0000	NA	1.0002	0.9897	1.0000			0.5683	
		P		0.9851	0.7913	0.0000	0.0000	0.9967	0.0000		1.0049	0.9936	1.0000			0.5656	
2	Assam	C															
	@	S															
		P															
3	Bihar	C #	NR	NR	NR									NR		NR	NR
		S		0.9834										0.6598		0.7288	1.0000
		P		0.9834										0.6598		0.7288	1.0000
4	Chhatti-	C		1.1363					0.9553					0.9954		1.0065	1.0000
	sgarh	S		1.0064					1.0000					0.9594		1.0057	1.0000
		P		1.0716					0.9819					0.9768		1.0063	1.0000
5	Gujarat	C #															
		S		1.0000				0.0000	1.0000		1.0000	1.3371		0.9537		0.4337	
		P		1.0000				0.0000	1.0000		1.0000	1.3371		0.4269		0.0940	
6	Haryana	C		0.9839				1.0184	0.0000		0.9894		0.9950	0.9918	0.7703	0.8284	0.9959
		S		0.9961				0.9934	1.0000		1.0001		1.1511	0.9985	1.0000	1.0000	1.0094
		P		0.9895				1.0057	0.7097		0.9948		1.0682	0.9948	0.8523	0.9214	1.0027
7	Himacha	C		1.0286					1.0760					1.2373	1.0178		
	Pradesh	S		1.0178					0.9917					0.9990	0.9725		
		P		1.0221					1.0380					1.1210	0.9885		
8	Jammu	C		0.9959					1.0399					1.0103			
	&	S		1.0005					1.0341					1.0000			
	Kashmir	P		0.9985					1.0371					1.0045			
9	Jhar-	C															
	khand	S	1.0000	0.8586					1.0000								
	@	P	1.0000	0.8586					1.0000								
10	Karna-	C		1.0849	0.9297	0.9624	0.8476	0.9564	0.8859	0.8510	1.0385	0.9439	0.8450	0.8440		0.9142	
	taka	S		1.0024	0.9154	1.0007	0.9972	1.0007	0.9995	1.0052	1.0000	1.0104	0.9065	0.9975		1.0043	
		P		1.0428	0.9279	0.9849	0.9364	0.9687	0.9424	0.9407	1.0196	0.9790	0.8789	0.9318		0.9750	
11	Kerala	C	1.0013	1.0006	1.0282												
		S	0.9998	1.0493	0.9999												
		P	1.0004	1.0263	1.0145												
12	Madhya	C		0.9431		0.5763			1.0132		0.7899	1.0658		1.0061		0.9841	1.0433
	Pradesh	S		0.9857		1.0000			0.9970		0.9659	1.0018		1.0205		1.0052	1.0000
		P		0.9594		0.7142			1.0058		0.8603	1.0341		1.0128		0.9929	1.0316
13	Mahara-	C		0.9486		0.9553	0.9980	0.9069			0.9073	0.9586	1.0172	0.8180		0.8922	
	shtra	S		1.1022		0.9843	0.9384	0.9280			0.9214	1.0046	0.9784	0.9284		0.9605	
		P		1.0421		0.9747	0.9419	0.9255			0.9162	0.9897	0.9834	0.8887		0.9354	
14	Odisha	C	0.9980	1.0158	0.9946				1.0000								
		S	1.0095	0.9395	1.0000				1.0000								
		P	1.0056	0.9790	0.9973				1.0000								

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

Sl. No.	State	AGENCY	Ratio of area based on Patwari's & Superviser's entries in sample clusters														
			Paddy			Jowar		Bajra	Maize	Ragi	Cotton	Ground-nut	Sugar-cane	Wheat	Barley	Gram	Rape & Mustard
			Aut.	Wint.	Sum.	Kharif	Rabi										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
15	Punjab	C		0.9995					0.9926		0.9928		0.9445	0.9649	1.0000	1.0000	0.9112
		S		0.9581					1.0000		1.0000		1.0074	0.9840	1.0000	0.0000	1.0000
		P		0.9723					0.9969		0.9957		0.9663	0.9732	1.0000	1.0000	0.9312
16	Raja-	C				0.9359		0.9591	0.9759		1.0737	0.0000	0.0000	0.9933	1.0544	0.9993	0.9539
	sthan	S				1.0084		0.9358	0.9960		0.9955	0.0000	0.0000	0.9913	0.9792	0.9919	0.9699
		P				0.9718		0.9463	0.9888		1.0410	0.0000	0.0000	0.9922	0.9983	0.9956	0.9640
17	Tamil	C	1.0786	0.7682	0.6338	0.9172	0.0000	0.8889	0.8662	0.0000	0.9026	0.9940	0.9940				
	Nadu	S	0.9859	0.9462	0.7831	0.9711	1.0113	0.6078	0.8919	0.0000	1.0440	0.9599	0.9599				
		P	1.0297	0.8528	0.7206	0.9421	0.8787	0.7276	0.8790	0.0000	0.9751	0.9765	1.0241				
18	Telangana	C	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
		S	0.9592	0.0000	0.9127	1.0000	1.0000	0.0000	0.9635	0.0000	0.9980	1.2293	0.0000				
		P	0.8503	0.0000	0.9127	1.0000	1.0000	0.0000	0.9078	0.0000	0.9150	1.2293	0.0000				
19	Uttar	C		0.8870		0.8895		0.9201	0.9415				0.9064	0.9190		0.8927	0.8385
	Pradesh	S		0.9255		1.0412		1.0143	0.9437				0.8444	0.9444		0.9851	0.9223
		P		0.9007		0.9624		0.9528	0.9423				0.8946	0.9247		0.9148	0.8586
20	Uttara-	C		1.0034						0.9226			0.0000	0.9886			
	khand	S		0.8653						0.9596			0.0617	0.7905			
		P		0.9497						0.9399			0.5451	0.8813			
21	West	C	0.6439	0.9078	0.9864									0.5678			0.9106
	Bengal	S	1.0695	0.8851	1.0686									1.1873			0.9101
		P	0.9063	0.8946	1.0339									1.1270			0.9102
22	Pudu-	C		1.0133	1.0000												
	cherry *	S		1.0000	0.7870												
		P		1.0036	0.8691												
For states		C	0.8412	0.9820	0.9410	0.9099	0.8579	0.9551	0.9411	0.8526	0.9255	1.0194	0.9144	0.9672	0.6321	0.9339	0.9322
covered		S	0.9775	0.9752	0.8912	0.9920	0.9704	0.9418	0.9922	1.0046	0.9549	1.0317	0.8581	0.9740	0.7466	0.9315	0.9695
		P	0.9408	0.9783	0.9084	0.9562	0.9389	0.9480	0.9684	0.9407	0.9441	1.0317	0.8873	0.9643	0.9871	0.9325	0.9517

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

DISCRIPANCIES IN RECORDING IRRIGATION PARTICULARS DURING 2017-18

S. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Supervisor				Patwari			
				Irr	UI	Total	Irr	UI	NR	Total	Irr	UI	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra Pradesh	Kharif	C	0	0	0	0	0	0	0	0	0	0	0
			S	52	47	99	0	0	0	1	0	0	1	1
			P	49	50	99	0	13	1	1	1	0	1	1
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0
			S	56	43	99	1	0	0	1	0	0	1	1
			P	56	43	99	1	0	0	1	0	0	1	1
2	Assam	Early	C											
	@	Kharif	S											
			P											
		Late	C											
		Kharif	S											
			P											
		Rabi	C											
			S											
			P											
		Summer	C											
			S											
			P											
3	Bihar	Bhadai	C	NR										
	#		S	33	66	99	0	1	0	1	0	0	1	1
			P^	33	66	99	0	1	0	1	0	0	1	1
		Aghani	C	NR										
			S	94	6	100	0	0	0	0	0	0	0	0
			P^	94	6	100	0	0	0	0	0	0	0	0
		Rabi	C	NR										
			S	92	8	100	0	0	0	0	0	0	0	0
			P^	92	8	100	0	0	0	0	0	0	0	0
		Summer	C	NR										
			S	45	55	100	0	0	0	0	0	0	0	0
			P^	45	55	100	0	0	0	0	0	0	0	0
4	Chhattisgarh	Kharif	C	26	64	90	1	8	1	10	0	1	9	10
			S	29	70	99	1	0	0	1	0	1	0	1
			P	27	67	94	1	4	0	6	0	1	5	6
		Rabi	C	48	49	97	2	1	0	3	0	1	2	3
			S	28	68	96	2	0	1	4	0	3	1	4
			P	37	60	97	2	0	0	3	0	2	1	3
5	Gujarat	Kharif	C	NR										
			S	14	85	99	0	1	0	1	0	0	1	1
			P^	14	85	99	0	1	0	1	0	0	1	1
		Rabi	C	NR										
			S	15	6	22	73	5	0	78	0	0	78	78
			P^	15	6	22	73	5	0	78	0	0	78	78
		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
6	Haryana	Kharif	C	80	7	87	8	0	5	13	5	0	8	13
	*		S	88	12	100	0	0	0	0	0	0	0	0
			P	83	10	93	4	1	3	7	3	1	4	7
		Rabi	C	88	3	91	6	0	3	9	3	0	6	9
			S	97	2	100	0	0	0	0	0	0	0	0
			P	92	3	95	3	0	2	5	2	0	3	5
		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

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

S. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Supervisor				Patwari			
				Irr	UI	Total	Irr	UI	NR	Total	Irr	UI	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
7	Himachal	Kharif	C	12	64	76	2	10	12	24	1	11	12	24
	Pradesh		S	17	80	97	0	2	1	3	0	1	2	3
			P	15	71	86	1	6	7	14	1	6	7	14
		Rabi	C	14	70	84	1	6	8	16	1	8	7	16
			S	19	78	97	0	1	1	3	0	1	1	3
			P	17	74	91	1	4	5	9	0	4	4	9
8	Jammu &	Kharif	C	48	45	93	2	3	3	7	2	1	4	7
	Kashmir		S	51	46	97	0	0	2	3	2	0	1	3
			P	50	46	95	1	1	2	5	2	1	2	5
		Rabi	C	44	49	93	1	2	4	7	2	1	3	7
			S	56	44	100	0	0	0	0	0	0	0	0
			P	51	46	97	0	1	1	3	1	1	1	3
9	Jharkhand	E. Kharif	C	NR										
	@		S	0	100	100	0	0	0	0	0	0	0	0
			P^	0	100	100	0	0	0	0	0	0	0	0
		L. Kharif	C	NR										
			S	5	91	96	3	1	0	4	1	3	0	4
			P^	5	91	96	3	1	0	4	1	3	0	4
		Rabi	C	NR										
			S	51	49	100	0	0	0	0	0	0	0	0
			P^	51	49	100	0	0	0	0	0	0	0	0
		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	21	60	81	4	11	4	19	1	3	15	19
			S	28	71	99	0	1	0	1	0	0	1	1
			P	24	65	89	2	6	2	11	1	2	8	11
		Rabi	C	34	46	80	8	6	6	20	4	3	13	20
			S	34	65	99	0	0	0	1	0	0	0	1
			P	34	58	92	3	3	3	8	2	1	5	8
		Summer	C	68	0	68	23	1	8	32	7	1	24	32
			S	85	15	100	0	0	0	0	0	0	0	0
2015			P	75	7	82	13	1	1	18	1	0	14	18
11	Kerala	Autumn	C	12	68	79	0	0	21	21	0	21	0	21
			S	14	70	84	0	0	16	0	0	16	0	16
			P	13	69	82	0	0	18	18	1	18	0	18
		Winter	C	19	65	84	0	0	16	16	0	16	0	16
			S	28	46	74	1	0	25	26	0	25	1	26
			P	24	55	79	0	0	21	21	0	21	0	21
		Summer	C	19	80	100	0	0	0	0	0	0	0	0
			S	24	76	100	0	0	0	0	0	0	0	0
			P	22	78	100	0	0	0	0	0	0	0	0
12	Madhya Pradesh	Kharif	C	10	78	88	2	7	3	12	0	4	8	12
			S	9	90	99	0	0	0	1	0	0	0	1
			P	10	83	93	1	4	2	7	0	2	5	7
		Rabi	C	79	11	91	6	1	2	9	2	1	6	9
			S	82	18	99	0	0	0	1	0	0	0	1
			P	80	14	94	4	1	1	6	1	1	4	6

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

S. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Supervisor				Patwari			
				Irr	UI	Total	Irr	UI	NR	Total	Irr	UI	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
13	Maharashtra	Kharif	C	21	65	86	5	6	3	14	1	3	10	14
			S	23	74	97	1	2	0	3	0	1	2	3
			P	23	71	93	2	3	1	7	1	1	5	7
		Rabi	C	72	20	92	6	1	1	8	1	1	6	8
			S	49	48	97	2	1	0	3	0	1	2	3
			P	54	42	96	3	1	0	4	0	1	3	4
		Summer	C	12	0	12	80	8	0	88	0	0	88	88
			S	90	9	99	1	0	0	1	0	0	1	1
			P	62	6	68	29	3	0	32	0	0	32	32
14	Odisha	Autumn	C	3	96	100	0	0	0	0	0	0	0	0
			S	4	95	99	0	1	0	1	1	0	0	1
			P	4	96	99	0	0	0	1	0	0	0	1
		Winter	C	32	68	100	0	0	0	0	0	0	0	0
			S	25	75	100	0	0	0	0	0	0	0	0
			P	28	72	100	0	0	0	0	0	0	0	0
		Summer	C	56	44	100	0	0	0	0	0	0	0	0
			S	51	49	100	0	0	0	0	0	0	0	0
			P	53	47	100	0	0	0	0	0	0	0	0
15	Punjab	Kharif	C	94	0	95	3	0	2	5	2	0	3	5
			S	98	1	99	1	0	0	1	0	0	0	1
			P	96	1	97	2	0	1	3	1	0	2	3
		Rabi	C	96	0	96	2	0	1	4	1	0	2	4
			S	98	1	99	0	0	1	1	1	0	0	1
			P	97	0	98	1	0	1	2	1	0	1	2
16	Rajasthan	Kharif	C	14	71	84	2	8	5	16	1	5	9	16
			S	18	80	98	1	1	1	2	0	0	1	2
			P	16	75	91	1	5	3	9	1	3	5	9
		Rabi	C	81	4	86	9	1	4	14	4	1	9	14
			S	88	9	98	2	0	0	2	0	1	1	2
			P	85	7	92	5	0	2	8	2	1	5	8
17	Tamil Nadu	Phase-I	C	36	33	69	8	18	4	31	2	3	26	31
			S	43	29	72	8	16	4	28	2	2	24	28
			P	40	31	71	8	17	4	29	2	2	25	29
		Phase-II	C	57	12	69	20	6	6	31	3	4	24	31
			S	56	21	77	13	4	5	23	4	1	17	23
			P	56	18	74	15	5	5	26	4	2	20	26
		Rabi	C	34	19	52	29	8	10	48	3	8	37	48
			S	56	18	75	14	3	8	25	7	1	17	25
			P	50	18	69	18	4	8	31	6	3	22	31
18	Telangana	Kharif	C	0	0	0	0	0	0	0	0	0	0	0
			S	56	43	99	0	0	0	1	0	0	0	1
			P	56	43	99	0	0	0	1	0	0	0	1
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0
			S	89	11	99	0	0	0	1	0	0	0	1
			P	89	11	99	0	0	0	1	0	0	0	1
19	Uttar Pradesh	Kharif	C	58	24	82	8	5	5	18	3	3	12	18
			S	59	34	92	3	3	1	8	1	0	6	8
			P	58	27	85	7	5	4	15	3	2	10	15
		Rabi	C	81	5	86	11	1	2	14	2	0	12	14
			S	74	11	85	10	2	3	15	3	1	11	15
			P	79	6	86	11	1	2	14	2	0	12	14
		Summer	C	81	1	83	16	0	2	17	2	0	16	17
			S	76	0	76	23	0	1	24	1	0	23	24
			P	80	1	81	17	0	1	19	1	0	17	19

S. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Supervisor				Patwari			
				Irr	UI	Total	Irr	UI	NR	Total	Irr	UI	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
20	Uttarakhand	Kharif	C	51	44	95	0	2	3	5	1	3	2	5
			S	57	40	97	1	0	1	3	1	1	1	3
			P	53	42	96	1	1	2	4	1	2	2	4
		Rabi	C	62	36	98	1	0	1	2	0	1	0	2
			S	65	32	97	2	0	1	3	1	0	2	3
			P	64	34	98	2	0	1	2	0	1	1	2
		Summer	C	81	17	98	2	0	0	2	0	0	2	2
			S	95	0	95	5	0	0	5	0	0	5	5
			P	90	6	96	4	0	0	4	1	1	4	4
21	West Bengal	Early Kharif	C	NOT APPLICABLE										
	$		S											
			P											
		Late Kharif	C											
			S											
			P											
		Rabi	C											
			S											
			P											
		Summer	C											
			S											
			P											
22	Puducherry	Kharif	C	72	21	93	5	0	2	7	2	0	5	7
			S	91	9	100	0	0	0	0	0	0	0	0
			P	81	16	96	3	0	1	4	1	0	3	4
		Rabi-I	C	76	2	77	0	0	23	23	8	15	0	23
			S	94	6	100	0	0	0	0	0	0	0	0
			P	87	4	91	0	0	9	9	3	5	0	9
		Rabi-II	C	100	0	100	0	0	0	0	0	0	0	0
			S	91	9	100	0	0	0	0	0	0	0	0
			P	93	7	100	0	0	0	0	0	0	0	0
FOR STATES		Early Kharif	C	26	50	75	5	12	8	25	1	7	17	25
COVERED			S	31	48	79	5	9	7	16	1	6	14	21
			P	29	49	78	5	10	7	22	1	6	15	22
		Late Kharif	C	35	51	86	4	5	4	14	2	3	9	14
			S	40	57	96	1	1	2	4	0	2	2	4
			P	38	54	92	2	3	3	8	1	2	5	8
		Rabi	C	74	15	89	7	1	3	11	2	1	8	11
			S	68	28	96	2	1	1	4	1	0	3	4
			P	71	22	93	5	1	2	7	1	1	5	7
		Summer	C	30	62	93	6	1	1	7	1	0	6	7
			S	36	60	96	3	0	1	4	1	0	4	4
			P	33	61	94	4	0	1	6	1	0	5	6
All seasons			C	46	42	87	5	4	4	13	2	3	9	13
			S	47	48	95	2	1	2	5	1	1	3	5
			P	46	45	91	3	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.

ANNEX - IV(d)

DISCREPANCIES IN RECORDING SEED VARIETY PARTICULARS DURING 2017-18

Sl. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Superviser				Patwari			
				HY	L	Total	HY	L	NR	Total	HY	L	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra	Kharif	C	0	0	0	0	0	0	0	0	0	0	0
	Pradesh		S	80	19	99	0	0	0	1	0	0	1	1
			P	81	18	99	1	4	1	1	2	0	1	1
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0
			S	78	21	99	1	0	0	1	0	0	1	1
			P	78	21	99	1	0	0	1	0	0	1	1
2	Assam	Early	C											
	@	Kharif	S											
			P											
		Late	C											
		Kharif	S											
			P											
		Rabi	C											
			S											
			P											
		Summer	C											
			S											
			P											
3	Bihar	Bhadai	C	NR										
	#		S	31	69	99	1	0	0	1	0	0	1	1
			P^	31	69	99	1	0	0	1	0	0	1	1
		Aghani	C	NR										
			S	68	32	100	0	0	0	0	0	0	0	0
			P^	68	32	100	0	0	0	0	0	0	0	0
		Rabi	C	NR										
			S	79	21	100	28	0	0	0	0	0	0	0
			P^	79	21	100	28	0	0	0	0	0	0	0
		Summer	C	NR										
			S	15	85	100	100	0	0	100	0	0	0	0
			P^	15	85	100	100	0	0	100	0	0	0	0
4	Chhattisgarh	Kharif	C	57	32	90	4	5	1	10	1	0	9	10
			S	70	28	98	1	1	0	2	1	1	0	2
			P	64	30	94	3	3	0	6	1	1	5	6
		Rabi	C	36	62	98	2	0	0	2	0	0	2	2
			S	28	71	98	0	1	1	2	0	1	1	2
			P	32	67	98	1	0	1	2	0	1	1	2
5	Gujarat	Kharif	C	NR										
			S	57	42	99	1	0	0	1	0	0	1	1
			P^	57	42	99	1	0	0	1	0	0	1	1
		Rabi	C	NR										
			S	12	9	22	66	12	0	78	0	0	78	78
			P^	12	9	22	66	12	0	78	0	0	78	78
		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
6	Haryana	Kharif	C	84	3	87	7	0	5	13	5	0	8	13
	*		S	96	4	100	0	0	0	0	0	0	0	0
			P	90	3	93	4	1	3	7	3	0	4	7
		Rabi	C	90	2	91	6	0	3	9	3	0	6	9
			S	98	2	100	0	0	0	0	0	0	0	0
			P	93	2	95	3	0	2	5	2	0	3	5
		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	Kharif	C	31	34	64	17	6	12	36	5	19	12	36
	Pradesh		S	62	35	97	0	1	1	3	0	1	2	3
			P	46	34	80	9	4	7	20	2	11	7	20
		Rabi	C	35	36	71	17	4	8	29	2	20	7	29
			S	56	41	97	1	1	1	3	1	1	1	3
			P	46	39	84	9	2	5	16	1	10	4	16

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

Sl. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Superviser				Patwari			
				HY	L	Total	HY	L	NR	Total	HY	L	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
8	Jammu &	Kharif	C	27	62	89	5	4	3	11	0	7	4	11
	Kashmir		S	29	68	97	0	1	2	3	0	2	1	3
			P	28	65	93	2	2	2	7	0	5	2	7
		Rabi	C	53	37	90	3	3	4	10	1	6	3	10
			S	58	42	100	0	0	0	0	0	0	0	0
			P	56	40	96	1	1	1	4	1	2	1	4
9	Jharkhand	Early	C	NR										
	@	Kharif	S	23	77	100	0	0	0	0	0	0	0	0
			P^	23	77	100	0	0	0	0	0	0	0	0
		Late	C	NR										
		Kharif	S	25	71	96	3	1	0	4	1	3	0	4
			P^	25	71	96	3	1	0	4	1	3	0	4
		Rabi	C	NR										
			S	17	83	100	0	0	0	0	0	0	0	0
			P^	17	83	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	69	12	81	11	5	4	19	3	1	15	19
			S	77	22	99	0	1	0	1	1	0	1	1
			P	73	16	89	6	3	2	11	2	1	8	11
		Rabi	C	69	11	80	12	2	6	20	6	0	13	20
			S	74	26	99	0	0	0	1	0	0	0	1
			P	72	20	92	5	1	3	8	3	0	5	8
		Summer	C	64	3	68	23	1	8	32	8	0	24	32
			S	70	30	100	0	0	0	0	0	0	0	0
			P	67	15	82	13	1	1	18	4	0	14	18
11	Kerala	Autumn	C	13	66	79	0	0	21	21	0	21	0	21
			S	15	69	84	0	0	16	16	0	16	0	16
			P	14	68	82	0	0	18	18	1	18	0	18
		Winter	C	14	70	84	0	0	16	16	0	16	0	16
			S	18	56	74	0	1	25	26	0	25	1	26
			P	16	63	79	0	0	21	21	0	21	0	21
		Summer	C	4	96	100	0	0	0	0	0	0	0	0
			S	5	94	100	0	0	0	0	0	0	0	0
			P	5	95	100	0	0	0	0	0	0	0	0
12	Madhya	Kharif	C	32	56	88	2	6	3	12	1	3	8	12
	Pradesh		S	62	37	99	0	0	0	1	0	0	0	1
			P	45	48	93	1	4	2	7	0	2	5	7
		Rabi	C	43	47	90	2	5	2	10	1	3	6	10
			S	56	43	99	0	0	0	1	0	0	0	1
			P	48	46	94	2	3	1	6	1	2	4	6
13	Maharashtra	Kharif	C	75	12	87	9	2	3	13	3	1	10	13
			S	75	20	95	4	0	0	5	0	2	2	5
			P	75	17	92	6	1	1	8	1	2	5	8
		Rabi	C	83	9	93	6	1	1	7	1	0	6	7
			S	79	17	97	3	0	0	3	0	1	2	3
			P	80	16	96	4	0	0	4	0	1	3	4
		Summer	C	12	0	12	81	7	0	88	0	0	88	88
			S	93	6	99	1	0	0	1	0	0	1	1
			P	64	4	68	29	3	0	32	0	0	32	32
14	Odisha	Autumn	C	62	38	100	0	0	0	0	0	0	0	0
			S	69	31	100	0	0	0	0	0	0	0	0
			P	65	34	100	0	0	0	0	0	0	0	0
		Winter	C	78	22	100	0	0	0	0	0	0	0	0
			S	76	24	100	0	0	0	0	0	0	0	0
			P	77	23	100	0	0	0	0	0	0	0	0
		Summer	C	53	47	100	0	0	0	0	0	0	0	0
			S	41	59	100	0	0	0	0	0	0	0	0
			P	47	53	100	0	0	0	0	0	0	0	0
15	Punjab	Kharif	C	47	2	50	48	0	2	50	1	46	3	50
			S	92	1	94	6	0	0	6	0	6	0	6
			P	68	2	70	29	0	1	30	1	27	2	30
		Rabi	C	50	3	53	46	0	1	47	1	44	2	47
			S	80	2	82	17	0	1	18	0	17	0	18
			P	63	2	65	34	1	1	35	1	33	1	35
16	Rajasthan	Kharif	C	43	40	83	7	4	5	17	4	3	9	17
			S	38	60	98	1	0	1	2	0	0	1	2
			P	41	50	90	4	2	3	10	2	2	5	10
		Rabi	C	65	20	85	8	3	4	15	3	3	9	15
			S	53	43	96	2	1	0	4	0	2	1	4
			P	59	32	91	5	2	2	9	2	2	5	9

Sl. No.	State	Season	AGENCY	Percentage of survey numbers in which particulars										
				Tallied			Not Tallied							
							Superviser				Patwari			
				HY	L	Total	HY	L	NR	Total	HY	L	NR	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
17	Tamil Nadu	Phase-I	C	41	21	62	14	19	4	38	3	9	26	38
			S	63	10	72	13	11	4	28	3	1	24	28
			P	52	15	67	14	15	4	33	3	5	25	33
		Phase-II	C	43	10	53	35	6	6	47	2	22	24	47
			S	67	10	77	15	3	6	23	5	0	17	23
			P	59	10	68	22	4	6	32	4	8	20	32
		Rabi	C	35	10	45	38	6	10	55	5	13	37	55
			S	60	15	75	15	3	8	25	6	2	17	25
			P	54	13	67	21	4	8	33	5	5	22	33
18	Telangana	Kharif	C	0	0	0	0	0	0	0	0	0	0	0
			S	94	6	100	0	0	0	0	0	0	0	0
			P	94	6	100	0	0	0	0	0	0	0	0
		Rabi	C	0	0	0	0	0	0	0	0	0	0	0
			S	98	2	99	0	0	0	1	0	0	0	1
			P	98	2	99	0	0	0	1	0	0	0	1
19	Uttar Pradesh	Kharif	C	70	13	84	9	3	5	16	4	1	12	16
			S	75	18	93	5	1	1	7	1	0	6	7
			P	72	15	86	8	2	4	14	3	1	10	14
		Rabi	C	76	10	86	10	3	2	14	2	0	12	14
			S	73	12	85	8	4	3	15	3	1	11	15
			P	75	10	85	9	3	2	15	2	1	12	15
		Zaid Rabi	C	74	8	82	13	3	2	18	2	0	16	18
			S	75	2	76	23	0	1	24	1	0	23	24
			P	74	7	81	16	2	1	19	1	0	18	19
20	Uttarakhand	Kharif	C	45	50	95	0	2	3	5	0	3	2	5
			S	52	45	97	0	1	1	3	0	1	1	3
			P	48	48	96	0	2	2	4	0	2	2	4
		Rabi	C	50	48	98	1	1	1	2	1	1	0	2
			S	56	41	97	1	1	1	3	0	0	2	3
			P	53	44	97	1	1	1	3	1	1	1	3
		Summer	C	64	33	97	1	2	0	3	1	0	2	3
			S	95	0	95	5	0	0	5	0	0	5	5
			P	84	12	96	3	1	0	4	0	0	4	4
21	West Bengal	Early Kharif	C	5	80	86	0	14	0	14	0	0	14	14
			S	50	29	79	7	5	9	21	7	2	12	21
			P	38	43	81	5	8	6	19	5	2	13	19
		Late Kharif	C	8	89	97	0	2	1	3	0	1	2	3
			S	82	11	93	2	1	3	7	2	2	4	7
			P	50	44	95	1	2	2	5	1	1	3	5
		Rabi	C	6	90	97	0	3	1	3	0	1	3	3
			S	36	38	75	14	4	7	25	5	2	18	25
			P	26	57	82	9	4	5	18	3	2	13	18
		Summer	C	0	97	97	0	1	2	3	0	2	1	3
			S	64	19	83	8	4	5	17	4	1	12	17
			P	33	56	90	4	2	4	10	2	1	7	10
22	Puducherry	Kharif	C	78	15	93	5	0	2	7	2	0	5	7
			S	57	43	100	0	0	0	0	0	0	0	0
			P	68	28	96	3	0	1	4	1	0	3	4
		Rabi-I	C	76	2	77	0	0	23	23	8	15	0	23
			S	75	25	100	0	0	0	0	0	0	0	0
			P	76	16	91	0	0	9	9	3	5	0	9
		Rabi-II	C	100	0	100	0	0	0	0	0	0	0	0
			S	70	30	100	0	0	0	0	0	0	0	0
			P	76	24	100	0	0	0	0	0	0	0	0
FOR STATES COVERED		Early Kharif	C	36	35	71	9	12	8	29	2	10	17	29
			S	48	31	79	8	6	7	21	2	5	14	21
			P	43	33	76	8	9	7	24	2	7	15	24
		Late Kharif	C	55	27	83	10	3	4	17	2	6	9	17
			S	70	26	96	2	1	2	4	0	2	2	4
			P	63	27	90	6	2	3	10	1	4	5	10
		Rabi	C	63	21	83	12	2	3	17	2	7	8	17
			S	71	24	95	4	1	1	5	1	2	3	5
			P	67	22	89	8	2	2	11	1	4	5	11
		Summer	C	18	75	93	6	1	1	7	1	0	6	7
			S	22	74	96	3	1	1	5	1	0	4	4
			P	20	74	94	4	1	1	6	1	0	5	6
All seasons			C	52	31	83	10	3	4	17	2	6	9	17
			S	63	32	94	3	1	2	6	1	2	3	6
			P	58	31	89	6	2	3	11	1	4	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. P^ - Since data from only one agency is available, the same has been taken against pooled agency for comparison purpose.
5. NR - Not Reported.

ANNEX-VI

RESPONSE IN SAMPLE CHECK ON CROP CUTTING EXPERIMENTS DURING 2017-18 (At Harvest stage only)

Sl. No.	State	AGENCY	Kharif				Rabi/ Summer				Grand Total of Planning
			Early Kharif		Late Kharif		Rabi		Summer		
			No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra	C			500	98	180	96			680
	Pradesh	S			500	100	180	98			680
		P			1000	99	360	97			1360
2	Assam	C	170	73	120	98	190	80	40	90	520
		S	170	54	120	75	190	78	40	85	520
		P	340	64	240	87	380	79	80	88	1040
3	Bihar	C	120	79	240	71	350	92	40	65	750
		S	120	43	240	63	350	39	40	25	750
		P	240	61	480	67	700	66	80	45	1500
4	Chhattisgarh	C			200	100	150	100			350
		S			200	88	150	91			350
		P			400	94	300	96			700
5	Gujarat	C			750	77	240	86			990
		S			750	42	240	47			990
		P			1500	60	480	66			1980
6	Haryana	C			320	96	380	100			700
		S			320	93	380	95			700
		P			640	94	760	98			1400
7	Himachal	C			150	83	150	71			300
	Pradesh	S			150	79	150	77			300
		P			300	81	300	74			600
8	Jammu &	C			160	99	120	98			280
	Kashmir	S			160	33	120	35			280
		P			320	66	240	67			560
9	Jharkhand	C	40	100	80	98	100	100			220
		S	40	30	80	23	100	66			220
		P	80	65	160	60	200	83			440
10	Karnataka	C			620	59	200	67	80	65	900
		S			620	80	200	85	80	88	900
		P			1240	70	400	76	160	76	1800
11	Kerala	C	100	100	100	100			320	100	520
	$	S	100	100	100	100			320	100	520
		P	200	100	200	100			640	100	1040
12	Madhya	C			628	94	524	98			1152
	Pradesh	S			628	71	524	62			1152
		P			1256	83	1048	80			2304
13	Maharashtra	C			850	69	450	54			1300
		S			850	49	450	41			1300
		P			1700	59	900	48			2600
14	Odisha	C	260	100	390	97			180	99	830
		S	260	100	390	96			180	98	830
		P	520	100	780	97			360	98	1660
15	Punjab	C			380	99	320	97			700
		S			380	92	320	94			700
		P			760	95	640	95			1400

ANNEX-VI (Contd.....)

