

राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय  
(क्षेत्र संकार्य प्रभाग) मुख्यालय का पता

Addresses of the Headquarters of  
National Sample Survey Office  
(Field Operations Division)

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71 वां अंक  
71<sup>st</sup> Issue

प्रमुख फसलों  
पर  
फसल प्राक्कलन सर्वेक्षण  
के

समेकित परिणाम  
**Consolidated Results  
of  
Crop Estimation Survey  
on  
Principal Crops**

**2018-19**



## प्रस्तावना

भारत में प्रमुख खाद्यान्जन तथा गैर-खाद्यान्जन फसलों पर उपज दरों का आंकलन “फसल प्राक्कलन सर्वेक्षण” (फ.प्रा.स.) नामक राष्ट्रीय कार्यक्रम के अन्तर्गत अधिकांश राज्यों/संघ-राज्यों में फसल कटाई प्रयोगों के संचालन के आधार पर किया जाता है। वर्तमान में खाद्यान्जनों के कुल उत्पादन का अनुमान 29 राज्यों/संघ-राज्यों में वैज्ञानिक आधार पर संचालित फसल कटाई प्रयोगों से प्राप्त उपज दरों के आधार पर किया जाता है।

2. राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (रा.प्र.स.का.) का क्षेत्र संकार्य प्रभाग (क्षे.सं.प्र.) प्रमुख फसलों की उपज दरों के आंकलन हेतु सर्वेक्षणों (फ.प्रा.स.) के आयोजन तथा संचालन में राज्यों/संघ-राज्यों को तकनीकी मार्गदर्शन प्रदान करता है। अपने तकनीकी निगहबानी के अधिमत के अंतर्गत रा.प्र.स.का. (क्षे.सं.प्र.) यह सुनिश्चित करने का विशेष ध्यान रखता है कि विभिन्न राज्यों/संघ-राज्यों द्वारा एक जैसी मानक तकनीक, कार्यविधि एवं प्रक्रिया अपनायी जाए। इसके अतिरिक्त रा.प्र.स.का., राज्यों/संघ-राज्यों के सहयोग से फसल सांख्यिकी सुधार (फ.सां.सु.) योजना के अन्तर्गत क्षेत्रफल परिगणना, क्षेत्रफल समुच्चयन एवं फसल कटाई प्रयोगों के प्रतिदर्श जांच कार्यक्रम को भी कार्यान्वित करता है। यह कार्यालय फसल कटाई प्रयोगों पर प्रतिदर्श जांच के कार्यक्रम का कार्यान्वयन करते समय, प्रतिदर्श ग्रामों के चयन, क्षेत्र कर्मचारियों के प्रशिक्षण तथा क्षेत्र कार्य के पर्यवेक्षण आदि में भी सहयोग देता है। इस प्रक्रिया में फसल उपज आंकलन हेतु फसल कटाई प्रयोग के संचालन सम्बन्धी कुछ महत्वपूर्ण सूक्ष्म स्तरीय जानकारी एकत्र करता है।

3. इन विश्लेषित फसल प्राक्कलन सर्वेक्षण के समेकित निष्कर्षों को रा.प्र.स.का. (क्षे.सं.प्र.) द्वारा “प्रमुख फसलों पर फसल प्राक्कलन सर्वेक्षण के समेकित परिणाम” नामक शीर्षक के अन्तर्गत इस वार्षिक प्रकाशन के रूप में निकाला जाता है। वर्तमान प्रकाशन इस श्रेणी का 71 वां अंक है। प्रतिवेदन का उद्देश्य विभिन्न राज्यों/संघ-राज्यों में सर्वेक्षण के बहुमुखी पक्षों/पहलुओं जैसे कार्य-क्षेत्र, विस्तारण, सर्वेक्षण-अभिकल्प तथा प्रतिदर्श आकार इत्यादि की संक्षिप्त समीक्षा करना तथा वर्ष 2018-19 के दौरान मानक त्रुटि के साथ फसल उपज दर आंकलित कर सर्वेक्षण के परिणामों पर ध्यान केन्द्रित कराना है।

4. वर्ष 2018-19 के दौरान फ. प्रा. स. के अंतर्गत विभिन्न राज्यों तथा संघ-राज्यों में 61 खाद्यान्जन तथा 17 गैर-खाद्यान्जन फसलों को शामिल करते हुए 17,26,577 फसल कटाई प्रयोगों को नियोजित किया गया है। इस प्रतिवेदन में किये गये विश्लेषण तथा प्राप्त किए गये निष्कर्ष मुख्य रूप से सम्बन्धित राज्यों/संघ-राज्यों के राज्य कृषि सांख्यिकी प्राधिकारों द्वारा प्रदत्त आंकड़ों तथा जानकारी पर आधारित हैं। यहां यह उल्लेख करना प्रासंगिक है कि हरियाणा, झारखंड, मध्य प्रदेश एवं पश्चिम बंगाल राज्य के राज्य प्राधिकारों द्वारा फसल प्राक्कलन सर्वेक्षण से संबन्धित पूर्ण सूचना उपलब्ध नहीं करवाए जाने के फलस्वरूप संबन्धित आंकड़े प्रस्तुत प्रतिवेदन में शामिल नहीं किए जा सके हैं। इस प्रतिवेदन के प्रस्तुतीकरण में विभिन्न राज्यों के राज्य कृषि सांख्यिकी प्राधिकारों एवं उच्च स्तरीय समन्वय समिति के अध्यक्षों एवं सदस्यों द्वारा दिये गये समर्थन एवं सहयोग के लिए आभार व्यक्त किया जाता है।

5. प्रतिवेदन की विषय वस्तु एवं प्रस्तुतीकरण में सुधार हेतु सुझावों का स्वागत है।

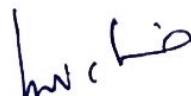
अप्रैल, 2023

  
(डॉ बिभास चौधुरी)  
अपर महानिदेशक

## PREFACE

In India, estimates of yield rates of principal food and non-food crops are obtained on the basis of crop cutting experiments conducted in majority of States/UTs under the National Programme of Crop Estimation Surveys (CES). At present, the production of food grains is estimated on the basis of yield rates obtained from the crop cutting experiments conducted on scientific basis spread over 29 States/UTs.

2. Field Operations Division (FOD) of the National Sample Survey Office (NSSO) has been providing technical guidance to States/UTs for organizing and conducting CES for estimating yield rates of principal crops. In the purview of its mandate of technical oversight, NSSO (FOD) also ensures adoption of uniform standard technique, methodology and procedures by different States/UTs. In addition, NSSO in collaboration with the States/UTs implements sample check programmes on Area Enumeration, Area Aggregation and conduct of Crop Cutting Experiments under the Scheme of Improvement of Crop Statistics (ICS). While executing the programme of sample checks on Crop Cutting Experiments, the operational aspects of the conduct of crop cutting experiments right from selection of sample villages, training of field staff and supervision of field work are duly taken into consideration. In the process, certain vital micro-level details relating to conduct of crop cutting experiments for estimation of crop yield are also captured.
3. The analysed results of CES are consolidated and brought out by NSSO (FOD) in this annual publication titled "**Consolidated Results of Crop Estimation Survey on Principal Crops**". The present publication is the **71<sup>st</sup>** issue of the series. The report purposes to review briefly the multifaceted aspects such as scope, coverage, survey design and sample size etc. of the survey in various States/UTs and focuses attention on the results of the surveys in setting out the estimates of crop yields and associated standard errors during the year 2018-19.
4. **17,26,577** crop cutting experiments covering 61 food and 17 non-food crops were planned in different States/UTs during 2018-19 under CES. The analysis made and conclusions drawn in the report are primarily based on the data and information furnished by the State Agriculture Statistics Authorities (SASAs) of the concerned States/UTs. It is, however, pertinent to mention here that the information pertaining to States of Haryana, Jharkhand, Madhya Pradesh and West Bengal could not be included for want of complete information on CES from the respective State Governments for the year under Report. The support and co-operation received from SASA, the Chairpersons and members of High Level Coordination Committee (HLCC) of various States in the presentation of the report is gratefully acknowledged.
5. Suggestions for further improvement in the content and presentation of the Report are welcome.



(Dr. Bivas Chaudhuri)  
Addl. Director General

April, 2023



## प्रकाशन से जुड़े अधिकारीगण

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

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## **A. Agricultural Statistics Schemes & NSSO**

### **1. National Sample Survey office(NSSO)**

The Directorate of National Sample Survey (NSS), established in the year 1950, was reorganized into the present NSSO under the Government of India's Resolution of 5<sup>th</sup> March, 1970. The organization now consists of four functional Divisions with a Director General (DG) at the apex level. Each of the Divisions viz. (i) Survey Design and Research Division, (ii) Data Processing Division (DPD) (iii) Survey Coordination Division and (iv) Field Operations Division is headed by an Additional Director General. The Field Operations Division (FOD) undertakes the field work relating to Socio - Economic Surveys, Industrial Surveys, Surveys for collection of retail prices in urban and rural areas, Urban Frame Survey for updation of area frame in urban areas for use in Socio-Economic Surveys & Methodological Surveys/Studies. Agriculture Statistics Headquarters of Field Operation Division is engaged with Agricultural Surveys under the scheme for Improvement of Crop Statistics (ICS).

### **2. Timely Reporting Scheme (TRS)**

The Ministry of Agriculture initiated TRS in 1968-69 in land record states in order to reduce the time lag between completion of sowing and the availability of estimates of area sown and similarly between the completion of harvesting and availability of estimates of production in respect of important crops.

### **3. Establishment of an Agency for Reporting Agricultural Statistics (EARAS)**

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

### **4. General Crop Estimation Surveys (GCES)**

Crop Estimation Surveys (CES) are conducted by States and Union Territories for obtaining sufficiently precise estimates of average yield of principal food and non-food crops using the objective technique of Crop Cutting Experiments (CCE) by applying scientific sampling method.

### **5. 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 deficiencies in the system of collection of area & yield statistics through the joint efforts of the NSSO (FOD) & State Agricultural Statistics Authority (SASA) and to suggest remedial measures. NSSO (FOD) is also entrusted with the responsibility of providing technical guidance and assistance to the states in developing suitable survey techniques for obtaining timely and reliable estimates of crop area & yield and imparting training to State Government field personnel. The scheme is operational in 21 states and 1 U.T at present covering about 44 crops.

## B. Concepts & Definitions

### 1(a). Food crops

The food crops cover Cereals, Pulses & Beans, Small Millets, Condiments & Spices, Fruits & Vegetables and Sugar (Sugarcane & Cocoa).

### 1(b). Non-Food crops

The non-food crops include Oil-seeds, Fibres and Drugs & Narcotics.

### 2(a). Temporarily settled States

States and Union Territories which have been cadastrally surveyed and where area & land use statistics form a part of the land records maintained by the revenue agency are referred to as “Temporarily Settled States”. This system is followed in 19 States namely, Andhra Pradesh, Assam (excluding hill districts), Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttarakhand and Uttar Pradesh, and the five Union Territories of Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Delhi and Puducherry, covering about 86% of area.

### 2(b). Permanently settled States

Kerala, Odisha and West Bengal are categorised as “Permanently Settled States”, as there is no land revenue agency at the village level and crop area & land use statistics are collected through a scheme of sample surveys. These States cover about 9% of area.

### 2(c). Other States

Parts of Assam (hill districts), Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura and the two Union Territories of Andaman & Nicobar Islands and Lakshadweep, for which only “conventional” estimates are available, cover about 5% of area.

### 3. Seasons

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

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

### 4. Reference period

The reference period for a survey is Agricultural Year (July to June) e.g. year 2018-19 is July 2018 to June 2019.

### 5. Crop mixtures

Two or more crops of the same season grown in a patch with the constituent crops being sown intermixed or in different rows, will constitute a crop mixture.

## **6. Geographical Area**

India has an area of 32,87,263 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.

## **7. Nine fold classification of Area**

a. Forests

### **Area not available for cultivation**

b. Area under non-agricultural uses

c. Barren and unculturable land whether in isolated blocks or within cultivated holding

### **Other uncultivated land excluding Current fallow**

d. Permanent pastures and other grazing lands

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

f. Culturable waste

### **Fallow land**

g. Fallow land other than current fallow

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

i. 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.

## **8. 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.

## **9. Area Sown more than once**

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

## **10. Irrigated Area**

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

## **11. Cropping Intensity**

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

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

## **12. Recovery ratio**

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

- i) **Driage ratio:** The ratio of weight between the wet grains or produce to dried and marketable produce is known as Driage ratio.
- ii) **Ginning ratio:** The weight of cotton to lint Cotton without seeds (i.e. cotton minus seeds) is known as ginning ratio. This ratio is obtained from ginning factories.
- iii) **Net weight:** In Agricultural Statistics, the net weight will always be more than gross weight. While reporting the weight of crop (produce) when sown in mixture, the percentage of the experimental crop sown in that mixture is also given. In this case, one has to work out the produce had it been sown pure.

## **13. Moisture meter**

Moisture meter is an instrument to measure the moisture content in the grains from which the driage ratio can be calculated.

## **14. Improved Agricultural Practices**

Agricultural practices include irrigation, crop rotation, application of fertilizers & pesticides, and the domestication of livestock. Improved agricultural practices could increase production, which can allow the population to feed itself without imports, or it might allow excess production so that the surplus can be sold to have increased buying power for other goods and services. The improved practices can reduce the cost of fertilizer and use of fuel. Also, some practices preserve the land environmentally, such as reducing erosion, etc.

## **15. Conventional Method of Yield Estimation :-**

### **(a) Annawari system**

Under ‘traditional method’, the yield per hectare is obtained either in terms of a direct estimate in quintals per hectare by eye-appraisal or as the product of ‘normal yield’ and the ‘condition factor’.

### **(b) Normal Yield**

The normal yield is somewhat vaguely defined as the yield which is typical of the area. It is considered to be the yield on the average soil in a year of average character. The normal yield is the yield for which past experiences have shown to be most occurring crop yield. This is the typical crop yield of the local area, which a cultivator has a right to expect and with which he is content, while if he gets more, he has reason to rejoice and if he gets less he has reason to complain. Normal yields have been fixed usually for each district empirically on the basis of past experience.

### **(c) Condition factor**

The condition factor is an estimate of the crop yield in a given year in relation to normal yield and is usually fixed in terms of annas, with a specified number of annas representing normal yield.

### **(d) Calculation of yield**

The lower officers of Revenue and Agriculture departments make a guess of the condition factor of the crop in their jurisdiction on the basis of their impression through personal observations and enquiries with local cultivators and pass on their estimates to their superiors, who may modify those in the light of their experience.

## **16. Statistical Methods of Yield Estimation:-**

### **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. The sampling design of GCES is that of stratified multistage random sampling, in which Taluks/CD Blocks/Anchals are taken as strata, villages within the stratum as FSUs, and plots of specified size within the field (survey numbers/sub-survey numbers) as ultimate units of sampling. In the land record states, villages selected under TRS in a stratum for the current year forms the sampling frame of FSUs for GCES.

## **17. Conversion factor**

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

Weight of produce in Gms.

----- X 10

Plot size in Sqr. Mtrs.

## **18. 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. It is calculated as under:-

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



## कार्य सारांश

प्रत्येक राज्य/जिला/प्रभाग या ऐसे प्रशासनिक स्तरों के लिए, प्रमुख खाद्यान्जन तथा गैर-खाद्यान्जन फसल का प्रति हैक्टेयर औसत उपज आंकलन जो कि फसल उत्पादन आंकलन की वृष्टि से बहुत महत्वपूर्ण है, फसल आंकलन सर्वेक्षण कार्यक्रम के अन्तर्गत वैज्ञानिक रूप से नियोजित फसल कटाई प्रयोगों से प्राप्त किया जाता है। वर्ष 2018-19 के लिए फसल प्राक्कलन सर्वेक्षण की मुख्य विशेषताएँ निम्न हैं:

- वर्ष 2018-19 के दौरान फसल प्राक्कलन सर्वेक्षण कार्यक्रम के अन्तर्गत 61 खाद्यान्जन तथा 17 गैर-खाद्यान्जन फसलों को शामिल किया गया। 2018-19 के दौरान 2 नई फसलें राजमा बीन्स एवं करेला क्रमशः आंध्र प्रदेश एवं केरल राज्य में जोड़ी गई हैं। नई फसलों का समावेश राज्यों द्वारा उपज दर के सांख्यिकीय प्राक्कलन हेतु प्रयोग में ली जाने वाली वैज्ञानिक पद्धतियों एवं प्रक्रियाँ पर बल देने को परिलक्षित करती है। **(पैरा-3.3)**
- आन्ध्र प्रदेश, बिहार, गुजरात, झारखण्ड, कर्नाटक, महाराष्ट्र, राजस्थान तथा तमिलनाडु में कुछ महत्वपूर्ण फसलों के लिए दो परतीय के साथ-साथ चार परतीय स्तरीकरण को अपनाया गया है, जबकि मध्य प्रदेश तथा छत्तीसगढ़ में धान तथा गेहूं के लिए तीन परतीय वर्गीकरण को अपनाया गया। **(पैरा-4.6 और सारणी-3)**
- गत वर्ष के कुल प्रयोगों 16,95,660 की तुलना में वर्ष 2018-19 के लिए विभिन्न फसलों के कुल प्रयोग 17,26,577 नियोजित किये गए। प्रतिदर्श परिमाण में 30,917 प्रयोगों की कुल वृद्धि खाद्यान्जन फसलों में 61,867 प्रयोगों की वृद्धि तथा गैर-खाद्यान्जन फसलों में 30,950 प्रयोगों की कमी के कारण हुई। **(पैरा-7.1)**
- खाद्यान्जन फसलों के लिए 14,70,648 प्रयोगों में से केवल 64,852 (4%) प्रयोग 18 फल तथा सब्जी की फसलों पर 13 राज्यों में नियोजित किये गये। भारत में फसल स्वरूप उत्तरोत्तर नकद फसल एवं फलों व सब्जियों की तरफ अग्रेषित हो रहा है। राज्यों द्वारा नई फसलों को उनके महत्व, सापेक्ष सार्थकता यथा कुल भारतीय उत्पादन में उनका हिस्सा इत्यादि के आधार पर समावेशित करने हेतु उचित प्रयास किए जाना चाहिए। **(पैरा-7.5 और परिशिष्ट-II)**
- फसल कटाई प्रयोगों के संचालन में लगे प्राथमिक कर्मियों के लिए नियमित प्रशिक्षण कार्यक्रमों को वर्ष 2018-19 के दौरान सभी राज्यों/संघ राज्यों में आयोजित किया गया। गोवा, मेघालय, ओडिशा, राजस्थान, दादर और नगर हवेली तथा पुडुचेरी राज्यों/ संघ राज्यों ने प्राथमिक कर्मचारियों की शत प्रतिशत उपस्थिति दर्ज कराई जो कि अत्यंत सराहनीय है। बिहार, छत्तीसगढ़ (कृषि/सांख्यिकी), हिमाचल प्रदेश (खरीफ), महाराष्ट्र, पंजाब (रबी में कृषि) एवं उत्तराखण्ड में विभिन्न एजेंसियों की उपस्थिति अखिल भारतीय औसत (84%) से कम थी। अप्रशिक्षित कर्मचारियों द्वारा फसल कटाई प्रयोगों का क्षेत्र कार्य किये जाने से इसकी वस्तुनिष्ठता पर विपरीत प्रभाव पड़ता है। अनुपस्थित रहे प्राथमिक कर्मियों के लिए अलग से प्रशिक्षण कार्यक्रम आयोजित करने की सम्भावनाओं को और अधिक मुहैया करवाए जाने की आवश्यकता है। **(पैरा-8.2)**
- फसल कटाई प्रयोग के संचालन में कार्यरत प्राथमिक कर्मियों को प्रशिक्षण देने के लिए आयोजित कुल 1866 प्रशिक्षण केन्द्रों में से 739 (40%) प्रशिक्षण केन्द्रों में रा.प्र.स.का. के अधिकारियों ने पर्यवेक्षक के रूप में भाग लिया और 145 (8%) केन्द्रों में प्रशिक्षण अधिकारी के रूप में भाग लिया। **(पैरा-8.3)**
- फसल प्राक्कलन सर्वेक्षण 2018-19 के अन्तर्गत नियोजित प्रयोगों में से लगभग 20 प्रतिशत प्रयोगों का ही पर्यवेक्षण किया गया जिसमें रा.प्र.स.का. द्वारा कार्यान्वित फसल सांख्यिकी सुधार योजना के अंतर्गत 2 प्रतिशत पर्यवेक्षण भी सम्मिलित हैं। आन्ध्र प्रदेश, बिहार, छत्तीसगढ़, गोवा, हरियाणा, हिमाचल प्रदेश, जम्मू एवं कश्मीर, झारखण्ड,

कर्नाटक, मध्य प्रदेश, मेघालय, ओडिशा, पंजाब, राजस्थान, उत्तराखण्ड तथा पश्चिम बंगाल में राज्य सांख्यिकी विभाग द्वारा कुल पर्यवेक्षण 10 प्रतिशत से कम था। पर्याप्त पर्यवेक्षण उपज सांख्यिकीय की गुणवत्ता के लिए आवश्यक है।

(पैरा-9.3)

8. फसल सांख्यिकी सुधार योजना के अंतर्गत फसल कटाई प्रयोगों पर प्रतिदर्श जांच के निष्कर्ष अनुलग्नक III(c) में सारणीबद्ध है। विगत वर्षों में प्राथमिक कर्मचारियों द्वारा किए गए फसल कटाई प्रयोगों के जांच से संबंधित राज्यों में सामान्य फसल प्राक्कलन सर्वेक्षण नियमावली (जी सी ई एस मैनुअल) की निर्धारित कार्यप्रणाली का पालन करने वाले फसल कटाई प्रयोगों के प्रतिशत में वृद्धि हुई है। इस संबंध में ऑडिशा राज्य के प्रयास अत्यन्त सराहनीय है जहां 90% से ज्यादा प्रयोग त्रुटिरहित पाए गए हैं। अखिल भारतीय औसत का आंकड़ा यह दर्शाता है की 66% फसल कटाई प्रयोग निर्धारित सा.फ.प्रा.स. कार्यप्रणाली और सांख्यिकीय प्रक्रियां के अनुसार सम्पन्न किए गए। यह गत वर्ष की तुलना में 8% की वृद्धि है, जो की सराहनीय है। इन निष्कर्षों को नियमित रूप से विभिन्न राज्य कृषि सांख्यिकी प्राधिकारों के ध्यान में लाया गया। समस्या वाले क्षेत्रों को उच्च स्तरीय समन्वय समिति की बैठकों में चर्चा के दौरान सामने लाने पर भी पर्याप्त ज़ोर दिया गया है। (पैरा-9.6)

9. राज्यों यथा: केरल, ओडिशा, तेलंगाना, दादर और नगर हवेली, दमन और दीव तथा पुडुचेरी से फसल प्राक्कलन सर्वेक्षण का प्रत्युत्तर दर शत प्रतिशत दर्ज किया गया जो कि अति सराहनीय है। वर्ष 2018-19 के दौरान फसल प्राक्कलन सर्वेक्षण के अंतर्गत कुल प्रत्योत्तर 90 प्रतिशत था। असम, बिहार, छत्तीसगढ़, गोवा, हरियाणा, जम्मू एवं कश्मीर, हिमाचल प्रदेश, झारखण्ड, कर्नाटक तथा मध्य प्रदेश में प्रत्युत्तर 90 प्रतिशत से कम था। फसल अनुमानों की विश्वसनीयता को बढ़ाने हेतु इन सभी राज्यों के राज्य प्राधिकारों को प्रत्युत्तर बढ़ाने के लिए उचित उपचारी उपाय अपनाए जाने की आवश्यकता है। (पैरा-10.2)

10. अप्रत्युत्तरों को नियंत्रित करने हेतु प्रभावी उपचारी कदम उठाने के उद्देश्य से यह आवश्यक है कि क्षेत्र स्तर पर अप्रत्योत्तर तथा सारणीयन स्तर पर प्रयोगों को रद्द करने के कारणों का विश्लेषण किया जाए। (पैरा-10.6)

11. फसल प्राक्कलन सर्वेक्षण 2018-19 के परिणामों से स्पष्ट होता है कि गेहूँ, रागी, जौ, गन्ना, राई और सरसों, अलसी एवं मूँगफली (रबी और ग्रीष्म) को छोड़ कर ज्यादातर महत्वपूर्ण फसलों में पिछले वर्ष की तुलना में अखिल भारतीय स्तर पर उपज दर अनुमानों में गिरावट आयी है। (पैरा-11.3)

12. असम, हिमाचल प्रदेश, कर्नाटक, केरल, मेघालय, राजस्थान एवं उत्तराखण्ड में सभी फसलों के उपज दरों के अनुमानों का 5% मानक त्रुटि प्रतिशत की स्वीकृत सीमा के अंदर था। जबकि, आंध्र प्रदेश में ज्वार (खरीफ) एवं कुल्थी (खरीफ); छत्तीसगढ़ में ज्वार (खरीफ) और सोयाबीन (खरीफ), हरियाणा में मक्का, कर्नाटक में मक्का (ग्रीष्म उच्च उपज), मूँग (रबी); उरद (रबी); प्याज (ग्रीष्म), मूँगफली (रबी), कपास (रबी), टमाटर (रबी एवं ग्रीष्म); लोबिया (खरीफ), फूलगोभी, सूरजमुखी (ग्रीष्म, सिंचित), कुसम (रबी); मध्य प्रदेश में चावल (खरीफ उच्च उपज सिंचित); मिर्च (रबी), ओडिशा में अलसी (ग्रीष्म), मक्का (शरद); कुलथी (ग्रीष्म), तिल (शरद); तेलंगाना में बाजरा (खरीफ), तिल (खरीफ), कुलथी (रबी); तमिलनाडु मक्का (रबी); पश्चिम बंगाल में अलसी (खरीफ), दादर एवं नगर हवेली में चावल; दमण और दीव, रागी (खरीफ) फसलों के उपज दरों के अनुमानों का मानक त्रुटि प्रतिशत (10 प्रतिशत से अधिक) पाया गया। निर्दिष्ट फसलों के लिए प्रतिदर्श आकार बढ़ाकर या अप्रत्युत्तर की दर को कम कर मानक त्रुटि को घटाने के लिए समुचित कदम उठाने की आवश्यकता है। यह लंबे समय से राज्यों में प्रचलित महत्वपूर्ण फसलों के जिला स्तर पर आकलन में अपेक्षित परिशुद्धता को सुनिश्चित करने के लिए अविभाज्य होगा।

(पैरा-11.5 और सारणी 17)

13. उपज दरों के स्तरीकरणोत्तर विश्लेषण को कुछ राज्यों में कुछ फसलों पर लागू किया जा रहा है। यह आवश्यक है कि इस विश्लेषण के क्षेत्र को सभी राज्यों में अधिक से अधिक फसलों पर लागू किया जाए। जिसे प्राक्कलन की परिशुद्धता को दो महत्वपूर्ण निविष्ट यथा सिचाई एवं बीज किस्म के आधार पर बढ़ाया जाए। (पैरा-12.2)



## EXECUTIVE SUMMARY

Estimates of average yield per hectare of principal food and non-food crops for each State/District/Division or such administrative levels which are of importance from the point of view of working out estimates of crop production, are derived from scientifically planned crop cutting experiments under the programme of Crop Estimation Surveys. The salient features of the Crop Estimation Surveys for the year 2018-19 are highlighted below: -

1. 61 food and 17 non-food crops were covered under the programme of Crop Estimation Surveys (CES) during the year 2018-19. Two new Crops viz. Rajma Beans & Bitter Gourd in the State of Andhra Pradesh & Kerala respectively were added during 2018-19. Inclusion of new crops reflects the emphasis of the State(s) on the increasing adoption of Statistical methodologies and procedures for the scientific estimation of Crop yield rate. **(Para-3.3 & Para- 3.4)**
2. Two-fold as well as four-fold stratification has been adopted for some important crops in Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Maharashtra, Rajasthan and Tamil Nadu. In Madhya Pradesh and Chhattisgarh, however, a three-fold classification has been adopted for Paddy and Wheat. **(Para-4.6, & Table-3)**
3. A total of 17,26,577 crop cutting experiments were planned on different crops during 2018-19 as compared to 16,95,660 experiments in the previous year. The net increase of 30,917 experiments in the sample size is due to increase of 61,867 experiments under food crops and decrease of 30,950 experiments under non-food crops. **(Para-7.1)**
4. Out of 14,70,648 experiments for food crops, only 64,852 (4 %) experiments were planned on 18 Fruits and Vegetable crops covered in 13 States. Cropping pattern in India is gradually shifting towards Cash crops and Fruits & Vegetables. Adequate efforts should be made by the States to include new crops in GCES based on its importance, relative significance etc. measured in terms of share in all India production. **(Para-7.5 & Appendix-II)**
5. Regular programmes of training for primary workers engaged in the conduct of crop cutting experiments were organised in all the States/UTs during 2018-19. It is encouraging to note that States: Goa, Meghalaya, Odisha, Rajasthan, Dadar & Nagar Haveli, Daman & Diu and Puducherry recorded cent percent attendance of their primary staff. However, attendance of various agencies at the training centers was less than All India average (84%) in Bihar, Chhattisgarh (Agricultural/Statistical), Himachal Pradesh (Agriculture in Kharif), Maharashtra, Punjab (Agriculture in Kharif) and Uttarakhand. Conducting of the experiments by untrained personnel would impact its objectivity adversely. The feasibility of organising separate training for the absentee primary workers needs to be explored. **(Para-8.2)**
6. In all, out of the 1866 training centers, NSSO officials participated in 739 (40%) centers as observers and imparted training in 145 (8%) centers. **(Para-8.3)**
7. 20% of the experiments planned under CES during 2018-19 were supervised. This includes 2% experiment which were supervised under Scheme of Improvement of Crop Statistics (ICS Scheme) implemented by NSSO. The total supervision by State Statistical Department was below 10% in Andhra Pradesh, Bihar, Chhattisgarh, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Meghalaya, Odisha, Punjab, Rajasthan, Uttarakhand and West Bengal. Adequate supervision is essential for quality of Yield Statistics. **(Para-9.3)**