Sl. No.	State	AGENCY	Kharif				Rabi/ Summer				Grand Total of Planning
			Early Kharif		Late Kharif		Rabi		Summer		
			No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	No. of Expts. Planned	% Response	
1	2	3	4	5	6	7	8	9	10	11	12
16	Rajasthan	C			520	81	420	92			940
		S			520	76	420	78			940
		P			1040	78	840	85			1880
17	Tamil Nadu	C			460	93	320	97	0	0	780
	#	S			460	93	320	90	0	0	780
		P			920	93	640	93	0	0	1560
18	Telangana	C			350	97	130	98			480
		S			350	71	130	78			480
		P			700	84	260	88			960
19	Uttar Pradesh	C			1380	99	840	96	80	100	2300
		S			1380	27	840	26	80	8	2300
		P			2760	63	1680	61	160	54	4600
20	Uttarakhand	C			130	88	60	90			190
		S			130	57	60	68			190
		P			260	73	120	79			380
21	West	C	180	88	160	100	220	74	190	100	750
	Bengal	S	180	42	160	31	220	25	190	15	750
		P	360	65	320	66	440	49	380	57	1500
22	Puducherry	C			10	100	10	100	10	100	30
		S			10	100	10	100	10	100	30
		P			20	100	20	100	20	100	60
For States		C	870	89	8498	88	5354	89	940	95	15662
covered		S	870	68	8498	64	5354	62	940	69	15662
		P	1740	79	16996	76	10708	75	1880	82	31324

Note:

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

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

DISTRIBUTION OF PERCENTAGE OF EXPERIMENTS ACCORDING TO IMPORTANT INPUTS DURING 2017-18

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
Paddy-Autumn						
1	Assam	C	H	18.18	19.70	34.85
		S		11.54	9.62	36.54
		P		15.25	15.25	35.59
		C	T	12.00	13.00	23.00
		S		7.32	6.10	23.17
		P		9.89	9.89	23.08
2	Bihar	C	H	6.67	6.67	80.00
		S		0.00	0.00	100.00
		P		3.57	3.57	89.29
		C	T	5.00	5.00	60.00
		S		0.00	0.00	100.00
		P		3.03	3.03	75.76
3	Jharkhand	C	H	0.00	0.00	30.00
		S		0.00	0.00	16.67
		P		0.00	0.00	25.00
		C	T	0.00	0.00	30.00
		S		0.00	0.00	16.67
		P		0.00	0.00	25.00
4	Kerala	C	H	32.00	84.00	76.00
		S		39.00	83.00	81.00
		P		35.50	83.50	78.50
		C	T	32.00	84.00	76.00
		S		39.00	83.00	81.00
		P		35.50	83.50	78.50
5	Odisha	C	H	5.00	85.45	81.82
		S		2.27	89.09	80.91
		P		3.64	87.27	81.36
		C	T	5.00	85.45	81.82
		S		2.27	89.09	80.91
		P		3.64	87.27	81.36
6	Tamil Nadu #	C	H	94.74	97.37	100.00
	Phase-I	S		100.00	100.00	100.00
		P		97.44	98.72	100.00
		C	T	92.31	94.87	97.44
		S		100.00	100.00	100.00
		P		96.20	97.47	98.73
7	West Bengal	C	H	77.66	91.49	97.87
		S		92.31	88.46	100.00
		P		82.88	90.41	98.63
		C	T	76.04	89.58	95.83
		S		92.31	88.46	100.00
		P		81.76	89.19	97.30
Paddy-Winter						
1	Andhra Pradesh	C	H	94.44	96.11	95.00
		S		94.44	96.67	96.67
		P		94.44	96.39	95.83
		C	T	94.44	96.11	95.00
		S		94.44	96.67	96.67
		P		94.44	96.39	95.83

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

T= Total (Harvest+Missed+Lost).

I= Irrigation

HYV= High yield variety

F= Fertilizers

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

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
2	Assam	C	H	1.69	8.47	41.53
		S		5.43	3.26	39.13
		P		3.33	6.19	40.48
		C	T	1.67	8.33	40.83
		S		5.32	3.19	38.30
		P		3.27	6.07	39.72
3	Bihar	C	H	72.77	56.54	95.29
		S		75.00	61.11	99.44
		P		73.85	58.76	97.30
		C	T	58.40	45.38	76.47
		S		72.58	59.14	96.24
		P		64.62	51.42	85.14
4	Chhattisgarh	C	H	47.50	80.00	77.50
		S		48.72	89.74	79.49
		P		48.10	84.81	78.48
		C	T	47.50	80.00	77.50
		S		47.50	87.50	77.50
		P		47.50	83.75	77.50
5	Gujarat	C	H	54.55	75.76	96.97
		S		37.50	41.67	91.67
		P		47.37	61.40	94.74
		C	T	45.00	62.50	80.00
		S		37.50	41.67	91.67
		P		42.19	54.69	84.38
6	Haryana	C	H	100.00	100.00	100.00
		S		100.00	92.59	97.53
		P		100.00	96.47	98.82
		C	T	98.89	98.89	98.89
		S		98.78	91.46	96.34
		P		98.84	95.35	97.67
7	Himachal Pradesh	C	H	64.00	32.00	66.00
		S		52.17	34.78	47.83
		P		58.33	33.33	57.29
		C	T	53.33	26.67	55.00
		S		40.00	26.67	36.67
		P		46.67	26.67	45.83
8	Jammu & Kashmir	C	H	85.71	22.86	100.00
		S		80.95	71.43	95.24
		P		83.93	41.07	98.21
		C	T	85.71	22.86	100.00
		S		73.91	65.22	86.96
		P		81.03	39.66	94.83
9	Jharkhand	C	H	7.69	17.95	73.08
		S		4.17	35.42	70.83
		P		6.35	24.60	72.22
		C	T	7.50	17.50	71.25
		S		4.00	34.00	68.00
		P		6.15	23.85	70.00
10	Karnataka	C	H	64.34	86.82	88.37
		S		64.29	76.43	83.57
		P		64.31	81.41	85.87
		C	T	58.87	79.43	80.85
		S		64.29	76.43	83.57
		P		61.57	77.94	82.21

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
11	Kerala	C	H	74.00	73.00	85.00
		S		78.00	77.00	84.00
		P		76.00	75.00	84.50
		C	T	74.00	73.00	85.00
		S		78.00	77.00	84.00
		P		76.00	75.00	84.50
12	Madhya Pradesh	C	H	32.65	59.18	72.45
		S		28.89	47.78	70.00
		P		30.85	53.72	71.28
		C	T	32.00	58.00	71.00
		S		28.89	47.78	70.00
		P		30.53	53.16	70.53
13	Maharashtra	C	H	30.16	69.84	93.65
		S		25.86	37.93	89.66
		P		28.10	54.55	91.74
		C	T	23.17	53.66	71.95
		S		23.44	34.38	81.25
		P		23.29	45.21	76.03
14	Odisha	C	H	24.81	89.85	92.11
		S		30.83	93.98	88.35
		P		27.82	91.92	90.23
		C	T	24.44	88.52	90.74
		S		30.83	93.98	88.35
		P		27.61	91.23	89.55
15	Punjab	C	H	100.00	100.00	100.00
		S		100.00	90.59	94.12
		P		100.00	95.52	97.20
		C	T	99.47	99.47	99.47
		S		100.00	90.59	94.12
		P		99.72	95.25	96.93
16	Tamil Nadu	C	H	88.16	100.00	88.16
	Phase-II	S		89.47	94.74	97.37
		P		88.82	97.37	92.76
		C	T	88.16	100.00	88.16
		S		89.47	94.74	97.37
		P		88.82	97.37	92.76
17	Telangana	C	H	91.18	97.06	100.00
		S		83.33	100.00	98.33
		P		87.50	98.44	99.22
		C	T	91.18	97.06	100.00
		S		83.33	100.00	98.33
		P		87.50	98.44	99.22
18	Uttar Pradesh	C	H	97.58	88.33	99.55
		S		94.00	95.00	98.00
		P		96.74	89.88	99.19
		C	T	97.58	88.33	99.55
		S		94.00	95.00	98.00
		P		96.74	89.88	99.19
19	Uttarakhand	C	H	68.00	40.00	60.00
		S		79.55	29.55	56.82
		P		73.40	35.11	58.51
		C	T	68.00	40.00	60.00
		S		77.78	28.89	55.56
		P		72.63	34.74	57.89

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
20	West Bengal	C	H	42.50	88.75	95.00
		S		62.00	100.00	100.00
		P		47.14	91.43	96.19
		C	T	42.50	88.75	95.00
		S		62.00	100.00	100.00
		P		47.14	91.43	96.19
21	Puducherry	C	H	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
Paddy-Rabi/Summer						
1	Andhra Pradesh	C	H	100.00	97.67	100.00
		S		100.00	100.00	100.00
		P		100.00	98.85	100.00
		C	T	97.78	95.45	97.73
		S		97.73	97.78	97.78
		P		97.75	96.63	97.75
2	Assam	C	H	55.56	33.33	72.22
		S		76.47	58.82	100.00
		P		65.71	45.71	85.71
		C	T	50.00	30.00	65.00
		S		72.22	55.56	94.44
		P		60.53	42.11	78.95
3	Bihar	C	H	100.00	76.92	100.00
		S		100.00	100.00	100.00
		P		100.00	83.33	100.00
		C	T	65.00	50.00	65.00
		S		45.45	45.45	45.45
		P		58.06	48.39	58.06
4	Karnataka	C	H	92.86	96.43	82.14
		S		100.00	83.33	77.78
		P		96.88	89.06	79.69
		C	T	65.00	67.50	57.50
		S		90.00	75.00	70.00
		P		77.50	71.25	63.75
5	Kerala	C	H	90.00	92.00	84.00
		S		97.98	89.90	91.92
		P		93.97	90.95	87.94
		C	T	90.00	92.00	84.00
		S		97.98	89.90	91.92
		P		93.97	90.95	87.94
6	Odisha	C	H	100.00	99.29	92.14
		S		100.00	100.00	98.55
		P		100.00	99.64	95.32
		C	T	100.00	99.29	92.14
		S		100.00	100.00	98.55
		P		100.00	99.64	95.32
7	Tamil Nadu	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

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
8	Telangana	C	H	100.00	100.00	100.00
		S		97.44	100.00	100.00
		P		98.81	100.00	100.00
		C	T	100.00	100.00	100.00
		S		97.44	100.00	100.00
		P		98.81	100.00	100.00
9	Puducherry	C	H	100.00	100.00	100.00
	Rabi-I	S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
	Rabi-II	C	H	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
		C	T	100.00	100.00	100.00
		S		100.00	100.00	100.00
		P		100.00	100.00	100.00
10	West Bengal	C	H	100.00	86.43	99.29
		S		100.00	100.00	100.00
		P		100.00	88.13	99.38
		C	T	100.00	86.43	99.29
		S		100.00	100.00	100.00
		P		100.00	88.13	99.38
Jowar- Kharif						
1	Karnataka	C	H	10.53	78.95	68.42
		S		36.96	73.91	56.52
		P		25.00	76.19	61.90
		C	T	8.00	60.00	52.00
		S		34.00	68.00	52.00
		P		21.00	64.00	52.00
2	Madhya Pradesh	C	H	0.00	35.56	52.22
		S		0.00	37.50	47.73
		P		0.00	36.52	50.00
		C	T	0.00	34.04	50.00
		S		0.00	37.50	47.73
		P		0.00	35.71	48.90
3	Maharashtra	C	H	11.29	95.16	93.55
		S		4.35	60.87	78.26
		P		8.33	80.53	87.04
		C	T	8.97	75.64	74.36
		S		3.57	50.00	64.29
		P		6.72	64.93	70.15
4	Rajasthan	C	H	11.36	9.09	50.00
		S		9.52	14.29	38.10
		P		10.47	11.63	44.19
		C	T	8.33	6.67	36.67
		S		6.90	10.34	27.59
		P		7.63	8.47	32.20
5	Tamil Nadu	C	H	10.00	85.00	30.00
		S		5.26	63.16	36.84
		P		7.69	74.36	33.33
		C	T	10.00	85.00	30.00
		S		5.26	63.16	38.84
		P		7.69	74.36	33.33

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
6	Telangana	C	H	0.00	52.50	95.00
		S		11.11	25.00	72.22
		P		5.26	39.47	84.21
		C	T	0.00	52.50	95.00
		S		11.11	25.00	72.22
		P		5.26	39.47	84.21
7	Uttar Pradesh	C	H	5.00	5.00	17.50
		S		0.00	0.00	0.00
		P		3.85	3.85	13.46
		C	T	5.00	5.00	17.50
		S		0.00	0.00	0.00
		P		3.85	3.85	13.46
				Jowar-Rabi		
1	Karnataka	C	H	16.13	51.61	54.84
		S		13.64	87.88	36.36
		P		14.84	70.31	45.31
		C	T	14.29	45.71	48.57
		S		13.24	85.29	35.29
		P		13.77	65.22	42.03
2	Maharashtra	C	H	73.27	34.65	17.82
		S		64.52	32.26	6.45
		P		69.07	33.51	12.37
		C	T	73.27	34.65	17.82
		S		64.52	32.26	6.45
		P		69.07	33.51	12.37
3	Tamil Nadu	C	H	27.50	90.00	52.50
		S		5.88	88.24	52.94
		P		17.57	89.19	52.70
		C	T	27.50	90.00	52.50
		S		5.88	88.24	52.94
		P		17.57	89.19	52.70
4	Telangana	C	H	15.00	27.50	100.00
		S		44.74	26.32	78.95
		P		29.49	26.42	89.74
		C	T	15.00	27.50	100.00
		S		44.74	26.32	78.95
		P		29.49	26.42	89.74
				BAJRA		
1	Andhra Pradesh	C	H	10.00	47.50	55.00
		S		10.00	45.00	60.00
		P		10.00	46.25	57.50
		C	T	10.00	47.50	55.00
		S		10.00	45.00	60.00
		P		10.00	46.25	57.50
2	Gujarat	C	H	25.81	95.16	88.71
		S		30.00	72.86	81.43
		P		28.03	83.33	84.85
		C	T	14.55	53.64	50.00
		S		28.38	68.92	77.03
		P		20.11	59.78	60.87
3	Haryana	C	H	82.35	98.04	89.22
		S		77.88	100.00	83.65
		P		80.10	99.03	86.41
		C	T	80.77	96.15	87.50
		S		77.88	100.00	83.65
		P		79.33	98.08	85.58
4	Karnataka	C	H	0.00	100.00	46.67
		S		16.67	95.83	35.42
		P		10.26	97.44	39.74
		C	T	0.00	60.00	28.00
		S		16.67	95.83	35.42
		P		8.16	77.55	31.63

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
5	Maharashtra	C	H	22.00	84.00	78.00
		S		22.22	77.78	61.11
		P		22.09	81.40	70.93
		C	T	18.33	70.00	65.00
		S		20.00	70.00	55.00
		P		19.00	70.00	61.00
6	Rajasthan	C	H	11.11	74.07	40.74
		S		1.92	53.85	50.00
		P		6.60	64.15	45.28
		C	T	10.00	66.67	36.67
		S		1.79	50.00	50.00
		P		6.03	58.62	41.38
7	Tamil Nadu	C	H	10.00	67.50	45.00
		S		10.00	67.50	35.00
		P		10.00	67.50	40.00
		C	T	10.00	67.50	45.00
		S		10.00	67.50	35.00
		P		10.00	67.50	40.00
8	Uttar Pradesh	C	H	47.33	69.33	85.33
		S		50.00	97.92	79.17
		P		47.98	76.26	83.84
		C	T	47.33	69.33	85.33
		S		50.00	97.92	79.17
		P		47.98	76.26	83.84
				Maize		
1	Bihar	C	H	57.14	50.00	85.71
		S		33.33	40.00	93.33
		P		44.83	44.83	89.66
		C	T	40.00	35.00	60.00
		S		33.33	40.00	93.33
		P		37.14	37.14	74.29
2	Chhattisgarh	C	H	0.00	22.50	25.00
		S		5.00	30.00	20.00
		P		2.50	26.25	22.50
		C	T	0.00	22.50	25.00
		S		5.00	30.00	20.00
		P		2.50	26.25	22.50
3	Gujarat	C	H	11.11	44.44	100.00
		S		0.00	38.46	96.15
		P		4.55	40.91	97.73
		C	T	5.00	20.00	45.00
		S		0.00	38.46	96.15
		P		3.03	27.27	65.15
4	Haryana	C	H	65.00	90.00	80.00
		S		28.57	85.71	42.86
		P		50.00	88.24	64.71
		C	T	65.00	90.00	80.00
		S		28.57	85.71	42.86
		P		50.00	88.24	64.71
5	Himachal Pradesh	C	H	5.41	28.38	60.81
		S		2.44	29.27	65.85
		P		3.85	28.85	63.46
		C	T	4.44	23.33	50.00
		S		2.22	26.67	60.00
		P		3.33	25.00	55.00

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
6	Jammu & Kashmir	C	H	4.55	23.86	79.55
		S		4.76	35.71	66.67
		P		4.62	27.69	75.38
		C	T	4.44	23.33	77.78
		S		4.35	32.61	60.87
		P		4.41	26.47	72.06
7	Jharkhand	C	H	0.00	40.00	90.00
		S		16.67	16.67	33.33
		P		6.25	31.25	68.75
		C	T	0.00	40.00	90.00
		S		12.50	12.50	25.00
		P		5.56	27.78	61.11
8	Karnataka	C	H	30.43	89.13	100.00
		S		33.33	91.67	91.67
		P		31.91	90.43	95.74
		C	T	28.00	82.00	92.00
		S		32.00	88.00	88.00
		P		30.00	85.00	90.00
9	Madhya Pradesh	C	H	0.00	37.50	70.00
		S		0.00	45.45	68.18
		P		0.00	41.10	69.18
		C	T	0.00	37.50	70.00
		S		0.00	45.45	68.18
		P		0.00	41.10	69.18
10	Odisha	C	H	0.00	70.00	70.00
		S		0.00	70.00	62.50
		P		0.00	70.00	66.25
		C	T	0.00	70.00	70.00
		S		0.00	70.00	62.50
		P		0.00	70.00	66.25
11	Punjab	C	H	68.75	85.42	91.67
		S		83.33	87.50	66.67
		P		76.04	86.46	79.17
		C	T	68.75	85.42	91.67
		S		83.33	87.50	66.67
		P		76.04	86.46	79.17
12	Rajasthan	C	H	8.70	28.26	78.26
		S		9.52	38.10	61.90
		P		9.09	32.95	70.45
		C	T	8.00	26.00	72.00
		S		9.52	38.10	61.90
		P		8.70	31.52	67.39
13	Tamil Nadu	C	H	40.00	100.00	75.00
		S		35.00	100.00	95.00
		P		37.50	100.00	85.00
		C	T	40.00	100.00	75.00
		S		35.00	100.00	95.00
		P		37.50	100.00	85.00
14	Telangana	C	H	37.50	92.50	100.00
		S		31.25	93.75	100.00
		P		34.72	93.06	100.00
		C	T	37.50	92.50	100.00
		S		41.67	100.00	100.00
		P		34.72	93.06	100.00

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
15	Uttar Pradesh	C	H	53.53	63.53	96.47
		S		70.31	97.92	90.63
		P		58.12	66.67	94.87
		C	T	53.53	63.53	96.47
		S		70.31	97.92	90.63
		P		58.12	66.67	94.87
				Ragi		
1	Karnataka	C	H	11.43	88.57	91.43
		S		22.86	94.29	68.57
		P		17.14	91.43	80.00
		C	T	10.53	81.58	84.21
		S		22.22	91.67	66.67
		P		16.22	86.49	75.68
3	Uttarakhand	C	H	10.00	2.50	5.00
		S		0.00	0.00	0.00
		P		5.71	1.43	2.86
		C	T	10.00	2.50	5.00
		S		0.00	0.00	0.00
		P		5.71	1.43	2.86
				Cotton		
1	Andhra Pradesh	C	H	10.00	100.00	97.50
		S		12.50	100.00	100.00
		P		11.25	100.00	98.75
		C	T	10.00	100.00	97.50
		S		12.50	100.00	100.00
		P		11.25	100.00	98.75
2	Gujarat	C	H	51.04	93.23	90.10
		S		57.14	55.36	94.64
		P		52.42	84.68	91.13
		C	T	44.55	81.36	78.64
		S		53.33	51.67	88.33
		P		46.43	75.00	80.71
3	Haryana	C	H	96.30	94.44	94.44
		S		96.43	100.00	98.21
		P		96.36	97.27	96.36
		C	T	92.86	91.07	91.07
		S		96.43	100.00	98.21
		P		94.64	95.54	94.64
4	Karnataka	C	H	16.33	93.88	91.84
		S		39.29	100.00	82.14
		P		28.57	97.14	86.67
		C	T	14.29	82.14	80.36
		S		39.29	100.00	82.14
		P		26.79	91.07	81.25
5	Madhya Pradesh	C	H	70.83	97.92	100.00
		S		63.64	100.00	100.00
		P		68.57	98.57	100.00
		C	T	70.83	97.92	100.00
		S		63.64	100.00	100.00
		P		68.57	98.57	100.00

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
6	Maharashtra	C	H	50.75	100.00	99.25
		S		16.67	75.00	100.00
		P		37.61	90.37	99.54
		C	T	49.28	97.10	96.38
		S		16.28	73.26	97.67
		P		36.61	87.95	96.88
7	Punjab	C	H	100.00	97.22	100.00
		S		100.00	100.00	91.94
		P		100.00	98.51	96.27
		C	T	100.00	97.22	100.00
		S		100.00	100.00	91.94
		P		100.00	98.51	96.27
8	Rajasthan	C	H	100.00	86.11	94.44
		S		100.00	56.25	93.75
		P		100.00	72.06	94.12
		C	T	90.00	77.50	85.00
		S		88.89	50.00	83.33
		P		89.47	64.47	84.12
9	Tamil Nadu (Kharif)	C	H	20.00	100.00	86.00
		S		20.00	100.00	96.00
		P		20.00	100.00	91.00
		C	T	20.00	100.00	86.00
		S		20.00	100.00	96.00
		P		20.00	100.00	91.00
	Tamil Nadu (Rabi)	C	H	50.00	100.00	95.00
		S		41.18	94.12	94.12
		P		45.95	97.30	94.59
		C	T	50.00	100.00	95.00
		S		41.18	94.12	94.12
		P		45.95	97.30	94.59
10	Telangana	C	H	20.51	100.00	100.00
		S		50.00	100.00	100.00
		P		31.75	100.00	100.00
		C	T	20.51	100.00	100.00
		S		50.00	100.00	100.00
		P		31.75	100.00	100.00
Groundnut						
1	Andhra Pradesh	C	H	2.86	88.57	73.57
		S		2.86	83.57	86.43
		P		2.86	86.07	80.00
		C	T	2.86	88.57	73.57
		S		2.86	83.57	86.43
		P		2.86	86.07	80.00
2	Gujarat	C	H	65.69	94.89	95.62
		S		65.22	73.91	96.74
		P		65.50	86.46	96.07
		C	T	60.00	86.67	87.33
		S		71.43	72.34	94.68
		P		61.48	81.15	90.16
3	Karnataka	C	H	12.50	75.00	62.50
		S		20.59	91.18	61.76
		P		16.95	84.75	66.95
		C	T	12.00	76.00	74.00
		S		20.00	88.57	60.00
		P		14.49	72.46	57.25
4	Madhya Pradesh	C	H	15.79	15.79	73.68
		S		0.00	26.67	53.33
		P		8.82	20.59	64.71
		C	T	15.00	15.00	70.00
		S		0.00	26.67	53.33
		P		8.57	20.00	62.86

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
5	Maharashtra	C	H	23.08	76.92	86.54
		S		11.76	67.65	76.47
		P		18.60	73.26	82.56
		C	T	20.00	66.67	75.00
		S		11.11	63.89	72.22
		P		16.67	65.63	73.96
6	Rajasthan	C	H	83.33	47.22	86.11
		S		75.00	33.33	61.11
		P		79.17	40.28	73.61
		C	T	75.00	42.50	77.50
		S		67.50	30.00	55.00
		P		71.25	36.25	66.50
7	Tamil Nadu (Kharif)	C	H	12.24	91.84	32.65
		S		8.70	95.65	65.22
		P		10.53	93.68	48.42
		C	T	12.24	91.84	32.65
		S		8.70	95.65	65.22
		P		10.53	93.68	48.42
	Tamil Nadu (Rabi)	C	H	89.47	100.00	89.47
		S		85.00	100.00	100.00
		P		87.18	100.00	94.87
		C	T	89.47	100.00	89.47
		S		85.00	100.00	100.00
		P		87.18	100.00	94.87
8	Telangana	C	H	10.53	86.84	89.47
		S		21.43	92.86	92.86
		P		15.15	89.39	90.91
		C	T	10.53	86.84	89.47
		S		21.43	92.86	92.86
		P		15.15	89.39	90.91
Sugarcane						
1	Andhra Pradesh	C	H	100.00	90.74	90.74
		S		100.00	95.00	96.67
		P		100.00	92.98	93.86
		C	T	93.10	84.48	84.48
		S		100.00	95.00	96.67
		P		96.61	89.83	90.68
2	Assam	C	H	0.00	3.33	16.67
		S		0.00	0.00	35.71
		P		0.00	2.27	22.73
		C	T	0.00	2.78	13.89
		S		0.00	0.00	31.25
		P		0.00	1.92	19.23
3	Bihar	C	H	51.28	35.90	84.62
		S		61.54	38.46	100.00
		P		55.38	36.92	90.77
		C	T	50.00	35.00	82.50
		S		61.54	38.46	100.00
		P		54.55	36.36	89.39
4	Haryana	C	H	100.00	93.18	100.00
		S		95.24	100.00	100.00
		P		97.67	96.51	100.00
		C	T	100.00	93.18	100.00
		S		95.24	100.00	100.00
		P		97.67	96.51	100.00
5	Karnataka	C	H	94.74	100.00	89.47
		S		97.37	71.05	84.21
		P		96.05	85.53	86.84
		C	T	94.74	100.00	89.47
		S		97.37	71.05	84.21
		P		96.05	85.53	86.84

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
6	Maharashtra	C	H	100.00	82.76	98.28
		S		61.54	69.23	92.31
		P		88.10	78.57	96.43
		C	T	86.57	71.64	85.07
		S		61.54	69.23	92.31
		P		79.57	70.97	87.10
7	Punjab	C	H	100.00	89.86	97.10
		S		100.00	100.00	100.00
		P		100.00	94.89	98.54
		C	T	98.57	88.57	95.71
		S		100.00	100.00	100.00
		P		99.28	94.20	97.83
8	Rajasthan	C	H	92.50	40.00	70.00
		S		93.55	41.94	93.55
		P		92.96	40.85	80.28
		C	T	92.50	40.00	70.00
		S		90.63	40.63	90.63
		P		91.67	40.28	79.17
9	Tamil Nadu	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		90.82	94.90	100.00
10	Uttar Pradesh	C	H	97.50	88.00	99.50
		S		100.00	100.00	100.00
		P		97.69	88.89	99.54
		C	T	97.50	88.00	99.50
		S		100.00	100.00	100.00
		P		97.69	88.89	99.54
11	Uttarakhand	C	H	100.00	90.00	100.00
		S		100.00	90.00	100.00
		P		100.00	90.00	100.00
		C	T	100.00	90.00	100.00
		S		100.00	90.00	100.00
		P		100.00	90.00	100.00
Wheat						
1	Assam	C	H	23.53	41.18	76.47
		S		5.26	31.58	57.89
		P		13.89	36.11	66.67
		C	T	16.00	28.00	52.00
		S		4.55	27.27	50.00
		P		10.64	27.66	51.06
2	Bihar	C	H	88.10	61.90	95.71
		S		83.56	58.22	91.78
		P		86.24	60.39	94.10
		C	T	84.86	59.63	92.20
		S		83.56	58.22	91.78
		P		84.34	59.07	92.03
3	Chhattisgarh	C	H	50.00	70.00	100.00
		S		57.89	86.84	92.11
		P		53.85	78.21	96.15
		C	T	50.00	70.00	100.00
		S		55.00	82.50	87.50
		P		52.50	76.25	93.75

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
4	Gujarat	C	H	89.29	85.00	95.71
		S		83.33	54.17	79.17
		P		87.26	74.53	90.09
		C	T	83.33	79.33	89.33
		S		83.33	54.17	79.17
		P		83.33	71.17	86.04
5	Haryana	C	H	98.89	96.67	99.44
		S		95.45	100.00	100.00
		P		97.19	98.31	99.72
		C	T	98.89	96.67	99.44
		S		95.45	100.00	100.00
		P		97.19	98.31	99.72
6	Himachal Pradesh	C	H	19.10	32.58	79.78
		S		10.64	32.98	63.83
		P		14.75	32.79	71.58
		C	T	15.45	26.36	64.55
		S		9.80	30.39	58.82
		P		12.74	28.30	61.79
7	Jammu & Kashmir	C	H	27.97	65.25	89.83
		S		43.82	55.06	55.06
		P		34.78	60.87	74.88
		C	T	27.50	64.17	88.33
		S		42.86	53.85	53.85
		P		34.12	59.72	73.46
8	Jharkhand	C	H	75.00	20.00	95.00
		S		50.00	22.22	83.33
		P		63.16	21.05	89.47
		C	T	75.00	20.00	95.00
		S		50.00	22.22	83.33
		P		63.16	21.05	89.47
9	Karnataka	C	H	68.42	68.42	65.79
		S		40.00	78.00	14.00
		P		52.27	73.86	36.36
		C	T	52.00	52.00	50.00
		S		40.00	78.00	14.00
		P		46.00	65.00	32.00
10	Madhya Pradesh	C	H	71.78	52.28	85.48
		S		68.75	49.38	78.75
		P		70.57	51.12	82.79
		C	T	70.61	51.43	84.08
		S		67.90	48.77	77.78
		P		69.53	50.37	81.57
11	Maharashtra	C	H	91.00	79.00	65.00
		S		92.39	91.30	72.83
		P		91.67	84.90	68.75
		C	T	89.22	77.45	63.73
		S		92.39	91.30	72.83
		P		90.72	84.02	68.04
12	Punjab	C	H	99.08	99.54	99.54
		S		98.08	100.00	99.04
		P		98.59	99.77	99.30
		C	T	98.18	98.64	98.64
		S		98.08	100.00	99.04
		P		98.13	99.30	98.83

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
13	Rajasthan	C	H	97.58	73.39	94.35
		S		98.15	53.70	86.11
		P		97.84	64.22	90.52
		C	T	97.58	73.39	94.35
		S		98.15	53.70	86.11
		P		97.84	64.22	90.52
14	Uttar Pradesh	C	H	99.28	86.71	99.46
		S		95.86	87.59	69.66
		P		98.58	86.89	93.30
		C	T	99.10	86.56	99.28
		S		95.86	87.59	69.66
		P		98.44	86.77	93.17
15	Uttarakhand	C	H	60.00	56.67	56.67
		S		78.05	43.90	70.73
		P		67.33	51.49	62.38
		C	T	60.00	56.67	56.67
		S		76.19	42.86	69.05
		P		66.67	50.98	61.76
16	West Bengal	C	H	98.21	100.00	100.00
		S		100.00	100.00	100.00
		P		98.61	100.00	100.00
		C	T	94.83	96.55	96.55
		S		100.00	100.00	100.00
		P		95.95	97.30	97.30
Barley						
1	Haryana	C	H	100.00	93.33	100.00
		S		93.33	93.33	93.33
		P		96.67	93.33	96.67
		C	T	100.00	93.33	100.00
		S		93.33	93.33	93.33
		P		96.67	93.33	96.67
2	Himachal Pradesh	C	H	27.27	0.00	27.27
		S		0.00	7.69	26.92
		P		12.50	4.17	27.08
		C	T	15.00	0.00	15.00
		S		0.00	5.88	20.59
		P		8.11	2.70	17.57
3	Punjab	C	H	100.00	96.30	100.00
		S		100.00	100.00	100.00
		P		100.00	98.11	100.00
		C	T	100.00	96.30	100.00
		S		100.00	100.00	100.00
		P		100.00	98.11	100.00
4	Rajasthan	C	H	100.00	43.59	89.74
		S		100.00	57.14	88.57
		P		100.00	50.00	89.19
		C	T	100.00	43.59	89.74
		S		100.00	57.14	88.57
		P		100.00	50.00	89.19
Gram						
1	Andhra Pradesh	C	H	20.00	90.00	92.50
		S		7.50	90.00	90.00
		P		13.75	90.00	91.25
		C	T	20.00	90.00	92.50
		S		7.50	90.00	90.00
		P		13.75	90.00	91.25

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
2	Bihar	C	H	31.58	15.79	57.89
		S		0.00	0.00	23.08
		P		18.75	9.38	43.75
		C	T	30.00	15.00	55.00
		S		0.00	0.00	23.08
		P		18.18	9.09	42.42
3	Chhhattisgarh	C	H	52.50	17.50	65.00
		S		42.50	25.00	55.00
		P		47.50	21.25	60.00
		C	T	52.50	17.50	65.00
		S		42.50	25.00	55.00
		P		47.50	21.25	60.00
4	Gujarat	C	H	45.83	75.00	66.67
		S		58.33	66.67	50.00
		P		50.00	72.22	61.11
		C	T	27.50	45.00	40.00
		S		58.33	66.67	50.00
		P		34.62	50.00	42.31
5	Haryana	C	H	45.71	67.14	55.71
		S		61.90	76.19	53.97
		P		53.38	71.43	54.89
		C	T	45.71	67.14	55.71
		S		61.90	76.19	53.97
		P		53.38	71.43	54.89
6	Jharkhand	C	H	30.00	0.00	20.00
		S		0.00	0.00	30.00
		P		15.00	0.00	25.00
		C	T	30.00	0.00	20.00
		S		0.00	0.00	30.00
		P		15.00	0.00	25.00
7	Karnataka	C	H	16.67	55.56	61.11
		S		21.05	89.47	23.68
		P		18.92	72.97	41.89
		C	T	15.00	50.00	55.00
		S		21.05	89.47	23.68
		P		17.95	69.23	39.74
8	Madhya Pradesh	C	H	52.17	18.12	68.12
		S		45.65	17.39	54.35
		P		49.57	17.83	62.61
		C	T	51.43	17.86	67.14
		S		45.65	17.39	54.35
		P		49.14	17.67	62.07
9	Maharashtra	C	H	95.95	91.89	59.46
		S		62.86	80.00	34.29
		P		85.32	88.07	51.38
		C	T	95.95	91.89	59.46
		S		62.86	80.00	34.29
		P		85.32	88.07	51.38
10	Punjab	C	H	96.15	88.46	53.85
		S		100.00	100.00	42.31
		P		98.08	94.23	48.08
		C	T	96.15	88.46	53.85
		S		100.00	100.00	42.31
		P		98.08	94.23	48.08