8. The findings of the sample check on crop cutting experiments under the Scheme of Improvement of Crop Statistics are tabulated in **Annex III(c)**. The Supervisory checks over the years on CCEs conducted by primary workers have resulted in increasing percentage of CCEs adhering to prescribed methodologies of the respective State GCES manual. The efforts of Odisha state are highly praiseworthy in this regard where more than 90% of the experiments conducted were found to be free from any kind of error. The figure of all India average shows that 66% sample experiments were conducted as per the prescribed GCES manual & Statistical procedures of the respective States/ UTs. This is an increase of 8% vis-à-vis previous year, which is commendable. These findings are brought to the notice of the various State Agricultural Statistics Authorities (SASAs) on a regular basis. Adequate emphasis is also given to focus on the problem areas in the deliberations of the High Level Co-ordination Committee meetings of the States. **(Para-9.6)**
9. It is commendable to note that CES response rate was cent percent from Kerala, Odisha, Telangana, Dadar & Nagar Haveli, Daman & Diu and Puducherry. However, in 2018-19, the overall response under CES was 90 percent. In Assam, Bihar, Chhattisgarh, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka and Madhya Pradesh the response was below 90 per cent. Adequate remedial measures need to be taken by SASAs of these States to improve the response so as to increase the reliability of the crop yield estimates. **(Para-10.2)**
10. With a view to take effective remedial measures to control non-response, it is necessary to analyse the reasons for non-response at field level and rejection of experiments at the tabulation stage. **(Para-10.6)**
11. The results of CES for 2018-19 reveal that the yield rate estimates at All-India level decreased as compared to the previous year for majority of important crops except Wheat, Ragi, Barley, Sugarcane, Groundnut (Rabi/Summer), Rape & Mustard and Linseed. **(Para-11.3)**
12. The percentage standard error of the estimates of yield rate of all crops was found to be within the acceptable limits of 5% for the States namely: Assam, Himachal Pradesh, Kerala, Meghalaya, Uttarakhand and Puducherry. However, it was high (more than 10%) in Andhra Pradesh for Jowar (Kharif) and Horsegram (Kharif); Chhattisgarh for Jowar (Kharif) and Soyabean; Haryana for Maize; Karnataka for Maize Sum. Hyv., Greengram (Rabi), Blackgram (Rabi), Onion (Summer), Groundnut (Rabi), Cotton (Rabi), Tomato (Rabi & Summer), Cowpea (Kharif), Cabbage, Sunflower Sum. Irr., Safflower (Rabi); Madhya Pradesh for Rice (Kh. Hyv Ir.), Chillies (Rabi), Maharashtra for Sunflower (Rabi); Odisha for Ragi (Summer), Maize (Winter), Horsegram (Summer) and Sesamum (Aut.); Telangana for Bajra (Kharif), Sesamum (Kharif), Horsegram (Rabi); Tamilnadu for Maize (Rabi); West Bengal for Linseed (Kharif) and Dadar Nagar & Haveli for Rice; and Daman & Diu for Ragi (Kharif). Suitable steps need to be taken by SASA(s) to reduce the standard error for specified crops either by increasing the sample size or reducing the rate of non-response. This is indispensable to ensure that the desired precision which is followed since long in various States in estimates at the district level is obtained. **(Para-11.5 & Table-17)**
13. Post-stratification analysis of yield rates as is being adopted by some States for a few crops. It is necessary to extend the scope of this analysis to more crops in all the States to increase the precision of estimates according to the two critical inputs viz. Irrigation and Seed Variety. **(Para-12.2)**



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# INTRODUCTION

1

- 1.1 Agricultural sector continues to play a dominant and vital role in the Indian Economy by contributing a sizable share in the National Product and absorbing bulk of the economic activity pursued by majority of the population. In the context of primacy of Agriculture, timely and reliable statistics on crop production is of vital importance and significance. Crop Production has two major components viz., Area sown and average Yield rate. The primary responsibility for collection of statistics on these two aspects rests with the State/UT Governments. Statistics of Land Use and Area Under Crops are obtained as by-product of land revenue administration in respect of the land record States/UTs, commonly known as Temporarily Settled States. On the other hand, the Permanently Settled States, viz., Kerala, Odisha and West Bengal are reporting Land Utilisation and Area Statistics based on sample surveys. At present, over **95 percent** of food grain production is estimated on the basis of yield rates obtained from scientifically planned crop cutting experiments conducted under the programme of Crop Estimation Surveys (CES) carried out by the State/UT Governments.
  
- 1.2 The Field Operations Division of NSS as a consequence of the Cabinet Resolution of 1952 that mandated work related to the estimation of food production and large-scale sample survey spearheaded the systematic attempt to develop Statistical architecture for Crop Statistics in India. This involved monitoring, forecasting and estimation of area under major crops and estimation of crop wise yield through twin surveys namely Land Utilisation Surveys (LUS) and Crop Yield Statistics (CYS) till 1970.  
In 1962, Agriculture Statistics Division of Directorate of National Sample Survey started publication of systematic series of reports on its work and the first such review was published in September 1964 containing consolidated results of Crop Estimation Surveys on principal food crops carried out in the States from 1949-50 to 1960-61. Field Operations



Division (FOD) of National Sample Survey office (NSSO) continues to consolidate the results of crop cutting experiments under Crop Estimation Survey every year on the basis of information received from various State Government/UTs. The report attempts to bring out the consolidated results on principal food and non-food crops. The present report is Seventy-first in the existing series and relates to the Agriculture year 2018-19.



## OBJECTIVE

2

- 2.1 “An Extensive series of CCE’s on paddy carried out by Sir John A. Hubback more than 20 years ago over a greater part of the Rice tracts in Bihar and Orissa . So far as I know these are the earliest CCE’s experiments based on the principle of random sampling anywhere in the world”

Professor RA Fisher in his memorandum dated 2<sup>nd</sup> March 1945 addressed to Imperial Council of Agricultural Research, GOI.

Sir John A. Hubback carried out crop cutting work in India in 1923, 1924 and 1925 and was a pioneer in CCEs based on principle of Simple random sampling. His de novo work not only inspired administrators like Shri C.D. Deshmukh & Shri P.S. Rau but also legendary Statisticians like Professor R.A. Fisher in Britain and Dr. P.V. Sukhatme of ICAR-Indian Agricultural Statistics Research Institute, New Delhi and Prof. P.C. Mahalanobis of Indian Statistical Institute (ISI), Kolkata in India.

The primary objective of Crop Estimation Surveys is to obtain fairly reliable estimates of average yield rates of principal food and non-food crops for each State and Union Territory and for lower administrative unit such as Block, District etc. which are important from the point of view of crop production. The estimates of yield rates, thus arrived at, are generally adopted for the compilation of official estimates of crop production and used for the purposes of planning, policy formulation and implementation.

- 2.2 Under the programme of Crop Estimation Surveys, data on yield rates are collected through organising and conducting crop cutting experiments by applying statistical techniques of random sampling. The crop cutting experiment consists of identification & marking of an experimental plot of a specified size & shape in a selected field on the principle of random sampling, harvesting & threshing the produce and recording the weight of the produce. For a part of the experimental produce or in some cases for the entire produce of experiment, further processing of the harvested produce is done for determining the percentage recovery of dry grains or the marketable produce. For Paddy and Cotton, the yield is expressed in terms of Rice and Lint respectively after applying the standard recovery ratio and ginning ratio.



# COVERAGE

3

- 3.1 During 2018-19, Crop Estimation Surveys (CES) was conducted in 20 land record States/UTs, 3 EARAS States and 6 other States / UTs as given in **Table-1**.

**Table –1: Details of CES coverage during 2018-19**

States in which C E S was conducted	
<b>Land Record States/UTs</b>	1. Andhra Pradesh 2. Assam 3. Bihar 4. Chhattisgarh 5. Gujarat 6. Haryana 7. Himachal Pradesh 8. Jammu &Kashmir 9. Jharkhand 10. Karnataka 11. Madhya Pradesh 12. Maharashtra 13. Punjab 14. Rajasthan 15. Tamil Nadu 16. Telangana 17. Uttar Pradesh 18. Uttarakhand 19. Dadra & Nagar Haveli 20. Puducherry
<b>EARAS States</b>	1. Kerala 2. Odisha 3. West Bengal
<b>Other States and UTs</b>	1. Andaman district of A & N Islands 2. Daman & Diu 3. Goa 4. Manipur 5. Meghalaya 6. Tripura
States/UTs in which CES was not conducted	
1. Arunachal Pradesh 2. Chandigarh 3. Lakshadweep	4. Mizoram 5. Nagaland 6. Sikkim



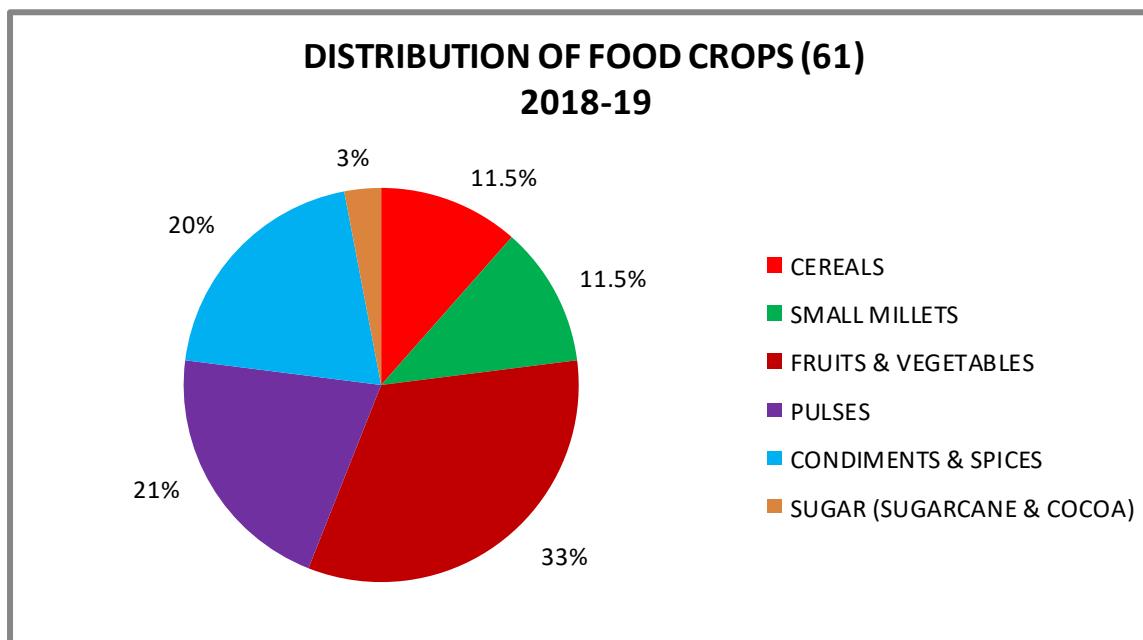
- 3.2 Details of crops for which crop cutting experiments under CES were planned in States/UTs together with the year of initiation of the survey and adoption of CES results for estimates of production are given in **Appendix-I**. It also gives information about the stratum, pre-stratification, if any, made in different States and size & shape of the plot adopted for the crop cutting experiments. It is evident that there is no uniformity among the States in respect of the plot size and shape even for major crops. Attempts need to be made to adopt the uniform shape and size of the cuts at least for important crops.
- 3.3 During the agricultural year 2018-19, a total of 78 crops comprising 61 food and 17 non-food crops were covered under CES in different States/UTs. The details of different categories of crops are given in Table –2 and also presented in Chart I & II.

**Table - 2: Crops covered under CES during 2018-19**

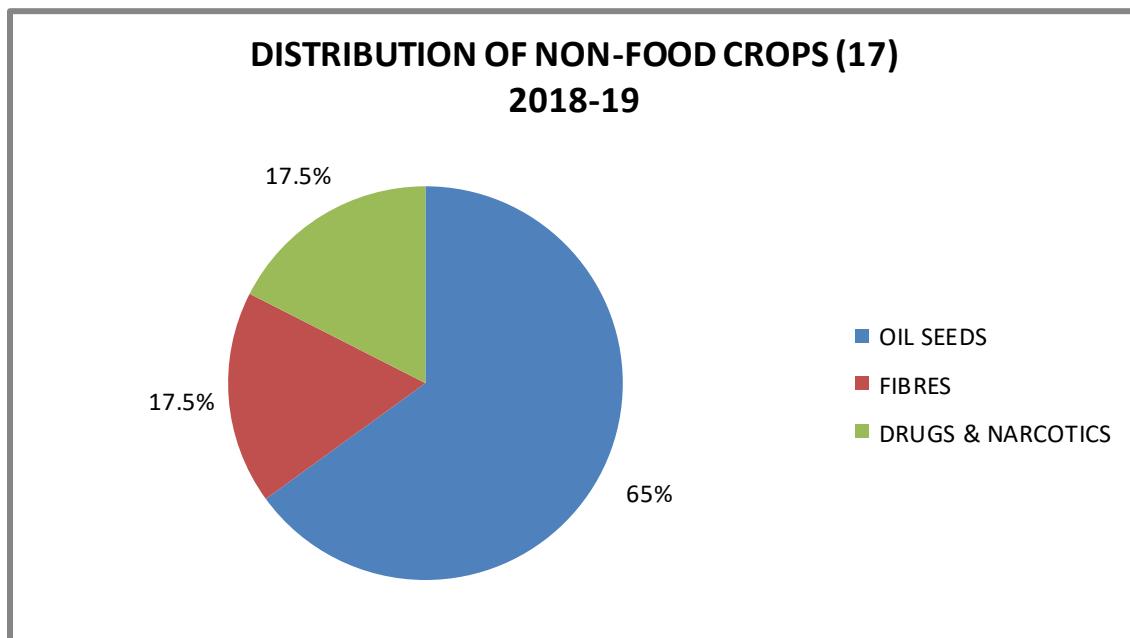
S. No.	Particulars	No. of crops (%)
<b>A. Food Crops</b>		
1	Cereals ( Paddy, Jowar, Bajra, Maize, Ragi (Mandua), Wheat, Barley )	7 (11.5%)
2	Pulses & Beans ( Gram (Bengalgram), Redgram (Tur/Arhar), Greengram (Moong), Blackgram (Urd), Lakh (Khesari), Masur, Horsegram (Kulthi), Peas, Moth, Cowpea (Lobia), Guar, Chowla, Rajma Beans)	13 (21%)
3	Small Millets ( Sawan (Jhangora), Korra, Kodon-Kutki (Kodan), Navane, Save, Samai, Varagu )	7 (11.5%)
4	Condiments & Spices (Chillies, Cumin, Fennel, Areca nut, Pepper, Saffron, Turmeric, Ginger, Garlic, Coriander, Methi, Nutmeg)	12 (20%)
5	Fruits & Vegetables (Lichi, Banana, Mango, Guava, Jackfruit, Cashewnut, Tapioca, Pine Apple, Potato, Onion, Brinjal, Tomato, Cauliflower, Papaya, Plantain, Avare (Sem), Tamarind, Beans, Cabbage, Bitter Gourd)	20 (33%)
6	Sugar (Sugarcane & Cocoa)	2 (3%)
<b>Total</b>		<b>61</b>
<b>B. Non –Food Crops</b>		
1	Oil Seeds (Groundnut, Sesamum (Gingelly), Castor, Rape & Mustard, Linseed (Alsi), Safflower, Sunflower, Soyabean, Tara Meera, Coconut, Niger )	11 (65%)
2	Fibres (Cotton, Jute, Mesta )	3 (17.5%)
3	Drugs & Narcotics (Tobacco, Isabgol, Betel Leaves )	3 (17.5%)
<b>Total</b>		<b>17</b>



## Chart - I



## Chart – II





3.4 The Field Operations Division (FOD) of the National Sample Survey office (NSSO) continuously reviews the coverage of crops under CES in States / UTs from the point of view of its importance, relative significance etc. measured in terms of share in All India production. *Two Crops: Rajma Beans in Andhra Pradesh and Bitter Gourd in Kerala were added during 2018-19. Inclusion of new crops reflects the emphasis of the State(s) on the increasing adoption of Statistical methodologies and procedures for the scientific estimation of Crop yield rate.*



## SAMPLING DESIGN

4

- 4.1 The sampling design generally adopted for the CES during 2018-19 is that of Stratified Multi-Stage Random Sampling, with Tehsils/Taluks/RI circles/CD Blocks/Anchals etc. as Strata and revenue village within a Stratum as the First Stage Unit of sampling, survey number/field within each selected village as the Second Stage Unit of sampling and experimental plot of a specified shape and size as the ultimate unit of sampling. **Appendix -I** inter-alia, gives the stratum, shape and size of the experimental plot for each crop in different States/UTs. In each selected primary unit of sampling, generally two survey numbers/fields growing the experimental crop are selected for conducting crop cutting experiments. However, in Dadra and Nagar Haveli, three survey numbers/ fields are selected instead of two.
- 4.2 Generally, 80-120 experiments are conducted for a crop in a major district, where a district is considered as major for a given crop if the area under the crop in the district exceeds 80,000 hectares or lies between 40,000 and 80,000 hectares but exceeds the average area per district in the State. Otherwise, district is considered as minor for a given crop. Experiments in minor districts are so adjusted that the precision of the estimate is fairly high and the workload on the field staff is manageable. On an average, about 44 or 46 experiments are planned in a minor district. The number of experiments allotted to a district is distributed among the strata within the district roughly in proportion to the area under the crop in the stratum.