Sl. No.	State	Agency	H/T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
11	Rajasthan	C	H	66.99	32.04	62.14
		S		62.24	29.59	58.16
		P		64.68	30.85	60.20
		C	T	66.99	32.04	62.14
		S		62.24	29.59	58.16
		P		64.68	30.85	60.20
12	Uttar Pradesh	C	H	58.00	16.00	70.00
		S		44.44	22.22	55.56
		P		54.41	17.65	66.18
		C	T	58.00	16.00	70.00
		S		44.44	22.22	55.56
		P		54.41	17.65	66.18
Rape & Mustard						
1	Assam	C	H	5.00	0.00	55.00
		S		3.57	0.00	67.86
		P		4.31	0.00	61.21
		C	T	4.29	0.00	47.14
		S		3.45	0.00	65.52
		P		3.91	0.00	55.47
2	Bihar	C	H	47.50	10.00	80.00
		S		66.67	3.33	70.00
		P		55.71	7.14	75.71
		C	T	47.50	10.00	80.00
		S		66.67	3.33	70.00
		P		55.71	7.14	75.71
3	Chhattisgarh	C	H	13.33	0.00	0.00
		S		11.54	7.69	15.38
		P		12.50	3.57	7.14
		C	T	13.33	0.00	0.00
		S		10.00	6.67	13.33
		P		11.67	3.33	6.67
4	Gujarat	C	H	100.00	97.92	100.00
		S		69.44	58.33	94.44
		P		86.90	80.95	97.62
		C	T	96.00	94.00	96.00
		S		65.79	55.26	89.47
		P		82.95	77.27	93.18
5	Haryana	C	H	87.00	90.00	
		S		92.39	98.91	96.74
		P		89.58	94.27	95.83
		C	T	87.00	90.00	95.00
		S		92.39	98.91	96.74
		P		89.58	94.27	95.83
6	Jharkhand	C	H	90.00	10.00	70.00
		S		30.00	0.00	50.00
		P		60.00	5.00	60.00
		C	T	90.00	10.00	70.00
		S		30.00	0.00	50.00
		P		60.00	5.00	60.00
7	Madhya Pradesh	C	H	73.33	46.67	66.67
		S		41.18	23.53	35.29
		P		61.70	38.30	55.32
		C	T	73.33	46.67	66.67
		S		41.18	23.53	35.29
		P		61.70	38.30	55.32

Sl. No.	State	Agency	H/ T	Percentage of Experiments under various inputs for crops		
				I	HYV	F
1	2	3	4	5	6	7
8	Punjab	C	H	97.50	70.00	95.00
		S		100.00	90.00	92.50
		P		98.75	80.00	93.75
		C	T	97.50	70.00	95.00
		S		100.00	90.00	92.50
		P		98.75	80.00	93.75
9	Rajasthan	C	H	95.12	78.05	92.68
		S		90.54	59.46	72.97
		P		92.95	69.23	83.33
		C	T	95.12	78.05	92.68
		S		90.54	59.46	72.97
		P		92.95	69.23	83.33
10	Uttar Pradesh	C	H	95.96	66.67	98.99
		S		90.91	54.55	81.82
		P		95.04	64.46	95.87
		C	T	95.96	66.67	98.99
		S		90.91	54.55	81.82
		P		95.04	64.46	95.87
11	West Bengal	C	H	80.19	82.08	98.11
		S		73.68	100.00	100.00
		P		78.47	86.81	98.61
		C	T	77.27	79.09	94.55
		S		73.68	100.00	100.00
		P		76.35	84.46	95.95

ANNEX - VIII

INCIDENCE OF ERRORS IN CONDUCTING CROP CUTTING EXPERIMENTS DURING 2017-18

S. No.	State	Season	AGENCY	% of Expts. where no error noticed	Percentage of experiments where errors noticed							
					e_1	e_2	e_3	e_4	e_5	e_6	e_7	e_8
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Andhra	Kharif	C	80	0	0	5	9	1	8	0	8
	Pradesh		S	40	0	0	9	2	1	7	1	52
			P	60	0	0	7	5	1	7	1	30
		Rabi	C	91	0	0	1	0	1	6	1	1
			S	38	1	1	0	0	3	5	0	55
			P	64	1	1	0	0	2	5	1	28
2	Assam	Early Kharif	C	96	0	0	0	0	0	0	0	4
			S	46	0	0	0	0	0	0	0	54
			P	75	0	0	0	0	0	0	0	25
		Late Kharif	C	94	0	0	0	0	0	0	0	6
			S	58	0	0	0	0	0	0	0	42
			P	78	0	0	0	0	0	0	0	22
		Rabi	C	60	0	0	1	1	0	1	0	39
			S	51	0	0	0	0	0	0	0	49
			P	56	0	0	0	0	0	0	0	44
		Summer	C	58	0	0	0	0	0	0	0	42
			S	35	0	0	0	0	0	0	0	65
			P	47	0	0	0	0	0	0	0	53
3	Bihar	Autumn	C	91	0	0	0	0	0	5	0	9
		(Bhadai)	S	10	2	0	4	4	0	0	0	88
			P	54	1	0	2	2	0	3	0	45
		Winter	C	84	0	0	0	0	1	2	0	13
		(Agahani)	S	12	0	0	0	0	0	4	0	88
			P	49	0	0	0	0	1	3	0	49
		Rabi	C	82	0	0	1	1	0	8	0	9
			S	19	0	0	0	0	0	0	0	81
			P	55	0	0	1	1	0	5	0	39
		Summer	C	100	0	0	0	0	0	0	0	0
			S	0	0	0	0	0	0	0	0	100
			P	72	0	0	0	0	0	0	0	28
4	Chhattisgarh	Kharif	C	69	1	0	0	7	6	6	0	25
			S	55	0	0	0	0	0	0	0	45
			P	62	1	0	0	4	3	3	0	34
		Rabi	C	89	5	1	0	5	3	7	1	3
			S	50	0	0	0	0	0	0	0	50
			P	70	2	1	0	3	1	4	0	26
5	Gujarat	Kharif	C	85	0	0	0	0	0	1	0	14
			S	29	0	2	0	1	0	8	0	70
			P	64	0	1	0	0	0	4	0	34
		Rabi	C	87	0	0	0	0	0	4	0	11
			S	27	0	7	7	5	0	3	1	73
			P	65	0	2	2	2	0	3	0	33
6	Haryana	Kharif	C	82	0	0	0	0	1	1	1	17
			S	80	0	0	0	0	0	1	0	20
			P	81	0	0	0	0	0	1	0	18
		Rabi	C	90	0	0	1	1	0	6	1	3
			S	83	0	0	0	0	0	1	0	15
			P	87	0	0	0	0	0	3	1	9
7	Himachal	Kharif	C	72	2	0	4	10	2	15	0	11
	Pradesh		S	66	0	0	1	1	6	13	0	27
			P	69	1	0	2	6	4	14	0	19
		Rabi	C	65	1	2	5	4	0	14	0	21
			S	54	2	2	5	0	13	11	1	35
			P	59	1	2	5	2	7	12	0	28

S. No.	State	Season	AGENCY	% of Expts. where no error noticed	Percentage of experiments where errors noticed							
					e_1	e_2	e_3	e_4	e_5	e_6	e_7	e_8
1	2	3	4	5	6	7	8	9	10	11	12	13
8	Jammu &	Kharif	C	11	9	10	9	41	4	18	0	71
	Kashmir		S	10	2	0	17	14	0	5	0	83
			P	10	7	7	12	31	3	13	0	75
		Rabi	C	45	0	0	2	1	0	1	0	52
			S	22	0	0	24	13	0	0	0	78
			P^	35	0	0	11	6	0	0	0	63
9	Jharkhand	Early Kharif	C	90	0	0	0	0	0	0	0	10
		(Bhadai)	S	25	0	0	0	0	0	0	0	75
			P	66	0	0	0	0	0	0	0	34
		Late Kharif	C	77	0	0	0	0	0	3	0	21
		(Agahani)	S	29	0	0	0	0	0	0	0	71
			P	59	0	0	0	0	0	2	0	40
		Rabi	C	77	0	0	0	5	0	2	0	22
			S	22	0	0	2	0	0	0	0	78
			P	51	0	0	1	3	0	1	0	48
10	Karnataka	Kharif	C	79	0	0	4	4	0	3	0	17
			S	43	0	1	3	1	1	4	0	56
			P	59	0	0	3	2	0	3	0	39
		Rabi	C	48	0	1	6	10	1	20	0	46
			S	33	0	0	4	3	0	3	2	66
			P	40	0	0	5	6	0	11	1	57
		Summer	C	83	0	0	2	8	0	8	0	13
			S	42	0	0	1	1	0	1	0	58
			P	61	0	0	1	4	0	4	0	37
11	Kerala	Autumn	C	91	0	0	0	0	0	6	0	3
	$		S	94	0	0	0	0	0	0	0	6
			P	93	0	0	0	0	0	3	0	5
		Winter	C	90	0	0	0	0	0	0	0	10
			S	81	0	0	0	0	0	0	0	19
			P	86	0	0	0	0	0	0	0	15
		Summer	C	96	0	0	0	0	0	0	0	4
			S	40	0	0	0	0	0	0	0	61
			P	68	0	0	0	0	0	0	0	32
12	Madhya	Kharif	C	81	2	1	0	6	1	2	0	12
	Pradesh		S	18	0	0	1	1	0	2	1	79
			P	53	1	1	1	4	1	2	0	42
		Rabi	C	85	0	0	0	5	9	3	0	3
			S	74	0	0	0	0	1	0	0	26
			P	80	0	0	0	3	5	2	0	12
13	Maharshtra	Kharif	C	46	2	3	15	42	0	32	5	17
			S	7	3	2	5	14	1	4	3	91
			P	30	2	2	11	31	0	20	4	47
		Rabi	C	32	0	0	0	1	37	20	3	37
			S	37	0	0	1	1	42	23	4	35
			P	34	0	0	0	1	39	22	3	36
14	Odisha	Autumn	C	90	0	0	0	0	3	2	0	5
			S	93	0	0	0	0	0	0	0	7
			P	91	0	0	0	0	2	1	0	6
		Winter	C	95	0	0	0	0	0	1	0	4
			S	99	0	0	0	0	0	1	0	1
			P	97	0	0	0	0	0	1	0	2
		Summer	C	95	0	0	1	2	0	1	0	2
			S	88	0	0	0	1	0	1	0	10
			P	92	0	0	0	2	0	1	0	6

S. No.	State	Season	AGENCY	% of Expts. where no error noticed	Percentage of experiments where errors noticed							
					e_1	e_2	e_3	e_4	e_5	e_6	e_7	e_8
1	2	3	4	5	6	7	8	9	10	11	12	13
15	Punjab	Kharif	C	50	0	0	1	2	2	15	0	44
			S	21	0	0	0	0	0	1	0	79
			P	36	0	0	0	1	1	8	0	61
		Rabi	C	84	0	0	2	3	1	8	0	10
			S	32	0	0	0	0	1	0	0	68
			P	58	0	0	1	1	1	4	0	38
16	Rajasthan	Kharif	C	56	2	0	7	6	1	33	1	16
			S	43	0	0	0	0	1	6	0	55
			P	50	1	0	3	3	1	20	0	35
		Rabi	C	57	0	0	5	3	0	40	1	11
			S	33	0	0	0	0	1	3	0	65
			P	46	0	0	3	1	1	22	0	37
17	Tamil Nadu #	Kharif	C	71	1	1	2	3	0	18	1	8
			S	43	0	1	5	0	0	7	0	51
			P	57	1	1	4	1	0	13	1	29
		Rabi	C	68	2	2	4	2	0	19	2	11
			S	69	0	0	0	0	0	2	0	29
			P	69	1	1	2	1	0	11	1	20
18	Telangana	Kharif	C	87	0	0	1	1	0	1	1	10
			S	30	0	0	19	0	0	5	1	66
			P	62	0	0	9	1	0	3	1	35
		Rabi	C	93	0	0	0	0	3	2	0	3
			S	31	0	0	6	2	0	3	0	66
			P	64	0	0	3	1	2	2	0	33
19	Uttar	Kharif	C	39	2	0	13	15	1	22	1	43
	Pradesh		S	44	1	0	1	3	1	9	0	52
			P	40	1	0	11	13	1	19	1	44
		Rabi	C	28	1	0	8	10	0	19	1	63
			S	29	0	0	2	6	0	6	0	69
			P	28	1	0	7	9	0	16	1	64
		Zaid Rabi	C	0	0	0	0	0	0	15	0	100
			S	Insufficient Data								
			P	1	0	0	0	0	0	14	0	99
20	Uttarakhand	Kharif	C	48	0	0	0	0	1	36	0	22
			S	30	0	0	0	14	0	5	0	65
			P	41	0	0	0	5	0	25	0	37
		Rabi	C	68	0	3	0	12	3	30	0	7
			S	0	0	0	0	68	5	15	0	100
			P	41	0	2	0	35	4	24	0	45
21	West Bengal	Aus	C	97	0	0	0	0	0	0	0	3
			S	70	0	0	0	0	0	0	0	30
			P	89	0	0	0	0	0	0	0	11
		Aman	C	49	0	0	0	1	0	0	0	51
			S	44	0	0	12	0	0	0	0	56
			P	48	0	0	3	0	0	0	0	52
		Rabi	C	78	0	0	1	1	0	6	0	15
			S	63	0	0	0	17	0	0	0	37
			P	74	0	0	1	5	0	4	0	21
		Summer	C	74	0	0	1	2	1	2	0	23
			S	64	0	0	0	0	0	0	0	36
			P	72	0	0	0	2	0	1	0	24

ANNEX VIII (Contd.....)

S. No.	State	Season	AGENCY	% of Expts. where no error noticed	Percentage of experiments where errors noticed							
					e_1	e_2	e_3	e_4	e_5	e_6	e_7	e_8
1	2	3	4	5	6	7	8	9	10	11	12	13
22	Puducherry	Kharif	C	60	0	0	0	0	0	20	0	20
			S	40	0	0	0	0	0	0	0	60
			P	50	0	0	0	0	0	10	0	40
		Rabi-I	C	100	0	0	0	0	0	0	0	0
			S	20	0	0	0	0	0	0	0	80
			P	60	0	0	0	0	0	0	0	40
		Rabi-II	C	40	0	0	0	0	0	40	0	40
			S	90	0	0	0	0	0	0	0	10
			P	65	0	0	0	0	0	20	0	25
For States		Early Kharif	C	63	0	0	0	1	1	1	2	16
covered			S	32	0	0	0	0	0	0	3	42
			P	49	0	0	0	1	0	1	2	21
		Late Kharif	C	65	1	1	5	10	1	13	1	22
			S	40	0	0	3	2	0	4	0	57
			P	55	1	1	4	7	1	9	1	37
		Rabi	C	66	0	0	3	4	3	13	1	22
			S	45	0	0	2	2	3	3	0	51
			P	57	0	0	2	3	3	9	1	35
		Summer	C	80	0	0	0	1	0	3	0	18
			S	54	0	0	0	0	0	0	0	46
			P	69	0	0	0	1	0	2	0	30
		All Seasons	C	66	1	0	4	7	2	12	1	21
			S	42	0	0	2	2	1	4	1	54
			P	56	1	0	3	5	2	8	1	35

Note:

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

SUPPLY AND USE OF EQUIPMENT FOR CROP CUTTING EXPERIMENTS DURING 2017-18

S. No.	State	Season	AGENCY	Percentage of experiments for which							
				Concerned Primary workers were not supplied with				Primary workers did not use the supplied items			
				Tape	Pegs	Balance	Weight	Tape	Pegs	Balance	Weight
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra	Kharif	C	0	100	0	2	6	0	8	7
	Pradesh		S	1	83	0	0	15	9	17	17
			P	1	91	0	1	10	5	12	12
		Rabi	C	0	99	0	0	1	0	1	0
			S	6	78	6	6	17	7	17	17
			P	3	89	3	3	9	3	9	9
2	Assam	Early Kharif	C	0	97	3	2	19	3	16	16
			S	0	59	0	0	0	11	2	7
			P	0	81	2	1	11	6	10	12
		Late Kharif	C	0	98	3	3	25	2	24	24
			S	0	70	0	0	4	11	4	4
			P	0	86	2	2	16	6	15	15
		Rabi	C	6	97	9	9	11	1	13	11
			S	0	71	0	0	5	3	5	4
			P	3	84	5	5	8	2	9	7
		Summer	C	0	78	8	8	17	3	28	28
			S	0	76	0	12	18	12	18	18
			P	0	77	4	10	17	7	23	23
3	Bihar	Autumn	C	92	98	94	94	4	0	4	4
		(Bhadai)	S	49	44	49	44	15	15	15	15
			P	72	73	73	71	9	7	9	9
		Winter	C	92	99	95	95	6	0	4	4
		(Aghani)	S	12	14	12	12	43	36	48	46
			P	53	58	54	55	24	17	25	25
		Rabi	C	95	100	99	83	3	0	1	1
			S	49	56	51	51	45	37	45	45
			P	75	81	79	70	21	16	20	19
		Summer	C	100	100	100	85	0	0	0	0
			S	0	0	0	0	20	20	20	20
			P	72	72	72	61	6	6	6	6
4	Chhattisgarh	Kharif	C	2	98	45	74	60	2	47	19
			S	0	13	2	2	0	0	8	8
			P	1	56	24	39	31	1	28	14
		Rabi	C	5	87	39	71	53	13	52	20
			S	0	17	3	1	0	0	5	3
			P	3	53	21	37	27	7	29	12
5	Gujarat	Kharif	C	21	97	50	53	23	2	17	15
			S	0	78	9	9	88	3	77	77
			P	13	90	35	37	47	3	39	38
		Rabi	C	46	95	58	58	9	1	10	10
			S	0	88	8	9	98	3	90	89
			P	30	92	40	40	41	2	39	39
6	Haryana	Kharif	C	15	99	39	66	5	0	6	5
			S	2	61	44	54	59	19	29	26
			P	9	80	42	60	31	9	17	15
		Rabi	C	29	100	53	53	7	0	3	3
			S	10	61	55	54	56	26	33	32
			P	20	81	54	54	31	13	18	17
7	Himachal	Kharif	C	11	100	52	55	24	0	24	26
	Pradesh		S	6	55	38	52	55	41	63	48
			P	9	77	44	53	40	21	44	37
		Rabi	C	17	98	65	67	8	2	15	12
			S	8	53	40	58	53	38	58	42
			P	13	75	52	62	32	21	38	27
8	Jammu &	Kharif	C	86	99	99	99	8	0	0	0
	Kashmir		S	50	67	52	50	17	0	17	19
			P	74	88	83	82	11	0	6	7
		Rabi	C	100	100	100	98	0	0	0	0
			S	63	85	63	63	34	11	34	34
			P*	84	94	84	83	14	5	14	14

ANNEX IX (Contd.....)

S. No.	State	Season	AGENCY	Percentage of experiments for which							
				Concerned Primary workers were not supplied with				Primary workers did not use the supplied items			
				Tape	Pegs	Balance	Weight	Tape	Pegs	Balance	Weight
1	2	3	4	5	6	7	8	9	10	11	12
9	Jharkhand	Early Kharif	C	80	100	100	100	10	0	0	0
			S	33	33	33	33	17	17	17	17
			P	63	75	75	75	13	6	6	6
		Late Kharif	C	72	97	97	97	28	3	3	3
			S	25	23	25	63	8	23	21	8
			P	54	69	70	84	21	10	10	5
		Rabi	C	73	100	98	98	8	0	2	2
			S	78	78	78	78	22	22	22	22
			P	75	89	88	88	15	11	12	12
10	Karnataka	Kharif	C	59	92	67	67	7	0	10	8
			S	40	57	39	35	21	6	19	18
			P	49	73	52	49	14	3	15	13
		Rabi	C	65	91	78	67	3	1	3	3
			S	49	68	50	50	16	3	16	15
			P	56	79	63	58	10	2	10	10
		Summer	C	66	88	63	63	9	0	6	3
			S	33	51	33	25	29	28	22	21
			P	49	68	47	43	20	15	15	13
11	Kerala	Autumn	C	2	27	5	29	12	23	15	11
	$ & *		S	0	4	0	6	0	0	0	0
			P	1	16	3	18	6	12	8	6
		Winter	C	1	20	3	28	8	37	16	13
			S	0	4	0	7	0	0	0	0
			P	1	12	2	18	4	19	8	7
		Summer	C	10	26	3	22	3	12	12	10
			S	0	2	0	7	1	0	0	0
			P	5	14	2	14	2	6	6	5
12	Madhya	Kharif	C	2	83	42	44	43	14	56	55
	Pradesh		S	0	10	7	7	30	38	38	33
			P	1	51	27	28	37	25	48	45
		Rabi	C	5	83	46	47	32	17	53	53
			S	0	0	0	0	41	50	54	50
			P	3	49	27	28	35	31	53	52
13	Maharastra	Kharif	C	77	97	95	94	14	2	2	3
			S	11	19	12	13	27	19	27	23
			P	50	65	61	60	19	9	12	11
		Rabi	C	0	0	0	0	37	2	20	4
			S	0	0	0	0	25	22	25	27
			P	0	0	0	0	32	11	22	14
14	Odisha	Autumn	C	0	6	0	0	8	9	15	10
			S	0	0	0	0	0	0	0	0
			P	0	3	0	0	4	5	8	5
		Winter	C	0	7	1	0	0	1	3	0
			S	0	0	0	0	0	0	0	0
			P	0	3	0	0	0	0	1	0
		Summer	C	0	0	1	1	2	7	3	2
			S	0	0	0	0	0	0	0	0
			P	0	0	0	0	1	3	1	1
15	Punjab	Kharif	C	45	99	97	88	6	1	1	1
			S	11	84	80	81	13	4	5	5
			P	29	92	89	85	10	2	3	3
		Rabi	C	57	100	98	85	4	0	2	0
			S	9	89	87	87	12	4	4	4
			P	33	94	92	86	8	2	3	2
16	Rajasthan	Kharif	C	59	99	86	91	27	1	14	8
			S	31	38	34	32	40	27	41	44
			P	45	69	60	62	34	23	27	26
		Rabi	C	87	99	98	87	8	1	1	0
			S	30	33	30	29	46	40	46	49
			P	60	68	66	60	26	19	22	23
17	Tamil	Kharif	C	0	18	7	6	12	40	18	15
	Nadu #		S	0	0	0	0	27	27	28	27
			P	0	9	3	3	20	33	23	21
		Rabi	C	1	22	8	5	11	26	15	8
			S	0	0	0	0	31	31	31	31
			P	1	11	4	3	21	29	23	19

S. No.	State	Season	AGENCY	Percentage of experiments for which							
				Concerned Primary workers were not supplied with				Primary workers did not use the supplied items			
				Tape	Pegs	Balance	Weight	Tape	Pegs	Balance	Weight
1	2	3	4	5	6	7	8	9	10	11	12
18	Telangana	Kharif	C	3	94	2	3	3	2	3	3
			S	4	55	4	4	25	10	31	31
			P	4	77	3	4	13	6	16	16
		Rabi	C	1	99	14	14	15	1	12	12
			S	16	90	16	16	12	2	14	14
			P	7	95	15	14	14	1	13	13
19	Uttar Pradesh	Kharif	C	20	93	70	79	26	4	20	15
			S	11	20	16	11	22	15	24	31
			P	18	78	59	65	25	6	21	18
		Rabi	C	21	97	79	80	19	2	20	19
			S	8	18	19	18	13	12	14	21
			P	18	80	67	67	17	4	19	19
		Summer	C	30	98	78	80	28	3	20	20
			S	0	0	0	0	0	0	0	0
			P	28	91	72	74	26	2	19	19
20	Uttarakhand	Kharif	C	1	80	17	38	8	5	15	15
			S	0	0	0	0	30	35	32	35
			P	0	51	11	25	16	16	22	23
		Rabi	C	0	60	45	45	7	17	23	23
			S	0	0	0	0	49	54	61	61
			P	0	36	27	27	24	32	39	39
21	West Bengal @	Autumn	C	6	92	0	0	5	1	8	8
			S	0	92	0	0	0	0	0	0
			P	4	92	0	0	3	1	5	5
		Winter	C	3	77	0	0	9	8	10	10
			S	0	96	0	0	0	0	0	0
			P	2	81	0	0	7	6	8	8
		Rabi	C	0	96	0	0	7	0	7	9
			S	0	100	0	0	0	0	0	0
			P	0	165	0	0	5	0	6	6
		Summer	C	1	81	7	1	0	0	1	0
			S	0	71	0	0	0	0	0	0
			P	0	79	6	1	0	0	0	0
22	Puducherry	Kharif	C	0	20	0	80	0	0	10	0
			S	0	40	0	0	0	0	0	0
			P	0	30	0	40	0	0	5	0
		Rabi-I	C	0	0	10	80	0	0	0	0
			S	0	40	0	0	0	0	0	0
			P	0	20	5	40	0	0	0	0
		Rabi-II	C	0	0	0	0	0	0	10	0
			S	0	0	0	0	0	0	0	0
			P	0	0	0	0	0	0	5	0
For States Covered		Early Kharif	C	17	57	18	21	9	7	12	9
			S	8	27	8	8	3	4	3	3
			P	13	43	13	15	6	6	8	7
		Late Kharif	C	27	85	52	56	18	5	16	13
			S	10	40	19	19	28	16	27	26
			P	20	65	38	40	22	10	20	19
		Rabi	C	32	85	56	55	14	5	15	12
			S	15	45	28	28	32	22	31	31
			P	25	69	44	43	22	12	22	20
		Summer	C	14	47	17	22	5	6	8	7
			S	4	14	4	7	5	4	4	4
			P	10	33	11	16	5	5	6	6
All Seasons			C	28	81	49	52	15	5	15	12
			S	11	39	20	21	26	16	26	25
			P	21	64	37	38	20	10	19	18

Note:

1. @= ISI Equipments in place of Tape
2. $ In Kerala, whole year data has been included in Summer season
3. #= In the light of introduction of concept of Kharif and Rabi seasons in the Tamil Nadu state from Agricultural year 2017-18 and consequent, categorization of crops, the data have been presented seasonwise instead of whole year.
4. * Since data from one agency is available, the same data has been taken against pooled data for comparison purpose .

DELEGATION OF WORK AND CONDUCT OF CROP CUTTING EXPERIMENTS BY UNTRAINED WORKERS DURING 2017-18

Sl. No.	State	AGENCY	Percentage of Experiments																							
			Early Kharif						Late Kharif						Rabi						Summer					
			S	UW	DJ	UV	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	C							0	0	2	0	99	0	2	0	17	16	124	10						
	Pradesh	S							1	0	2	0	97	8	0	0	0	0	100	6						
		P							1	0	2	0	98	4	1	0	9	8	112	8						
2	Assam	C	2	0	0	0	98	0	0	0	0	0	100	0	0	0	0	0	102	0	11	0	0	0	89	0
		S	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	101	0	0	0	0	0	100	0
		P	1	0	0	0	99	0	0	0	0	0	100	0	0	0	0	0	101	0	6	0	0	0	94	0
3	Bihar	C	0	0	2	2	98	12	1	0	6	0	93	10	0	0	1	1	99	23	0	0	0	0	100	8
		S	2	2	0	0	98	7	3	0	13	0	83	1	0	0	4	1	96	50	0	0	0	0	100	80
		P	1	1	1	1	98	10	2	0	10	0	88	6	0	0	2	1	98	35	0	0	0	0	100	28
4	Chhattis-	C							1	0	5	1	94	1	0	0	2	0	97	0						
	garh	S							2	0	0	0	98	0	0	0	0	0	104	0						
		P							2	0	3	1	96	1	0	0	1	0	101	0						
5	Gujarat	C							0	0	0	0	100	0	0	0	0	0	100	11						
		S							0	0	0	0	100	0	1	0	0	0	99	31						
		P							0	0	0	0	100	0	1	0	0	0	99	18						
6	Haryana	C							0	0	0	0	100	0	1	0	2	1	97	2						
		S							0	0	0	0	100	0	1	0	6	6	93	1						
		P							0	0	0	0	100	0	1	0	4	3	95	1						
7	Himachal	C							3	0	0	0	97	0	2	0	0	0	133	2						
	Pradesh	S							0	0	0	0	100	3	0	0	0	0	113	0						
		P							2	0	0	0	98	2	1	0	0	0	123	1						
8	Jammu	C							6	0	0	0	94	14	7	0	0	0	93	0						
	&	S							10	0	0	0	90	7	0	0	0	0	102	0						
	Kashmir	P							7	0	0	0	93	12	4	0	0	0	97	0						
9	Jharkhand	C	0	0	5	0	95	40	3	0	15	0	82	33	3	1	2	2	95	30						
		S	0	0	0	0	100	67	0	0	0	0	100	0	2	0	2	0	96	22						
		P	0	0	3	0	97	50	2	0	10	0	89	21	3	1	2	1	95	26						
10	Karnataka	C							0	0	0	0	121	0	1	0	0	0	99	1	0	0	0	0	100	0
		S							0	0	0	0	102	0	0	0	0	0	100	0	3	0	0	0	97	0
		P							0	0	0	0	111	0	1	0	0	0	99	1	1	0	0	0	99	0
11	Kerala	C	0	0	0	0	100	0	0	0	0	0	100	0							1	0	0	0	99	0
	@	S	2	0	0	0	98	0	0	0	0	0	100	0							0	0	0	0	100	0
		P	1	0	0	0	99	0	0	0	0	0	100	0							0	0	0	0	100	0
12	Madhya	C							0	0	1	0	99	0	0	0	2	0	98	0						
	Pradesh	S							1	0	0	0	99	13	0	0	0	0	100	18						
		P							1	0	1	0	99	6	0	0	1	0	99	7						

Sl. No.	State	AGENCY	Percentage of Experiments																							
			Early Kharif						Late Kharif						Rabi						Summer					
			S	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
13	Maharashtra	C							0	0	1	0	99	0	0	0	0	0	87	0						
		S							0	0	0	0	100	10	0	0	0	0	82	0						
		P							0	0	0	0	100	4	0	0	0	0	84	0						
14	Odisha	C	0	0	0	0	100	0	0	0	0	0	100	0							1	0	1	0	99	0
		S	1	1	0	0	99	0	1	1	0	0	99	0							0	0	0	0	100	0
		P	0	0	0	0	100	0	0	0	0	0	100	0							0	0	0	0	99	0
15	Punjab	C							0	0	0	0	100	0	1	0	0	0	99	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						
16	Rajasthan	C							2	0	0	0	102	9	0	0	2	0	98	3						
		S							1	0	0	0	99	0	1	0	0	0	99	3						
		P							2	0	0	0	100	5	0	0	1	0	99	3						
17	Tamil	C							1	0	2	0	97	0	1	0	0	0	99	0						
	Nadu	S							0	0	1	0	99	0	0	0	1	0	99	0						
	#	P							1	0	1	0	98	0	1	0	1	0	99	0						
18	Telangana	C							0	0	2	0	98	1	1	0	6	0	93	0						
		S							1	1	1	1	97	22	7	0	0	0	93	0						
		P							1	0	2	0	98	10	4	0	3	0	93	0						
19	Uttar	C							3	2	13	13	83	33	12	11	1	1	87	25	0	0	0	34	66	21
	Pradesh	S							2	1	9	2	89	0	25	13	7	4	67	11	0	0	0	0	0	0
		P							3	1	13	11	85	26	14	12	3	2	83	22	0	0	0	31	69	20
20	Uttarakhand	C							0	0	0	0	100	0	0	0	3	3	97	0						
		S							0	0	0	0	100	0	0	0	0	0	100	0						
		P							0	0	0	0	100	0	0	0	2	2	98	0						
21	West	C	1	1	0	0	99	32	0	0	0	0	100	1	0	0	0	0	100	17	0	0	0	0	74	1
	Bengal	S	0	0	0	0	100	24	0	0	0	0	100	0	0	0	2	0	98	4	0	0	0	0	71	0
		P	1	1	0	0	99	29	0	0	0	0	100	1	0	0	0	0	100	14	0	0	0	0	73	1
22	Pudu-	C							0	0	0	0	100	0	0	0	0	0	100	0	20	0	0	0	80	0
	cherry	S							0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0
		P							0	0	0	0	100	0	0	0	0	0	100	0	10	0	0	0	90	0
For States		C	1	0	1	0	99	10	1	0	3	2	97	7	3	2	2	1	97	8	1	0	3	3	89	3
Covered		S	1	1	0	0	99	6	1	0	1	0	98	4	2	1	1	1	96	8	0	0	0	0	98	1
		P	1	0	0	0	99	8	1	0	2	1	98	6	2	1	2	1	97	8	1	0	2	2	93	2

Note:

1- @= In Kerala Whole year data has been included in Summer season

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

3- NA = Data Not available

4 DS=For which field work was delegated to equivalent/senior person

5 DJ=For which field work was delegated to juniors

6 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

ANNEX - XI

SUBSTITUTION OF SAMPLING UNITS OBSERVED DURING SAMPLE CHECK ON CROP CUTTING EXPERIMENTS UNDER ICS DURING 2017-18

Sl. No.	State	Season	Percentage of experiments for which substitution was done in respect of							
			Selected villages due to reason *				Selected survey nos.due to reason $			
Reason Code			1	2	3	9	1	2	3	9
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	Kharif	20	0	0	0	0	0	0	1
		Rabi	21	0	0	0	0	0	0	0
2	Assam	Early Kharif	23	0	0	3	0	0	0	0
		Late Kharif	4	4	0	0	0	0	0	0
		Rabi	13	0	0	0	3	0	0	3
		Summer	11	0	0	3	0	0	0	3
3	Bihar	Bhadai	21	1	0	3	0	1	0	0
		Aghani	1	0	0	2	0	0	0	0
		Rabi	7	0	0	1	1	0	0	6
		Summer	6	0	0	0	3	0	0	0
4	Chhattisgarh	Kharif	13	0	0	0	0	0	0	0
		Rabi	36	0	0	1	10	0	0	4
5	Gujarat	Kharif	7	0	0	1	0	0	0	0
		Rabi	0	0	0	0	0	1	0	0
6	Haryana	Kharif	12	0	0	0	0	0	0	0
		Rabi	3	0	0	0	0	0	0	0
7	Himachal Pradesh	Kharif	18	0	0	0	1	0	0	1
		Rabi	4	1	0	0	0	0	0	14
8	Jammu & Kashmir	Kharif	2	0	1	2	0	0	0	2
		Rabi	2	0	0	1	0	0	0	4
9	Jharkhand	Early Kharif	9	0	0	0	0	0	0	3
		Late Kharif	0	0	0	3	0	0	0	3
		Rabi	3	0	0	16	2	0	0	54
10	Karnataka	Kharif	22	1	0	1	0	0	0	1
		Rabi	24	3	0	6	0	0	0	0
		Summer	25	6	0	6	0	0	0	1
11	Kerala	Autumn	29	0	0	0	0	0	0	0
		Winter	23	0	0	0	0	1	0	0
		Summer@	0	0	0	0	0	0	0	0
12	Madhya Pradesh	Kharif	7	0	0	1	0	0	0	0
		Rabi	6	0	0	0	1	0	0	2
13	Maharashtra	Kharif	6	0	0	1	0	0	0	0
		Rabi	0	0	0	0	0	0	0	0
14	Odisha	Autumn	5	0	0	0	0	0	0	0
		Winter	9	0	0	0	0	0	0	0
		Summer	47	0	0	0	1	0	0	1
15	Punjab	Kharif	2	0	0	0	0	0	0	0
		Rabi	2	0	0	0	0	0	0	0
16	Rajasthan	Kharif	7	0	0	0	2	0	0	2
		Rabi	7	0	0	0	2	0	0	2
17	Tamil Nadu #	Kharif	21	0	0	0	0	0	0	0
		Rabi	26	0	0	0	3	0	0	1

ANNEX- XI (Contd.....)

Sl. No.	State	Season	Percentage of experiments for which substitution was done in respect of							
			Selected villages due to reason *				Selected survey nos.due to reason $			
Reason Code			1	2	3	9	1	2	3	9
1	2	3	4	5	6	7	8	9	10	11
18	Telangana	Kharif	6	0	1	2	0	0	0	0
		Rabi	6	0	1	2	0	0	0	0
19	Uttar Pradesh	Kharif	2	0	0	0	1	1	0	0
		Rabi	0	0	0	0	0	0	0	0
		Summer	0	0	0	0	0	0	0	0
20	Uttarakhand	Kharif	8	0	0	0	0	0	0	1
		Rabi	0	0	0	0	1	0	0	0
21	West Bengal	Aus	0	0	0	1	0	0	0	0
		Aman	0	0	0	0	0	0	0	0
		Rabi	0	0	0	0	0	0	0	0
		Summer	0	0	0	0	2	0	0	0
22	Puducherry	Kharif	10	10	0	0	0	0	0	0
		Rabi-I	0	0	0	5	0	0	0	0
		Rabi-II	0	0	0	0	5	0	0	0
For States covered		Early Kharif	12	0	0	1	0	0	0	0
		Late Kharif	10	0	0	0	0	0	0	0
		Rabi	8	0	0	1	1	0	0	3
		Summer	14	1	0	1	1	0	0	1
		All Seasons	10	0	0	1	1	0	0	1

Note:

* 1.Crop not sown

2.Entire crop harvested in the village.

3. Records not available

9.Others

$ 1.Crop harvested prior to selection.

2.Crop harvested before the date fixed.

3.Field partially harvested affecting the location of experimental plot.

9.Others.

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

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

COMPARISON OF ESTIMATES OF CROP AREAS BASED ON ICS, TRS & FINAL ESTIMATES : 2017-18

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
				RICE-KHARIF					
1	Andhra	C	21	1716					
	Pradesh	S	1844	2004					
		P^	1140	1893	1534	1477	1.0386	0.7721	1.2815
2	Assam	C		128					
	(Autumn)	S		18					
	*	P^	NR	74	206	400	0.5150		0.1838
	Assam	C		527					
	(Winter)	S		368					
	*	P^		452	1720	2033	0.8460		0.2222
3	Bihar	C	0	188					
	(Bhadai)	S	91	891					
	$$	P	40	496	549	581			0.8535
	Bihar	C	0	545					
	(Aghani)	S	624	2866					
	$$	P	290	1622		2600		0.1114	0.6239
4	Chhattis-	C	6981	5315					
	garh	S	4272	4252					
		P	5633	4786	3911	3761	1.0399	1.4978	1.2726
5	Gujarat	C	0	785					
		S	72	748					
		P^	26	772	157	803	0.1955	0.0322	0.9611
6	Haryana	C	1614	1643					
	$$	S	1192	1201					
		P	1405	1424	1442	1422		0.9881	1.0016
7	Himachal	C	65	63					
	Pradesh	S	75	70					
	$$	P^	70	67		72	0.0000	0.9730	0.9241
8	Jammu &	C	260	256					
	Kashmir	S	175	174					
	@	P	217	214	287	274	1.0474	0.7915	0.7824
9	Jharkhand	C	NR	136					
	(Bhadai)$	S	143	166					
		P^	68	150		156			
	(Aghani)$	C	NR	1729					
	*	S	370	595					
		P^	168	1214	1038	1579		0.1065	0.7686
10	Karnataka	C	1211	1041					
		S	1003	1001					
		P	1113	1022	693	737	0.9403	1.5095	1.3868
11	Kerala	C	2	2					
	(Autumn)	S	2	2					
	@	P	2	2	0	44		0.0455	0.0455
	Kerala	C	2	2					
	(Winter)	S	3	3					
	@	P	3	3		145		0.0172	0.0172
12	Madhya	C	1225	1244					
	Pradesh	S	861	907					
		P	1068	1099	2144	2023	1.0598	0.5281	0.5433
13	Mahar-	C	536	1309					
	ashtra	S	970	1097					
		P	725	1217	1425	1425	1.0000	0.5088	0.8538
14	Odisha	C	765	767					
	(Autumn)	S	2065	2088					
	@	P	1414	1426		545		2.5936	2.6165
	Odisha	C	2709	2690					
	(Winter)	S	2852	2858					
	@	P	2781	2774		3085		0.9013	0.8992
15	Punjab	C	2896	2990					
	@	S	7451	7708					
		P	5050	5221		3065		1.6478	1.7036
16	Tamil Nadu	C	1168	1117					
	P-I	S	1188	1182					
		P	1178	1149	1104	1671	0.6607	0.7049	0.6878
	P-II	C	496	622					
		S	787	826					
		P	641	724	681	1671	0.4075	0.3836	0.4330
17	Telangana	C	0	2495					
		S	2247	2359					
		P	1301	2416	764	1047			

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
18	Uttar	C	3969	6919					
	Pradesh	S	2458	2919					
		P	3553	5818	5898	5788	1.0190	0.6139	1.0053
19	Uttar-	C	320	320					
	akhand	S	250	273					
	@	P	287	298	249	239	1.0418	1.1994	1.2453
20	W.Bengal	C	75	194					
	(Autumn)	S	44	193					
	@	P	62	194		154		0.4048	
	(Winter)	C	1061	3014					
	@	S	964	1207					
		P	1024	2326		3704		0.2765	0.6280
21	Puducherry	C	5	5					
		S	10	10					
		P^	1	1	4	13	0.3077	0.0769	0.0769
For states covered			29259	38853	23806	40514		0.7222	0.9590
			RICE (RABI/ SUMMER)						
1	Andhra	C	8	1208					
	Pradesh	S	1031	1247					
		P	635	1232		679	0.0000	0.9359	1.8143
2	Assam	C	0	122					
	*	S	0	193					
	@	P^	0	155	418	400	1.0450		0.3870
3	Bihar	C	0	212					
	*	S	0	146					
		P	0	183	83	68			2.6955
4	Karnataka	C	754	1285					
		S	524	524					
		P	640	908	31	256	0.1211	2.4999	3.5458
5	Kerala	C	2	2					
	@	S	4	4					
		P	3	3		44		0.0682	0.0682
6	Odisha	C	222	217					
	@	S	150	150					
		P^	186	183		222		0.8375	0.8262
7	Tamil Nadu	C	135	184					
		S	376	420					
		P	255	302	681	1671	0.4075	0.1526	0.1805
8	Telangana	C	0	2097					
		S	1892	2027					
	@	P	1123	2055	852	915		1.2269	2.2464
9	West	C	505	3451					
	Bengal	S	222	279					
	@	P	420	2495	0	1258		0.3336	1.9833
10	Puducherry	C	14	13					
	Rabi-I	S	15	22					
	$	P	15	18					
	Rabi-II	C	6	6					
	@	S	3	3					
		P	5	5	6	4	1.5000	1.1250	1.1250
For states covered			3281	7538	2071	5517		0.5947	1.3663
			JOWAR(KHARIF)						
2	Karnataka	C	97	111					
		S	117	117					
		P	106	114	93	92	1.0109	1.1573	1.2374
3	Madhya	C	10	90					
	Pradesh	S	59	59					
		P	31	77	161	270	0.5963	0.1151	0.2839
4	Maharashtra	C	185	498					
		S	416	414					
		P	286	461	565	565	1.0000	0.5056	0.8166
5	Rajasthan	C	60	57					
		S	109	106					
		P	84	81	553	516	1.0717	0.1634	0.1576
6	Tamil Nadu	C	439	473					
		S	428	444					
		P	434	459	339	241	1.4066	1.7988	1.9027

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
7	Telangana	C	0	6					
		S	34	34					
		P	20	22	0	43	0.0000	0.4578	0.5165
8	Uttar	C	103	127					
	Pradesh	S	158	147					
		P	118	133	169	169	1.0000	0.6990	0.7840
For states covered			1079	1347	1880	1896	0.9916	0.5690	0.7102
				JOWAR(RABI)					
1	Karnataka	C	602	913					
		S	1046	1046					
		P	822	979	1002	996	1.0060	0.8254	0.9829
2	Maharashtra	C	43	2694					
		S	904	934					
		P	388	1988	2899	1666		0.2331	1.1933
3	Tamil Nadu	C	0	4					
		S	28	28					
		P	14	16	63	144	0.4375	0.0968	0.1108
4	Telangana	C	0	141					
		S	29	29					
		P	17	75	22	24	0.9167	0.7170	3.1060
For states covered			1242	3058	3986	2830		0.4387	1.0804
				BAJRA					
1	Andhra	C	9	78					
	Pradesh	S	49	49					
		P	34	60	41	48	0.8542	0.6992	1.2540
2	Gujarat	C	NR	298					
		S	0	179					
		P^	0	255	29	397	0.0730	0.0000	0.6431
3	Haryana	C	572	566					
$$		S	639	645					
		P	605	605	446	450		1.3448	1.3447
4	Karnataka	C	465	604					
		S	149	149					
		P	315	389	230	231	0.9957	1.3653	1.6821
5	Maharashtra	C	119	845					
		S	726	855					
		P	383	849	788	788	1.0000	0.4867	1.0779
6	Rajasthan	C	739	789					
		S	788	840					
		P	763	814	4264	4236	1.0066	0.1802	0.1922
7	Tamil Nadu	C	48	32					
	P-I	S	70	117					
		P	59	74	42	63	0.6667	0.9358	1.1799
8	Uttar	C	988	1390					
	Pradesh	S	710	742					
		P	912	1212	925	925	1.0000	0.9854	1.3100
For states covered			3071	4259	6765	7138		0.4303	0.5967
				MAIZE					
2	Bihar	C	0	1446					
	@	S	42	996					
		P	19	1237	251	223			5.5477
3	Chhattisgarh	C	66	74					
		S	83	83					
		P	74	78	111	133	0.8346	0.5598	0.5901
4	Gujarat	C	NR	253					
	@	S	137	214					
		P^	195	239	68	303	0.2244	0.6436	0.7888
5	Haryana	C	17	28					
$$		S	4	4					
		P^	11	16	6	6		1.7609	2.6869
6	Himachal	C	356	318					
	Pradesh	S	294	302					
$$		P^	325	310	0	281	0.0000	1.1554	1.1029
7	Jammu &	C	268	264					
	Kashmir	S	279	274					
		P	274	269	302	303	0.9967	0.9029	0.8880
8	Jharkhand	C	NR	80					
		S	97	140					
		P^	44	107	0	285		0.1547	0.3764

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
9	Karnataka	C	836	1006					
		S	1319	1319					
		P	1065	1154	1169	1183	0.9882	0.9000	0.9757
10	Madhya	C	259	266					
	Pradesh	S	323	324					
		P	287	291	1069	1317	0.8117	0.2176	0.2209
11	Odisha	C	143	143					
	@	S	62	62					
		P^	103	103	0	45		2.2778	2.2778
12	Punjab	C	117	114					
	@	S	172	172					
		P	143	141	0	114		1.2545	1.2406
13	Rajasthan	C	150	150					
		S	252	253					
		P	201	201	841	856	0.9825	0.2344	0.2350
14	Tamil Nadu	C	262	314					
		S	221	245					
		P	242	280	0	166		1.4553	1.6845
14	Telangana	C	0	425					
		S	434	448					
		P	251	438	0	463		0.5427	0.9467
15	Uttar	C	379	562					
	Pradesh	S	291	342					
		P	355	501	664	664	1.0000	0.5343	0.7552
For states covered			3587	5367	4481	6342		0.5656	0.8462
					RAGI				
1	Karnataka	C	418	497					
	@	S	704	703					
		P	553	595	733	778	0.9422	0.7113	0.7642
2	Uttarakhand	C	55	64					
	@	S	146	148					
		P	98	104	107	103	1.0388	0.9547	1.0097
For states covered			652	699	840	881	0.9535	0.7398	0.7929
					COTTON				
1	Andhra	C	66	783					
	Pradesh	S	629	629					
		P	412	688	711	646	1.1006	0.6373	1.0657
2	Gujarat	C	0	2748					
	@	S	2	1159					
		P^	1	2178	436	2624	0.1662	0.0003	0.8300
3	Haryana	C	552	535					
		S	818	818					
		P	684	675	683	665		1.0281	1.0151
4	Karnataka	C	983	984					
		S	664	664					
		P	832	832	548	547	1.0018	1.5209	1.5219
5	Madhya	C	54	49					
	Pradesh	S	197	202					
		P	116	115	554	603	0.9187	0.1916	0.1904
6	Maharashtra	C	2132	3962					
		S	2581	2827					
		P	2328	3467	4351	4351	1.0000	0.5350	0.7969
7	Punjab	C	240	245					
	@	S	107	107					
		P	177	180	0	291		0.6086	0.6176
8	Rajasthan	C	171	165					
		S	77	80					
		P	124	123	608	584	1.0411	0.2129	0.2102
9	Tamil Nadu	C	271	286					
	Kharif	S	337	323					
		P	304	304	153	183	0.8361	1.6605	1.6635
	Tamil Nadu	C	2	0					
	Rabi	S	3	10					
		P	2	5	16	0	0.0000	0.0000	0.0000
10	Telngana	C	0	2678					
		S	1969	1973					
		P	1140	2270	0	1897		0.6009	1.1965
For states covered			6119	10838	8060	12391		0.4938	0.8747

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
					GROUNDNUT				
1	Andhra	C	260	447					
	Pradesh	S	573	571					
		P^	452	523	685	648	1.0571	0.6978	0.8073
2	Gujarat	C	0	1682					
		S	70	747					
		P^	25	1347	248	1627	0.1524	0.0154	0.8276
3	Karnataka	C	263	298					
		S	299	297					
		P	280	298	389	390	0.9974	0.7181	0.7629
4	Madhya	C	61	34					
	Pradesh	S	31	31					
		P	48	33	208	218	0.9541	0.2206	0.1500
5	Maharashtra	C	45	195					
		S	99	126					
		P	69	165	240	240	1.0000	0.2855	0.6872
6	Rajasthan	C	93	97					
		S	93	95					
		P	93	96	624	641	0.9735	0.1451	0.1498
7	Tamil Nadu	C	140	167					
	Kharif	S	275	335					
		P	207	251	180	189	0.9524	1.0965	1.3263
8	Tamil Nadu	C	6	6					
	Rabi	S	34	35					
		P	20	20	139	139	1.0000	0.1435	0.1471
9	Telngana	C	0	57					
		S	76	59					
		P	44	58	NA	21		2.0952	2.7694
For states covered			1174	2712	2574	3953	0.6512	0.2970	0.6859
					SUGARCANE				
1	Andhra	C	0	73					
	Pradesh	S	17	17					
		P^	10	39	100	99	1.0101	0.1054	0.3900
2	Assam	C	0	0					
	*	S	0	3					
		P^	0	1	22	31	0.7097		0.0458
3	Bihar	C	0	228					
	@	S	0	126					
		P^	0	181	237	234		0.0000	0.7720
4	Haryana	C	187	171					
	$$	S	127	122					
		P	157	147	114	114		1.3799	1.2873
5	Karnataka	C	322	448					
		S	324	335					
		P	323	394	444	370	1.2000	0.8728	1.0662
6	Maharashtra	C	74	1374					
	@	S	766	878					
		P	376	1158		902	0.0000	0.4163	1.2837
7	Punjab	C	50	55					
	@	S	62	61					
		P	56	58		96		0.5800	0.6025
8	Rajasthan	C	0	0					
		S	3	3					
		P^	1	1	6	5	1.2000	0.2000	
9	Tamil Nadu	C	183	174					
	Kharif	S	234	241					
		P	208	207	111	172	0.6453	1.2116	1.2056
10	Uttar	C	1596	2699					
	Pradesh	S	416	708					
		P	1271	2151	2234	2234	1.0000	0.5691	0.9629
11	Uttarakhand	C	69	70					
	@	S	9	163					
		P	40	114	91	90	1.0111	0.4492	1.2698
For states covered			2443	4452	3359	4347	0.7727	0.5620	1.0240

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
					WHEAT				
1	Assam	C	0	4					
	* $$	S	0	3					
	@	P^	0	4	15	18	0.0000		
2	Bihar	C	NR	5461					
	* $$	S	496	3027					
	@	P^	216	4402	2085	2101		0.1027	2.0953
3	Chhattisgarh	C	219	220					
		S	158	161					
		P	189	191	103	101	1.0198	1.8679	1.8876
4	Gujarat	C	NR	1983					
		S	16	1272					
		P^	5	1747	177	1059	0.1671	0.0050	1.6496
5	Haryana	C	2677	2731					
		S	2107	2109					
		P	2405	2435	2565	2440	1.0512	0.9858	0.9978
6	Himachal	C	606	386					
	Pradesh	S	380	380					
	$$	P^	492	383	0	319	0.0000	1.5429	1.2006
7	Jammu &	C	319	315					
	Kashmir	S	322	322					
	@	P^	321	319	279	299	0.9331	1.0721	1.0656
8	Jharkhand	C	0	164					
	*	S	123	162					
		P^	57	163	65	221	0.2941		0.7379
9	Karnataka	C	188	246					
		S	215	214					
		P	201	230	194	193	1.0052	1.0434	1.1924
10	Madhya	C	2352	2353					
	Pradesh	S	1951	1833					
		P	2176	2125	5433	5316	1.0220	0.4094	0.3997
11	Maharashtra	C	284	990					
	@	S	698	799					
		P	450	913	1138	1024		0.4395	0.8920
12	Punjab	C	3315	3400					
	@	S	3161	3202					
		P	3248	3314		3512		0.9249	0.9436
13	Rajasthan	C	631	628					
		S	667	693					
		P	649	661	3055	2810	1.0872	0.2311	0.2353
14	Uttar	C	6650	10368					
	Pradesh	S	1989	2363					
		P	5806	8918		9753	0.0000	0.5953	0.9144
15	Uttarakhand	C	433	459					
		S	3447	3580					
		P	1919	1998	333	333	1.0000	5.7633	5.9998
16	West	C	8	32					
	Bengal	S	69	82					
	@	P	26	47		117		0.2255	0.4023
For states covered			18161	27849	15442	29616	0.5214	0.6132	0.9403
					BARLEY				
1	Haryana	C	24	27					
		S	29	29					
		P	26	28	21	20	1.0500	1.3191	1.3976
2	Himachal	C	15	15					
	Pradesh	S	25	27					
	$$	P^	20	21		19		1.0546	1.1076
3	Punjab	C	8	8					
	@	S	1	1					
		P	5	5		8		0.6200	0.6200
4	Rajasthan	C	35	37					
		S	77	82					
		P	56	60	275	274		0.2059	0.2188
For states covered			108	114	296	321		0.3358	0.3549
					GRAM				
1	Andhra Pradesh	C	1	267					
		S	672	833					
		P^	413	614	498	520	0.9577	0.7934	1.1811
2	Bihar	C	NR	60					
	@	S	1	27					
		P	0	46	54	58		0.0075	0.7870

Sl No	State	AGENCY	Estimates of area based on sample checks (ICS) (in `000' ha)		Estimated area as per TRS (in `000' ha)	Final Estimates of Area (in `000' ha)	Ratio of Area Estimates		
			A-III As per primary worker	A-IV As per supervisor			TRS/ Final	A-III/ Final	A-IV/ Final
1	2	3	4	5	6	7	8	9	10
3	Chhattisgarh	C	585	595					
		S	218	218					
		P	402	407	284	318	0.8931	1.2655	1.2813
4	Gujarat	C	NR	372					
		S	27	251					
		P^	10	332	43	293	0.1468	0.0329	1.1325
5	Haryana	C	39	45					
		S	115	115					
		P	75	78	33	32	1.0313	2.3503	2.4485
6	Jharkhand	C	0	5					
	*	S	19	19					
		P^		12	15	233	0.0644		0.0494
7	Karnataka	C	484	586					
		S	1318	1318					
		P	897	949	1360	1265	1.0751	0.7095	0.7501
8	Madhya	C	848	821					
	Pradesh	S	669	651					
	$$	P	770	746	2938	3590	0.8184	0.2144	0.2079
9	Maharashtra	C	577	1907					
	@	S	1370	1449					
		P	895	1723	2234	2000		0.4475	0.8617
10	Punjab	C	0	0					
	@	S	0	NR					
		P	0	0	0	2		0.0000	0.0000
11	Rajasthan	C	238	236					
		S	336	339					
		P	288	289	1519	1572	0.9663	0.1832	0.1835
12	Uttar	C	401	553					
	Pradesh	S	121	126					
		P	350	476		501	0.0000	0.6991	0.9494
For states covered			4101	5672	8978	10384		0.3949	0.5462
			RAPE & MUSTARD						
1	Assam	C	0	59					
	@	S	0	57					
	$$	P^	0	58	284	290	0.9793		0.2003
2	Bihar	C	0	339					
	@	S	4	79					
		P^	2	226	0	79		0.0220	2.8595
3	Chhattisgarh	C	22	22					
		S	56	56					
		P	39	39	42	44	0.9545	0.8844	0.8844
4	Gujarat	C	0	278					
		S	0	195					
		P^	0	250	33	221	0.1493	0.0000	1.1332
5	Haryana	C	541	524					
		S	630	626					
		P	583	573	0	549	0.0000	1.0627	1.0430
6	Jharkhand	C	0	8					
	* @ & $	S	33	35					
		P^	15	21	10	305	0.0328		0.0673
8	Madhya	C	232	227					
	Pradesh	S	60	60					
	@ $$	P	157	154	620	748	0.8289	0.2094	0.2056
9	Punjab	C	16	19					
	@	S	8	8					
		P	13	14	0	30		0.4175	0.4741
10	Rajasthan	C	466	474					
		S	595	644					
		P	532	561	2164	2210	0.9792	0.2406	0.2537
11	Uttar	C	878	1359					
	Pradesh	S	248	298					
	$$	P	764	1167	0	679	0.0000	1.1250	1.7184
12	West	C	41	544					
	Bengal	S	110	157					
	@	P	62	427		615		0.1005	0.6949
For states covered			2166	3489	3153	5770		0.3754	0.6047

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

Note:-

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

COMPARISON OF PERCENTAGE OF AREA UNDER DIFFERENT INPUTS AS ESTIMATED
UNDER ICS & TRS : 2017-18

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RICE																
1	Andhra	Kharif	91.14	3.88	95.02	2.86	2.12	4.98	100	0.00	0.00	0.00	0.00	0.00	100.00	100
	Pradesh	Rabi	98.46	1.44	99.90	0.10	0.00	0.10	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Assam	Autumn	11.72	1.38	13.11	0.68	86.22	86.89	100	0.00	0.00	2.43	0.00	0.00	97.57	100
		Winter	4.10	0.00	4.10	8.23	87.68	95.90	100	0.00	0.00	0.00	0.00	0.00	0.00	0
		Summer	37.34	11.54	48.88	6.60	44.52	51.12	100	Data not available						
3	Bihar	Autumn	68.57	3.48	72.05	3.74	24.22	27.95	100	0.00	0.00	34.79	0.00	0.00	65.21	100
		Winter	54.38	24.47	78.85	13.58	7.56	21.15	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Summer	92.42	3.79	96.21	0.00	3.79	3.79	100	0.00	0.00	96.39	0.00	0.00	3.61	100
4	Chattis-	Kharif	40.83	0.15	40.98	40.55	18.47	59.02	100	32.11	3.40	35.52	40.48	24.01	64.48	100
	garh															
5	Gujarat	Kharif	65.97	12.28	78.25	15.21	6.54	21.75	100	0.00	0.00	71.97	0.00	0.00	28.03	100
6	Haryana	Kharif	99.01	0.04	99.04	-	-	-	100	0.00	0.00	100.00	0.00	0.00	0.00	100
7	Himachal	Kharif	69.57	5.29	74.86	21.36	3.78	25.14	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Pradesh															
8	Jammu &	Kharif	27.89	65.13	93.02	4.62	2.36	6.98	100	15.33	68.29	83.62	9.06	7.32	16.38	100
	Kashmir															
9	Jharkhand	Autumn	0.00	0.00	0.00	5.04	94.96	100.00	100	0.00	0.00	0.00	0.00	100.00	100.00	100
		Winter	0.00	0.31	0.31	66.74	32.94	99.69	100	21.19	7.42	28.61	11.46	59.92	71.39	100
		Summer	Data Not Available													
10	Karnataka	Kharif	75.41	0.00	75.41	20.07	4.52	24.59	100	58.79	2.16	60.95	27.95	11.10	39.05	100
		Rabi	99.55	0.00	99.55	0.45	0.00	0.45	100	0.00	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	Kharif	27.29	4.04	31.33	38.64	30.04	68.67	100	33.68	7.04	40.72	23.32	35.96	59.28	100
	Pradesh															
13	Maharashtra	Kharif	33.30	2.15	35.45	47.38	17.17	64.55	100	0.00	0.00	0.00	0.00	0.00	100.00	100
14	Odisha	Autumn	0.53	0.11	0.64	72.90	26.46	99.36	100	TRS NOT APPLICABLE						
		Winter	33.14	0.07	33.21	60.59	6.20	66.79	100							
		Summer	92.35	0.00	92.35	7.65	0.00	7.65	100							
15	Punjab	Kharif	97.40	1.22	98.62	1.38	0.00	1.38	100	Data not available						
16	Tamil Nadu	Phase-I	89.22	2.81	92.03	7.97	0.00	7.97	100	0.00	0.00	92.12	0.00	0.00	7.88	100
		Phase-II	97.54	0.62	98.15	1.85	0.00	1.85	100	0.00	0.00	95.30	0.00	0.00	4.70	100
17	Telangana	Kharif	96.42	2.25	98.67	1.33	0.00	1.33	100	0.00	0.00	91.94	0.00	0.00	8.06	100
		Rabi	97.44	0.00	97.44	2.56	0.00	2.56	100	0.00	0.00	100.00	0.00	0.00	0.00	100
18	Uttar	Kharif	96.61	0.98	97.59	2.24	0.16	2.41	100	79.53	3.15	82.69	16.46	0.85	17.31	100
	Pradesh															
19	Uttara-	Kharif	45.06	23.74	68.80	0.82	30.38	31.20	100	58.75	12.92	71.67	32.08	0.00	28.33	100
	khand															
20	West	Autumn	Data Not Available							TRS NOT APPLICABLE						
	Bengal	Winter	30.33	0.00	30.33	7.48	62.18	69.67	100							
		Summer	46.07	0.00	46.07	0.17	53.76	53.93	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			72.96	3.30	76.26	13.09	10.64	23.74	100	29.68	3.12	53.60	13.71	10.22	46.40	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			79.95	2.07	82.02	11.62	6.36	17.98	100	32.94	3.22	59.17	31.36	8.85	40.83	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYY & LOCAL			80.09	1.59	81.68	12.30	6.02	18.32	100	43.38	4.13	48.85	19.86	11.24	51.15	100

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

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
			JOWAR													
1	Karnataka	Kharif	10.72	0.00	10.72	65.15	24.13	89.28	100	15.05	0.00	15.05	68.82	16.13	84.95	100
		Rabi	10.83	4.44	15.26	73.87	10.86	84.74	100	0.00	0.00	57.89	0.00	0.00	42.11	100
2	Madhya Prades	Kharif	0.00	0.00	0.00	21.69	78.31	100.00	100	0.00	0.00	0.00	43.48	56.52	100.00	100
3	Maharashtra	Kharif	12.23	1.31	13.54	76.82	9.64	86.46	100	0.00	0.00	1.59	0.00	0.00	98.41	100
		Rabi	26.96	3.65	30.61	61.98	7.41	69.39	100	0.00	0.00	17.18	0.00	0.00	82.82	100
4	Rajasthan	Kharif	0.62	1.85	2.46	40.34	57.20	97.54	100	0.00	0.00	0.18	0.00	0.00	99.82	100
5	Tamil Nadu	Kharif	16.06	0.00	16.06	61.28	22.65	83.94	100	0.00	0.00	7.67	0.00	0.00	92.33	100
6	Telangana	Kharif	0.00	0.00	0.00	87.30	12.70	100.00	100	0.00	0.00	0.59	0.00	0.00	99.41	100
		Rabi	11.06	5.41	16.47	50.52	33.01	83.53	100	0.00	0.00	25.40	0.00	0.00	74.60	100
7	Uttar Pradesh	Kharif	4.36	0.21	4.57	39.91	55.52	95.43	100	0.00	0.00	40.91	0.00	0.00	59.09	100
TOTAL FOR			18.82	2.90	21.72	64.01	14.27	78.28	100	0.28	0.00	13.70	2.64	2.09	86.30	100
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			18.82	2.90	21.72	64.01	14.27	78.28	100	0.29	0.00	14.15	1.30	0.31	85.85	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			6.13	0.00	6.13	46.53	47.34	93.87	100	0.42	0.00	18.83	3.99	3.15	81.17	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																
			BAJRA													
1	Andhra Pradesh	Kharif	45.44	3.09	48.53	44.26	7.21	51.47	100	0.00	0.00	17.07	0.00	0.00	82.93	100
2	Gujarat	Kharif	48.18	0.00	48.18	43.73	8.08	51.82	100	0.00	0.00	17.24	0.00	0.00	82.76	100
3	Haryana	Kharif	65.05	1.39	66.44	33.39	0.17	33.56	100	0.00	0.00	43.27	0.00	0.00	56.73	100
4	Karnataka	Kharif	5.07	0.00	5.07	74.62	20.31	94.93	100	10.43	0.00	10.43	87.83	1.74	89.57	100
5	Maharshtra	Kharif	21.60	1.53	23.13	71.41	5.47	76.87	100	0.00	0.00	0.00	0.00	0.00	100.00	100
6	Rajasthan	Kharif	1.72	1.28	3.00	61.55	35.45	97.00	100	0.00	0.00	3.45	0.00	0.00	96.55	100
7	Tamil Nadu	Kharif	37.98	2.05	40.03	59.97	0.00	59.97	100	0.00	0.00	9.52	0.00	0.00	90.48	100
8	Uttar Pradesh	Kharif	38.98	0.06	39.04	55.43	5.53	60.96	100	0.00	0.00	9.73	0.00	0.00	90.27	100
TOTAL FOR			29.04	0.75	29.79	59.05	11.16	70.21	100	0.35	0.00	6.95	2.99	0.06	93.05	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			29.04	0.75	29.79	59.05	11.16	70.21	100	0.35	0.00	6.95	2.99	0.06	93.05	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			5.07	0.00	5.07	74.62	20.31	94.93	100	10.43	0.00	10.43	87.83	1.74	89.57	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RAGI																
1	Karnataka	Kharif	4.04	0.00	4.04	86.30	9.66	95.96	100	22.10	0.00	22.10	77.90	0.00	77.90	100.00
2	Uttrakhand	Kharif	-	-	-	0.50	99.50	100.00	100	0.00	0.00	0.00	0.00	0.00	100.00	100.00
TOTAL FOR STATES COVERED UNDER ICS SCHEME			3.80	0.00	3.80	81.12	15.08	96.20	100	19.29	0.00	19.29	67.98	0.00	80.71	100.00
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			3.80	0.00	3.80	81.12	15.08	96.20	100	22.10	0.00	22.10	77.90	0.00	77.90	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			4.04	0.00	4.04	86.30	9.66	95.96	100	22.10	0.00	22.10	77.90	0.00	77.90	100.00
MAIZE																
1	Bihar	Kharif	17.86	14.33	32.19	26.76	41.04	67.81	100	0.00	0.00	0.00	0.00	0.00	100.00	100
2	Chattisgarh	Kharif	0.00	0.00	0.00	40.95	75.67	100.00	100	3.60	0.00	3.60	45.95	50.45	96.40	100
3	Gujarat	Kharif	20.44	1.88	22.32	50.05	27.63	77.68	100	0.00	0.00	11.76	0.00	0.00	88.24	100
4	Haryana	Kharif	87.72	0.00	87.72	12.28	0.00	12.28	100	0.00	0.00	66.67	0.00	0.00	33.33	100
5	Himachal Pradesh	Kharif	28.69	0.48	29.16	42.73	28.11	70.84	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Jharkhand	Kharif	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Jammu & Kashmir	Kharif	0.00	1.11	1.11	21.77	77.12	98.89	100	1.33	7.97	9.30	23.59	67.11	90.70	100
8	Karnataka	Kharif	22.67	0.00	22.67	76.05	1.29	77.33	100	0.00	0.00	31.05	0.00	0.00	68.95	100
9	Madhya Pradesh	Kharif	0.00	0.00	0.00	37.42	62.58	100.00	100	1.22	0.94	2.15	47.71	50.14	97.85	100
10	Odisha	Kharif	0.00	0.00	0.00	76.67	23.33	100.00	100	Not applicable						
11	Punjab	Kharif	94.31	1.86	96.17	3.83	0.00	3.83	100	Data not available						
12	Rajasthan	Kharif	0.00	0.00	0.00	38.96	61.04	100.00	100	0.00	0.00	0.24	0.00	0.00	99.76	100
13	Tamil Nadu	Kharif	28.76	0.00	28.76	36.73	34.51	71.24	100	Data not available						
14	Telangana	Kharif	10.87	0.96	11.83	87.79	0.38	88.17	100	Data not available						
15	Uttar Pradesh	Kharif	45.88	0.00	45.88	37.86	16.26	54.12	100	0.00	0.00	32.68	0.00	30.42	67.32	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			24.24	1.46	25.70	51.05	23.36	74.30	100	0.47	0.76	14.49	14.11	22.23	85.51	100.00
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			23.04	1.68	24.71	50.35	25.08	75.29	100	0.47	0.76	14.49	14.11	22.23	85.51	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			0.00	0.25	0.25	33.87	65.88	99.75	100	0.67	1.34	16.31	22.88	29.07	83.69	100