- 4.3 In the 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 other States, some special features in these States need specific mention.
- 4.4 In **Kerala**, block/city corporation 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. These 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, Areca nut, Cashewnut, Pepper, Plantain, Sesamum 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 and 5 for Coconut per year. For City Corporation areas, 8 experiments for Paddy per season and 5 for Coconut per year in one Investigator Zone are conducted.
- 4.5 In **Odisha**, crop-cutting experiments for Paddy are conducted in 40% of EARAS villages having even serial nos. except serial nos. ending with “Zero” i. e. 10, 20, etc. in each block and for other crops, 50% of sample villages occurring against the even serial nos. i.e. 2, 4 and 6 etc. during Autumn and Winter Seasons. In Summer season, all the villages selected for Area Enumeration Survey 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 of four experiments in a village. For other crops, only one experiment is conducted in a village.
- 4.6 In the State of **West Bengal**, the area and yield surveys conducted by the Bureau of Applied Economics & Statistics (BAE&S) on the basis of grid sampling followed till 1985-86, has been dispensed with and the Scheme ‘Establishment of an Agency for Reporting Agricultural Statistics’ (EARAS) has become not only the primary source for area statistics but also the source to provide the frame for selection of villages



for conduct of crop cutting experiments under CES in the State. Since Kharif 1996-97, the frame for sampling of plots for CCEs is prepared by BAE&S on its own. Ten mouzas out of all the EARAS mouzas in a block are randomly selected for CCE. 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 cultivating a crop in a mouza is too small, all the plots cultivating 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.

- 4.7 In some States, the sampling design takes into account the stratification according to inputs viz. Irrigation and Seed variety for major crops. Details of such stratification are given in **Table-3**. While the idea of evolving a general design for stratification needs examination, it is felt that there would be practical difficulties in attempting stratification according to variety mainly due to non-availability of required data in the present system of area statistics at different levels.



**Table - 3: Stratification according to inputs adopted in sampling design during 2018-19**

Sl. No.	State	Crop for which pre-stratification is done according to Irrigation & seed		
		Irrigation	Seed	
1.	Andhra Pradesh	-	Paddy (Kharif & Rabi)	-
2.	Bihar	Paddy (Agh.) & Wheat	Paddy (Bha.) & Sugarcane	Paddy (Gar.) & Maize (Bha. & Gar.)
3.	Chhattisgarh	Paddy* & Wheat*	-	-
4.	Gujarat	-	Paddy (Kharif), Wheat & Cotton	-
5.	Jharkhand	-	-	Paddy (Agh.) & Wheat
6.	Karnataka	Paddy (Kharif, Rabi.* & Sum.*), Jowar (Kharif Rabi & Sum.**), Bajra (Kharif), Maize (Kharif, Rabi & Sum.**), Ragi (Kharif,Rabi & Sum.**) & Wheat	Groundnut® (Kharif, Rabi & Sum.), Cotton (Kharif), Gram , Sunflower (Kharif, Rabi & Sum. *)	Maize (Sum.)
7.	Madhya Pradesh	Paddy * & Wheat *	-	-
8.	Maharashtra	-	Paddy (Kharif), Jowar (Rabi), Bajra, Wheat & Cotton .	-
9.	Rajasthan	-	Gram & Wheat	-
10.	Tamil Nadu	-	Jowar, Bajra, Maize, Ragi, Groundnut, Sesamum & Cotton.	-

\* Pre –stratification according to seed is only for irrigated.

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

\*\* Pre –stratification according to irrigation is only for HYV.



# ORGANISATION

5

- 5.1 Assignment relating to planning of survey, training of field staff, organisation of field work and tabulation of data is the responsibility of the State Agricultural Statistics Authority (SASA) in each State/UT. The SASA in the State is either the Director of the Bureau/Directorate of Economics and Statistics or the Director of Agriculture or the Director of Land Record depending on the administrative arrangements in each State/UT.
- 5.2 The primary field work of the survey is generally entrusted to the staff of the State Department of Revenue, Agriculture, Community Development or Statistics, exclusively or as a part of their normal duties. In the five States viz. Assam, Kerala, Meghalaya, Odisha and in the UT of Puducherry, the primary work during 2018-19 was carried out by trained whole time staff of the Department of Statistics. **Appendix-III** gives State-wise information about the primary agency assigned with the task of conduct of crop cutting experiments on different crops. Workload of the primary field staff of different agencies in the State/UT in the two seasons and also for the entire year is shown in **Appendix-IV**. It is observed that at all India level, 7.3 percent and 7 percent of the primary workers had to conduct more than 12 experiments during Kharif and Rabi respectively. Likewise, 7.4 percent of the primary workers had to conduct more than 20 experiments annually during 2018-19. As per the detail given in **Table-4**, it is observed that the workload of primary worker during the year was high (more than the All India figures, **Appendix-IV**) in Andhra Pradesh, Assam, Goa, Gujarat, Kerala, Madhya Pradesh, Odisha, Telangana, West Bengal and Puducherry.



**Table - 4: Details of the high workload of primary workers during 2018-19**

State	Agency for field work	Total strength	No. of primary workers conducted more than		
			12 Experiments	20 Expts.	Annually
Kharif	Rabi				
Andhra Pradesh	Statistical/Agriculture	1906	405	251	357
Assam	Statistical	129	90	90	90
Goa	Agriculture Kh.	24	16	-	17
	Agriculture Rabi	22	-	17	
Gujarat	Agriculture	3207	1281	997	1256
Kerala	Statistical	995	775	811	811
Madhya Pradesh	Revenue	4407	1072	1275	1285
Meghalaya	Statistical	55	55	-	55
Odisha	Statistical	607	-	-	607
Telangana	Statistical/Agriculture	2664	295	207	100
West Bengal	Agriculture	254	210	242	183
Puducherry	Statistical (Rabi-I)	22	-	7	-

5.3 Heavy work load of primary workers adversely affects the results of crop cutting experiments and may also lead to loss of experiments. States may make efforts to ensure that experiments are allotted to the primary workers as per the norms in order to improve the quality in the conduct of experiments.



# CO-ORDINATION

6

- 6.1 The Field Operations Division of National Sample Survey office i.e. NSSO (FOD) has the overall responsibility of assisting the States/UTs in developing suitable techniques for obtaining reliable and timely estimates, providing technical guidance and ensuring adoption of uniform concepts, definitions and procedures in CES in the States/UTs. It reviews the design, plan, details of implementation and the results of the surveys. NSSO (FOD) also associates itself with the conduct of training camps organised for the State field staff in the capacity of trainers and observers. Under the scheme namely Improvement of Crop Statistics (ICS), it participates in the primary field work on sample basis by exercising technical supervision.
- 6.2 The NSSO (FOD) received plan of work of CES for the year 2018-19 from most of the States and offered comments, wherever necessary, with regard to planning and organisation of the survey. Some of the earlier suggestions with regard to timely selection of sample units, improving the response rates, ensuring adequate departmental supervision, timely communication of preliminary results and supply of equipment are reiterated. NSSO (FOD) stresses on adoption of statistical methodology by the States in the conduct of Crop Cutting Experiments which are not covered in CES.



## SAMPLE SIZE

7

- 7.1 During the year 2018-19, a total of 17,26,577 experiments were planned under CES at All India level. The corresponding figure during 2017-18 was 16,95,660 experiments. This shows an increase of 30,917 experiments during 2018-19. The net increase in sample size is due to increase of 61,867 experiments under food crops and decrease of 30,950 experiments under non- food crops as shown in **Table-5** below.
- 7.2 The number of experiments planned over the last 10 years, given in **Table-5**, shows an overall rising trend, indicating the overwhelming response to the adoption of objective sampling technique of crop cutting experiments in greater magnitude from year to year for estimation of yield rates in the country. The number of experiments is showing steady increase over the past few years owing to the need for crop yield estimates at lower administrative levels i.e. Block, Gram Panchayats in the wake of Government's efforts of providing insurance cover to farmers for crop damage under Pradhan Mantri Fasal Bima Yojana (PMFBY) also conspicuous in 2018-19. **However, the methodological juxtaposition of PMFBY in GCES is raising serious quality concerns in collection of Yield data and estimation procedure in some States due to marked procedural deviations and objectives of PMFBY vis-à-vis GCES.** States like Bihar, Haryana, Jharkhand, Karnataka, Maharashtra, Odisha, Rajasthan, Uttar Pradesh and West Bengal needs to revisit the single series efficacy.
- 7.3 The adoption and continuance of single series by the respective SASA(s) may have unwholesome bearings on the sampling plan, workload of primary worker and generation of stipulated crop-wise and district-wise statistical tables & annexures viz. Standard Error, Driage experiments, Frequency distribution of plot yields, Analysis of variance of Plot Yields etc. vital to ensure precision of the estimates & control over sampling process and implementation. The testimony to it is provided in the **Table-8**, which gives a snapshot of humongous increase of experiments noticed in the State of Bihar, Maharashtra & Odisha and a decline of 74810 experiments for the State of Gujarat.



**Table –5: Number of experiments planned under CES for last ten years.**

Year	Kharif			Rabi/Sum.			Total		
	Food	Non-Food	Total	Food	Non-Food	Total	Food	Non-Food	Total
2009-10 @	470887	100605	571492	307216	72049	379265	778103	172654	950757
2010-11 *	433789	84023	517812	333409	68004	401413	767198	152027	919225
2011-12 #	438205	87113	525318	328639	72660	401299	766844	159773	926617
2012-13 **	453042	92265	545307	327987	73790	401777	781029	166055	947084
2013-14***	532491	90424	622915	416531	77460	493991	949022	167884	1116906
2014-15 ##	649352	96000	745352	474258	88415	562673	1123610	184415	1308025
2015-16 ###	588743	102948	691691	479032	81390	560422	1067775	184338	1252113
2016-17 \$	724615	158631	883246	643957	120599	764556	1368572	279230	1647802
2017-18 \$\$	751071	165287	916358	657710	121592	779302	1408781	286879	1695660
2018-19 \$\$	796647	138461	935108	674001	117468	791469	1470648	255929	1726577

- @ It includes figures for the year 2005-06 for Jammu & Kashmir.
- \* It includes figures for the year 2005-06 for Jammu & Kashmir and Jharkhand, Uttarakhand and for the year 2009-10 as no data for subsequent years 2010-11, 2012-13 and 2013-14 was received from respective SASA, till finalization of the Report. In the State of Tamil Nadu, data in respect of NAIS not included.
- # It includes figures for the year 2009-10 for Jharkhand and for the year 2010-11 for Bihar, Haryana Maharashtra and Daman & Diu as no data was received till the finalization of the Report.
- \*\* It includes figures repeated for the year 2010-11 in the States of Bihar and Maharashtra.
- \*\*\* It includes figures repeated for the year 2010-11 in the State of Maharashtra and 2012-13 in the State of Gujarat.
- ## It includes figures repeated for the year 2010-11 in the State of Maharashtra and 2013-14 in the State of Karnataka.
- ### It includes figures repeated from the year 2014-15 in the States of Karnataka and Jammu & Kashmir.
- \$ It includes figures repeated from the year 2015-16 in the States of Haryana, Karnataka and Madhya Pradesh.
- \$\$ It includes figures repeated from the year 2015-16 in the States of Haryana, Madhya Pradesh and from the year 2016-17 in the State of Jharkhand & West Bengal.

7.4 **Table-6** gives the percentage of food and non-food crops season-wise (Kharif and Rabi) to the total experiments planned at the interval of every 5 years starting from 1974-75.

**Table-6: Summary of Experiments planned under CES since 1974-75**

Year	Total Experiments	Percentage of Kharif Crops		Percentage of Rabi Crops	
		Food	Non-Food	Food	Non –Food
1974-75	193639	43	18	33	5
1979-80	268782	52	11	32	5
1984-85	303465	50	10	32	8
1989-90 *	373094	48	9	35	8
1994-95	446003	47	9	35	9
1999-2000@	477514	47	11	33	8
2004-05	816315	49	9.0	35	7
2009-10	950757	50	11	32	8
2014-15 ##	1308025	50	7	36	7
2018-19 \$	1726577	46	8	39	7

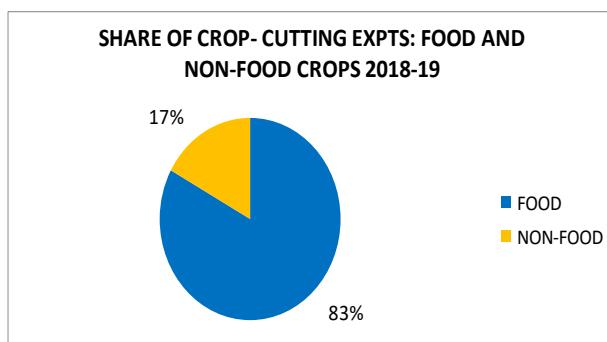
- \* It does not include figures for West Bengal and Meghalaya as information was not received.
- @ It includes figures for the year 1998-99 for Jammu & Kashmir as no data for the year 1999-2000 was received from SASA.



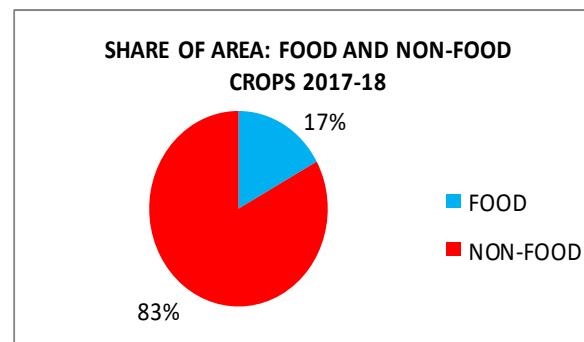
- ## It includes figures repeated for the year 2010-11 in the State of Maharashtra and 2013-14 in the State of Karnataka  
\$ It includes figures repeated for the year 2016-17 in the States of Haryana, Jharkhand, Madhya Pradesh and West Bengal.

7.5 Details of number of experiments planned under CES during 2018-19 for food and non-food crops are given in **Annexure-I(a)**. It may be seen from the Annex-I(a) that out of total 17,26,577 experiments planned, 14,70,648 (85%) were on food crops and 2,55,929 (15%) on non-food crops (Chart -III). Corresponding shares in cropped area under food and non-food crops which may be seen from **Annexure-V** were 77% and 23% respectively (Chart-IV). If season-wise details are considered, it may be observed that Kharif crops account for a major share of 9,35,108 (54%) experiments and Rabi crops for 7,91,469 (46%) experiments.

**Chart – III**



**Chart – IV**



7.6 Fruits and Vegetables form an essential component of human diet. Eighteen important Fruits and Vegetable crops in 13 States were covered under CES (**Appendix-II**) on which information has been presented in this report. It can be seen from the **Table-7** that out of 14,70,648 (85%) experiments for food crops, only 64,852 (4%) experiments were covered under 18 Fruits and Vegetable crops. Cropping pattern in India is gradually shifting towards Cash crops and Fruits & Vegetables. Adequate efforts should be made by the States to include new crops in GCES based on its importance, relative significance etc. measured in terms of share in all India production. Among fruits and vegetable crops, 12% of the experiments were accounted for fruits and 88% for vegetable crops.