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
			COTTON													
1	Andhra Prades	Kharif	22.74	0.00	22.74	76.81	0.45	77.26	100	0.00	0.00	0.00	0.00	0.00	100.00	100
2	Gujarat	Kharif	79.57	2.20	81.76	14.67	3.57	18.24	100	0.00	0.00	67.89	0.00	0.00	32.11	100
3	Haryana	Kharif	90.53	0.00	90.53	9.47	0.00	9.47	100	0.00	0.00	99.71	0.00	0.00	0.29	100
4	Karnataka	Kharif	31.90	0.76	32.66	67.09	0.25	67.34	100	0.00	0.00	26.46	0.00	0.00	73.54	100
5	Madhya Prades	Kharif	58.58	0.00	58.58	25.31	16.11	41.42	100	0.00	0.00	65.88	0.00	0.00	34.12	100
6	Maharashtra	Kharif	21.66	0.84	22.50	72.93	4.57	77.50	100	0.00	0.00	0.00	0.00	0.00	100.00	100
7	Punjab	Kharif	96.48	2.93	99.41	0.59	0.00	0.59	100	Data not available						
8	Rajasthan	Kharif	83.14	9.48	92.62	7.38	0.00	7.38	100	0.00	0.00	97.20	0.00	0.00	2.80	100
9	Tamil Nadu	Kharif	16.11	2.48	18.59	62.43	18.98	81.41	100	0.00	0.00	14.38	0.00	0.00	85.62	100
	Tamil Nadu	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	25.00	0.00	0.00	75.00	100
10	Telangana	Kharif	9.37	0.00	9.37	85.66	4.97	90.63	100	0.00	0.00	0.00	0.00	0.00	0.00	0
TOTAL FOR			36.21	1.03	37.24	58.71	4.05	62.76	100	0.00	0.00	26.12	0.00	0.00	73.88	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			39.90	1.18	41.08	54.97	3.95	58.92	100	0.00	0.00	26.12	0.00	0.00	73.88	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			Variety wise TRS Estimates not available													
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																
			GROUNDNUT													
1	Andhra Prades	Kharif	8.81	0.12	8.93	76.17	14.91	91.07	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Gujarat	Kharif	57.93	4.12	62.05	33.56	4.39	37.95	100	0.00	0.00	22.98	0.00	0.00	77.02	100
3	Karnataka	Kharif	7.19	0.96	8.15	70.37	21.48	91.85	100	7.20	0.51	7.71	85.09	7.20	92.29	100
4	Madhya Prades	Kharif	0.00	18.84	18.84	39.10	42.07	81.16	100	0.00	0.00	8.17	0.00	0.00	91.83	100
5	Maharashtra	Kharif	18.02	2.89	20.91	67.89	11.20	79.09	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Rajasthan	Kharif	35.85	37.67	73.52	10.87	15.61	26.48	100	0.00	0.00	84.29	0.00	0.00	15.71	100
7	Tamil Nadu	Kharif	38.17	0.30	38.47	53.26	8.27	61.53	100	0.00	0.00	14.44	0.00	0.00	85.56	100
	Tamil Nadu	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	83.72	0.00	0.00	16.28	100
8	Telangana	Kharif	5.30	0.00	5.30	94.70	0.00	94.70	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL FOR			35.75	4.04	39.79	50.14	10.07	60.21	100	1.04	0.07	28.26	12.25	1.04	71.74	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			36.21	4.10	40.31	49.47	10.22	59.69	100	1.04	0.07	28.26	12.25	1.04	71.74	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED AND																
UNIRRIGATED																
TOTAL FOR			7.19	0.96	8.15	70.37	21.48	91.85	100	7.20	0.51	7.71	85.09	7.20	92.29	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																

ANNEX XIII (Contd.....)

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
SUGARCANE																
1	Andhra Pradesh	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	0.00	0.00	0.00	0.00	0.00	100.00	100
2	Assam	Kharif	0.00	0.00	0.00	0.00	0.00	0.00	0	Data not available						
3	Bihar	Kharif	57.32	15.91	73.24	0.51	26.25	26.76	100	0.00	0.00	81.01	0.00	0.00	18.99	100
4	Haryana	Kharif	99.66	0.00	99.66	0.34	0.00	0.34	100	0.00	0.00	100.00	0.00	0.00	0.00	100
5	Karnataka @	Kharif	88.56	9.21	97.77	2.23	0.00	2.23	100	0.00	0.00	100.00	0.00	0.00	0.00	100
6	Maharashtra	Kharif	88.03	9.12	97.15	1.53	1.32	2.85	100	Data not available						
7	Punjab	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
8	Rajasthan	Kharif	Not Tabulated							-	-	100.00	-	-	0.00	100
9	Tamil Nadu	Kharif	90.77	0.00	90.77	0.49	8.75	9.23	100	-	-	95.50	-	-	4.50	100
10	Uttar Pradesh	Kharif	93.45	0.86	94.32	4.74	0.94	5.68	100	-	-	94.49	-	-	5.51	100
11	Uttarakhand	Kharif	100.00	0.00	100.00	0.00	0.00	0.00	100	-	-	98.90	-	-	1.10	100
TOTAL FOR STATES COVERED UNDER ICS SCHEME			91.22	3.48	94.70	3.48	1.82	5.30	100	0.00	0.00	91.22	0.00	0.00	8.78	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			91.98	2.04	94.02	4.02	1.96	5.98	100	0.00	0.00	91.79	0.00	0.00	8.21	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			Variety wise TRS estimates not available.													

@ TRS data for Rabi season

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
WHEAT																
1	Assam	Rabi	13.06	26.12	39.18	0.00	60.82	60.82	100	0.00	0.00	0.00	0.00	0.00	100.00	100
2	Bihar	Rabi	89.54	7.83	97.38	0.31	2.31	2.62	100	72.47	23.55	96.02	2.01	1.97	3.98	100
3	Chhattisgarh	Rabi	80.90	3.68	84.59	14.11	1.30	15.41	100	0.00	0.00	0.00	0.00	0.00	100.00	100
4	Gujarat	Rabi	94.55	5.17	99.71	0.08	0.21	0.29	100	0.00	0.00	0.00	0.00	0.00	100.00	100
5	Haryana	Rabi	99.68	0.25	99.94	0.06	0.00	0.06	100	0.00	0.00	0.00	0.00	0.00	0.00	0
6	Himachal Pradesh	Rabi	25.48	3.66	29.13	37.18	33.68	70.87	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Jammu & Kashmir	Rabi	24.72	9.26	33.98	35.50	30.52	66.02	100	Data not available						
8	Jharkhand	Rabi	61.63	22.29	83.92	0.86	15.22	16.08	100	27.69	58.46	86.15	4.62	9.23	13.85	100
9	Karnataka	Rabi	60.21	6.25	66.46	20.38	13.16	33.54	100	0.00	0.00	0.00	0.00	0.00	100.00	100
10	Madhya Pradesh	Rabi	69.36	27.73	97.10	0.12	2.78	2.90	100	64.26	25.92	90.18	2.53	7.28	9.82	100
11	Maharashtra	Rabi	87.11	4.79	91.90	7.22	0.88	8.10	100	0.00	0.00	0.00	0.00	0.00	100.00	100
12	Punjab	Rabi	99.45	0.55	100.00	0.00	0.00	0.00	100	Data not available						
13	Rajasthan	Rabi	82.53	17.40	99.92	0.08	0.00	0.08	100	80.23	19.25	99.48	0.10	0.43	0.52	100
14	Uttar Pradesh	Rabi	97.91	1.42	99.33	0.63	0.04	0.67	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Uttarakhand	Rabi	20.18	12.81	33.00	4.57	62.43	67.00	100			61.56			38.44	100
16	West Bengal	Rabi	10.31	36.29	46.61	3.22	50.17	53.39	100	TRS not applicable						
TOTAL FOR STATES COVERED UNDER ICS SCHEME			90.13	5.57	95.70	1.42	2.88	4.30	100	52.20	16.75	68.96	2.11	4.16	31.04	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			81.13	10.98	92.10	1.97	5.92	7.90	100	66.07	21.20	87.27	2.68	5.26	12.73	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			73.75	15.90	89.64	1.24	9.12	10.36	100	63.78	24.29	88.07	4.26	6.29	11.93	100

ANNEX XIII (Contd.....)

Sl. No.	State	SEASON	Percentage of Area under different categories														
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
BARLEY																
1	Haryana	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	-	-	0.00	-	-	0.00	0
2	Himachal Prades	Rabi	0.00	0.00	0.00	7.36	92.64	100.00	100	-	-	0.00	-	-	0.00	0
3	Punjab	Rabi	100.00	0.00	100.00	0.00	0.00	0.00	100	Data not available						
4	Rajasthan	Rabi	81.49	15.96	97.45	0.00	2.55	2.55	100	0.00	34.18	99.27	0.00	0.73	0.73	100
TOTAL FOR			76.90	10.34	87.24	0.82	11.95	12.76	100	-	-	99.32	-	-	0.68	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			61.76	12.09	73.86	0.00	1.93	1.93	100	-	-	99.32	-	-	0.68	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED																
AND UNIRRIGATED																
TOTAL FOR			VARIETY-WISE TRS ESTIMATES NOT AVAILABLE													
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																
GRAM																
1	Andhra Pradesh	Rabi	3.65	1.00	4.65	73.48	21.87	95.35	100	0.00	0.00	2.21	0.00	0.00	97.79	100
2	Bihar	Rabi	1.91	33.42	35.33	2.19	62.48	64.67	100	0.00	0.00	0.00	0.00	0.00	100.00	100
3	Chhattisgarh	Rabi	13.72	37.04	50.76	24.77	24.47	49.24	100	-	-	53.17	-	-	46.83	100
4	Gujarat	Rabi	51.10	6.43	57.53	16.20	26.27	42.47	100	-	-	55.81	-	-	44.19	100
5	Haryana	Rabi	53.26	0.00	53.26	37.56	9.18	46.74	100	-	-	0.00	-	-	0.00	0
6	Jharkhand	Rabi	0.00	9.32	9.32	18.01	72.67	90.68	100	-	-	0.00	-	-	100.00	100
7	Karnataka	Rabi	4.96	3.55	8.51	76.10	15.39	91.49	100	0.00	0.00	13.90	0.00	0.00	86.10	100
8	Madhya Pradesh	Rabi	15.34	66.97	82.30	3.81	13.89	17.70	100	-	-	72.60	-	-	27.40	100
9	Maharashtra	Rabi	43.24	1.98	45.22	45.19	9.58	54.78	100	0.00	0.00	0.00	0.00	0.00	100.00	100
10	Punjab	Rabi	0.00	0.00	0.00	0.00	0.00	0.00	0	Data not available						
11	Rajasthan	Rabi	20.41	52.97	73.38	11.49	15.13	26.62	100	-	-	72.68	-	-	27.32	100
12	Uttar Pradesh	Rabi	8.13	19.79	27.92	3.87	68.21	72.08	100	Data not available						
TOTAL FOR			23.90	16.50	40.41	38.91	20.68	59.59	100			40.60			59.40	100
STATES																
COVERED UNDER																
ICS SCHEME																
TOTAL FOR			23.04	5.56	28.60	42.44	14.59	57.99	100	-	-	40.85	-	-	59.15	100
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
IRRIGATED																
AND UNIRRIGATED																
TOTAL FOR			VARIETY WISE TRS ESTIMATES NOT AVAILABLE													
STATES WHERE																
TRS ESTIMATES																
AVAILABLE FOR																
HYV & LOCAL																

ANNEX XIII (Contd.....)

Sl. No.	State	SEASON	Percentage of Area under different categories													
			As per Sample check						TOTAL	As per T.R.S. @						TOTAL
			Irrigated			Unirrigated				Irrigated			Unirrigated			
			HYV	Local	Total	HYV	Local	Total		HYV	Local	Total	HYV	Local	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RAPE & MUSTARD																
1	Assam	Rabi	4.81	3.73	8.55	6.68	84.77	91.45	100	0.00	0.00	1.41	0.00	0.00	98.59	100
2	Bihar	Rabi	68.27	9.77	78.04	2.25	19.71	21.96	100	Data Not available						
3	Chattisgarh	Rabi	0.00	6.48	6.48	1.31	92.22	93.52	100	0.00	0.00	16.67	0.00	0.00	83.33	100
4	Gujarat	Rabi	97.46	0.13	97.60	0.53	1.87	2.40	100	0.00	0.00	100.00	0.00	0.00	0.00	100
5	Haryana @	Rabi	87.00	0.46	87.45	12.55	0.00	12.55	100	0.00	0.00	0.00	0.00	0.00	0.00	0
6	Jharkhand	Rabi	0.00	45.73	45.73	2.31	51.96	54.27	100	0.00	0.00	0.00	0.00	0.00	0.00	0
7	Madhya Pradesh	Rabi	61.06	17.95	79.01	0.86	20.13	20.99	100	0.00	0.00	59.19	0.00	0.00	40.81	100
8	Punjab	Rabi	80.92	19.08	100.00	0.00	0.00	0.00	100	Data Not available						
9	Rajasthan	Rabi	69.62	28.25	97.86	1.05	1.09	2.14	100	0.00	0.00	94.32	0.00	0.00	5.68	100
10	Uttar Pradesh	Rabi	75.28	15.47	90.75	5.50	3.75	9.25	100	0.00	0.00	0.00	0.00	0.00	0.00	0
11	West Bengal	Rabi	8.18	2.96	11.15	0.77	88.08	88.85	100	TRS Not applicable						
TOTAL FOR STATES COVERED UNDER ICS SCHEME			70.06	13.63	83.69	4.51	11.80	16.31	100	0.00	0.00	78.02	0.00	0.00	21.98	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR IRRIGATED AND UNIRRIGATED			71.29	19.08	90.37	1.07	8.56	9.63	100	0.00	0.00	85.62	0.00	0.00	14.38	100
TOTAL FOR STATES WHERE TRS ESTIMATES AVAILABLE FOR HYV & LOCAL			VARIETY-WISE TRS ESTIMATES NOT AVAILABLE													

@ Data for oilseeds used

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

COMPARISON OF ESTIMATES OF YIELD RATES UNDER ICS AND CES DURING 2017-18

Sl. No.	State	AGENCY	ICS				C.E.S. $				% Diff. (Col.6-Col.10/Col.10 x 100)	Coefficient of Variation
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analyse			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
RICE (KHARIF)												
1	Andhra	C	180	175	3161	2.6						34
	Pradesh *	S	180	180	N.P.							N.C.
		P	360	355	3238	1.6	3804	3804	5165	0.4	-37.31	30
2	Assam	C	100	66	1880	8.9						72
	(Aut)	S	100	52	NP							0
		P	200	118	1880	8.9	2000	1266	1380	0.9	36.23	97
	Assam	C	120	118	2136	3.8						41
	(Wint)	S	120	90	NP							0
	*	P	240	208	2136	3.8	3000	2951	2023	0.6	5.59	55
3	Bihar	C	40	28	2171	11.4						60
	(Aut/ Bhadai)	S	40	22	N.P.							N.C.
	*	P	80	50	2107	9.2	952	488	2557	NR	-17.60	65
	Bihar	C	240	171	3033	3.5						46
	(Wint/Winter)	S	240	152	N.P.							N.C.
	*	P	480	323	2901	2.1	41085	38806	4035	0.0	-28.10	38
4	Chhattisgarh	C	80	80	1570	6.9						62
		S	80	76	1630	9.9						86
		P	160	156	1589	5.7	1522	1344	1913	1.3	-16.94	71
5	Gujarat	C	80	66	2043	7.6						62
	*	S	80	44	N.P.							N.C.
		P	160	110	2043	7.6	14536	12564	3424	2.0	-40.33	80
6	Haryana	C	90	89	3265	5.0						47
		S	90	81	N.P.							0
		P	180	170	3265	5.0	990	864	3268	1.6	-0.09	65
7	Himachal	C	60	50	2420	7.6						54
	Pradesh	S	60	46	N.P.							N.C.
	*	P	120	96	2200	6.2	1334	951	2039	3.1	7.90	61
8	Jammu &	C	70	70	2102	4.9						41
	Kashmir	S	70	32	N.P.							N.C.
	*	P	140	102	2064	4.0	1412	734	3288	8.0	-37.23	40
9	Jharkhand	C	20	20	1360	3.6						16
	(Aut/E. Kharif)	S	20	12	N.P.							N.C.
		P	40	32	1360	3.6	600	452	1675	0.0	-18.81	20
	Jharkhand	C	80	78	1592	7.1						63
	(Wint/L. Kharif)	S	80	18	N.P.							N.C.
	*	P	160	96	1592	7.1	18120	15321	2108	0.0	-24.48	70
10	Karnataka	C	144	119	2928	5.1						56
		S	144	137	2979	5.5						64
		P	288	256	2951	3.7	11840	11692	4401	1.3	-32.95	59
11	Kerala	C	100	100	1950	13.2						132
	(Aut)	S	100	100	2406	8.6						86
		P	200	200	2229	7.2	2344	2340	2954	2.0	-24.54	102
	Kerala	C	100	100	2371	6.7						67
	(Wint)	S	100	100	2605	6.7						67
		P	200	200	2477	4.7	3140	3132	1957	2.7	26.57	66
12	Madhya	C	100	98	1420	10.4						103
	Pradesh	S	100	84	1464	8.1						74
		P	200	182	1447	6.4	2760	2316	1127	10.0	28.39	86
13	Maharashtra	C	82	60	1619	5.2						40
	*	S	82	45	N.P.							N.C.
		P	164	105	1619	5.2	4214	4061	1731	0.9	-6.47	53
14	Odisha	C	220	220	924	6.6						98
	(Aut)	S	220	220	914	7.7						114
		P	440	440	920	5.0	7327	7327	1285	1.2	-28.40	105
	Odisha	C	270	266	1696	3.4						55
	(Wint)	S	270	266	1622	4.0						65
		P	540	532	1663	2.6	16499	16499	2586	0.3	-35.69	60
15	Punjab	C	190	187	4828	1.7						23
		S	190	170	4558	1.5						20
		P	380	357	4664	1.1	1978	1976	4149	NR	12.41	21
16	Tamil Nadu	C	40	38	3930	4.7						29
	(Phase-I)	S	40	40	3555	7.2						46
		P	80	78	3801	4.0	428	412	4294	1.7	-11.48	35
	Tamil Nadu	C	80	76	3684	4.5						39
	(Phase-II)	S	80	76	3563	4.7						41
		P	160	152	3624	3.3	1260	1260	1802	1.7	101.11	41
17	Telangana	C	70	66	2511	4.9						40
		S	70	60	2543	4.8						37
		P	140	126	2527	3.4	2812	2812	3422	0.7	-26.15	38

ANNEX XIV (Contd.....)

Sl. No.	State	AGENCY	ICS				C.E.S. $				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analyse			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
18	Uttar	C	660	658	2702	1.9						49
	Pradesh	S	660	200	N.P.							N.C.
	*	P	1320	858	2702	1.9	182544	179566	2413	NR	11.98	56
19	Uttarakhand	C	50	40	2484	9.7						61
	*	S	50	44	N.P.							N.C.
		P	100	84	2484	9.7	2956	2890	3108	0.8	-20.08	89
20	West Bengal	C	100	94	2421	3.5						34
	E. Kharif	S	100	52	2506	3.9						28
		P	200	146	2458	2.6	2281	2011	2590	1.2	-5.10	31
	L. Kharif	C	160	160	2523	2.9						37
		S	160	50	2809	3.3						23
		P	320	210	2685	2.2	13308	12739	2774	0.5	-3.21	32
21	Puducherry	C	10	10	2909	10.7						34
	(Kh.)	S	10	10	N.P.							12
		P	20	20	3660	3.6	80	80	3271	3.1	11.89	16
For states covered			7072	5762	2486	1.1	345126	330658	2687	0.3	-7.48	81
RICE (SUMMER)												
1	Andhra	C	90	85	4225	3.9						36
	Pradesh	S	90	88								35
		P	180	173	4351	2.7	2994	2830	7095	0.6	-38.68	36
2	Assam	C	40	36	2991	4.9						29
	*	S	40	34	N.P.							N.C.
		P	80	70	2991	4.9	1500	1298	2773	0.8	7.86	41
3	Bihar	C	40	26	2861	12.6						64
	*	S	40	10	N.P.							N.C.
		P	80	36	2861	12.6	440	126	3988	NR	-28.26	76
4	Karnataka	C	40	22	0	0.0						0
	@	S	40	34	0	0.0						0
		P	80	56	3257	8.7	1212	1186	3867	3.1	-15.77	65
5	Kerala	C	100	100	1764	12.4						124
		S	100	99	3163	9.8						98
		P	200	199	4984	7.7	1350	1347	3006	3.6	65.80	109
6	Odisha	C	140	138	2903	4.4						52
		S	140	136	2825	6.2						72
		P	280	274	2875	3.6	3525	3525	3531	1.7	-18.58	60
7	Tamil Nadu	C	40	39	5057	3.2						20
		S	40	38	5335	2.1						13
		P	80	77	4510	1.8	300	300	3790	2.1	19.00	16
8	Telangana	C	90	87	3925	3.3						31
		S	90	74	3559	3.5						30
		P	180	161	3736	2.4	2266	2266	3801	0.7	0.00	30
9	West Bengal	C	140	140	3843	2.2						26
		S	140	20	3713	6.5						29
		P	280	160	3828	2.1	11674	10891	3379	0.7	13.29	27
10	Puducherry	C	10	10	2192	4.1						13
	(Rabi-I)	S	10	10	N.P.							N.C.
		P	20	20	2366	3.5	140	140	2687	2.4	-11.95	16
	Puducherry	C	10	10	2904	6.4						20
	(Rabi-II)	S	10	10	3801	9.4						30
	*	P	20	20	3097	5.4	70	70	3635	2.6	-14.80	24
For states covered			1480	1246	3780	1.4	25471	23979	4054	0.3	-6.77	51
JOWAR (KHARIF)												
1	Karnataka	C	50	16	0	0.0						0
		S	50	40	0	0.0						0
		P	100	56	2366	13.0	3450	3190	1122	3.1	110.87	97
2	Madhya	C	100	90	1325	6.9						65
	Pradesh	S	100	78	1399	4.9						43
		P	200	168	1373	4.0	1746	1378	1491	2.2	-7.91	52
3	Maharashtra	C	80	56	913	22.5						168
	*	S	80	43	N.P.							N.C.
		P	160	99	913	22.5	4248	3960	1082	0.8	-15.62	224
4	Rajasthan	C	60	44	507	18.2						121
		S	60	38	535	15.0						92
		P	120	82	523	11.6	10840	9646	603	0.0	-13.27	105
5	Tamil Nadu	C	40	40	1301	10.0						63
	#	S	40	36	807	14.0						84
		P	80	76	1012	8.3	1080	1080	573	3.3	76.61	72
6	Telangana	C	40	40	1051	11.8						75
		S	40	34	965	8.8						51
		P	80	74	992	7.1	448	448	634	4.2	0.00	61
7	Uttar	C	40	40	1154	15.7						99
	Pradesh	S	40	12	N.P.							N.C.
	*	P	80	52	1154	15.7	6452	6108	1001	NR	15.28	113
For states covered			820	607	1098	7.5	28264	25810	930	0.6	18.01	185

Sl. No.	State	AGENCY	ICS				C.E.S. $				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analyse			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
JOWAR(RABI)												
1	Karnataka	C	70	56	1038	12.8						96
	@	S	70	61	1490	17.6						137
		P	140	117	1131	10.5	8772	8400	943	2.8	19.94	114
2	Maharashtra	C	150	74	689	12.0						103
	*	S	150	60	N.P.							N.C.
		P	300	134	689	12.0	8768	8443	687	0.7	0.29	139
3	Tamil Nadu	C	40	40	1665	8.6						54
	*	S	40	34	929	11.7						N.C.
		P	80	74	1196	7.2	8768	8443	687	0.7	74.09	62
4	Telangana	C	40	40	1154	9.9						63
	*	S	40	28	1324	11.1						59
		P	80	68	1218	7.4	290	290	1190	3.1	0.00	61
For states covered			600	393	851	7.8	26598	25576	723	0.6	17.59	154
BAJRA												
1	Andhra	C	40	40	1901	17.1						108
	Pradesh	S	40	40	N.P.							61
		P	80	80	1754	8.4	488	462	1744	4.9	0.57	75
2	Gujarat	C	110	52	0	0.0						0
	*	S	110	58	N.P.							N.C.
		P	220	110	0	0.0	2162	2007	1535	0.0	-100.00	0
3	Haryana	C	104	102	4311	19.0						192
		S	104	104	2583	15.0						153
		P	208	206	2900	12.1	1532	1438	1762	1.0	64.59	174
4	Karnataka	C	50	18	0	0.0						0
	@	S	50	26	0	0.0						0
		P	100	44	1485	10.2	3562	3370	624	2.8	137.98	68
5	Maharashtra	C	60	39	2079	6.0						74
	*	S	60	32	N.P.							N.C.
		P	120	71	1976	5.4	762	744	1086	NR	-16.76	99
6	Rajasthan	C	60	54	1065	15.4						113
		S	60	50	772	15.8						112
		P	120	104	877	11.2	26064	24262	1001	0.5	-12.39	114
7	Tamil Nadu	C	40	40	1938	9.8						62
	#	S	40	40	2124	6.8						43
		P	80	80	2056	5.6	444	392	2054	3.8	0.10	50
8	Uttar	C	150	150	2116	4.4						54
	Pradesh	S	150	48	N.P.							N.C.
	*	P	300	198	2116	4.4	36462	34695	1914	NR	10.55	62
For states covered			1228	893	956	6.2	71476	67370	1192	0.3	-19.76	185
MAIZE												
2	Bihar	C	40	28	1827	18.9						100
	*	S	40	12	N.P.							N.C.
		P	80	40	2048	10.0	1320	1154	2586	NR	-20.80	63
3	Chhattisgarh	C	40	40	2575	15.0						95
	*	S	40	34	1606	10.0						58
		P	80	74	1750	8.5	490	426	2566	0.0	-31.80	73
4	Gujarat	C	40	18	0	0.0						0
	**	S	40	26	N.P.							N.C.
		P	80	44	0	0.0	8140	7980	1677	0.0	-100.00	0
5	Haryana	C	20	20	4311	19						85
		S	20	14	2583	15						56
		P	40	34	2900	12	144	88	3000	12.6	-3.33	71
6	Himachal	C	90	74	2913	9.8						84
	Pradesh	S	90	72	2780	8.2						70
	*	P	180	146	2832	6.3	1882	1735	2909	1.4	-2.65	76
7	Jammu &	C	90	88	2079	6.0						51
	Kashmir	S	90	20	N.P.							96
	*	P	180	108	1976	5.4	1378	826	1550	6.0	27.48	56
8	Jharkhand	C	20	20	1627	21.5						96
		S	20	0								0
		P	40	20	1627	21.5	7830	6102	25172	0.0	-93.54	96
9	Karnatka	C	50	32	4776	9.2						52
		S	50	36	4889	9.5						57
		P	100	68	4829	6.6	11388	11048	2701	1.7	78.79	54
10	Madhya	C	80	76	3754	6.3						55
	Pradesh	S	80	62	2140	7.3						57
	@	P	160	138	2628	5.0	1928	1768	2308	1.7	13.86	59
11	Odisha	C	40	40	2793	14.0						89
		S	40	40	2193	7.0						44
		P	80	80	2272	6.3	2162	2162	4146	6.0	-45.20	56
12	Punjab	C	48	48	3500	7.6						53
	*	S	48	48	3936	5.6						39
		P	96	96	3759	4.5	360	360	3835	NR	-1.98	44
13	Rajasthan	C	50	46	2159	15.5						105
		S	50	40	1593	15.9						101
		P	100	86	1800	11.2	11968	11504	1501	0.8	19.92	104

ANNEX XIV (Contd.....)

Sl. No.	State	AGENCY	ICS				C.E.S. $				% Diff. (Col.6-Col.10/ Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analyse			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
14	Tamil Nadu	C	40	40	8411	5.7						36
	*	S	40	40	7546	4.3						27
		P	80	80	8188	3.4	432	428	3024	3.4	170.77	30
15	Telangana	C	40	40	5071	10.1						64
		S	40	28	4269	9.7						51
		P	80	68	4591	7.0	960	960	2669	1.6	0.00	58
16	Uttar	C	170	170	2639	4.8						63
	Pradesh	S	170	64	N.P.							N.C.
	*	P	340	234	2639	4.8	29562	29102	1876	NR	40.67	73
For states covered			1716	1316	3241	2.1	79944	75643	2758	0.5	17.54	77
RAGI												
1	Karnataka	C	40	28	2199	15.3						81
		S	40	33	2255	13.5						78
		P	80	61	2230	10.1	7150	7052	1704	1.8	30.87	79
3	Uttarakhand	C	40	35	1311	11.4						67
	*	S	40	30	N.P.							N.C.
		P	80	65	1311	11.4	1106	1038	1532	1.0	-14.43	92
For states covered			160	126	2093	9.2	8256	8090	1679	1.6	24.66	103
COTTON												
1	Andhra	C	40	40								
	Pradesh	S	40	40								
		P	80	80	513	9.3	952	944	1675	3.3	-69.37	83
2	Gujarat	C	220	190								
		S	220	54								
		P	440	244	678	4.8	26324	22667	1018	0.9	0.00	75
3	Haryana	C	56	54								
		S	56	56								
		P	112	110	435	8.9	940	908	275	0.0	58.18	93
4	Karnataka	C	56	41								
		S	56	56								
		P	112	97	475	11.8	1490	1474	489	5.4	-2.86	116
5	Madhya	C	48	46								
	Pradesh	S	48	16								
		P	96	62	879	10.4	962	819	1227	2.1	-28.36	82
6	Maharashtra	C	140	134	490	5.5						64
		S	140	74								
		P	280	208	490	5.5	8516	8350	322	0.4	52.17	79
7	Punjab	C	72	72								
		S	72	62								
		P	144	134	728	5.4	696	696	756	NR	-3.70	63
8	Rajasthan	C	40	36								
		S	40	30								
		P	80	66	593	6.2	7204	6104	1689	0.0	-64.89	50
9	Tamil Nadu (Kharif	C	50	50								
		S	50	50								
		P	100	100	475	6.4	820	790	715	3.2	-33.57	64
9	Tamil Nadu (Rabi)	C	40	40								
		S	40	34								
		P	80	74	488	9.8	0	0	0	0.0	0.00	84
10	Telangana	C	40	39								
		S	40	24								
		P	80	63	663	9.8	1318	1318	1346	1.3	-50.74	78
For states covered			1604	1238	570	3.2	49222	44070	797	0.5	-28.52	114
GROUNDNUT												
1	Andhra	C	140	140	1384	8.0						95
	Pradesh	S	140	140	N.P.							67
		P	280	280	1389	4.7	2608	2592	419	2.4	231.50	79
2	Gujarat *	C	150	129	2618	7.7						87
		S	150	84	0	0.0						0
		P	300	213	2618	7.7	16196	8957	1632	2.5	60.42	112
3	Karnataka	C	70	26	795	16.4						84
		S	70	54	1412	11.7						86
		P	140	80	1032	9.9	7170	6876	635	2.8	62.52	89
4	Madhya	C	40	38	1243	12.1						75
	Pradesh	S	40	30	1465	15.4						84
		P	80	68	1312	9.6	954	792	1141	3.2	14.99	79
5	Maharashtra	C	60	41	1133	26.5						170
	*	S	60	18	N.P.							N.C.
		P	120	59	1133	26.5	2938	2744	959	1.0	18.14	204
6	Rajasthan	C	40	36	2155	8.3						50
		S	40	36	0	0.0						0
		P	80	72	2155	8.3	5904	4390	2051	0.8	5.07	70
7	Tamil Nadu (Kharif	C	50	49	2504	6.9						48
		S	50	46	2578	8.2						56
		P	100	95	2550	5.3	1160	1148	2085	2.3	22.30	52

ANNEX XIV (Contd.....)