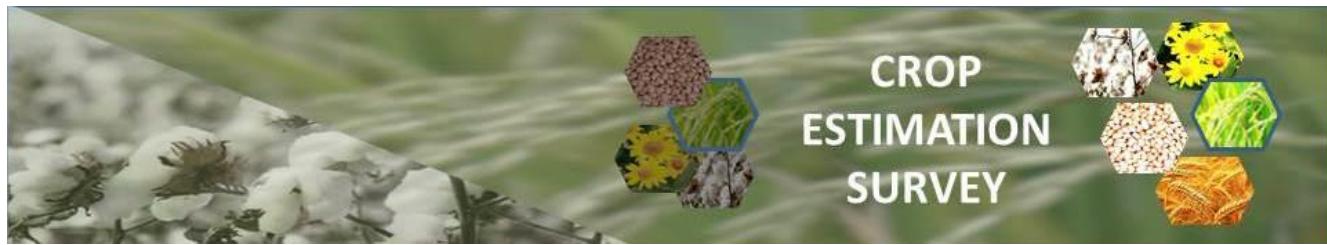


**Table –7: Fruits and Vegetables covered under CES during 2018-19**

<u>Sl. No.</u>	<u>Fruits</u>	<u>No. of Experiments Planned</u>
1	Lichi	300
2	Banana	3032
3	Mango	600
4	Guava	280
5	Jackfruit	2038
6	Pineapple	1554
7	Papaya	32
<b>Total</b>		<b>8091</b>

<u>Sl. No.</u>	<u>Vegetables</u>	<u>No. of Experiments Planned</u>
1	Tapioca	1584
2	Cashewnut	1514
3	Potato	37787
4	Onion	6757
5	Brinjal	1550
6	Tomato	3540
7	Cauliflower	340
8	Plantain	1622
9	Avare	340
10	Cabbage	100
11	Bitter Gourd	1627
<b>Total</b>		<b>56761</b>

The Centrally Sponsored Scheme “Crop Estimation Survey on Fruits and Vegetables” which started in the year 1982-83 is no longer in operation. However, considering the importance of Horticulture for the national economy and nutrient security, the Department of Agriculture & Cooperation, Ministry of Agriculture has launched a national level programme on horticulture assessment and development,



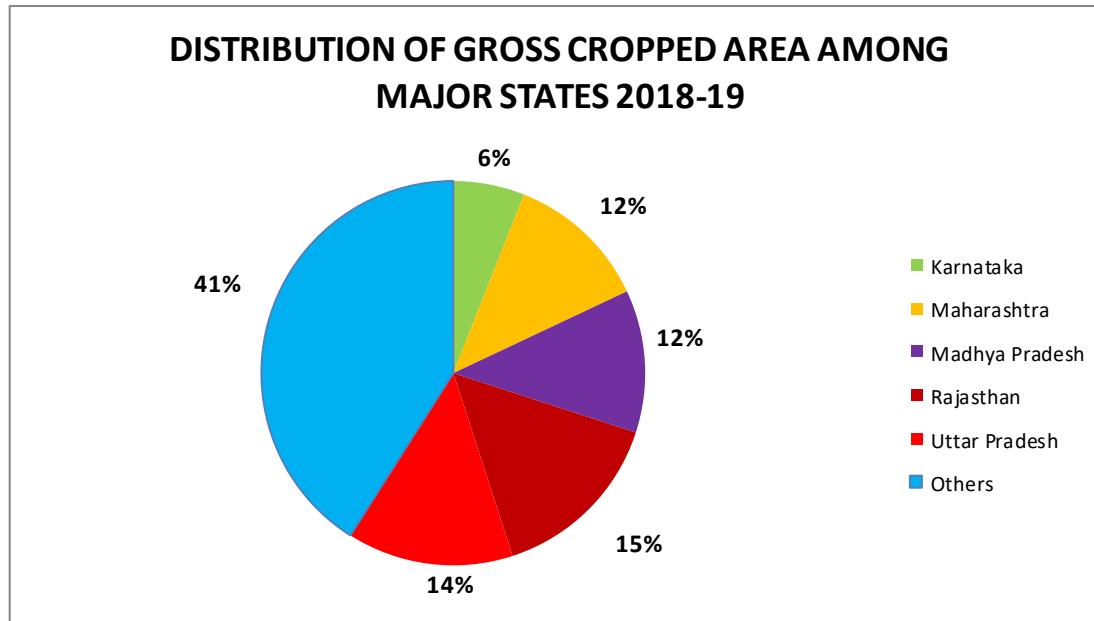
called CHAMAN (Coordinated Horticulture Assessment and Management using geo-informatics) from September, 2014. This programme envisages use of satellite remote sensing data for area and production estimation of 7 horticultural crops (Potato, Onion, Tomato, Chili, Mango, Banana and Citrus) in selected districts of major producing States. The programme also uses GIS (Geographical Information System) tools along with remote sensing data for generating action plans for horticultural development (site suitability, infrastructure development, crop intensification, orchard rejuvenation, aqua-horticulture, etc.). Another component of CHAMAN is to carry out research activities on horticultural crop condition studies, diseases assessment and precision farming. Two National Level Agencies have been identified for implementing this programme i.e. Mahalanobis National Crop Forecast Centre (MNCFC) of Department of Agriculture & Cooperation for the remote sensing component and the Indian Agricultural Statistical Research Institute (IASRI) for the field survey component. The programme is being jointly implemented through Space Applications Centre, Ahmedabad; National Remote Sensing Centre, Hyderabad; State Horticulture Departments; State Remote Sensing Centres, National Horticulture Research & Development Foundation, Nasik; India Meteorological Department and ICAR Centres.

7.7 The States of Rajasthan (15%), Uttar Pradesh (14%), Madhya Pradesh (12%), Maharashtra (12%), and Karnataka (6%) have accounted for more than 59 percent of the gross cropped area (Chart-V). However, the distribution of experiments over States/UTs reveals that nearly 75 percent of the experiments were planned in Uttar Pradesh (37%), Rajasthan (14%), Bihar (10%), Karnataka (8%) and Maharashtra (5%) (Chart-VI).

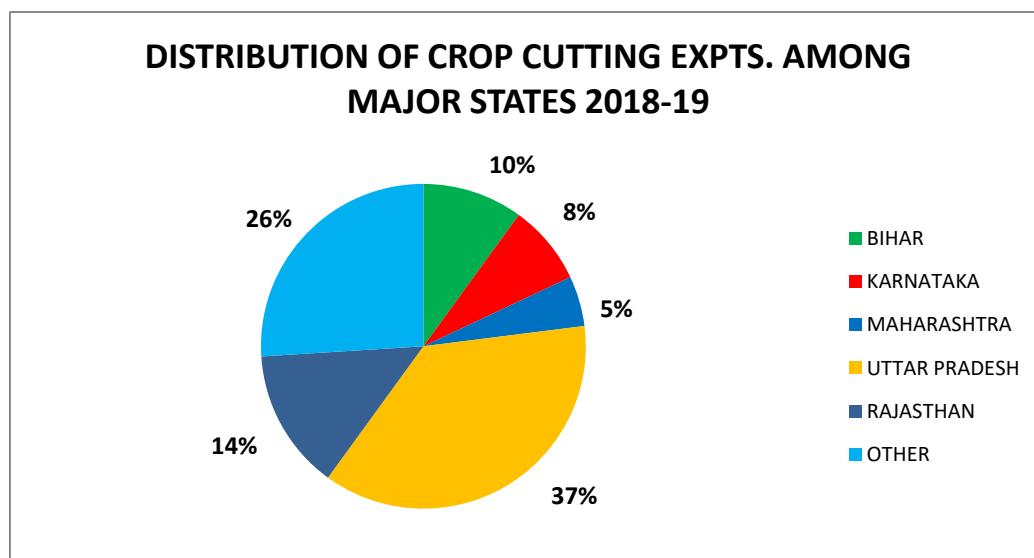
\* Figures for experiments planned are obtained from Annexure V.



### Chart – V



### Chart – VI





7.8 **Table-8** shows increase of 1,06,879 experiments during 2018-19 due to increase in number of experiments planned for a number of crops in the States of Andhra Pradesh, Bihar, Chhattisgarh, Himachal Pradesh, Maharashtra, Meghalaya, Odisha, Rajasthan, Telangana and Uttar Pradesh. The total number of experiments planned decreased by 75, 962 due to decrease in experiments planned in the States of Dadar & Nagar Haveli, Goa, Gujarat, Jammu & Kashmir, Karnataka, Kerala, Puducherry, Punjab and Uttarakhand. This shows net increase of experiments in the States is 30,917 during 2018-19 over 2017-18. There was no change in planning in the States of Assam and Daman & Diu whereas for the States of Haryana, Jharkhand, Madhya Pradesh and West Bengal information was not received.

**Table-8: Comparison of number of experiments planned during 2018-19 and 2016-17**

States showing increase in experiments planned	No. of experiments planned			States showing decrease in experiments planned	No. of experiments planned		
	2017-18	2018-19	Net increase over previous year		2017-18	2018-19	Net decrease over previous year
Andhra Pradesh	23010	23074	64	Dadra & Nagar Haveli	100	92	-8
Bihar	97858	178364	80506	Goa	1050	1004	-46
Chhattisgarh	6686	7324	638	Gujarat	154146	79336	-74810
Himachal Pradesh	8294	8306	12	Jammu & Kashmir	5580	5496	-84
Maharashtra	82520	92844	10324	Karnataka	139636	139008	-628
Meghalaya	2038	2357	319	Kerala	32779	32743	-36
Odisha	47431	57327	9896	Puducherry	308	304	-4
Rajasthan	237590	238378	788	Punjab	6952	6950	-2
Telangana	15924	18560	2636	Uttarakhand	8322	7978	-344
Uttar Pradesh	642604	644300	1696				
	<b>Total</b>	<b>106879</b>			<b>Total</b>		<b>-75962</b>

#:- The data pertaining to Karnataka for 2018-19 and 2016-17 correspondent to 1 year prior to the year mentioned.

\*:- CES data in respect of newly formed State Telangana was received first time from year 2016-17.

7.9 **Annexes-I(b) and I(c)** give the State-wise details of experiments planned for food crops during Kharif and Rabi, 2018-19 respectively and **Annexures-1(d) and 1(e)** give similar details for non-food crops. Summary of details are presented in **Table-9 & Table-10**. On examination of these tables, it can be concluded that except for Maize, Gram, Blackgram and Sugarcane the representation of remaining 8 main crops has decreased in percentage terms as compared to previous year.



**Table – 9: Details of experiments planned on Food and Non- Food Crops during 2018-19**

S. No.	Particulars	No. of Expts.	Percentage
<b>A. FOOD CROPS</b>		<b>1470648</b>	<b>85.17</b>
1	Cereals	1096783	63.52
2	Pulses & beans	249787	14.47
3	Small Millets	3440	0.2
4	Sugar & Cocoa	30190	1.75
5	Condiments & Spices	25596	1.48
6	Fruits & Vegetables	64852	3.75
<b>B. NON-FOOD CROPS</b>		<b>255929</b>	<b>14.83</b>
1	Oil Seeds	210294	12.19
2	Fiber Crops	39053	2.26
3	Drugs & Narcotics	6582	0.38
<b>TOTAL</b>		<b>1726577</b>	<b>100</b>

**Table- 10: Distribution of experiments planned for Main Crops during 2018-19**

Sl. No.	Crop	No. of Expts.	% to Total Expts.	Prev. year % to Total Expts.
1.	Paddy	389224	22.54	22.98
2.	Wheat	379122	21.96	23.58
3.	Maize	169933	9.84	5.34
4.	R & M	81327	4.71	4.84
5.	Bajra	83005	4.81	5.22
6.	Gram	67382	3.90	3.84
7.	Jowar	50770	2.94	3.08
8.	Redgram	34423	1.99	2.18
9.	Groundnut	53778	3.11	3.65
10.	Blackgram	38444	2.23	2.00
11.	Sugarcane	29393	1.70	1.47
12.	Sesamum	31361	1.82	1.83

7.10 Annexure-V also provide information on the percentage of area covered under CES to the total area in the CES States. Crop-wise summary for main crops is presented in **Table-11**, which indicates that the area covered under CES for food and non-food crops was substantial. However, there exists a need for extending CES in different States to cover important pulses, oil seeds and cash crops. The issue of extending the scope of the CES to encompass important crops which are not covered at present needs attention of the concerned States/UTs. Distribution of area and experiments by category of crops are presented in **Chart-VII** and **Chart-VIII** respectively.

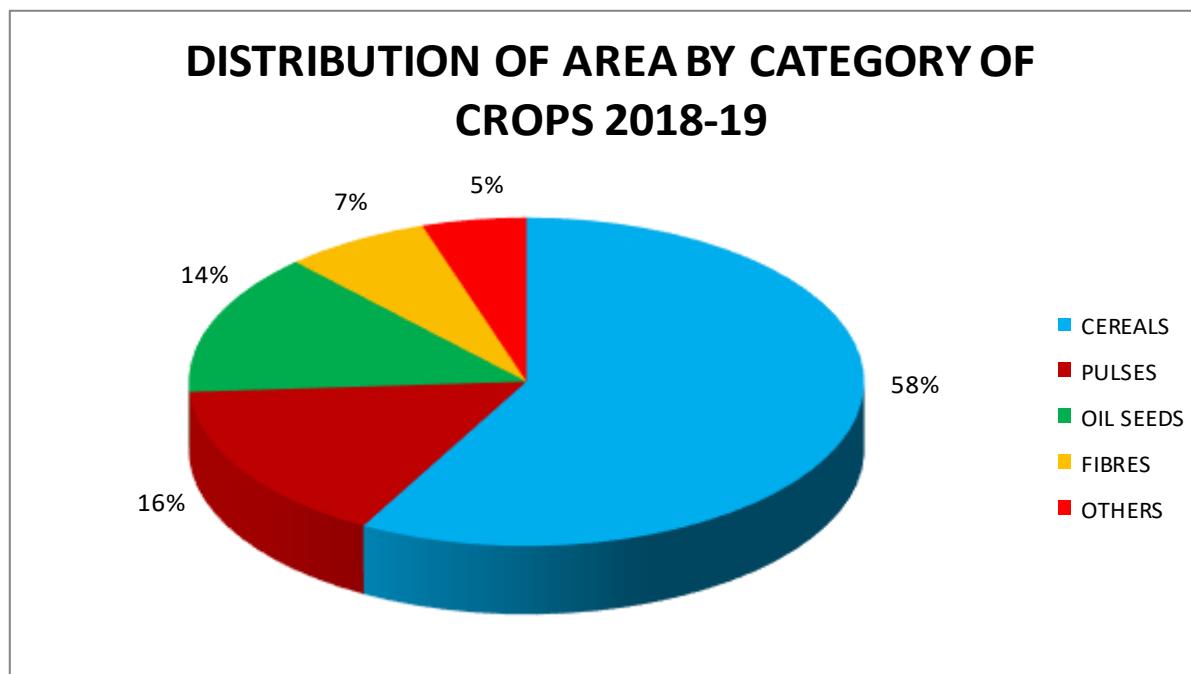


**Table – 11: Percentage of area covered under CES during 2018-19**

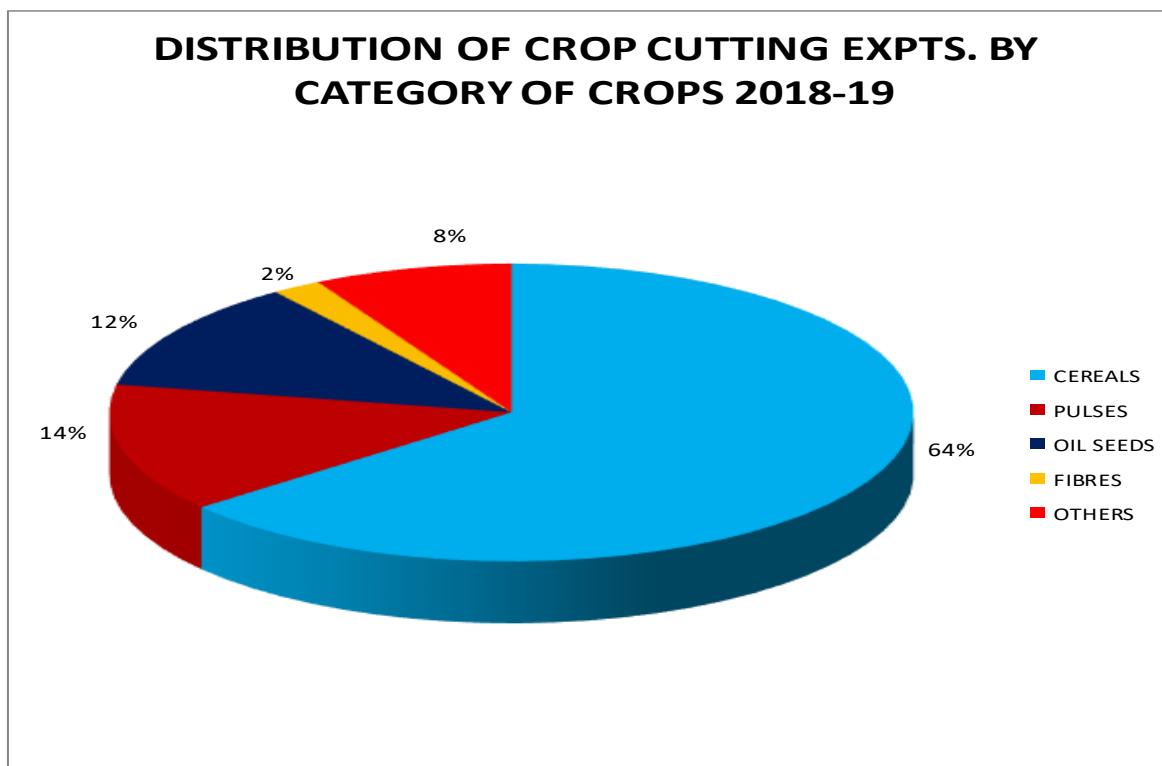
Sl. No.	Crop	%age of area covered by CES to total area under the crop in the States covered
1	Paddy (Kharif)	87
	Paddy (Rabi / Sum.)	89
2	Jowar (Kharif)	84
	Jowar (Rabi / Sum.)	79
3	Bajra (Kharif & Rabi / Sum.)	89
4	Maize (Kharif )	85
	Maize (Rabi / Sum.)	71
5	Ragi (Kharif & Rabi / Sum.)	86
6	Wheat	96
7	Barley	88
8	Gram	98
9	Redgram/Tur (Kharif&Rabi)	93
10	Sugarcane	97
11	Sunflower (Kharif)	99
	Sunflower (Rabi / Sum.)	94
12	Groundnut (Kharif)	96
	Groundnut (Rabi / Sum.)	88
13	Sesamum(Kharif& Rabi/Sum.)	92
14	Castor	98
15	Rape & Mustard	94
16	Linseed	89
17	Safflower	100
18,	Coconut	29
19	Niger	68
20	Cotton	92
21	Jute	99
22	Mesta	98
23	Tobacco	88



**Chart-VII**



**Chart- VIII**





# TRAINING

8

- 8.1 A programme for imparting training to primary workers engaged in the conduct of crop cutting experiments under CES is held in each State by respective agencies (**Annex-II**) at the beginning of each season/year. In Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Maharashtra, Punjab, Rajasthan, Uttar Pradesh and Puducherry, the training was held in the beginning of each crop season and in other States, it was held at the commencement of the agricultural year 2018-19. NSSO officials also participated in the training programmes either as trainers or as observers.
- 8.2 **Annexure-II** shows the agency-wise details of the number of training centres, number of primary workers who attended the training and the extent of NSSO participation in the training programmes in the year 2018-19. During the year, training was organised in 1866 centres. It is pleasing to note that States: Goa, Meghalaya, Odisha, Rajasthan, Dadar & Nagar Haveli, Daman & Diu and Puducherry recorded cent percent attendance of their primary staff. However, at All India level, 91430 out of 91464 primary workers were called for training and 76566 attended the training camps resulting in 84% attendance in CES training camps. States where the attendance of primary workers of various agencies was less than the All-India average were Bihar, Chhattisgarh (Agriculture/Statistical), Himachal Pradesh (Agriculture in Kharif), Maharashtra, Punjab (Agriculture in Rabi) and Uttarakhand. It is essential that all the staff engaged in the conduct of crop cutting experiments is fully familiar with the technical aspects, the methodology and operational procedures relevant to the conduct of the experiments. Conduct of experiments by untrained personnel would introduce subjectivity and result in generation of unreliable data. To obviate this, the feasibility of arranging separate training for absentees subsequently needs to be explored.
- 8.3 During 2018-19, the officers of NSSO (FOD) posted in different States associated themselves with the training programmes, either as trainers or observers in all the States except in Andhra Pradesh, Bihar, Goa, Gujarat, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Maharashtra, Meghalaya, Telangana, Uttarakhand, West Bengal, Dadra & Nagar Haveli and Daman & Diu. In all, out of the 1866 training centers, NSSO officials participated in 739 (40%) centers as observers and imparted training in 145 (8%) centers.



# SUPERVISION

9

- 9.1 Supervision of field work is an essential part of any large-scale sample survey for ensuring quality of data collected. A threefold approach is adopted in the States for supervision of crop cutting experiments planned under CES. This includes the following:-
- (i) Supervision by the statistical staff of State Agricultural Statistics Authorities (SASA),
  - (ii) Supervision by the Departmental staff i.e. by the supervisory officers of the Departments whose workers are responsible for the conduct of crop cutting experiments in the field and
  - (iii) Supervision by the Technical personnel of the NSSO (FOD).
- 9.2 In the States of Andhra Pradesh, Assam, Kerala, Meghalaya, Odisha, Rajasthan and the UT of Puducherry, the field work and supervision were done only by the Statistical Department. In the case of Bihar, though there are other supervisory agencies, the supervision was done by the State Statistical Departments only. NSSO (FOD) was instrumental in the creation of institutional framework through the Land Utilization Surveys (LUS) and CES (Crop Estimation Surveys) as large scale sample surveys by NSS during the 1950s. This acted as a hand holding exercise and inspired many State Governments to create and develop a Modular Statistical System at State level in sync with agrarian practices, needs and heterogeneity. Later on, the launch of Improvement in Crop Statistics (ICS) in 1973-74, resulted in dovetailing of TRS/EARAS and GCES schemes of Union Ministry of Agriculture and State/UT governments respectively. This ushered coterminous supervision by the State Supervisory officials apart from NSSO (FOD) officers of collection of crop statistics by the primary workers of the State Government. Currently, the Scheme for Improvement of Crop Statistics (ICS) is operational in 21 States and 1 Union Territory from the year 1973-74 (Rabi) onwards. During the year 2018-19, total numbers of experiments planned for sample check under the ICS Scheme were 15,662 for each Central and as well for State samples during Kharif, Rabi and Summer seasons.



9.3 **Annexure-III (a)** shows State-wise total number of experiments planned under CES, number of experiments inspected by each agency and breakup of these supervisory checks for Kharif and Rabi seasons according to food and non-food crops. **Annexure-III (b)** gives crop-wise details of experiments supervised by each agency in a State. Summary of details of supervision at All India level is given in **Table -12**.

**Table –12: Supervision of crop cutting experiments during 2018-19**

Item	No. of expts. Planned	No. of Experiments Supervised by					
		State Statistical Department		Other State Departments		NSSO	
1	2	3	4	5	6	7	8
<b>Kharif</b>							
Food Crops	796647	32596 (4)	23909 (3)	136364 (17)	108180 (14)	7028 (1)	6092 (1)
Non-Food Crops	138461	12093 (9)	9692 (7)	36370 (26)	27903 (20)	3190 (2)	2852 (1)
Combined	935108	44689 (5)	33601 (4)	172734 (18)	136083 (15)	10218 (1)	8944 (1)
<b>Rabi</b>							
Food Crops	674001	18899 (3)	18298 (3)	69576 (10)	69046 (10)	4397 (1)	3989 (1)
Non-Food Crops	117468	4898 (4)	4063 (3)	23604 (20)	23574 (20)	932 (1)	834 (1)
Combined	791469	23797 (3)	22361 (3)	93180 (12)	92620 (12)	5329 (1)	4823 (1)
<b>TOTAL (Percentage)</b>	<b>1726577</b>	<b>68486 (4)</b>	<b>55962 (3)</b>	<b>265914 (15)</b>	<b>228703 (13)</b>	<b>15547 (1)</b>	<b>13767 (1)</b>

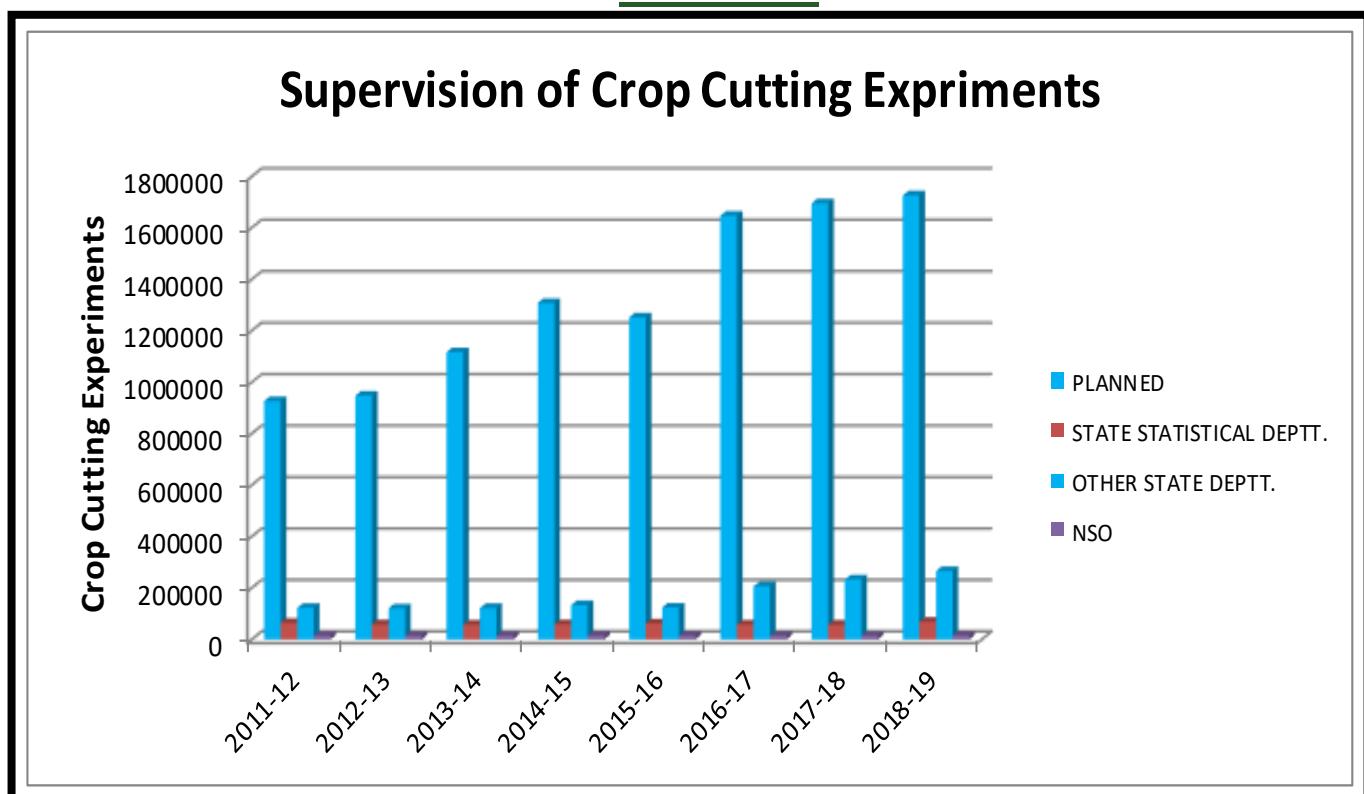
\* Total Percentages have been calculated by including only those States from which complete data was received.

During 2018-19, about 20% of the total experiments planned were supervised, out of which 20 percent were supervised by the State Statistical Department, 76 percent by other State Departments and 4 percent by NSSO. However, the supervision was conducted at harvest stage in approximately 85% cases. It may also be observed from the State-wise position as given in **Annexure-III (a)** that the total supervision by State Statistical Department was above 25



percent in the States Kerala, Tamil Nadu, and Union Territories of Dadra & Nagar Haveli, Daman & Diu and Puducherry and was below 10 percent in the States of Andhra Pradesh, Bihar, Chhattisgarh, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Meghalaya, Odisha, Punjab, Rajasthan, Uttarakhand and West Bengal. Total supervision by other State Departments was above 25 percent in case of Odisha, Rajasthan, Dadar & Nagar Haveli and Daman & Diu. The same was below 10 percent in the States of Himachal Pradesh, Karnataka, Meghalaya and Tamil Nadu. Adequate supervision is essential for quality of Yield Statistics. Total supervision by NSSO officers in individual States varied from 0.3 percent in Jharkhand to 10 percent in Punjab. Above details are summarised in the following Bar diagram (Chart-IX). Inspection plays an integral part in the improvement of data collection of data and requires due attention of the controlling supervisory officers associated with the GCES & ICS programme. No information regarding the supervision by State agencies has been received from Maharashtra, Madhya Pradesh, Uttar Pradesh and West Bengal although the supervisory agencies are in existence.

### Chart – IX





9.4 **Annex-III (a)** also gives the breakup of experiments supervised during the two major seasons. It is seen that the supervision was well distributed between both the seasons as well as over food and non-food crops. Crop-wise details of supervision given in **Annex-III (b)** are summarised in **Table-13**. It is seen that at All India level, the total supervision (adding up figures for all the concerned departments) varied between 11 and 46 percent for important crops like Paddy, Jowar, Bajra, Maize, Ragi, Wheat, Barley, Groundnut, Sesamum, Cotton and Jute, and in the range of 16 to 44 percent for crops like Gram, other Pulses and Beans, Small Millets, Condiments & Spices, Linseed, Castor, Rape & Mustard and other Oilseeds. For other crops like Sugars, Drugs & Narcotics, Fruits & Vegetables and Mesta, the supervision was in the range of 1 to 38 percent, which needs improvement. It is evident from the data presented that there is a need to increase the level of supervision for the crops where supervision is less than 10% by all the concerned departments. This will definitely have a lasting effect on the improvement of the quality of data collected in the field.



**Table-13: Crop- wise percentage of experiments supervised during 2018-19**

Crop	Percentage of Experiments supervised by							
	State Statistical Deptt		Other State Departments		NSSO		All Deptts	
	Total	At Harvest stage	Total	At Harvest stage	Total	At Harvest stage	Total	At Harvest stage
1	2	3	4	5	6	7	8	9
Paddy	4	4	8	8	1	1	13	12
Jowar	4	4	24	19	1	1	29	24
Bajra	2	2	30	22	1	1	33	25
Maize	3	3	9	7	0	0	12	10
Wheat	1	1	9	9	1	1	11	11
Barley	4	4	41	41	2	2	46	46
Gram	2	2	17	17	1	1	20	20
Other Pluses & Beans	3	3	27	19	1	1	31	39
Small Millets	8	8	5	5	2	2	16	16
Sugars	4	2	2	2	2	2	8	6
Condiments & Spices	16	2	22	22	0	0	38	24
Fruits & Veg.	5	2	3	3	0	0	8	5
Ragi	8	8	8	8	1	1	17	17
Groundnut	6	6	16	14	1	1	24	21
Sesamum	4	4	17	13	1	1	22	18
Castor	18	15	23	20	2	2	44	38
Rape & Mustard	2	2	24	24	1	1	27	27
Linseed	3	3	14	14	6	6	23	23
Other Oil Seeds	8	2	29	21	1	1	37	23
Cotton	10	10	29	22	2	2	41	34
Jute	11	11	0	0	3	3	14	14
Mesta	1	1	0	0	0	0	1	1
Drugs & Narcotics	15	2	24	24	0	0	38	26

9.5 An idea about the extent of participation by the State Statistical and the NSSO officials under the Scheme for Improvement of Crop Statistics (ICS) by way of association in the sample check on crop cutting experiments may be taken from the details presented in **Table-14**. It is seen that a total of



21616 (1.5%) experiments out of the 14,77,346 experiments planned (for the crops covered under ICS) were spot checked at harvest stage either by Central or State agencies during 2018-19 as against 22580 (1.5%) experiments out of 14,79,564 experiments planned during 2017-18. Details of Crop-wise allocation of number of experiments under ICS implementing States are presented in **Appendix VII**. The sample checks are undertaken by the supervisory staff of NSSO (FOD) and State Govts. on matching basis in two non-overlapping samples.