Sl. No.	State	AGENCY	ICS				C.E.S. $				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analyse			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
	Tamil Nadu (Rabi)	C	40	38	3725	6.2						38
		S	40	40	3892	13.1						83
		P	80	78	3753	5.6	1160	1148	2085	2.3	80.00	49
8	Telangana	C	40	38	1745	14.0						86
		S	40	28	1307	5.3						28
		P	80	66	1337	5.0	142	142	1930	4.6	0.00	41
For states covered			1260	1011	2075	4.9	38232	28789	1307	1.3	58.74	155
						SUGARCANE						
1	Andhra	C	60	54	94936	4.5						33
	Pradesh	S	60	60	N.P.							22
		P	120	114	93104	2.4	1602	1571	77294	0.9	20.45	26
2	Assam	C	40	30	27532	3.8						21
	**	S	40	14	N.P.							N.C.
		P	80	44	27532	3.8	700	572	38466	0.1	-28.43	25
3	Bihar	C	40	39	65480	1.2						7
	*	S	40	18	N.P.							N.C.
		P	80	57	63630	1.1	856	754	54415	NR	16.93	8
4	Haryana	C	50	42	82492	4.4						29
	*	S	50	42	70562	7.4						48
		P	100	84	79681	3.2	1070	850	75183	0.0	5.98	29
5	Karnataka	C	40	38	103538	9.5						59
		S	40	38	79345	13.0						80
		P	80	76	92077	7.7	940	940	89000	6.5	3.46	67
6	Maharashtra	C	68	56	105311	7.6						57
	*	S	68	17	N.P.							N.C.
		P	136	73	105311	7.6	8742	7784	89000	0.4	18.33	65
7	Punjab	C	70	69	81235	5.1						42
		S	70	68	84988	4.7						39
		P	140	137	83164	3.5	698	668	81271	NR	2.33	41
8	Rajasthan	C	40	40	59897	4.4						28
	*	S	40	31	N.P.							0
		P	80	71	59897	4.4	450	402	68456	0.0	-12.50	37
9	Tamil Nadu	C	40	37	123989	3.7						23
		S	40	40	104943	4.1						26
		P	80	77	113741	2.8	468	468	87000	1.8	30.74	25
10	Uttar	C	200	196	75337	4.0						56
	Pradesh	S	200	16	N.P.							N.C.
	*	P	400	212	75337	4.0	9400	9080	72667	NR	3.67	58
11	Uttarakhand	C	40	40	69706	8.1	0					51
	*	S	40	0	N.P.		0					N.C.
		P	80	40	69706	8.1	0	0	0	0	0	51
For states covered			1376	985	85354	3.1	24926	23089	77271	0.5	0.00	97
						WHEAT						
1	Assam	C	50	34	1311	5.1						30
		S	50	34	N.P.							N.C.
		P	100	68	1439	6.7	850	644	1344	1.1	7.07	55
2	Bihar	C	230	206	2942	2.7						39
	*	S	230	85	N.P.							N.C.
		P	460	291	2932	2.4	41325	40250	2843	NR	3.13	41
3	Chhattisgarh	C	40	40	1311	9.9						63
	@	S	40	38	1442	9.3						57
		P	80	78	1375	6.8	866	608	1360	2.1	1.10	60
4	Gujarat	C	150	138	3004	3.2						38
	*	S	150	70	N.P.							N.C.
		P	300	208	3004	3.2	41374	38506	2773	0.0	8.33	46
5	Haryana	C	180	180	4681	1.9						25
		S	180	176	4762	1.9						25
		P	360	356	4720	1.4	2200	2182	4407	0.7	7.10	26
6	Himachal	C	110	87	1820	7.0						65
	Pradesh	S	110	90	1849	10.3						98
		P	220	177	1829	5.8	1930	1746	1988	1.4	-8.00	77
7	Jammu &	C	120	118	1953	6.6						72
	Kashmir	S	120	42	N.P.							0
	*	P	240	160	2291	6.7	1980	1578	1822	6.0	25.74	85
8	Jharkhand	C	40	40	1887	13.8						87
	*	S	40	24	N.P.							N.C.
		P	80	64	1583	4.2	17520	11902	2022	0.0	-21.71	34
9	Karnataka	C	50	34	1037	15.0						87
	*	S	50	45	1273	15.8						106
		P	100	79	1125	11.0	3488	3438	736	4.8	52.85	98
10	Madhya	C	250	241	2950	2.6						40
	Pradesh *	S	250	142	N.P.							0
		P	500	383	2950	2.6	5830	5146	2896	0.6	1.86	51

ANNEX XIV (Contd.....)

Sl. No.	State	AGENCY	ICS				C.E.S. $				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
11	Maharashtra	C	150	91	2126	7.7						73
	*	S	150	85	N.P.							N.C.
		P	300	176	2126	7.7	8126	7731	1757	0.5	21.00	102
12	Punjab	C	220	218	5058	1.1						16
	*	S	220	208	N.P.							0
		P	440	426	5058	1.1	2334	2334	5046	NR	0.24	23
13	Rajasthan	C	130	122	3557	4.4						49
		S	130	101	3475	4.6						46
		P	260	223	3517	3.2	39316	37486	3712	0.2	-5.25	48
14	Uttar	C	570	557	3506	3.1						73
	Pradesh	S	570	145	N.P.							N.C.
	*	P	1140	702	3506	3.1	226430	224792	3538	NR	-0.90	82
15	Uttarakhand*	C	60	54	2163	6.4						47
		S	60	41	N.P.							N.C.
		P	120		2163	6.4	2952	2913	2565	0.9	-15.67	62
16	West Bengal	C	110	56	2663	5.1						38
		S	110	16	3165	6.0						24
		P	220	72	2834	3.9	2528	2285	2682	0.9	5.67	33
For states covered			4920	3558	3407	1.2	399049	383541	3457	0.1	-1.45	71
BARLEY												
1	Haryana	C	30	30	2912	10.2						56
	*	S	30	30	3370	9.3						51
		P	60	60	3127	6.9	516	355	3414	1.6	-8.41	53
2	Himachal	C	40	20	1774	11.6						52
	Pradesh	S	40	26	1267	10.7						55
	*	P	80	46	1421	8.0	900	698	1634	1.9	-13.04	54
3	Punjab	C	30	27	3803	3.9						20
	*	S	30	26	N.P.							0
		P	60	53	3803	3.9	244	244	3795	NR	0.21	28
4	Rajasthan	C	80	78	2887	5.1						45
		S	80	68	2844	8.3						68
		P	160	146	2868	4.3	6064	5946	3297	0.5	-13.01	52
For states covered			360	305	2706	3.2	7724	7243	3224	0.5	-16.07	56
GRAM												
1	Andhra Pradesh	C	40	40	1269	8.9						56
	*	S	40	40	N.P.							N.C.
		P	80	80	1212	6.9	1328	1328	959	1.6	26.38	62
2	Bihar	C	40	38	1219	8.1						50
	*	S	40	14	N.P.							N.C.
		P	80	52	1072	6.9	800	695	1120	0.0	-4.29	50
3	Chhattisgarh	C	40	40	746	15.2						96
		S	40	39	1169	12.5						78
		P	80	79	906	9.9	488	326	1171	3.0	-22.63	88
4	Gujarat	C	40	24								0
	**	S	40	12	N.P.							N.C.
		P	80	36			3880	3602	1124	0.0	-100.00	0
5	Haryana	C	70	70	969	12.5						105
	*	S	70	63	1227	10.3						82
		P	140	133	1093	8.0	562	512	619	0.0	76.58	92
6	Jharkhand	C	20	20	732	15.1						68
	*	S	20	14	N.P.							N.C.
		P	40	34	669	7.9	7830	5094	1120	NR	-40.27	46
7	Karnataka	C	40	25	746	9.9						50
		S	40	38	758	9.8						60
		P	80	63	752	7.0	8172	7890	439	2.2	71.30	56
8	Madhya	C	140	138	1391	4.1						48
	Pradesh	S	140	78	0	0.0						0
	*	P	280	216	1392	4.7	5330	4306	1115	0.8	24.84	69
9	Maharashtra	C	100	71	1006	7.9						67
	*	S	100	35	N.P.							N.C.
		P	200	106	1006	7.9	5524	5449	918	9.9	9.59	81
10	Punjab	C	30	26	1443	10.8						55
	*	S	30	26	0	0.0						0
		P	60	52	1443	10.8	100	100	1391	NR	3.74	78
11	Rajasthan	C	120	103	813	12.7						129
		S	120	92	881	13.2						127
		P	240	195	843	9.2	16096	14562	910	0.8	-7.36	128
12	Uttar	C	50	50	1093	13.1						93
	Pradesh	S	50	18	N.P.							N.C.
	*	P	100	68	1093	13.1	13060	12753	1115	NR	-1.97	108
13	West Bengal	C										N.C.
	**	S			Not Planned							N.C.
		P					725	630	1030	4.5	-100.0	N.C.
For states covered			1460	1114	971	3.3	63895	57247	953	1.1	1.89	110

ANNEX XIV (Contd.....)

Sl. No.	State	AGENCY	ICS				C.E.S. $				% Diff. (Col.6-Col.10/Col.10 x 100)	Coeffi-cient of Varia-tion
			No.of Expts.		Estimated Yield Rate Kg/Hac	% SE	No.of Expts.		Estimated Yield Rate Kg/Hac	% SE		
			Planned	Analysed			Planned	Analysed				
1	2	3	4	5	6	7	8	9	10	11	12	13
RAPE & MUSTARD												
1	Assam	C	70	60	666	5.7						44
	*	S	70	52	N.P.							N.C.
		P	140	112	647	4.1	1250	1166	644	1.2	0.47	43
2	Bihar	C	40	40	1107	9.1						58
		S	40	20	N.P.							N.C.
		P	80	60	1037	7.1	1064	1006	1180	NR	-12.12	55
3	Chhattisgarh	C	30	30	458	10.8						59
		S	30	22	441	14.0						66
		P	60	52	451	8.6	438	316	389	3.3	15.94	62
4	Gujarat	C	50	44	1831	3.8						25
	*	S	50	30	N.P.							N.C.
		P	100	74	1831	3.8	3450	2914	1771	1.1	3.39	33
5	Haryana	C	100	100	1737	5.3						53
	*	S	100	92	2003	5.3						51
		P	200	192	1850	3.8	1040	990	1434	0.5	29.01	53
6	Jharkhand	C	20	20	576	3.9						17
	*	S	20	20	N.P.							N.C.
		P	40	40	532	3.2	7830	4860	935	NR	-43.10	20
7	Madhya	C	60	58	1647	9.6						73
	Pradesh	S	60	34	N.P.							0
	*	P	120	92	1596	18.6	1116	996	1178	2.0	35.48	178
8	Punjab	C	40	40	1514	5.8						37
	*	S	40	40	0	0.0						0
		P	80	80	1514	5.8	566	566	1413	NR	7.15	52
9	Rajasthan	C	90	82	1349	8.8						80
		S	90	67	1568	7.5						61
		P	180	149	1460	5.7	30712	28875	1521	0.3	-4.01	70
10	Uttar Pradesh	C	100	99	1524	5.7						57
	*	S	100	20	N.P.							N.C.
		P	200	119	1524	5.7	26442	25584	1245	NR	22.41	62
11	West Bengal	C	110	106	1329	4.0						41
	*	S	110	38	N.P.							N.C.
		P	220	144	1235	2.9	5030	4397	1077	0.9		35
For states covered			1420	1114	1493	2.5	78938	71670	1342	0.3	11.24	83

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

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

ESTIMATES OF YIELD RATE ACCORDING TO IRRIGATION AND SEED VARIETY UNDER ICS DURING 2017-18

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
PADDY																					
1	Andhra	C	Kh.	162	3415	6	2326	168	3376	3	3525	4	1234	7	2216	165	3417	10	1889	175	3330
	Pradesh	S		168	3263	6	2238	174	3228	2	3173	4	588	6	1450	170	3262	10	1578	180	3168
		P		330	3338	12	2282	342	3301	5	3384	8	911	13	669	335	3338	20	1734	355	3248
		C	Sum.	83	4052	0	0	83	4052	2	2417	0	0	2	2417	85	4013	0	0	85	4013
		S		88	4012	0	0	88	4012	0	0	0	0	0	0	88	4012	0	0	88	4012
		P		171	4031	0	0	171	4031	2	2417	0	0	2	2417	173	4012	0	0	173	4012
2	Assam	C	Aut.	5	3163	8	2186	13	2562	7	1474	46	1728	53	1694	12	2178	54	1795	66	1865
		S		2	1853	3	2677	5	2347	4	1381	43	1363	47	1365	6	1539	46	1448	52	1459
		P		7	2788	11	2320	18	2502	11	1440	89	1551	100	1539	18	1965	100	1636	118	1686
		C	Win.	2	1406	8	2245	10	2077	0	0	108	2125	108	2125	2	1406	116	2133	118	2121
		S		0	0	3	2739	3	2739	5	2428	82	2129	87	2146	5	2427	85	2150	90	2165
		P		2	1460	11	2380	13	2230	5	2428	190	2127	195	1665	7	2135	201	2140	208	1070
		C	Sum.	6	2372	6	3410	12	2891	14	3219	5	2576	19	3050	20	2965	11	3031	31	2988
		S		16	3562	4	4544	20	3758	10	3349	4	2647	14	3148	26	3480	8	3596	34	3507
		P		22	3237	10	3864	32	3433	24	3273	9	2608	33	3092	46	3256	19	3269	65	3260
3	Bihar	C	Bha.	2	2395	0	0	2	2395	0	0	26	3423	26	3423	2	2395	26	3423	28	3350
		S		0	0	0	0	0	0	0	0	22	3533	22	3533	0	0	22	3533	22	3533
		P		2	2395	0	0	2	2395	0	0	48	3473	48	3473	2	2395	48	3473	50	3430
		C	Agh.	76	4519	20	3654	96	4339	45	4372	30	2959	75	3807	121	4464	50	3237	171	4105
		S		82	4600	8	3520	90	4504	40	3884	22	2634	62	3440	122	4366	30	2870	152	4071
		P		158	4561	28	3616	186	4419	85	4142	52	2822	137	3641	243	4415	80	3099	323	4089
		C	Sum.	20	2538	0	0	20	2538	6	2270	0	0	6	2270	26	2476	0	0	26	2476
		S		10	2320	0	0	10	2320	0	0	0	0	0	0	10	2320	0	0	10	2320
		P		30	2465	0	0	30	2465	6	2270	0	0	6	2270	36	2433	0	0	36	2433
4	Chhattis-	C	Kh.	38	3023	26	1893	64	2564	0	0	16	1961	16	1961	38	3023	42	1919	80	2443
	garh	S		36	3017	32	1866	68	2475	0	0	8	2971	8	2971	36	3017	40	2088	76	2528
		P		74	3020	58	1878	132	2518	0	0	24	2298	24	2298	74	3020	82	2001	156	2485
5	Gujarat	C	Kh.	32	2220	18	1602	50	1998	4	2764	12	1061	16	1487	36	2280	30	1385	66	1873
		S		9	2641	11	1584	20	2060	9	2642	15	1301	24	1804	18	2641	26	1421	44	1920
		P		41	2312	29	1595	70	2015	13	2680	27	1194	40	1677	54	2400	56	1402	110	1892
6	Haryana	C	Kh.	89	11374	0	0	89	11374	0	0	0	0	0	0	89	11373	0	0	89	11373
		S		75	10842	0	0	75	10842	6	11219	0	0	1	67314	81	10869	0	0	81	10869
		P		164	11131	0	0	164	11131	6	11219	0	0	1	67314	170	11133	0	0	170	11133
7	Himachal	C	Kh.	12	3020	4	1520	16	2645	20	2333	14	1442	34	1966	32	2591	18	1460	50	2184
	Pradesh	S		8	2817	8	1794	16	2306	16	2106	14	1444	30	1797	24	2342	22	1571	46	1973
		P		20	2939	12	1702	32	2475	36	2232	28	1443	64	1887	56	2484	40	1521	96	2083
8	Jammu	C	Kh.	10	2096	6	2089	16	2093	50	2117	4	2242	54	2126	60	2114	10	2150	70	2119
	&	S		24	1900	4	1926	28	1904	2	1516	2	1711	4	1614	26	1870	6	1854	32	1867
	Kashmir	P		34	1958	10	2024	44	1973	52	2094	6	2065	58	2091	86	2040	16	2039	102	2040
9	Jhar-	C	Aut.	0	0	0	0	0	0	0	0	20	1464	20	1464	0	0	20	1464	20	1464
	khand	S		0	0	0	0	0	0	0	0	12	998	12	998	0	0	12	998	12	998
		P		0	0	0	0	0	0	0	0	32	1289	32	1289	0	0	32	1289	32	1289
9	Jhar-	C	Wint.	0	0	14	4344	14	4344	6	3001	58	3398	64	3361	6	3001	72	3582	78	3537
	khand	S		0	0	4	4893	4	4893	0	0	14	2114	14	2114	0	0	18	2731	18	2731
		P		0	0	18	4466	18	4466	6	3001	72	3148	78	3137	6	3001	90	3412	96	3386
10	Karna-	C	Kh.	71	2931	34	2534	105	2803	7	2615	7	1916	14	2265	78	2903	41	2429	119	2739
	taka	S		75	3275	31	2617	106	3083	15	2609	16	2067	31	2329	90	3164	47	2430	137	2912
		P		146	3108	65	2574	211	2943	22	2611	23	2021	45	2309	168	3043	88	2429	256	2832
		C	Sum.	19	3488	2	2483	21	3392	1	3550	0	0	1	3550	20	3491	2	2483	22	3399
		S		28	3047	0	0	28	3047	4	3352	0	0	4	3352	32	3085	0	0	32	3085
		P		47	3225	2	2483	49	3195	5	3391	0	0	5	3391	52	3241	2	2483	54	3213
11	Kerala	C	Aut.	30	2340	54	1916	84	2067	2	1930	14	937	16	1061	32	2314	68	1714	100	1906
		S		37	2158	46	2002	83	2072	2	1913	15	1340	17	1407	39	2146	61	1840	100	1959
		P		67	2239	100	1956	167	2069	4	1922	29	1145	33	1240	71	2222	129	1774	200	1933
		C	Win.	65	2607	8	1128	73	2445	9	1685	18	1219	27	1374	74	2495	26	1191	100	2156
		S		70	2591	7	2503	77	2583	8	2021	15	890	23	1283	78	2531	22	1404	100	2283
		P		135	2599	15	1770	150	2516	17	1843	33	1069	50	1333	152	2513	48	1289	200	2220
		C	Sum.	84	2644	8	2099	92	2597	5	358	2	1388	7	652	89	2516	10	1957	99	2460
		S		88	2832	1	1719	89	2819	9	1688	1	1602	10	1679	97	2726	2	1660	99	2704
		P		172	2740	9	2058	181	2706	14	1213	3	1459	17	1256	186	2626	12	1908	198	2582
12	Madhya	C	Kh.	32	2339	26	1557	58	1988	0	0	40	960	40	960	32	2339	66	1195	98	1569
	Pradesh	S		18	1999	21	1603	39	1786	8	2465	37	1099	45	1342	26	2142	58	1281	84	1548
		P		50	2217	47	1578	97	1907	8	2465	77	1027	85	1162	58	2251	124	1235	182	1559

ANNEX- XV (Contd.....)

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
13	Mahara-	C	Kh.	18	1240	25	2008	43	1687	0	0	17	1010	17	1010	18	1240	42	1604	60	1495
	shtra	S		7	1267	13	1633	20	1505	3	782	22	1196	25	1146	10	1122	35	1358	45	1306
		P		25	1248	38	1880	63	1629	3	782	39	1115	42	1091	28	1198	77	1492	105	1414
14	Odisha	C	Aut.	63	1700	176	1682	239	1687	3	2774	24	1511	27	1651	66	1749	200	1661	266	1683
		S		82	2032	168	1445	250	1638	0	0	16	1269	24	846	82	2032	184	1429	266	1615
		P		145	1888	344	1566	489	1662	3	399	40	1414	51	1272	148	1906	384	1550	532	1649
		C	Win.	29	13720	0	0	29	13720	5	12789	0	0	5	12789	34	13583	0	0	34	13583
		S		12	10000	0	0	12	10000	16	12677	0	0	16	12677	28	11530	0	0	28	11530
		P		41	12631	0	0	41	12631	21	12704	0	0	21	12704	62	12656	0	0	62	12656
		C	Sum.	137	2986	0	0	137	2986	0	0	0	0	0	0	137	2986	0	0	137	2986
		S		136	36341	0	0	136	36341	0	0	0	0	0	0	136	36341	0	0	136	36341
		P		273	19602	0	0	273	19602	0	0	0	0	0	0	273	19602	0	1589	273	19602
15	Punjab	C	Kh.	187	15550	0	0	187	15550	0	0	0	0	0	0	187	15550	0	0	187	15550
		S		154	15342	0	0	154	15342	2	18809	0	0	2	18809	156	15387	0	0	156	15387
		P		341	15456	0	0	341	15456	2	18809	0	0	2	18809	343	15476	0	0	343	15476
16	Tamil	C	Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Nadu	S	I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		P		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C	Phase	35	3957	2	4974	37	4012	1	3070	0	0	1	3070	36	3932	2	4974	38	3987
		S	II	40	3824	0	0	40	3824	0	0	0	0	0	0	40	3824	0	0	40	3824
		P		75	3886	2	4974	77	3914	1	3070	0	0	1	3070	76	3875	2	4974	78	3903
		C	Phase	67	4480	9	0	76	3949	0	0	0	0	0	0	67	4480	9	0	76	3949
		S	III	68	3947	4	0	72	3728	0	0	4	7	4	7	68	3947	8	3	76	3532
		P		135	4212	13	0	148	3842	0	0	4	7	4	7	135	4212	17	1	152	3741
17	Telangan	C	Kh.	58	2524	6	2027	64	2477	2	2017	0	0	2	2017	60	2507	6	2027	66	2463
		S		50	2626	10	2150	60	2547	0	0	0	0	0	#DIV/0!	50	2626	10	2150	60	2547
		P		108	2571	16	2104	124	2511	2	2017	0	0	2	2017	110	2561	16	2104	126	2503
		C	Rabi	87	3744	0	0	87	3744	0	0	0	0	0	#DIV/0!	87	3743	0	0	87	3743
		S		72	3735	2	2900	74	3712	0	0	0	0	0	#DIV/0!	72	3735	2	2900	74	3712
		P		159	3740	2	2900	161	3729	0	0	0	0	0	#DIV/0!	159	3739	2	2900	161	3729
18	Uttar	C	Kh.	566	2756	15	1856	581	2733	76	2292	1	2101	77	2290	642	2701	16	1871	658	2681
	Pradesh	S		180	2677	10	2962	190	2692	8	2247	2	2327	10	2263	188	2658	12	2856	200	2670
		P		746	2737	25	2298	771	2723	84	2288	3	2252	87	2286	830	2691	28	2293	858	2678
19	Uttara-	C	Kh.	16	3917	0	0	16	3917	12	2588	12	1305	24	1947	28	3347	12	1305	40	2734
	khand	S		13	3153	0	0	13	3153	22	2365	9	685	31	1877	35	2658	9	685	44	2254
		P		29	3575	0	0	29	3575	34	2444	21	1039	55	1907	63	2964	21	1039	84	2483
20	West	C	Aut.	71	2457	15	2350	86	2438	2	3684	6	1524	8	2064	73	2491	21	2114	94	2407
	Bengal	S		44	2739	2	2649	46	2735	4	1728	2	1951	6	1802	48	2655	4	2300	52	2628
		P		115	2565	17	2385	132	2542	6	2380	8	1631	14	1952	121	2556	25	2144	146	2485
		C	Am.	64	2800	78	2527	142	2650	4	1613	14	1602	18	1604	68	2730	92	2386	160	2532
		S		31	2791	19	2856	50	2816	0	0	0	0	0	0	31	2791	19	2856	50	2816
		P		95	2797	97	2591	192	2693	4	1613	14	1602	18	1604	99	2749	111	2466	210	2600
		C	Sum.	121	3698	0	0	121	3698	19	4179	0	0	19	4179	140	3763	0	0	140	3763
		S		20	1372	0	0	20	1372	0	0	0	0	0	0	20	1372	0	0	20	1372
		P		141	3368	0	0	141	3368	19	4179	0	0	19	4179	160	3464	0	0	160	3464
21	Pudu-	C	Kh.	10	2776	0	0	10	2776	0	0	0	0	0	0	10	2776	0	0	10	2776
	cherry	S		10	3523	0	0	10	3523	0	0	0	0	0	0	10	3523	0	0	10	3523
		P		20	3150	0	0	20	3150	0	0	0	0	0	0	20	3150	0	0	20	3150
		C	R-I	6	2016	0	0	6	2016	0	0	0	0	0	0	10	2283	0	0	10	2283
		S		10	3043	0	0	10	3043	0	0	0	0	0	0	10	3043	0	0	10	3043
		P		16	2658	0	0	16	2658	0	0	0	0	0	0	20	2663	0	0	20	2663
		C	R-II	10	2922	0	0	10	2922	0	0	0	0	0	0	10	2922	0	0	10	2922
		S		10	3464	0	0	10	3464	0	0	0	0	0	0	10	3464	0	0	10	3464
		P		20	3193	0	0	20	3193	0	0	0	0	0	0	20	3193	0	2873	20	3193
For States Covered		C		2238	4549	568	2087	2806	4032	306	2865	394	2238	801	2207	2545	4321	1066	1871	3611	3519
		S		1653	7342	410	1912	2056	6254	190	3771	407	1676	579	2410	1843	6863	817	1736	2660	5263
		P		3889	5738	973	2024	4862	4971	498	3199	879	1779	1380	2292	4391	5385	1852	1843	6243	4278
JOWAR																					
1	Karna-	C	Kh.	2	2832	14	1567	16	1725	0	0	0	0	0	0	2	2831	14	1567	16	1725
	taka	S		12	2802	18	1571	30	2063	3	2186	7	1564	10	1750	15	2679	25	1569	40	1985
		P		14	2806	32	1569	46	1946	3	2186	7	1564	10	1750	17	2697	39	1569	56	1911
		C	Rabi	10	1484	20	774	30	1011	0	0	26	1044	26	1044	10	1484	46	927	56	1026
		S		7	1011	42	1067	49	1059	0	0	4	1207	4	1207	7	1011	46	1080	53	1071
		P		17	1289	62	972	79	1041	0	0	30	1066	30	1066	17	1289	92	1004	109	1048
2	Madhya	C	Kh.	0	0	32	1429	32	1429	0	0	58	1306	58	1306	0	0	90	1350	90	1350
	Pradesh	S		0	0	29	1680	29	1680	0	0	49	936	49	936	0	0	78	1212	78	1212
		P		0	0	61	1548	61	1548	0	0	107	1137	107	1137	0	0	168	1286	168	1286

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
3	Mahara-	C	Kh.	5	1884	49	960	54	1046	0	0	2	0	2	0	5	1884	51	923	56	1009
	shtra	S		0	0	25	811	25	811	0	0	18	1111	18	1111	0	0	43	937	43	937
		P		5	1884	74	910	79	971	0	0	20	1000	20	1000	5	1884	94	929	99	978
		C	Rabi	37	1119	0	0	37	1119	39	6397	0	0	39	6396	76	3827	0	0	76	3827
		S		30	1353	0	0	30	1353	30	4695	0	0	30	4695	60	3024	0	0	60	3024
		P		67	1224	0	0	67	1224	69	5657	0	0	69	5656	136	3473	0	0	136	3473
4	Raja-	C	Kh.	0	0	4	420	4	420	5	723	35	534	40	558	5	723	39	523	44	546
	sthan	S		2	104	2	546	4	325	2	278	32	560	34	543	4	192	34	559	38	520
		P		2	104	6	462	8	373	7	596	67	546	74	551	9	486	73	540	82	534
5	Tamil	C	**	4	1183	30	1387	34	1363	0	0	6	1395	6	1395	4	1183	36	1388	40	1368
	Nadu	S		2	746	20	1011	22	987	0	0	14	346	14	346	2	746	34	737	36	738
		P		6	1037	50	1237	56	1215	0	0	20	661	20	661	6	1037	70	1072	76	1069
6	Telangana	C	Kh.	0	0	21	1162	21	1162	0	0	19	768	19	768	0	0	40	975	40	975
		S		4	1562	5	779	9	1127	0	0	25	943	25	943	4	1562	30	916	34	992
		P		4	1562	26	1088	30	1152	0	0	44	868	44	867	4	1562	70	950	74	983
		C	Rabi	2	1352	9	1291	11	1302	4	1984	25	1035	29	1166	6	1773	34	1103	40	1204
		S		2	944	6	1550	8	1399	13	1142	7	1457	20	1252	15	1116	13	1500	28	1294
		P		4	1148	15	1394	19	1343	17	1340	32	1127	49	1201	21	1303	47	1212	68	1241
7	Uttar	C	Kh.	0	0	2	2459	2	2459	2	381	36	888	38	861	2	381	38	971	40	942
	Pradesh	S		0	0	0	0	0	0	0	0	12	934	12	934	0	0	12	934	12	934
		P		0	0	2	2459	2	2459	2	381	48	1822	50	879	2	381	50	1905	52	940
For States Covered		C		60	9854	181	11449	241	13035	50	9485	207	6970	257	13494	110	14086	388	9727	498	1521
		S		59	8522	147	9015	206	10804	48	8301	168	9058	216	13718	107	10330	315	9444	422	1374
		P		119	11055	328	11639	447	13271	98	10160	375	9790	473	14768	217	14112	703	10466	920	1454
BAJRA																					
1	Andhra	C	Kh.	0	0	19	1890	19	1890	4	2423	17	1276	21	1494	4	2423	36	1600	40	1682
	Pradesh	S		4	2667	14	1644	18	1871	0	0	22	1255	22	1255	4	2667	36	1406	40	1532
		P		4	2667	33	1786	37	1881	4	2423	39	1264	43	1372	8	2545	72	1503	80	1607
2	Gujarat	C	Kh.	12	1805	39	1738	51	1754	0	0	1	1642	1	1642	12	1805	40	1736	52	1752
		S		13	2662	28	1971	41	2190	5	1512	12	2031	17	1878	18	2343	40	1989	58	2099
		P		25	2251	67	1836	92	1948	5	1512	13	2001	18	1865	30	2128	80	1863	110	1935
3	Haryana	C	Kh.	82	4100	18	4771	100	4221	2	9852	0	0	2	9852	84	4237	18	4771	102	4331
		S		81	4465	23	4090	104	4382	0	0	0	0	0	0	81	4465	23	4090	104	4382
		P		163	4281	41	4389	204	4303	2	9852	0	0	2	9852	165	4349	41	4389	206	4357
4	Karna-	C	Kh.	0	0	18	1537	18	1537	0	0	0	0	0	0	0	0	18	1537	18	1537
	taka	S		2	1846	24	1335	26	1374	0	0	0	0	0	0	2	1846	24	1335	26	1374
		P		2	1846	42	1422	44	1441	0	0	0	0	0	0	2	1846	42	1422	44	1441
5	Mahara-	C	Kh.	9	1192	24	821	33	922	0	0	6	1007	6	1007	9	1192	30	858	39	935
	shtra	S		6	2161	20	848	26	1151	0	0	6	620	6	620	6	2161	26	795	32	1051
		P		15	1580	44	833	59	1023	0	0	12	814	12	814	15	1580	56	829	71	987
6	Raja-	C	Kh.	5	1357	35	1677	40	1637	1	2553	13	626	14	764	6	1556	48	1392	54	1410
	sthan	S		0	0	27	902	27	902	0	0	23	693	23	693	0	0	50	806	50	806
		P		5	1357	62	1340	67	1341	1	2553	36	669	37	720	6	1556	98	1093	104	1120
7	Tamil	C	**	4	4059	23	2030	27	2331	0	0	13	1228	13	1228	4	4059	36	1740	40	1972
	Nadu	S		4	3139	23	2415	27	2522	0	0	13	1295	13	1295	4	3139	36	2010	40	2123
		P		8	3599	46	2223	54	2426	0	0	26	1262	26	1262	8	3599	72	1875	80	2047
8	Uttar	C	Kh.	64	2420	40	2110	104	2301	7	2034	39	1122	46	1261	71	2382	79	1622	150	1982
	Pradesh	S		23	2351	24	2195	47	2271	1	2800	0	0	1	2800	24	2369	24	2195	48	2282
		P		87	2402	64	2142	151	2292	8	2130	39	1122	47	1294	95	2379	103	1756	198	2055
For States Covered		C		176	3105	216	1976	392	2483	14	3299	89	1093	103	1392	190	3119	305	1718	495	2256
		S		133	3686	183	1934	316	2671	6	1727	76	1164	82	1205	139	3601	259	1708	398	2369
		P		309	3355	399	1956	708	2567	20	2827	165	1126	185	1310	329	3323	564	1713	893	2306
MAIZE																					
1	Bihar	C	Kh.	6	2258	8	4151	14	3340	10	2147	4	4122	14	2711	16	2189	12	4142	28	3026
		S		0	0	4	2555	4	2555	2	3845	6	2633	8	2936	2	3845	10	2602	12	2809
		P		6	2258	12	3619	18	3165	12	2430	10	3229	22	2793	18	2373	22	3442	40	2961
2	Chattis-	C	Kh.	0	0	9	4149	9	4149	0	0	31	1606	31	1606	0	0	40	2178	40	2178
	garh	S		2	2458	10	2161	12	2211	0	0	22	1369	22	1369	2	2459	32	1616	34	1666
		P		2	2458	19	3103	21	3041	0	0	53	1508	53	1508	2	2459	72	1928	74	1943
3	Gujarat	C	Kh.	0	0	8	1976	8	1976	2	1492	8	1286	10	1327	2	1492	16	1632	18	1616
		S		0	0	10	1464	10	1464	0	0	16	1145	16	1145	0	0	26	1268	26	1268
		P		0	0	18	1692	18	1692	2	1492	24	1192	26	1215	2	1492	42	1407	44	1411

ANNEX- XV (Contd.....)