**Table -14: Supervision under ICS scheme during 2018-19**

Sl. No.	State/UT	Number of Experiments			Percentage of Supervision under ICS at harvest stage	
		Planned under CES (for important crops covered under ICS)	Supervised under ICS at harvest stage by	Central Staff	State Staff	Total
1	2	3	4	5	6	7
1.	Andhra Pradesh	15766	662	619	1281	8.13
2.	Assam	11250	328	264	592	5.26
3.	Bihar	128399	531	417	948	0.74
4.	Chhattisgarh	5848	343	309	652	11.15
5.	Gujarat	57328	832	300	1132	1.97
6.	Haryana	8994	700	469	1169	13.00
7.	Himachal Pradesh	8306	255	231	486	5.85
8.	Jammu & Kashmir	4860	262	77	339	6.98
9.	Jharkhand	59790	214	66	280	0.47
10.	Karnataka	103012	492	730	1222	1.19
11.	Kerala	14371	511	499	1010	7.03
12.	Madhya Pradesh	28310	959	812	1771	6.26
13.	Maharashtra	85864	629	366	995	1.16
14.	Odisha	46284	462	605	1067	2.31
15.	Punjab	6950	693	582	1275	18.35
16.	Rajasthan	197126	856	771	1627	0.83
17.	Tamil Nadu	5284	634	568	1202	22.75
18.	Telangana	10040	390	338	728	7.25
19.	Uttarakhand	6710	190	125	315	4.69
20.	Uttar Pradesh	631636	2075	503	2578	0.41
21.	West Bengal	40914	740	147	887	2.17
22.	Puducherry	304	30	30	60	19.74
	<b>All States</b>	<b>1477346</b>	<b>12788</b>	<b>8828</b>	<b>21616</b>	<b>1.5</b>

Note: Important crops include Paddy, Jowar, Bajra, Maize, Ragi, Wheat, Barley, Gram, Tur, Cotton, Jute, Sugarcane, Groundnut and Rape & Mustard.



9.6 Sample checks under ICS scheme are being undertaken since the year 1973-74 to assess the extent to which the prescribed techniques and procedures are adhered to by the State primary workers while conducting the experiments and provide spot guidance, wherever necessary. As detailed in **Annexure III-C**, the efforts of Odisha State are highly praiseworthy in this regard where more than 90% of the experiments conducted were found to be free from any kind of error. The figure of all India reveal that during 2018-19, 66 percent experiments were conducted as per the prescribed procedures. This shows an increase of 8% vis-à-vis previous year, which is commendable. The occurrence of one or more type of discrepancy was observed in the remaining set of analyzed experiments. There exists ample scope for improvement especially with regard to selection of random numbers and locating & marking of plots (e4). The sample checks revealed that the primary workers assigned with the task of conducting the experiment do not use, in sizeable number of cases i.e., more than All India average figures, the equipment supplied for the purpose. This incidence was particularly noticeable in all States except, Andhra Pradesh, Jharkhand, Kerala, Odisha, Punjab, Telangana, West Bengal & Puducherry. The tendency to delegate the work of crop cutting experiments to others including untrained workers was observed to be comparatively high (more than All India average figures) in case of Bihar, Jammu & Kashmir (Kharif), Jharkhand, Uttar Pradesh, West Bengal(Aus. & Aman) during 2018-19. 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 officials who are joining these ranks after the regular training camps are over, or those entrusted with these duties as a stop-gap arrangement.



## RESPONSE

10

- 10.1 State-wise number of experiments analyzed and percentage response during Kharif and Rabi seasons for food and non - food crops under CES are detailed in **Annex-IV (a)**.
- 10.2 It is commendable to note that CES response rate was cent percent from Kerala, Odisha, Telangana, Dadar & Nagar Haveli, Daman Diu & Puducherry. However, in 2018-19, the overall response under CES was 90 percent. Percentage response for food crops during Kharif and Rabi, 2018-19 was 91% each and for non-food crops, it was 90 % & 84 % respectively. Response was below 90 percent in Assam (75%), Bihar (71%), Chhattisgarh (71%), Goa (62%), Haryana (89%), Himachal Pradesh (78%), Jammu & Kashmir (71%), Jharkhand (71%), Karnataka (75%), Maharashtra (87%) and Madhya Pradesh (85%). **Special measures are needed to improve the percentage of response to more than 90 percent in these States.**
- 10.3 An analysis of non-response was attempted with a view to focus and identify the specific causes leading to non- response, facilitating taking adequate corrective measures. State-wise details of number of experiments that could not be taken up for analysis are given in **Annex-IV (b)**. For all crops taken together, it is seen that 90.1 percent of the total number of experiments planned were analysed, 9.7 percent were reported to be lost in the field, 0.1 percent were reported to be rejected at tabulation stage and for 0.1 percent of experiments, precise reasons for the exclusion were not available.
- 10.4 Out of 9.7 percent experiments lost in the field, no specific reasons had been reported in respect of 8 percent experiments while 0.3 percent experiments were lost due to harvesting of the crop by the cultivator prior to the date fixed for the experiments.
- 10.5 At All India level, data for less than 0.1 percent of the experiments could not be included for analysis. In Haryana (10%) experiments were rejected at the tabulation stage. This is a wastage of manpower, time & financial resources and it demands serious attention of higher authorities. The percentage of experiments lost (in the field + rejected by Statisticians) was more than 10 % in the States like Assam (25 %), Bihar (29%), Chhattisgarh (29%), Goa (30%), Haryana (11%), Himachal Pradesh (22%), Jammu & Kashmir (29%), Jharkhand (29%), Karnataka (25%), Maharashtra (13%) and Madhya Pradesh (14.9 %).



- 10.6 **No reason could be ascribed for exclusion of experiments from analysis in 10% of experiments in Haryana.** Non-response is to be kept within the permissible margin and timely remedial measures need to be taken for exercising adequate checks.
- 10.7 Results of crop cutting experiments for each crop along with the number of experiments planned and analyzed indicating the response achieved during 2018-19 are given in **Annex -V.** **Table-15** shows the crop-wise percentage response at All India level for important crops during 2018-19.

**Table-15: Crop - wise percentage response at All India level for important crops under CES 2018-19**

Sl.No.	Crop	Response (%)
1	Paddy (Kharif)	97
	Paddy (Rabi / Sum.)	89
2	Jowar (Kharif)	83
	Jowar (Rabi)	88
3	Bajra (Kharif)	95
	Bajra (Sum.)	91
4	Maize (Kharif)	73
	Maize (Rabi / Sum.)	59
5	Ragi (Kharif)	88
	Ragi (Rabi / Sum.)	76
6	Wheat	96
7	Barley	91
8	Gram	85
9	Redgram/Tur	93
10	Sugarcane	76
11	Groundnut (Kharif)	88
	Groundnut (Rabi / Sum.)	71
12	Sesamum (Kharif)	90
	Sesamum (Rabi)	89
13	Castor	93
14	Rape & Mustard	92
15	Linseed	75
16	Cotton	94
17	Jute	87



# RESULTS 11

- 11.1 The estimates of average yield rate along with percentage Standard Error are presented in **Annex-V**. The method of estimation followed by the States for working out the average yield rate and its Standard Error (SE) is explained in **Appendix-V**. The trend of area, yield rates and production under important crops during 2013-14 to 2018-19 are presented in **Charts-X to XII** respectively.
- 11.2 The results of CES for 2018-19 reveal that for some crops, response was very low in few States. For instance, it was less than 50 percent in (i) Andhra Pradesh for Soyabean (36%) (ii) Bihar for Rice (Bhadai 30%), Maize (Bhadai 33%), Mesta (39%), (iii) Chhattisgarh for Jowar (46%), Barley (17%), Chillies (25%), Potato (9%), Onion (Rabi 36%); (iv) Goa for Groundnut ( Kharif 38%), Cowpea (Kharif 16%); (v) Haryana for Sunflower (29%) (vi) Jharkahand for Redgram (42%) (vii) Jammu & Kashmir for Potato (Kharif 26%, Rabi 18%), (viii) Karnataka for Castor (40%), Safflower (48%), Sunflower (Rabi 31% & Summer irr. 19%) (ix) Rajasthan for Tarameera (49%) (x) Tamil Nadu for Sunflower (Kharif 4%) and (xi)Uttar Pradesh for Sunflower (12%). **Such cases of extreme low response affects the reliability of estimates of yield rate.**
- 11.3 Estimates of average yield rates at All India Level for the year 2018-19 and for the previous year for some important crops are given in **Table-16**. These results show that the average yield per hectare during 2018-19 was more than that of previous year for Ragi, Sugarcane, Wheat, Barley, Rape & Mustard, Linseed, Groundnut (Rabi/Sum.) and Cotton . In case of Rice Kharif and Rabi, Jowar Kharif and Rabi, Bajra, Maize, Gram, Redgram, Groundnut (Kharif), Seasamum, Castor, Cotton and Jute the average yield has shown decline as compared to the previous year 2017-18.



**Table -16: Comparison of CES Yield Rates during 2018-19 and 2017-18**

Sl. No.	Crop	Yield rate in (kg/ha.) 2018-19	Yield rate in (kg/ha.) 2017-18	Percentage difference
1.	Rice (Kharif)	2660	2678	-0.67
2.	Rice (Rabi/Sum.)	4031	4491	-10.24
3.	Jowar (Kharif)	994	1007	-1.29
4.	Jowar (Rabi/ Sum.)	635	864	-26.50
5.	Bajra (Comb.)	1176	1222	-3.76
6.	Maize (Comb.)	2700	3281	-17.71
7.	Ragi (Comb.)	1360	1203	13.05
8.	Wheat	3663	3509	4.39
9.	Barley	2902	2810	3.27
10.	Gram	962	1020	-5.69
11.	Redgram/Tur	675	894	-24.50
12.	Sugarcane	83670	83565	0.13
13.	Groundnut (Kharif)	1259	1857	-32.20
14.	Groundnut (Rabi / Sum.)	2313	1863	24.15
15.	Sesamum (Comb.)	442	468	-5.56
16.	Castor	1690	2367	-28.60
17.	Rape & Mustard	1481	1390	6.55
18.	Linseed	518	489	5.93
19.	Cotton (Lint)	765	881	-13.17
20.	Jute	2602	2605	-0.12

11.4 The dimension of the standard error provides an idea about the precision of the estimate. In an attempt to standardise the measure, generally it is expressed in percentage terms. The percentage standard errors of the estimates of average yield are furnished along with the estimates in **Annex-V**. Standard error was not calculated for any crop in Goa, Jharkhand, Punjab, Rajasthan and Uttar Pradesh. Standard Error was calculated in Gujarat only for Rice, Redgram, Blackgram, Moth, Garlic, Onion, Groundnut Kh., Cotton Ir & UI and Rape & Mustard & in Jammu & Kashmir only for Rice, Wheat and Maize. The standard error was also not calculated in Bihar for Rice, Maize, Ragi, Wheat, Barley, Gram Redgram, Greengram, Lakh, Masur, Sugarcane, Chillies, Lichi, Banana, Mango, Guava, Potato (Agh.), Cauliflower, Onion, Rape & Mustard, Jute and Mesta; Haryana for Gram, Redgram, Sugarcane, Sunflower Rabi and Cotton; Madhya Pradesh for Banana and Papaya; Kerala for Sugarcane, Cocoa, Turmeric, Ginger, Jackfruit, Cashewnut, Pineapple, Plantain, Sesamum and Betel Leaves.



## CROP ESTIMATION SURVEY



11.5 Technically, standard errors are associated with efficiency of the estimates and the degree of precision reduces with increase in the standard error. The desirable range of standard error of a good estimate of crop yield at State level is between 0 to 5 percent. It is observed that in a good number of cases, the standard errors were above the desirable limits. The State Governments may consider increasing the sample size of the concerned crops with increased supervision. **Table-17** presents the cases where the standard errors were higher than the desirable range.

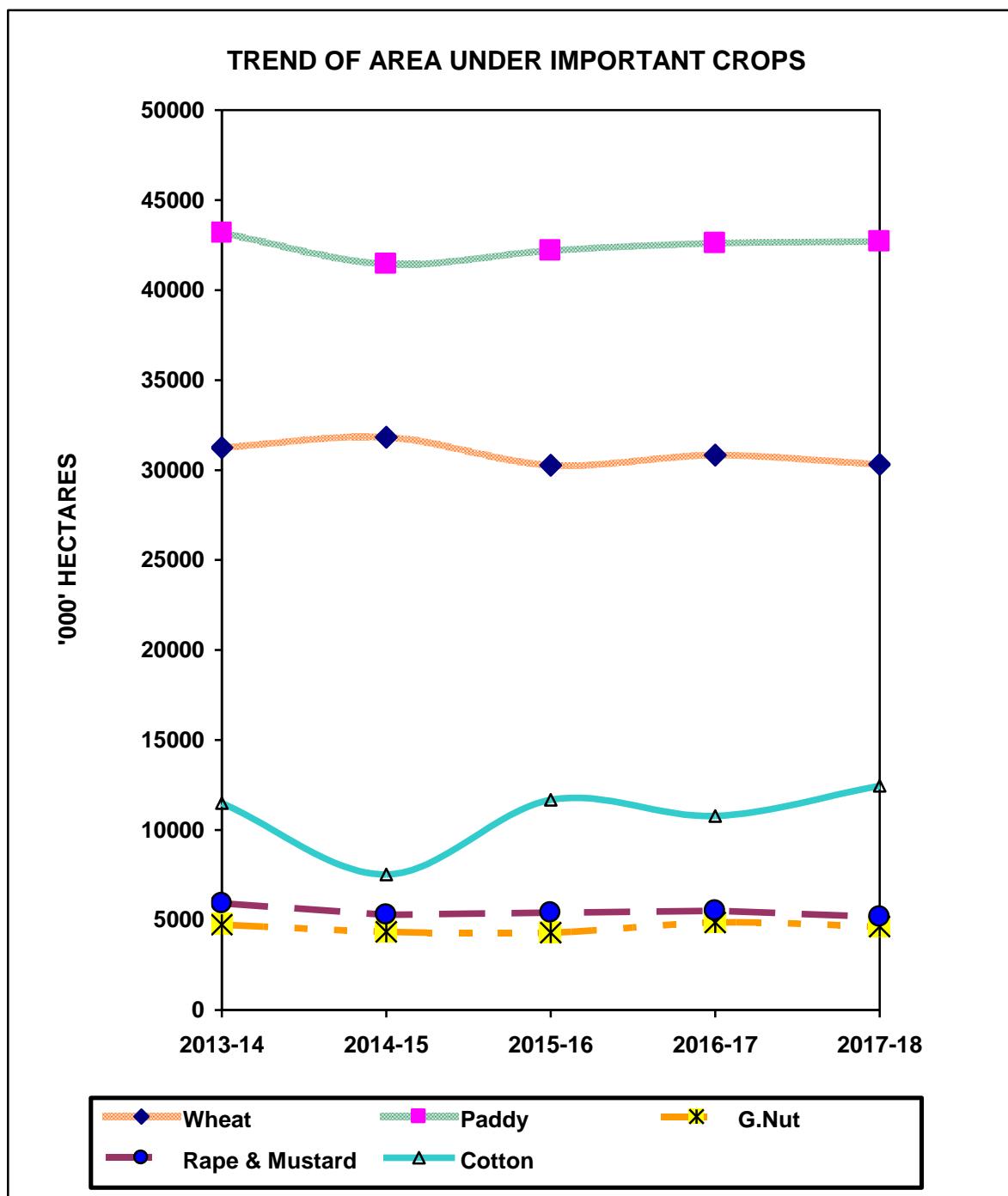
**Table-17: State-wise crops with high standard error during 2018-19**