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
4	Haryana	C	Kh.	13	10508	5	5338	18	9072	0	0	2	9205	2	9205	13	10507	7	6443	20	9085
		S		3	3006	9	2570	12	2679	1	1198	1	2763	2	1981	4	2554	10	2590	14	2580
		P		16	9101	14	3559	30	6515	1	1198	3	7058	4	5593	17	8636	17	4177	34	6406
5	Himachal	C	Kh.	2	3260	19	4968	21	4805	2	3659	51	2033	53	2094	4	3459	70	2830	74	2864
	Pradesh	S		2	5667	16	2933	18	3237	0	0	54	2613	54	2613	2	5667	70	2686	72	2769
		P		4	4464	35	4038	39	4081	2	3659	105	2331	107	2356	6	4195	140	2758	146	2817
6	Jammu &	C	Kh.	0	0	21	2776	21	2776	4	429	63	1988	67	1895	4	429	84	2185	88	2105
	Kashmir	S		0	0	5	2547	5	2547	0	0	15	1417	15	1417	0	0	20	1699	20	1699
		P		0	0	26	2732	26	2732	4	429	78	1878	82	1808	4	429	104	2092	108	2030
7	Jhar-	C	Kh.	0	0	8	2370	8	2370	0	0	12	1822	12	1822	0	0	20	2041	20	2041
	khand	S		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		P		0	0	8	2370	8	0	0	0	12	1822	12	1822	0	0	20	2041	20	2041
8	Karna-	C	Kh.	11	5676	18	4219	29	4772	0	0	3	6434	3	6434	11	5676	21	4536	32	4928
	taka	S		6	6362	26	4975	32	5235	2	6107	2	3649	4	4878	8	6298	28	4880	36	5195
		P		17	5918	44	4666	61	5015	2	6107	5	5320	7	5545	19	5938	49	4733	68	2750
9	Madhya	C	Kh.	0	0	29	4561	29	4561	0	0	47	1818	47	1818	0	0	76	2864	76	2864
	Pradesh	S		0	0	30	1874	30	1874	0	0	32	1578	32	1578	0	0	62	1721	62	1721
		P		0	0	59	3195	59	3195	0	0	79	1721	79	1721	0	0	138	2350	138	2350
10	Odisha	C	Kh.	0	0	28	3050	28	3050	0	0	12	2198	12	2198	0	0	40	2794	40	2794
		S		0	0	28	2601	28	2601	0	0	12	1331	12	1331	0	0	40	2220	40	2220
		P		0		56	2826	56	2826	0	0	24	1765	24	1765	0	0	80	2507	80	2507
11	Punjab	C	Kh.	33	3980	8	3337	41	3855	0	0	7	2287	7	2287	33	3980	15	2847	48	3626
		S		36	5052	6	4534	42	4978	4	3000	2	1099	6	2366	40	4847	8	3675	48	4652
		P		69	4539	14	3850	83	4423	4	3000	9	2023	13	2324	73	4455	23	3135	96	4139
12	Raja-	C	Kh.	1	3657	12	4688	13	4609	3	1906	30	1658	33	1680	4	2344	42	2524	46	2508
	sthan	S		2	3525	14	1706	16	1933	2	832	22	1642	24	1575	4	2178	36	1667	40	1718
		P		3	3569	26	3082	29	3133	5	1476	52	1651	57	1636	8	2261	78	2128	86	2141
13	Tamil	C	Kh.	16	10510	24	7070	40	8446	0	0	0	0	0	0	16	10510	24	7070	40	8446
	Nadu	S		14	8938	26	6355	40	7259	0	0	0	0	0	0	14	8937	26	6355	40	7259
		P		30	9776	50	6698	80	7853	0	0	0	0	0	0	30	9776	50	6698	80	7852
14	Telanaga	C	Kh.	14	5239	23	4620	37	4854	1	13167	2	436	3	4679	15	5767	25	4286	40	4841
		S		10	4467	18	4294	28	4356	0	0	0	0	0	0	10	4467	18	4294	28	4356
		P		24	4917	41	4477	65	4640	1	13167	2	436	3	4679	25	5247	43	4289	68	4641
15	Uttar	C	Kh.	77	11572	31	4452	108	9528	14	4024	48	2319	62	2704	91	10410	79	3156	170	7039
	Pradesh	S		41	5498	7	5101	48	5440	4	2511	12	1793	16	1973	45	5232	19	3012	64	4573
		P		118	9462	38	4572	156	8270	18	3688	60	2214	78	2554	136	8697	98	3128	234	6365
For States		C		159	8889	228	4250	387	6156	35	2730	318	2056	353	2123	194	7777	546	2972	740	4019
Covered		S		106	5688	191	3349	297	4184	15	2987	196	1852	211	1933	121	5353	387	2591	508	3249
		P		265	7608	419	3839	684	5300	50	2807	514	1978	564	1983	315	6846	933	2814	1248	3705
RAGI																					
1	Karna-	C	Kh.	3	3479	24	3158	27	3194	0	0	1	2260	1	2260	3	3479	25	3122	28	3160
	taka	S		8	2425	23	1875	31	2017	0	0	2	1614	2	1614	8	2425	25	1854	33	1993
		P		11	2712	47	2530	58	2565	0	0	3	1829	3	1829	11	2712	50	2488	61	2529
2	Uttra-	C		0	0	1	1837	1	1837	4	1422	30	1271	34	1289	4	1422	31	1289	35	1304
	khand	S		0	0	0	0	0	0	0	0	30	1392	30	1392	0	0	30	1392	30	1392
		P		0	0	1	1837	1	1837	4	1422	60	1332	64	1337	4	1422	61	1340	65	1345
For States		C		3	3479	25	3523	28	1443	4	4031	31	4327	35	0	7	0	56	0	63	0
Covered		S		8	2425	23	2719	31	1451	0	0	32	3360	32	0	8	0	55	0	63	0
		P		11	2712	48	3138	59	1447	4	8881	63	3836	67	0	15	0	111	0	126	0
GROUNDNUT																					
1	Andhra	C	Kh.	4	2343	120	1646	124	1668	0	0	16	1048	16	1048	4	2344	136	1576	140	1598
	Pradesh	S		2	1596	115	1660	117	1659	2	3012	21	995	23	1170	4	2304	136	1557	140	1578
		P		6	2094	235	1653	241	1664	2	3012	37	1018	39	1120	8	2324	272	1567	280	1588
2	Gujarat	C	Kh.	80	2672	42	2052	122	2459	3	3142	4	1504	7	2206	83	2689	46	2005	129	2445
		S		35	2814	25	1930	60	2446	17	2833	7	1057	24	2315	52	2820	32	1739	84	2408
		P		115	2715	67	2007	182	2454	20	2880	11	1220	31	2290	135	2740	78	1896	213	2431
3	Karna-	C	Kh.	3	671	17	1591	20	1453	0	0	6	709	6	709	3	671	23	1361	26	1281
	taka	S		8	1016	40	1230	48	1194	2	1353	4	1419	6	1397	10	1083	44	1247	54	1217
		P		11	922	57	1338	68	9740	2	1353	10	993	12	1053	13	988	67	1286	80	1238
4	Madhya	C	Kh.	0	0	6	1009	6	1009	6	597	26	1428	32	1272	6	597	32	1349	38	1230
	Pradesh	S		0	0	8	1616	8	1616	0	0	22	1426	22	1426	0	0	30	1476	30	1476
		P		0	0	14	1356	14	1356	6	597	48	1427	54	1335	6	597	62	1410	68	1339
5	Mahara-	C	Kh.	10	1294	19	1367	29	1342	0	0	12	879	12	879	10	1294	31	1178	41	1206
	shtra	S		0	0	9	1631	9	1631	0	0	9	2061	9	2061	0	0	18	1846	18	1846
		P		10	1294	28	1452	38	1410	0	0	21	1386	21	1386	10	1294	49	1423	59	1401
6	Raja-	C	Kh.	14	2232	3	1790	17	2154	16	2772	3	1678	19	2599	30	2520	6	1734	36	2389
	sthan	S		10	2416	2	898	12	2163	17	1770	7	1808	24	1781	27	2009	9	1606	36	1908
		P		24	2309	5	1433	29	2158	33	2256	10	1769	43	2143	57	2278	15	1657	72	2149

ANNEX- XV (Contd.....)

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
7	Tamil	C	**	6	2787	39	2376	45	2431	0	0	4	3047	4	3047	6	2787	43	2438	49	2481
	Nadu	S		4	2486	40	2545	44	2540	0	0	2	2308	2	2308	4	2486	42	2534	46	2530
		P		10	2667	79	2462	89	2485	0	0	6	2801	6	2801	10	2667	85	2485	95	2505
8	Telangana	C	Kh.	4	3399	29	1387	33	1631	0	0	5	1402	5	1402	4	3399	34	1389	38	1601
		S		6	1110	20	1480	26	1395	0	0	2	1078	2	1078	6	1110	22	1444	28	1372
		P		10	2026	49	1425	59	1527	0	0	7	1309	7	1309	10	2026	56	1411	66	1504
For States Coverd		C		117	2445	246	1792	363	2002	25	2294	71	1295	96	1555	142	2418	317	1681	459	1836
		S		59	2439	239	1755	298	1891	38	2289	72	1405	110	1710	97	2380	311	1674	408	1842
		P		176	2443	485	1774	661	1952	63	2291	143	1350	206	1638	239	2403	628	1677	867	1839
SUGARCANE																					
1	Andhra	C	Kh.	49	127151	0	0	49	127151	5	90552	0	0	5	90552	54	123762	0	0	54	123762
	Pradesh	S		57	93038	0	0	57	93038	3	69000	0	0	3	69000	60	91836	0	0	60	91836
		P		106	108807	0	0	106	108807	8	82470	0	0	8	82470	114	106959	0	0	114	106959
2	Assam	C	Kh.	0	0	1	59600	1	59600	0	0	29	35450	29	35450	0	0	30	36255	30	36255
		S		0	0	0	0	0	0	0	0	14	36111	14	36111	0	0	14	36111	14	36111
		P		0	0	1	59600	1	59600	0	0	43	35665	43	35665	0	0	44	36209	44	36209
3	Bihar	C	Kh.	10	38386	4	53245	14	42631	10	37615	15	45785	25	42517	20	38000	19	47356	39	42558
		S		8	81550	0	0	8	81550	4	54800	6	57334	10	56320	12	72633	6	57334	18	67533
		P		18	57570	4	53245	22	56784	14	42525	21	49085	35	46461	32	50988	25	49751	57	50445
4	Haryana	C	Kh.	39	77084	0	0	39	77084	3	69066	0	0	3	69066	42	76511	0	0	42	76511
		S		40	78480	2	99510	42	79481	0	0	0	0	0	0	40	78480	2	99510	42	79481
		P		79	77791	2	99510	81	78327	3	69066	0	0	3	69066	82	77471	2	99510	84	77996
5	Karna-taka	C	Kh.	36	99841	2	97780	38	99733	0	0	0	0	0	0	36	99841	2	97780	38	99733
		S		27	62607	0	0	27	62607	10	74972	1	48200	11	72538	37	65949	1	48200	38	65482
		P		63	57079	2	97780	65	58331	10	75	1	48	11	73	73	49270	3	65202	76	49899
6	Mahara-shtra	C	Kh.	46	122060	0	0	46	122060	10	154594	0	0	10	154594	56	127870	0	0	56	127870
		S		14	72771	1	58800	15	71840	1	43200	1	65000	2	54100	15	70800	2	61900	17	69753
		P		60	110559	1	58800	61	109711	11	144467	1	65000	12	137845	71	115813	2	61900	73	114336
7	Punjab	C	Kh.	62	82436	0	0	62	82436	7	73617	0	0	7	73617	69	81541	0	0	69	81541
		S		68	85189	0	0	68	85189	0	0	0	0	0	0	68	85189	0	0	68	85189
		P		130	83876	0	0	130	83876	7	73617	0	0	7	73617	137	83352	0	0	137	83352
8	Raja-sthan	C	Kh.	15	58646	1	58800	16	58656	22	48643	2	94600	24	52473	37	52699	3	82666	40	54947
		S		13	86830	0	0	13	86830	16	56010	2	57000	18	56120	29	69826	2	57000	31	68999
		P		28	71731	1	58800	29	71286	38	51745	4	75800	42	54036	66	60225	5	72400	71	61082
9	Tamil	C	**	37	110921	0	0	37	110921	0	0	0	0	0	0	37	110921	0	0	37	110921
	Nadu	S		40	102615	0	0	40	102615	0	0	0	0	0	0	40	102615	0	0	40	102615
		P		77	106606	0	0	77	106606	0	0	0	0	0	0	77	106606	0	0	77	106606
10	Uttar	C	Kh.	171	76586	3	63800	174	76366	22	75800	0	0	22	75800	193	76496	3	63800	196	76302
	Pradesh	S		16	77050	0	0	16	77050	0	0	0	0	0	0	16	77050	0	0	16	77050
		P		187	76626	3	63800	190	76423	22	75800	0	0	22	75800	209	76538	3	63800	212	76358
11	Uttara-khand	C	Kh.	36	74783	0	0	36	74783	4	66250	0	0	4	66250	40	73930	0	0	40	73930
		S		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		P		36	74783	0	0	36	74783	4	66250	0	0	4	66250	40	73930	0	0	40	73930
For States Covered		C		501	89247	11	65304	512	88733	83	73495	46	41392	129	62048	584	87008	57	46007	641	83362
		S		283	85028	3	85940	286	85038	34	62214	24	44865	58	55035	317	82581	27	49429	344	79979
		P		784	87724	14	69726	798	87408	117	70217	70	42583	187	59873	901	85451	84	47107	985	82181
WHEAT																					
1	Assam	C	Rabi	6	1409	8	1149	14	1260	2	1415	18	1235	20	1253	8	1411	26	1209	34	1257
		S		2	867	6	1135	8	1068	0	0	22	1377	22	1377	2	867	28	1325	30	1294
		P		8	1274	14	1143	22	1190	2	1415	40	1313	42	1318	10	1302	54	1269	64	1274
2	Bihar	C	Rabi	125	3007	5	1974	130	2967	58	2899	18	1801	76	2639	183	2973	23	1839	206	2846
		S		40	2811	2	2435	42	2793	27	2664	0	0	27	2664	67	2752	2	2435	69	2743
		P		165	2959	7	2106	172	2925	85	2824	18	1801	103	2646	250	2914	25	1887	275	2820
3	Chhattis-garh	C	Rabi	20	1796	8	685	28	1479	0	0	12	593	12	593	20	1796	20	630	40	1213
		S		21	1658	12	911	33	1386	1	695	4	979	5	922	22	1614	16	928	38	1325
		P		41	1725	20	821	61	1429	1	695	16	690	17	690	42	1701	36	762	78	1268
4	Gujarat	C	Rabi	111	8041	6	2437	117	7754	11	6362	8	2291	19	4648	122	7890	14	2352	136	7320
		S		39	8544	0	0	39	8544	21	6797	1	6324	22	6776	60	7932	1	6324	61	7906
		P		150	8172	6	2437	156	7951	32	6647	9	2739	41	5790	182	7904	15	2617	197	7501
5	Haryana	C	Rabi	174	4672	0	0	174	4672	4	4426	2	2002	6	3618	178	4667	2	2002	180	4637
		S		168	4807	8	3880	176	4765	0	0	0	0	0	0	168	4808	8	3881	176	4766
		P		342	4738	8	3880	350	4719	4	4426	2	2002	6	3618	346	4735	10	3505	356	4701
6	Himachal Pradesh	C	Rabi	9	3082	20	2115	29	2415	8	2615	49	1466	57	1627	17	2862	69	1655	86	1894
		S		8	2306	19	1371	27	1648	2	2460	61	1579	63	1607	10	2337	80	1529	90	1619
		P		17	2717	39	1753	56	2045	10	2584	110	1529	120	1617	27	2668	149	1587	176	1753
7	Jammu & Kashmir	C	Rabi	32	2739	45	1854	77	2222	1	1498	40	1386	41	1389	33	2702	85	1634	118	1933
		S		16	3116	14	1610	30	2413	0	0	8	1022	8	1022	16	3117	22	1396	38	2121
		P		48	2865	59	1796	107	2275	1	1498	48	1326	49	1329	49	2838	107	1585	156	1978
8	Jhar-khand	C	Rabi	8	865	0	0	8	865	22	1689	10	1757	32	1710	30	1469	10	1757	40	1541
		S		2	2426	6	2524	8	2499	10	1839	6	1735	16	1800	12	1937	12	2130	24	2034
		P		10	1177	6	2524	16	1682	32	1736	16	1749	48	1740	42	1603	22	1960	64	1726

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
9	Karna-	C	Rabi	20	1391	2	753	22	1333	4	1806	8	872	12	1183	24	1460	10	848	34	1280
	taka	S		13	1619	20	2025	33	1865	3	1088	2	293	5	770	16	1519	22	1868	38	1721
		P		33	1481	22	1910	55	1652	7	1499	10	756	17	1062	40	1484	32	1549	72	1513
10	Madhya	C	Rabi	114	2606	12	1724	126	2522	59	2344	56	1324	115	1847	173	2517	68	1394	241	2200
	Pradesh	S		65	2738	2	1192	67	2692	35	2556	38	1531	73	2022	100	2674	40	1514	140	2343
		P		179	2654	14	1648	193	2581	94	2423	94	1408	188	1915	273	2575	108	1438	381	2252
11	Mahara-	C	Rabi	79	2055	0	0	79	2055	12	1205	0	0	12	1205	91	1943	0	0	91	1943
	shtra	S		84	2001	0	0	84	2001	1	1328	0	0	1	1328	85	1993	0	0	85	1993
		P		163	2027	0	0	163	2027	13	1214	0	0	13	1214	176	1967	0	0	176	1967
12	Punjab	C	Rabi	215	5059	2	2087	217	5032	1	5863	0	0	1	5863	216	5063	2	2086	218	5036
		S		204	5069	4	3791	208	5044	0	0	0	0	0	0	204	5069	4	3791	208	5044
		P		419	5064	6	3223	425	5038	1	5863	0	0	1	5963	420	5066	6	3223	426	5040
13	Raja-	C	Rabi	86	3237	3	2095	89	3199	33	2700	0	0	33	2700	119	3088	3	2094	122	3064
	sthan	S		55	3417	0	0	55	3417	44	2856	2	4742	46	2938	99	3168	2	4742	101	3199
		P		141	3307	3	2095	144	3282	77	2790	2	4742	79	2839	218	3124	5	3153	223	3125
14	Uttar	C	Rabi	483	3466	0	0	483	3466	66	3074	3	1915	69	3024	549	3419	3	1916	552	3411
	Pradesh	S		121	3714	0	0	121	3714	18	2306	0	0	18	2306	139	3531	0	0	139	3531
		P		604	3516	0	0	604	3516	84	2910	3	1915	87	2875	688	3442	3	1916	691	3435
15	Uttara-	C	Rabi	30	3286	2	1364	32	3166	4	3330	18	870	22	1317	34	3291	20	919	54	2412
	khand	S		17	3287	1	2115	18	3222	15	2860	8	1713	23	2461	32	3087	9	1758	41	2795
		P		47	3287	3	1614	50	3186	19	2959	26	1129	45	1902	66	3192	29	1179	95	2578
16	West	C	Rabi	55	2738	1	1194	56	2710	0	0	0	0	0	0	55	2738	1	1194	56	2710
	Bengal	S		16	1053	0	0	16	1053	0	0	0	0	0	0	16	1053	0	0	16	1053
		P		71	2358	1	1194	72	2342	0	0	0	0	0	0	71	2358	1	1194	72	2342
For States Covered		C	Rabi	1567	3845	114	1767	1681	3704	285	2770	242	1370	527	2116	1852	3679	356	1497	2208	3328
		S		871	3989	94	1889	965	3784	177	3067	152	1562	329	2371	1048	3833	246	1687	1294	3425
		P		2438	3896	208	1822	2646	3733	462	2883	394	1444	856	2214	2900	3735	602	1575	3502	3364
BARLEY																					
1	Haryana	C	Rabi	28	2987	0	0	28	2987	2	3557	0	0	2	3557	30	3025	0	0	30	3025
		S		26	3742	2	1182	28	3559	2	1820	0	0	2	1820	28	3605	2	1182	30	3443
		P		54	3351	2	1182	56	3273	4	2689	0	0	4	2689	58	3305	2	1182	60	3234
2	Himachal	C	Rabi	0	0	0	0	0	0	6	1792	14	1488	20	1579	6	1792	14	1488	20	1579
	Pradesh	S		0	0	2	1783	2	1783	0	0	24	1048	24	1048	0	0	26	1105	26	1105
		P		0	0	2	1783	2	1783	6	1792	38	1210	44	1289	6	1792	40	1239	46	1311
3	Punjab	C	Rabi	26	3772	0	0	26	3772	1	3448	0	0	1	3448	27	3760	0	0	27	3760
		S		26	3757	0	0	26	3757	0	0	0	0	0	0	26	3757	0	0	26	3757
		P		52	3765	0	0	52	3765	1	3448	0	0	1	3448	53	3759	0	0	53	3759
4	Raja-	C	Rabi	34	3238	0	0	34	3238	44	2672	0	0	44	2672	78	2919	0	0	78	2919
	sthan	S		38	3089	0	0	38	3089	30	2935	0	0	30	2935	68	2993	0	0	68	2993
		P		72	3159	0	0	72	3159	74	2779	0	0	74	2779	146	2954	0	0	146	2953
For States Covered		C		88	3316	0	0	88	3316	53	2620	14	1488	67	2384	141	3055	14	1488	155	2913
		S		90	3471	4	0	94	3386	32	2865	24	1048	56	2086	122	3296	28	1111	150	2888
		P		178	3394	4	0	182	3352	85	2713	38	1210	123	2248	263	3167	42	1236	305	2901
GRAM																					
1	Andhra	C	Rabi	6	1617	30	1381	36	1420	2	742	2	532	4	637	8	1398	32	1328	40	1342
	Pradesh	S		3	1703	33	1262	36	1299	0	0	4	865	4	865	3	1703	37	1220	40	1256
		P		9	1646	63	1319	72	1360	2	742	6	754	8	751	11	1482	69	1270	80	1299
2	Bihar	C	Rabi	6	1186	0	0	6	1186	6	1467	26	1114	32	1180	12	1326	26	1114	38	1181
		S		0	0	0	0	0	0	0	0	12	1114	12	1114	0	0	12	1114	12	1114
		P		6	1186	0	0	6	1186	6	1467	38	1114	44	1162	12	1326	38	1114	50	1165
3	Chhattis-	C	Rabi	6	1174	1	227	7	1039	15	822	18	862	33	844	21	923	19	828	40	878
	garh	S		4	1011	5	1134	9	1079	12	1226	18	886	30	1022	16	1173	23	940	39	1036
		P		10	1109	6	983	16	1062	27	1002	36	874	63	929	37	1031	42	890	79	956
4	Gujarat	C	Rabi	8	1330	10	1479	18	1413	3	1048	3	1100	6	1074	11	1253	13	1391	24	1328
		S		7	1118	1	882	8	1089	0	0	0	0	0	0	7	1118	1	882	8	1089
		P		15	1231	11	1425	26	1313	3	1048	3	1100	6	1074	18	1201	14	1355	32	1268
5	Haryana	C	Rabi	27	1230	20	833	47	1061	5	1554	18	621	23	824	32	1281	38	732	70	983
		S		38	1216	10	1338	48	1241	1	1420	14	948	15	979	39	1221	24	1111	63	1179
		P		65	1222	30	1001	95	1152	6	1532	32	764	38	885	71	1248	62	879	133	1076
6	Jhar-	C	Rabi	0	0	0	0	0	0	6	715	14	519	20	578	6	716	14	519	20	578
	khand	S		0	0	0	0	0	0	0	0	14	806	14	806	0	0	14	806	14	806
		P		0	0	0	0	0	0	6	715	28	663	34	672	6	716	28	663	34	672
7	Karna-	C	Rabi	2	310	12	760	14	696	0	0	11	812	11	812	2	310	23	786	25	748
	taka	S		8	526	18	985	26	844	0	0	2	508	2	508	8	527	20	937	28	820
		P		10	483	30	895	40	792	0	0	13	766	13	765	10	484	43	856	53	786
8	Madhya	C	Rabi	19	1592	6	1320	25	1527	53	1412	60	1191	113	1295	72	1459	66	1203	138	1337
	Pradesh	S		10	1299	2	744	12	1207	26	1514	40	1040	66	1227	36	1454	42	1026	78	1224
		P		29	1491	8	1176	37	1423	79	1446	100	1131	179	1270	108	1458	108	1134	216	1296
9	Mahara-	C	Rabi	68	968	0	0	68	968	3	894	0	0	3	894	71	965	0	0	71	965
	shtra	S		22	1273	8	896	30	1172	1	1170	2	788	3	915	23	1268	10	874	33	1149
		P		90	1043	8	896	98	1031	4	963	2	788	6	905	94	1040	10	874	104	1023

ANNEX- XV (Contd.....)

Sl. No.	State	AGENCY	SEASON	High Yield Varieties						Other Varieties						Both HYV & Other varieties					
				Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total		Irrigated		Unirrigated		Total	
				No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha	No. Of Exp.	Yield Rate Kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
10	Punjab	C	Rabi	22	1439	1	1097	23	1424	3	1770	0	0	3	1770	25	1479	1	1097	26	1464
		S		26	1103	0	0	26	1103	0	0	0	0	0	0	26	1102	0	0	26	1102
		P		48	1257	1	1097	49	1254	3	0	1770	0	3	1770	51	1287	1	1097	52	1283
11	Raja-	C	Rabi	27	1063	6	506	33	962	42	1301	28	670	70	1049	69	1208	34	641	103	1021
	sthan	S		19	1210	10	720	29	1041	41	1229	22	824	63	1088	60	1223	32	791	92	1073
		P		46	1124	16	640	62	999	83	1265	50	738	133	1067	129	1215	66	714	195	1045
12	Uttar	C	Rabi	6	1524	2	1140	8	1428	23	834	19	1198	42	999	29	977	21	1193	50	1068
	Pradesh	S		0	0	4	2364	4	2364	8	666	4	757	12	696	8	666	8	1560	16	1113
		P		6	1524	6	1956	12	1740	31	791	23	1121	54	931	37	910	29	1294	66	1079
For States		C	Rabi	197	1187	88	1097	285	1160	161	1208	199	951	360	1066	358	1197	287	996	645	1107
Covered		S		137	1168	91	1150	228	1161	89	1263	132	929	221	1064	226	1205	223	1019	449	1113
		P		334	1180	179	1124	513	1160	250	1227	2101	148	581	1065	584	1200	510	1006	1094	1110
RAPE & MUSTARD																					
1	Assam	C	Rabi	0	0	0	0	0	0	3	779	56	647	59	654	3	779	56	647	59	654
		S		0	0	0	0	0	0	2	743	48	585	50	591	2	743	48	585	50	591
		P		0	0	0	0	0	0	5	765	104	618	109	625	5	765	104	618	109	625
2	Bihar	C	Rabi	4	1240	0	0	4	1240	15	1189	20	864	35	1003	19	1200	20	864	39	1028
		S		0	0	0	0	0	0	12	803	0	0	12	803	12	803	0	0	12	803
		P		4	1240	0	0	4	1240	27	1017	20	864	47	952	31	1046	20	864	51	975
3	Chattis-	C	Rabi	0	0	0	0	0	0	4	132	26	348	30	319	4	132	26	348	30	319
	garh	S		0	0	2	750	2	750	3	406	17	395	20	397	3	406	19	432	22	428
		P		0	0	2	750	2	750	7	250	43	367	50	350	7	250	45	384	52	365
4	Gujarat	C	Rabi	43	1760	0	0	43	1760	1	1560	0	0	1	1560	44	1755	0	0	44	1755
		S		14	1780	7	1694	21	1751	8	1700	0	0	8	1700	22	1750	7	1694	29	1736
		P		57	1765	7	1694	64	1757	9	1684	0	0	9	1684	66	1754	7	1694	73	1748
5	Haryana	C	Rabi	81	1856	9	1504	90	1821	6	1527	4	1614	10	1562	87	1834	13	1538	100	1796
		S		84	2300	7	2019	91	2278	1	1951	0	0	1	1951	85	2296	7	2018	92	2275
		P		165	2082	16	1729	181	2051	7	1588	4	1614	11	1597	172	2062	20	1706	192	2025
6	Jhar-	C	Rabi	2	410	0	0	2	410	16	483	2	466	18	481	18	475	2	466	20	474
	khand	S		0	0	0	0	0	0	6	718	14	604	20	638	6	718	14	604	20	638
		P		2	410	0	0	2	410	22	547	16	587	38	564	24	536	16	587	40	556
7	Madhya	C	Rabi	28	1424	0	0	28	1424	16	1436	14	813	30	1145	44	1429	14	813	58	1280
	Pradesh	S		8	1380	0	0	8	1380	6	894	20	628	26	689	14	1172	20	628	34	852
		P		36	1414	0	0	36	1414	22	1288	34	704	56	934	58	1367	34	704	92	1122
8	Punjab	C	Rabi	28	1587	0	0	28	1587	11	1778	1	464	12	1669	39	1641	1	464	40	1612
		S		36	1680	0	0	36	1680	4	1130	0	0	4	1130	40	1625	0	0	40	1625
		P		64	1639	0	0	64	1639	15	1605	1	464	16	1534	79	1633	1	464	80	1618
9	Raja-	C	Rabi	60	1304	4	801	64	1273	18	1208	0	0	18	1208	78	1282	4	801	82	1259
	sthan	S		40	1490	1	1532	41	1491	22	1271	4	1039	26	1235	62	1412	5	1138	67	1392
		P		100	1378	5	947	105	1358	40	1243	4	1039	44	1224	140	1340	9	988	149	1318
10	Uttar	C	Rabi	66	1629	0	0	66	1629	26	1418	3	64	29	1278	92	1570	3	64	95	1522
	Pradesh	S		12	1634	0	0	12	1634	6	956	2	1147	8	1004	18	1409	2	1148	20	1383
		P		78	1630	0	0	78	1630	32	1332	5	498	37	1219	110	1544	5	498	115	1498
11	West	C	Rabi	73	1300	14	976	87	1248	12	714	7	1288	19	925	85	1217	21	1080	106	1190
	Bengal	S		28	1078	10	991	38	1055	0	0	0	0	0	0	28	1078	10	991	38	1055
		P		101	1238	24	982	125	1189	12	714	7	1288	19	925	113	1183	31	1051	144	1154
For States		C		385	325	27	873	412	361	128	67	133	68	261	67	513	260	160	204	673	1288
Covered		S		222	2688	27	1126	249	2519	70	2127	105	867	175	1371	292	2554	132	920	424	1358
		P		607	1641	54	1284	661	1611	198	1135	238	644	436	867	805	1516	292	762	1097	1316

Note :-

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

ANNEX - XVI

ESTIMATES OF YIELD RATE ACCORDING TO USE OF
FERTILISERS, MANURES AND UNMANURED UNDER ICS DURING 2017-18

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
PADDY													
1	Andhra	Kharif	C	94	3672	0	0	73	3050	8	1864	175	3330
	Pradesh		S	89	3366	5	1168	85	3082	1	2870	180	3168
			P	183	3523	5	0	158	3067	9	1976	355	3248
		Summer	C	52	4231	0	0	33	3669	0	0	85	4013
			S	57	4261	0	0	25	3413	0	0	82	4002
			P	109	4247	0	0	58	3559	0	0	167	4008
2	Assam	Early	C	14	1971	20	1633	9	2589	23	1719	66	1865
		Kharif	S	13	1867	8	1319	6	1000	25	1401	52	1459
			P	27	1921	28	1543	15	1953	48	1553	118	1686
		Late	C	38	1987	25	2250	11	2356	44	2104	118	2121
		Kharif	S	22	2365	2	2558	12	2075	54	2090	90	2166
			P	60	2126	27	2273	23	2209	98	2096	208	2140
		Summer	C	18	2946	7	3057	8	2907	3	3727	36	3024
			S	25	3778	0	0	9	2755	0	0	34	3507
			P	43	3430	7	3057	17	2827	3	3727	70	3259
3	Bihar	Bhadai	C	20	3453	4	3375	4	2805	0	0	28	3349
			S	22	3533	0	0	0	0	0	0	22	3533
			P	42	3495	4	3375	4	2805	0	0	50	3430
		Aghani	C	141	4352	1	2460	26	3255	3	417	171	4105
			S	113	4329	1	2740	38	3337	0	0	152	4071
			P	254	4342	2	2600	64	3304	3	417	323	4089
		Summer	C	26	2476	0	0	0	0	0	0	26	2476
			S	3	1708	0	0	5	2552	0	0	8	2236
			P	29	2397	0	0	5	2552	0	0	34	2419
4	Chhattisgarh	Kharif	C	41	2887	12	1004	21	2480	6	2162	80	2443
			S	42	2406	8	1458	18	2950	8	3290	76	2528
			P	83	2644	20	1186	39	2697	14	2807	156	2485
5	Gujarat	Kharif	C	25	1933	2	1717	39	1843	0	0	66	1873
			S	32	2124	0	0	12	1379	0	0	44	1921
			P	57	2040	2	1717	51	1734	0	0	110	1892
6	Haryana	Kharif	C	84	11380	0	0	5	11264	0	0	89	11373
			S	71	10664	0	0	8	12347	2	12245	81	10869
			P	155	11052	0	0	13	11930	2	12245	170	11133
7	Himachal	Kharif	C	4	3296	14	1762	29	2287	3	1672	50	2184
	Pradesh		S	4	2348	20	1623	18	2376	4	1538	46	1973
			P	8	2822	34	1680	47	2321	7	1595	96	2083
8	Jammu &	Kharif	C	16	2043	0	0	54	2142	0	0	70	2119
	Kashmir		S	22	1965	2	1711	8	1639	0	0	32	1868
			P	38	1998	2	1711	62	2077	0	0	102	2040
9	Jharkhand	Bhadai	C	4	848	14	1580	2	1885	0	0	20	1464
			S	2	674	4	970	0	0	6	1124	12	998
			P	6	790	18	1444	2	1885	6	1124	32	1289
		Aghani	C	30	4831	21	1942	27	3342	0	0	78	3538
			S	10	2232	4	1820	4	4893	0	0	18	2732
			P	40	4181	25	1922	31	3542	0	0	96	3387

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
10	Karnataka	Kharif	C	23	2521	11	3026	85	2762	0	0	119	0
			S	32	3309	17	2522	84	2799	4	3788	137	0
			P	55	2979	28	2720	169	2780	4	3788	256	0
		Summer	C	3	3224	5	2695	14	3688	0	0	22	3399
			S	10	3260	1	3001	12	2575	7	3288	30	2984
			P	13	3252	6	2746	26	3174	7	3288	52	3160
11	Kerala	Autumn	C	26	2213	14	1497	50	1997	10	1232	100	1907
			S	23	1854	14	1326	58	2246	5	891	100	1959
			P	49	2044	28	1412	108	2131	15	1118	200	1933
		Winter	C	28	2489	11	1153	57	2252	4	1207	100	2156
			S	35	2490	9	1030	49	2582	7	783	100	2284
			P	63	2490	20	1098	106	2405	11	937	200	2220
		Summer	C	30	2545	9	1343	54	2723	5	1404	98	2474
			S	29	3116	5	1950	62	2639	3	1339	99	2705
			P	59	2826	14	1560	116	2678	8	1380	197	2590
12	Madhya Pradesh	Kharif	C	52	1782	13	1029	19	1945	14	768	98	1569
			S	46	1625	1	2983	15	2221	22	863	84	1548
			P	98	1708	14	1169	34	2067	36	826	182	1559
13	Mahara-shtra	Kharif	C	36	1617	4	581	20	1459	0	0	60	1495
			S	21	1227	0	0	20	1278	4	1856	45	1306
			P	57	1473	4	581	40	1369	4	1856	105	1414
14	Odisha	Autumn	C	84	749	15	1455	96	1191	25	631	220	977
			S	90	955	20	749	88	1090	22	550	220	950
			P	174	856	35	1052	184	1143	47	593	440	963
		Winter	C	84	1598	13	1473	161	1750	8	1564	266	1683
			S	70	1716	13	1790	165	1585	18	1372	266	1615
			P	154	1652	26	1632	326	1666	26	1431	532	1649
		Summer	C	89	3085	7	4582	38	2672	4	1370	138	2998
			S	73	3118	0	0	61	77253	2	1183	136	36341
			P	162	3100	7	4582	99	48626	6	1308	274	19548
15	Punjab	Kharif	C	139	15358	0	0	48	16106	0	0	187	15550
			S	144	15195	0	0	16	16527	10	15321	170	15328
			P	283	15275	0	0	64	16211	10	15321	357	15444
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	12	3599	0	0	26	4166	0	0	38	3987
			S	4	3980	0	0	36	3807	0	0	40	3824
			P	16	3694	0	0	62	3958	0	0	78	3904
		Phase-III	C	14	4277	7	0	53	4534	2	0	76	3950
			S	13	1780	1	2065	61	3987	1	0	76	3532
			P	27	3075	8	258	114	4241	3	0	152	3741

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
17	Telangana	Kharif	C	37	2632	0	0	29	2249	0	0	66	2464
			S	33	2772	1	1489	26	2301	0	0	60	2547
			P	70	2698	1	1489	55	2274	0	0	126	2503
		Rabi	C	70	3584	0	0	17	4398	0	0	87	3743
			S	56	3692	0	0	18	3776	0	0	74	3712
			P	126	3632	0	0	35	4078	0	0	161	3729
18	Uttar	Kharif	C	572	3995	0	0	81	4208	3	1789	656	4011
	Pradesh		S	83	3915	0	0	20	3661	1	2955	104	3857
			P	655	3985	0	0	101	4100	4	2081	760	3990
19	Uttarakhand	Kharif	C	19	3254	16	1728	5	3983	0	0	40	2735
			S	13	2483	17	1541	12	3004	2	2331	44	2254
			P	32	2941	33	1632	17	3292	2	2331	84	2483
20	West	Aus	C	68	2551	2	2747	19	2177	5	1439	94	2420
	Bengal		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	5	2637	0	0	5	2914	0	0	10	2776
			S	4	3362	0	0	6	3630	0	0	10	3523
			P	9	2959	0	0	11	3305	0	0	20	3149
		Rabi-I	C	6	2015	0	0	4	2685	0	0	10	2283
			S	10	3043	0	0	0	0	0	0	10	3043
			P	16	2658	0	0	4	2685	0	0	20	2663
		Rabi-II	C	4	2880	0	0	6	2950	0	0	10	2922
			S	10	3464	0	0	0	0	0	0	10	3464
			P	14	3297	0	0	6	2950	0	0	20	3193
For states covered			C	2194	4166	251	1800	1367	3106	176	1489	3988	3454
			S	1535	4285	158	1562	1175	6620	236	2244	3104	4747
			P	3729	4215	409	1708	2542	4730	412	1922	7092	4020
JOWAR													
1	Karnataka	Kharif	C	5	1724	5	1757	4	1136	2	2832	16	0
			S	6	2500	2	1812	14	1729	18	2032	40	1985
			P	11	2147	7	1772	18	1597	20	2112	56	0
		Rabi	C	16	949	7	1217	12	935	21	1073	56	1026
			S	11	1334	5	406	9	478	31	1249	56	1067
			P	27	1106	12	879	21	739	52	1178	112	1046
2	Madhya	Kharif	C	31	1457	15	1235	16	1188	28	1386	90	1350
	Pradesh		S	38	1513	4	895	4	829	32	943	78	1212
			P	69	1488	19	1163	20	1116	60	1150	168	1286
3	Maha-	Kharif	C	39	753	2	0	13	2086	2	0	56	1009
	rashtra		S	29	669	0	0	6	1306	8	1631	43	937
			P	68	717	2	0	19	1840	10	1305	99	977
		Rabi	C	20	1186	0	0	0	0	56	4770	76	3827
			S	5	1113	0	0	1	1200	54	3234	60	3023
			P	25	1171	0	0	1	1200	110	4016	136	3472

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
4	Rajasthan	Kharif	C	19	779	5	252	3	246	17	425	44	546
			S	14	790	2	306	2	105	20	395	38	521
			P	33	784	7	267	5	190	37	409	82	534
5	Tamil	@	C	2	2905	22	1158	10	1414	6	1550	40	1368
	Nadu		S	2	201	10	1086	12	998	12	278	36	738
			P	4	1553	32	1136	22	1187	18	702	76	1070
6	Telangana	Kharif	C	26	954	0	0	12	1167	2	101	40	975
			S	20	1130	0	0	6	713	8	856	34	992
			P	46	1031	0	0	18	1016	10	705	74	983
		Rabi	C	38	1174	0	0	2	1754	0	0	40	1203
			S	14	1516	0	0	6	1331	8	878	28	1294
			P	52	1266	0	0	8	1437	8	878	68	1241
7	Uttar	Kharif	C	6	1331	8	930	1	277	25	878	40	941
	Pradesh		S	0	0	0	0	0	0	12	934	12	934
			P	6	1331	8	930	1	0	37	896	52	940
For states covered			C	202	13212	64	6549	73	10203	159	13015	498	12245
			S	139	10766	23	4505	60	8689	203	12430	425	12703
			P	341	12594	87	6147	133	10321	362	13350	923	11549
BAJRA													
1	Andhra	Kharif	C	7	2371	14	1011	15	1909	4	1976	40	1682
	Pradesh		S	12	1258	15	1144	12	2373	1	557	40	1532
			P	19	1668	29	1080	27	2115	5	1692	80	1607
2	Gujarat	Kharif	C	28	1812	1	1642	19	1641	4	1890	52	1752
			S	34	1987	0	0	15	2335	9	2126	58	2099
			P	62	1908	1	1642	34	1947	13	2053	110	1935
3	Haryana	Kharif	C	81	4502	0	0	10	2983	11	4302	102	4332
			S	85	4555	0	0	2	2350	17	3757	104	4382
			P	166	4529	0	0	12	2878	28	3971	206	4357
4	Karnataka	Kharif	C	2	1240	5	2035	2	1967	9	1231	18	0
			S	10	1199	0	0	6	1914	10	1225	26	1374
			P	12	1206	5	2035	8	1927	19	1228	44	812
5	Mahara-	Kharif	C	22	908	1	151	14	1061	2	753	39	936
	shtra		S	14	1096	2	307	4	2369	12	684	32	1051
			P	36	981	3	255	18	1352	14	694	71	988
6	Rajasthan	Kharif	C	20	1701	6	1989	2	2701	26	954	54	1410
			S	19	743	5	556	6	648	20	975	50	806
			P	39	1234	11	1338	8	1161	46	963	104	1120
7	Tamil	@	C	4	3227	20	1676	14	1902	2	2920	40	1972
	Nadu		S	3	2423	18	1607	11	2915	8	2085	40	2124
			P	7	2882	38	1643	25	2348	10	2252	80	2048
8	Uttar	Kharif	C	116	2163	3	1943	12	2041	19	848	150	1982
	Pradesh		S	38	2178	0	0	0	0	10	2682	48	2283
			P	154	2167	3	1943	12	2041	29	1480	198	2055
For states covered			C	280	2687	50	1548	88	1874	77	1586	495	2200
			S	215	2797	40	1237	56	2234	87	1920	398	2369
			P	495	2735	90	1410	144	2014	164	1763	893	2276
MAIZE													
1	Bihar	Kharif	C	22	2857	4	4200	2	2535	0	0	28	3026
			S	12	2809	0	0	0	0	0	0	12	2809
			P	34	2840	4	4200	2	2535	0	0	40	2961

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
2	Chhattisgarh	Kharif	C	7	4709	24	1650	3	1456	6	1699	40	2178
			S	6	3049	14	1360	2	1928	12	1288	34	1666
			P	13	3943	38	1543	5	1645	18	1425	74	1943
3	Gujarat	Kharif	C	0	0	0	0	18	1616	0	0	18	1616
			S	13	1372	0	0	12	1154	1	1289	26	1268
			P	13	1372	0	0	30	1431	1	1289	44	1410
4	Haryana	Kharif	C	8	8204	4	6001	8	11507	0	0	20	9085
			S	6	2679	8	2506	0	0	0	0	14	2580
			P	14	5836	12	3671	8	11507	0	#DIV/0!	34	6406
5	Himachal	Kharif	C	2	3714	29	2449	43	3105	0	0	74	2864
	Pradesh		S	0	0	24	2708	44	2811	4	2668	72	2769
			P	2	3714	53	2566	87	2956	4	2668	146	2817
6	Jammu &	Kharif	C	7	2244	18	1194	63	2350	0	0	88	2105
	Kashmir		S	8	1450	8	1817	4	1965	0	0	20	1700
			P	15	1821	26	1386	67	2327	0	0	108	2030
7	Jharkhand	Kharif	C	12	1705	2	2476	6	2569	0	0	20	2041
			S	0	0	0	0	0	0	0	0	0	0
			P	12	1705	2	2476	6	2569	0	0	20	2041
8	Karnataka	Kharif	C	7	5606	0	0	25	4738	0	0	32	0
			S	5	4031	0	0	27	5204	4	6592	36	5195
			P	12	4950	0	0	52	4980	4	6592	68	2750
9	Madhya	Kharif	C	35	3695	11	1690	19	2790	11	1526	76	2865
	Pradesh		S	45	1699	6	1349	0	0	11	2014	62	1721
			P	80	2572	17	1570	19	2790	22	1770	138	2351
10	Odisha	Kharif	C	17	3362	6	1563	11	3135	6	1791	40	2794
			S	12	2424	10	1507	13	2882	5	1430	40	2219
			P	29	2974	16	1528	24	2998	11	1627	80	2507
11	Punjab	Kharif	C	32	3848	3	2439	12	3426	1	2504	48	3626
			S	30	4877	0	0	2	3675	16	4350	48	4651
			P	62	4346	3	2439	14	3462	17	4241	96	4139
12	Rajastahan	Kharif	C	29	3079	7	1291	7	2348	3	202	46	2508
			S	24	2120	2	1703	0	0	14	1030	40	1718
			P	53	2645	9	1383	7	2348	17	884	86	2140
13	Tamil Nadu	@	C	12	7473	4	5723	18	9243	6	9820	40	8447
			S	11	7803	0	0	27	7126	2	6069	40	7259
			P	23	7631	4	5723	45	7973	8	8882	80	7853
14	Telangana	Kharif	C	30	4855	0	0	10	4802	0	0	40	4842
			S	23	4152	0	0	5	5293	0	0	28	4356
			P	53	4550	0	0	15	4966	0	0	68	4642
15	Uttar	Kharif	C	137	7826	1	0	27	4159	5	2459	170	7040
	Pradesh		S	58	4991	0	0	0	0	6	535	64	4573
			P	195	6983	1	0	27	4159	11	1410	234	6365
For states covered			C	357	5464	113	2169	272	3742	38	2949	780	4061
			S	253	3523	72	2016	136	4069	75	2433	536	3307
			P	610	4659	185	2110	408	3851	113	2606	1316	3754
RAGI													
1	Karnataka	Kharif	C	5	2348	2	6838	20	2628	1	2152	28	1877
			S	5	1769	5	1084	17	2487	6	1535	33	1281
			P	10	2058	7	2728	37	2563	7	2819	61	1555
2	Tamil	@	C	4	1670	2	3290	29	3541	3	2074	38	3215
	Nadu		S	18	4541	8	2356	12	2087	2	275	40	3155
			P	22	4019	10	2543	41	3115	5	1354	78	3184

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
3	Uttarakhand	Kharif	C	0	0	31	1280	2	1897	2	1093	35	1305
			S	0	0	24	1263	0	0	6	1910	30	1392
			P	0	0	55	1273	2	1897	8	1706	65	1345
For states covered			C	9	2047	35	1712	51	3118	6	0	101	2182
			S	23	3938	37	1475	29	2321	14	1516	103	2041
			P	32	3406	72	1591	80	2830	20	1589	204	2111
GROUNDNUT													
1	Andhra	Kharif	C	35	1573	32	2117	68	1372	5	1502	140	1597
	Pradesh		S	53	1595	9	1278	68	1646	10	1301	140	1578
			P	88	1586	41	1933	136	1509	15	1368	280	1588
2	Gujarat	Kharif	C	64	2567	1	2395	59	2342	5	2108	129	2445
			S	59	2398	0	0	22	2611	3	1118	84	2408
			P	123	2486	1	2395	81	2415	8	1737	213	2430
3	Karnataka	Kharif	C	2	712	2	1119	20	1384	2	987	26	1281
			S	17	1219	4	1465	19	1251	14	1096	54	1217
			P	19	1165	6	1350	39	1319	16	1082	80	1238
4	Madhya	Kharif	C	16	1095	8	1299	12	1374	2	1178	38	1230
	Pradesh		S	14	1478	0	0	2	1487	14	1473	30	1476
			P	30	1274	8	1299	14	1390	16	1436	68	1339
5	Mahara-	Kharif	C	27	1376	1	679	8	954	5	801	41	1207
	shtra		S	6	503	0	0	8	906	4	574	18	698
			P	33	1217	1	679	16	930	9	700	59	1051
6	Rajasthan	Kharif	C	17	2542	3	1454	14	2576	2	1179	36	2389
			S	18	1932	5	1241	4	1790	9	2284	36	1908
			P	35	2228	8	1321	18	2401	11	2083	72	2149
7	Tamil	@	C	2	2595	24	2245	14	2886	9	2455	49	2481
	Nadu		S	10	2190	10	2575	20	2686	6	2500	46	2530
			P	12	2258	34	2342	34	2768	15	2473	95	2505
8	Telangana	Kharif	C	28	1700	1	1033	6	1409	3	1256	38	1601
			S	22	1410	0	0	4	1385	2	937	28	1373
			P	50	1572	1	1033	10	1399	5	1128	66	1504
For States Covered			C	191	1945	72	1982	201	1832	33	1655	497	1885
			S	199	1800	28	1761	147	1835	62	1485	436	1764
			P	390	1871	100	1920	348	1833	95	1544	933	1829
SUGARCANE													
1	Andhra	Kharif	C	20	182308	1	88000	29	88993	4	92050	54	123762
	Pradesh		S	24	94513	2	75100	34	90931	0	0	60	91836
			P	44	134420	3	79400	63	90039	4	0	114	106959
2	Assam	Kharif	C	1	33320	15	35320	4	34170	10	38786	30	36255
			S	1	34400	2	35000	4	40000	7	34451	14	36111
			P	2	33860	17	35282	8	37085	17	37001	44	36209
3	Bihar	Kharif	C	13	42587	4	46540	20	40379	2	56200	39	42558
			S	12	65394	0	0	6	70733	0	0	18	67174
			P	25	53534	4	46540	26	47384	2	56200	57	50332

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
4	Haryana	Kharif	C	34	73437	0	0	8	89577	0	0	42	76511
			S	30	76642	0	0	12	86582	0	0	42	79482
			P	64	74939	0	0	20	87780	0	0	84	77997
5	Karnataka	Kharif	C	17	109762	1	64400	17	101557	3	44333	38	99732
			S	16	59000	2	92000	16	71000	4	53750	38	65237
			P	33	56573	3	21528	33	52352	7	19030	76	82485
6	Mahara-	Kharif	C	13	91493	1	62400	42	140688	0	0	56	127870
	shtra		S	6	79147	0	0	11	64629	0	0	17	69753
			P	19	87594	1	62400	53	124902	0	0	73	114336
7	Punjab	Kharif	C	63	84189	2	60140	4	50550	0	0	69	81542
			S	68	85189	0	0	0	0	0	0	68	85189
			P	131	84708	2	60140	4	50550	0	0	137	83352
8	Rajasthan	Kharif	C	10	55490	6	76300	18	56413	6	28286	40	54946
			S	12	65913	0	0	17	65882	2	70000	31	66160
			P	22	61175	6	76300	35	61012	8	38715	71	59842
9	Tamil	@	C	12	141216	0	0	25	96379	0	0	37	110921
	Nadu		S	13	87544	0	0	27	109872	0	0	40	102615
			P	25	113307	0	0	52	103385	0	0	77	106606
10	Uttar	Kharif	C	145	75846	0	0	50	77702	1	72400	196	76302
	Pradesh		S	16	77050	0	0	0	0	0	0	16	77050
			P	161	75966	0	0	50	77702	1	72400	212	76358
11	Uttarakhand	Kharif	C	24	74767	0	0	16	74767	0	0	40	74767
			S	0	0	0	0	0	0	0	0	0	0
			P	24	74767	0	0	16	74767	0	0	40	74767
For States covered			C	352	85599	30	50295	395	50295	26	47830	641	83415
			S	198	79597	6	67367	143	67367	86595	7	344	79678
			P	550	83438	36	53140	555	53140	39	47173	985	82109
WHEAT													
1	Assam	Rabi	C	19	1344	6	1190	7	885	2	1926	34	1257
			S	12	1556	4	1263	6	1106	12	1247	34	1333
			P	31	1426	10	1219	13	987	14	1344	68	1295
2	Bihar	Rabi	C	163	2931	4	2431	34	2525	5	2601	206	2846
			S	38	2841	0	0	14	2697	12	3095	64	2857
			P	201	2914	4	2431	48	2575	17	2950	270	2849
3	Chattisgarh	Rabi	C	31	1188	0	0	9	1299	0	0	40	1213
			S	32	1338	0	0	3	1793	3	720	38	1325
			P	63	1264	0	0	12	1423	3	720	78	1268
4	Gujarat	Rabi	C	94	7882	3	2627	38	6689	3	3665	138	7348
			S	41	8283	0	0	14	7112	15	4931	70	7331
			P	135	8004	3	2627	52	6803	18	4720	208	7342
5	Haryana	Rabi	C	166	4651	0	0	13	4440	1	4917	180	4637
			S	167	4806	0	0	9	4001	0	0	176	4765
			P	333	4729	0	0	22	4260	1	4917	356	4700

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
6	Himachal	Rabi	C	0	0	16	1653	69	1901	2	2919	87	1879
	Pradesh		S	2	4989	24	1498	54	1575	10	1470	90	1619
			P	2	4989	40	1560	123	1758	12	1712	177	1747
7	Jammu &	Rabi	C	26	1809	12	1245	80	2075	0	0	118	1932
	Kashmir		S	26	2386	0	0	9	1208	6	2959	41	2211
			P^	52	2098	12	1245	89	1987	6	2959	159	2004
8	Jharkhand	Rabi	C	18	1470	2	2091	20	1550	0	0	40	1541
			S	18	2274	0	0	0	0	6	1311	24	2033
			P	36	1872	2	2091	20	1550	6	1311	64	1726
9	Karnataka	Rabi	C	20	1125	2	2028	5	1889	7	1073	34	1280
			S	7	1485	4	879	0	0	34	1846	45	1704
			P	27	1218	6	1262	5	1889	41	1714	79	1521
10	Madhya	Rabi	C	161	2300	10	1133	45	2404	25	1615	241	2200
	Pradesh		S	91	2426	6	2900	27	2400	18	1598	142	2336
			P	252	2346	16	1796	72	2403	43	1608	383	2250
11	Maha-	Rabi	C	62	2223	0	0	3	2406	27	1175	92	1921
	rashtra		S	64	2195	0	0	3	2406	18	1202	85	1992
			P	126	2209	0	0	6	2406	45	1186	177	1955
12	Punjab	Rabi	C	204	5029	0	0	13	5160	1	4730	218	5035
			S	198	5086	0	0	7	4040	2	4223	207	5042
			P	402	5057	0	0	20	4768	3	4392	425	5039
13	Rajasthan	Rabi	C	73	3133	5	2825	42	3015	2	2146	122	3064
			S	81	3215	9	2534	7	3844	4	3225	101	3198
			P	154	3176	14	2638	49	3133	6	2865	223	3125
14	Uttar	Rabi	C	512	3435	2	1974	41	3226	1	0	556	3408
	Pradesh		S	91	3533	0	0	10	3871	38	3465	139	3539
			P	603	3450	2	1974	51	3352	39	3376	695	3434
15	Uttarakhand	Rabi	C	21	3353	20	919	11	3169	2	3315	54	2413
			S	24	3476	10	1370	4	2453	0	0	38	2814
			P	45	3419	30	1069	15	2978	2	3315	92	2578
16	West	Rabi	C	39	2775	0	0	17	2560	0	0	56	2710
	Bengal		S	9	1117	0	0	7	969	0	0	16	1052
			P	48	2464	0	0	24	2096	0	0	72	2341
For states covered			C	1609	3635	82	1490	447	2848	78	1716	2216	3330
			S	901	3861	57	1727	174	2665	178	2442	1310	3416
			P	2510	3716	139	1587	621	2797	256	2221	3526	3362
BARLEY													
1	Haryana	Rabi	C	29	3003	0	0	1	3674	0	0	30	3025
			S	28	3605	0	0	0	0	2	1182	30	3443
			P	57	3299	0	0	1	3674	2	1182	60	3234
2	Himachal	Rabi	C	0	0	16	1705	4	1074	0	0	20	1579
	Pradesh		S	0	0	17	1204	7	1019	2	564	26	1105
			P	0	0	33	1447	11	1039	2	564	46	1311
3	Punjab	Rabi	C	27	3760	0	0	0	0	0	0	27	3760
			S	26	3757	0	0	0	0	0	0	26	3757
			P	53	3759	0	0	0	0	0	0	53	3759

ANNEX XVI (Contd.....)

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
4	Rajasthan	Rabi	C	55	2869	6	3084	15	2755	2	5020	78	2919
			S	52	3011	2	4262	8	3291	6	2017	68	2993
			P	107	2938	8	3379	23	2941	8	2768	146	2953
For states covered			C	111	3121	22	2081	20	2465	2	5020	155	2913
			S	106	3351	19	1526	15	2231	10	1559	150	2888
			P	217	3233	41	1824	35	2364	12	2136	305	2901
GRAM													
1	Andhra	Rabi	C	22	1414	2	674	15	1406	1	1240	40	1370
	Pradesh		S	21	1224	0	0	15	1334	4	1131	40	1256
			P	43	1321	2	674	30	1370	5	930	80	1313
2	Bihar	Rabi	C	22	1259	0	0	0	0	16	1072	38	1180
			S	4	1212	0	0	0	0	10	928	14	1009
			P	26	1252	0	0	0	0	26	1017	52	1134
3	Chattisgarh	Rabi	C	24	878	2	536	2	435	12	1009	40	878
			S	22	1280	1	58	0	0	16	761	39	1036
			P	46	1070	3	376	2	435	28	867	79	956
4	Gujarat	Rabi	C	10	1461	1	1112	6	1317	7	1178	24	1328
			S	0	0	0	0	6	984	6	1624	12	1304
			P	10	1461	1	1112	12	1151	13	1384	36	1320
5	Haryana	Rabi	C	37	1235	4	1475	2	405	27	607	70	983
			S	34	1089	0	0	0	0	29	1284	63	1179
			P	71	1165	4	1475	2	405	56	958	133	1076
6	Jharkhand	Rabi	C	4	824	11	577	0	0	5	381	20	577
			S	2	597	4	654	0	0	8	933	14	805
			P	6	748	15	598	0	0	13	721	34	671
7	Karnataka	Rabi	C	18	825	4	562	1	963	2	310	25	747
			S	6	813	2	813	3	574	27	775	38	767
			P	24	822	6	645	4	671	29	743	63	759
8	Madhya	Rabi	C	81	1400	11	805	13	1418	33	1328	138	1337
	Pradesh		S	40	1288	6	1429	2	805	30	1124	78	1223
			P	121	1363	17	1025	15	1336	63	1231	216	1296
9	Maha-	Rabi	C	40	1073	0	0	4	775	27	834	71	965
	rashtra		S	10	937	6	1377	3	1210	19	876	38	998
			P	50	1046	6	1377	7	961	46	851	109	977
10	Punjab	Rabi	C	14	1446	0	0	0	0	12	1485	26	1464
			S	11	1100	0	0	0	0	15	1104	26	1102
			P	25	1294	0	0	0	0	27	1273	52	1283
11	Rajasthan	Rabi	C	59	1051	3	597	5	846	36	1030	103	1020
			S	48	1064	11	1208	7	1382	26	948	92	1073
			P	107	1057	14	1077	12	1159	62	996	195	1045
12	Uttar	Rabi	C	26	1307	2	811	9	686	13	650	50	1005
	Pradesh		S	6	555	0	0	0	0	8	1670	14	1192
			P	32	1166	2	811	9	650	21	1039	64	1046
For states covered			C	357	1207	40	757	57	1115	191	981	645	1104
			S	204	1124	30	1147	36	1182	198	1042	468	1095
			P	561	1177	70	925	93	1141	389	1012	1113	1100

Sl. No.	State	SEASON	AGENCY	Treated with						Not treated with Manure or Fertiliser		Pooled	
				Fertilisers only		Manures only		Both Fert. & Manures					
				No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac	No.of expts.	Yield Rate Kg/hac
1	2	3	4	5	6	7	8	9	10	11	12	13	14
RAPE & MUSTARD													
1	Assam	Rabi	C	17	641	12	621	16	665	15	675	60	652
			S	24	633	10	509	10	588	8	588	52	594
			P	41	636	22	570	26	635	23	645	112	625
2	Bihar	Rabi	C	28	1143	0	0	4	914	8	700	40	1032
			S	10	852	0	0	0	0	9	1073	19	957
			P	38	1066	0	0	4	914	17	897	59	1007
3	Chattisgarh	Rabi	C	0	0	14	291	0	0	16	344	30	319
			S	4	350	2	266	0	0	16	469	22	429
			P	4	350	16	288	0	0	32	407	52	366
4	Gujarat	Rabi	C	37	1769	0	0	7	1680	0	0	44	1755
			S	22	1706	0	0	8	1834	0	0	30	1740
			P	59	1746	0	0	15	1762	0	0	74	1749
5	Haryana	Rabi	C	95	1785	0	0	0	0	5	1985	100	1795
			S	86	2294	0	0	3	1965	3	2037	92	2275
			P	181	2027	0	0	3	1965	8	2005	192	2025
6	Jharkhand	Rabi	C	8	468	0	0	6	441	6	515	20	474
			S	10	659	0	0	0	0	10	617	20	638
			P	18	574	0	0	6	441	16	579	40	556
7	Madhya Pradesh	Rabi	C	33	1388	12	812	7	2064	6	710	58	1280
			S	12	1315	0	0	0	0	22	599	34	852
			P	45	1369	12	812	7	2064	28	623	92	1122
8	Punjab	Rabi	C	34	1619	0	0	4	2040	2	618	40	1611
			S	37	1650	0	0	0	0	3	1303	40	1624
			P	71	1635	0	0	4	2040	5	1029	80	1618
9	Rajasthan	Rabi	C	66	1300	2	1486	10	1119	4	795	82	1258
			S	39	1553	4	706	12	1413	12	1075	67	1392
			P	105	1394	6	966	22	1279	16	1005	149	1318
10	Uttar Pradesh	Rabi	C	89	1543	0	0	9	1037	1	0	99	1481
			S	16	1466	0	0	0	0	4	1045	20	1382
			P	105	1531	0	0	9	1037	5	836	119	1465
11	West Bengal	Rabi	C	78	1266	2	189	26	1039	0	0	106	1190
			S	27	1178	0	0	11	753	0	0	38	1055
			P	105	1243	2	189	37	954	0	0	144	1154
For States Covered			C	485	1452	42	586	89	1111	63	681	679	1282
			S	287	1600	16	528	44	1175	87	785	434	1354
			P	772	1507	58	570	133	1132	150	742	1113	1310

Note:

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

PART-III
(APPENDIX)

APPENDIX

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

I - Estimation of Area

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

The estimated area under a crop in the ith stratum is given by :

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

where

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

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

S_{ij} = Number of selected survey/serial numbers in the jth sample in the ith stratum,

H_{ij} = Highest survey/serial number in the jth sample village in the ith stratum,

n_i = Number of sample villages analysed in the ith stratum and

N_i = Total number of revenue villages in the ith 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:

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

where

a_{ij} = Area under the crop in the plots belonging to selected households in the jth sample village of ith stratum.

The estimates of variance at district level is calculated from

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

where,

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

$$Y_{ij} = \frac{H_{ij}}{S_{ij}} \; X \; a_{ij}$$

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

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

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

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

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

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

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

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

3. Pooling of estimates:

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

L e t

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

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

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

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

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

Then pooled estimate of area is given by

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

And an estimate of its variance by

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

II - Estimate of Yield Rates

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

Let ,

Y_{ijk} = plot yield in gms. in the kth experimental plot of jlh sample village in the ith district,

n_{ij} = number of experiments analysed in the jth sample village of the ith district,

n_i = number of experiments analysed in the ith district,

a_i = area under the crop in the ith district,

m_i = number of sample villages in which experiments are analysed in the ith district,

E = mean square of yield between villages,

F = mean square of yield within villages and

d = number of districts in the State.

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

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

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

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

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

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

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

Where

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

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

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

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

And percentage standard error is given by

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

Abbreviations used in various Annexures

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

State-wise seasons covered under ICS

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