Sl. No	State	Crop with percentage S.E.
1	Andhra Pradesh	Jowar Kh. (76), Horsegram Kh. (37.9) Rabi (5.8), Sesamum Kh. (5.1) and Sunflower Kh. (7.0), Bajra (6.3), Redgram (5.9), Greengram (9.6), Soyabean (7.0), Castor (6.9), Korra (9.1), Rajma Beans (9.5)
2	Bihar	Brinjal Rabi (7.82)
3	Chhattisgarh	Jowar (15.8), Soyabean (11.5), Barley (9.32), lakh (5.5), Sesamum (11.7)
4	Gujarat	Rice Kh.UI. (9), Moth (8)
5	Haryana	Maize (12.6)
6	Karnataka	Maize Sum. Hyv. (13.8); Ragi Sum. Hyv Ir (7.3); Greengram Rabi (12), Blackgram Rabi (12.9), Navane (6); Save (12); Sugarcane (6.1); Chillies Kh. (9.8), Linseed (26), Onion Kh. (5.1), Rabi (7.8), & Summer (16.9), Groundnut Rabi (15.6), Castor (8.3), Turmeric (6.0), Cotton Rabi (22.0), Potato Kh (7.5), Rabi (7.8), Tomato Rabi (10.98), Summer (14.25), Cowpea Kharif (34.0), Cabbage (19.0), Sunflower Sum. Irr. (14.9), Safflower Rabi (16.3) Tobacco Kharif (5.7) and Sesamum Kh (5.7)
8	Madhya Pradesh	Rice Kh. Hyv Ir. (20.6); Kh. LV Ir. (8.2) and Chillies (29.6)
9	Maharashtra	Sunflower Kharif (9.0), Rabi (23.0), Summer (8) and Tobacco (6.6).
10	Odisha	Ragi Sum. (13.8), Wheat Summer (6.0), Maize Winter (13), Blackgram Sum. (5.8), Horsegram Summer (15.3), Sesamum Aut. (27.4) and Jute (6.4)
11..	Telangana	Bajra Kh. (36.3), Sunflower Rabi (7), Sesamum Kh (19.4), Horse gram Rabi (11.6), Groundnut Kharif (5.2) and Castor (5.8)
12	Tamil Nadu	Bajra Rabi (6.7), Greengram (6.2), Maize Rabi (10.7), Blackgram Kharif (9.5), Redgram (6.4), Sunflower Kh (9.0), Rabi (7.0), Varagu (7.0) and Cowpea Kharif (6.0)
13	West Bengal	Lakh (8.7), Peas (9), Sugarcane (8.2) and Linseed (27.7)
14	Dadar & Nagar Haveli	Rice (22.7)
15	Daman & Diu	Rice (8.6), Bajra Kharif (7.44), Ragi Kharif (13.3)



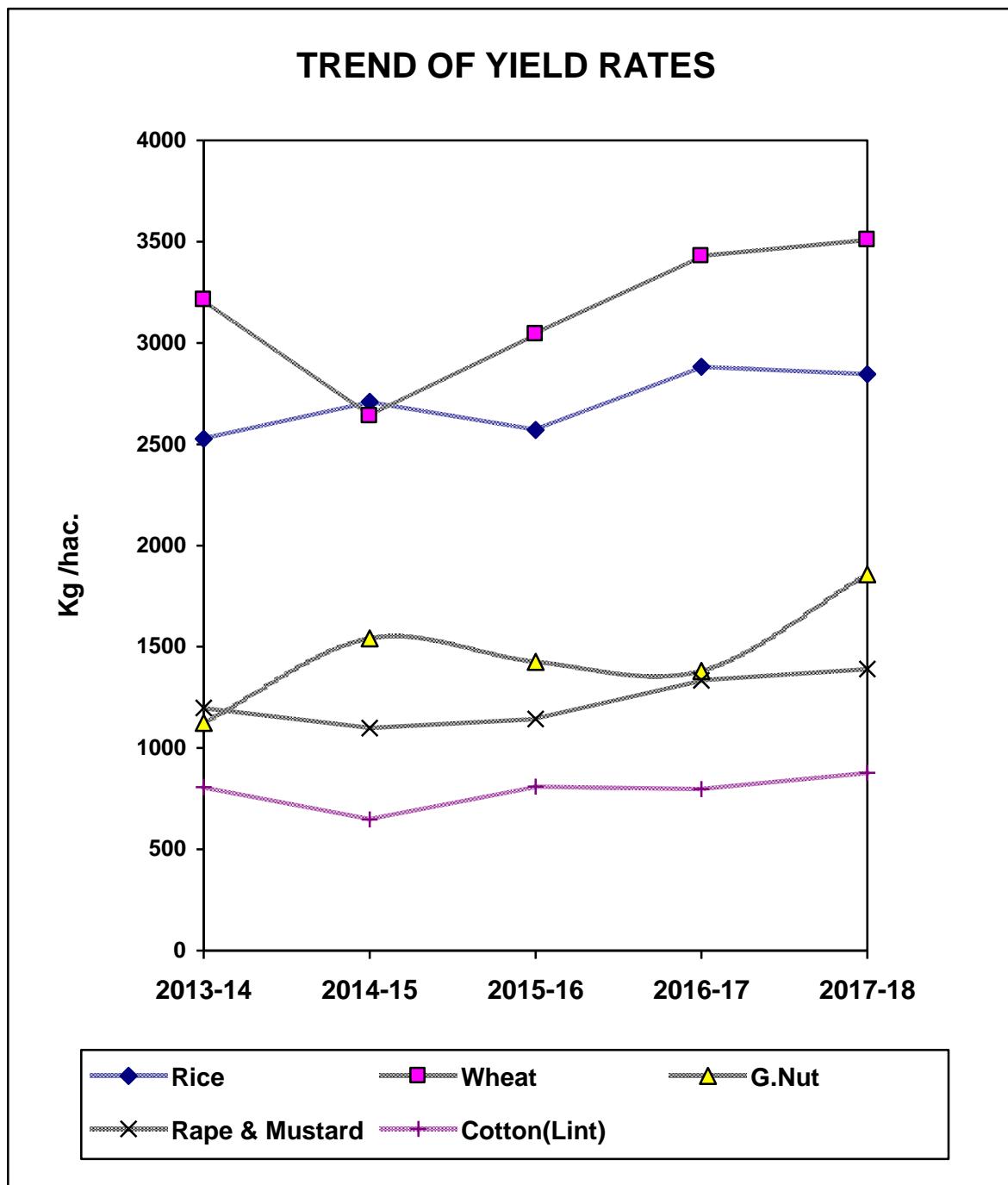
## CROP ESTIMATION SURVEY

### Chart - X



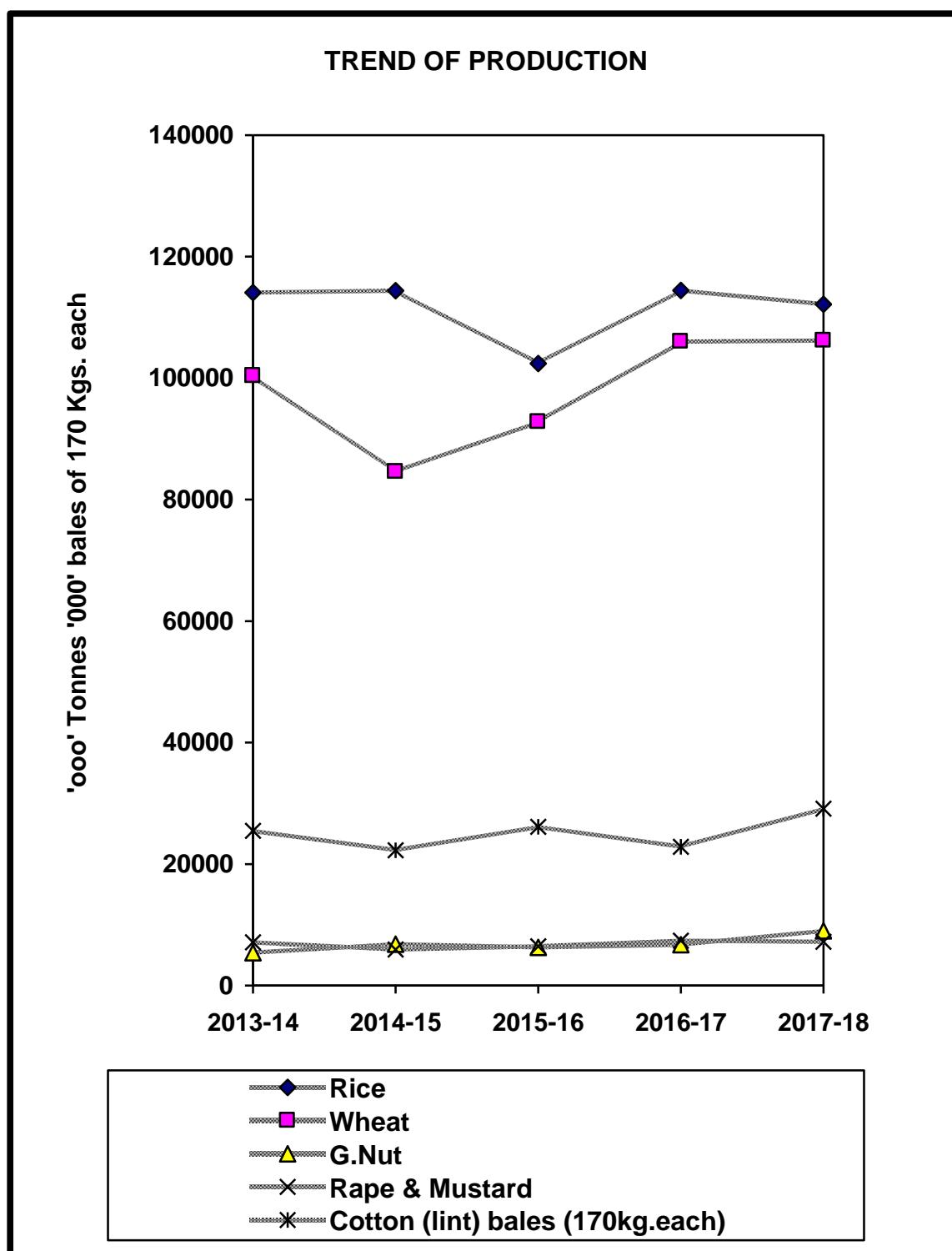


## Chart – XI





## Chart - XII





11.6 Comparison of estimates of crop production for 2018-19 based on the CES results furnished by the States with the corresponding estimates issued by the Directorate of Economics and Statistics (DES), Union Ministry of Agriculture and Co-operation, shows differences in some cases. The details of such cases where the difference between the two estimates is more than 5% in area, production or average yield rate are presented in **Annex-VI**. There may be several reasons for such deviations, some of which are listed as follows:-

- (i) *Non-adoption of survey estimates for preparing official estimates for some crops in the States:* This may be due to the small size of sample adopted for these crops.
- (ii) *Adoption of survey estimates only for part of the State or part of the year (season)*
- (iii) Utilisation of previous year's area figures for official estimates.



## ANCILLARY DATA

12

- 12.1 Ancillary information regarding use of inputs such as irrigation, variety of seeds, fertilizers, manures and pesticides etc. are collected in the primary schedule for crop cutting experiments. An analysis of input data by multi-fold classification, providing an idea about the extent of adoption of improved agricultural practices, enables proper appreciation of the observed yield differentials.
- 12.2 In certain States, the sampling design provides for stratification at planning stage itself. The inputs considered for this purpose are irrigation, variety of seed or both for various crops. For these crops, separate estimates of average yield for each category are available as per standard procedure. In cases where pre-stratification is not envisaged, NSSO has been advocating post-stratification analysis of the experiments according to four-fold classification (Irrigated, Un-irrigated, High yielding variety and Local variety) for major crops like Rice, Jowar, Bajra, Maize and Wheat and two-fold classification (Irrigated and Un-irrigated) for other crops. Under the procedure suggested, the estimates of average yield for each category are worked out as simple average at the stratum level and as weighted average at district level using corresponding area as weights. Likewise, the district level estimates are pooled in a similar manner to arrive at State level estimates. It has further been suggested that in the absence of area figures for different categories based on girdawari, TRS estimates of area may be used as weights to work out estimates at district as well as State level.
- 12.3 Preference of area figures over number of experiments adopted earlier as weights has distinct advantages and as such the procedure is being progressively adopted in many States. However, numbers of experiments continue to be used as weights in a large number of cases and as such average yield in such cases may not tally with the averages worked out on the basis of area figures as respective weights. Such cases are listed in **Table-18**.



**Table-18: States where number of experiments have been used as weights instead of area for yield calculation during 2018-19**

Sl.No.	State	Crop
1.	Assam	All Crops
2.	Himachal Pradesh	All Crops
3.	Madhya Pradesh	All Crops except Rice & Wheat
4.	West Bengal	All Crops

- 12.4 Data according to four-fold classifications for crops of Rice, Jowar, Bajra, Maize and Wheat were not received from States listed below in **Table-19**.

**Table-19: Non-receipt of data on four-fold classification during 2018-19**

Sl.No.	State	Crop
1.	Himachal Pradesh	Rice, Maize, Wheat and Barley
2.	Jharkhand	Rice, Maize and Wheat
3.	Rajasthan	Rice, Jowar, Bajra, Maize & Wheat
4.	Uttar Pradesh	Rice, Jowar, Bajra, Maize and Wheat

- 12.5 On account of operational problems, it is noticed that data as per the two fold classifications i.e. irrigated and un-irrigated, were not received (**Table-20**) from the following States for the crops mentioned against each: -

**Table-20: Non-receipt of data on two-fold classification during 2018-19**

Sl. No.	State	Crop
1.	Jammu & Kashmir	Saffron, Potato, R&M, Linseed.
2.	Jharkhand	All Crops.
3..	Kerala	All Crops except Rice.
4.	Rajasthan	All Crops except Rice, Jowar, Bajra, Maize and Cotton.
5.	Uttar Pradesh	All Crops.



- 12.6 Estimates of yield rates calculated separately for irrigated and un-irrigated fields are presented in **Annex-VII**. Yield rates according to four-fold classification for five major crops are detailed in **Annex-VIII**.
- 12.7 Tabulation of CES data based on the extent of area benefited by improved agricultural practices, such as use of improved variety of seed, fertilizers, manures and application of pesticides has been attempted in this report. Information about proportion of area under different agricultural practices as reported by the States is presented in **Annex-IX**. This information has not been received from Gujarat, Himachal Pradesh, Jammu & Kashmir, Maharashtra and Uttar Pradesh for all the crops; Jharkhand for Barley; Rajasthan for Wheat, Barley, Gram, Rape & Mustard, Cumin Seed, Linseed, Tarameera, Methi, Masur and Coriander; Kerala for all Crops except Paddy and Madhya Pradesh for Banana & Papaya crops.



## **DRIAGE EXPERIMENTS** 13

- 13.1 The produce which is harvested and weighed at the time of actual conduct of crop cutting experiments is often different from the marketable produce. The results of the Crop Estimation Surveys are presented in terms of the marketable produce. Therefore, determination of driage ratio, ratio of weight of marketable produce to that of the harvested produce is an important stage in the entire process. For this purpose, driage experiments are carried out in all the States. Such experiments are usually conducted in a sub-sample of plots selected for crop cutting experiments. Information enabling adequate insight about the procedure followed for different crops in various States is given in **Appendix-VI**. The details include information on the form of produce harvested for first weighment, the form of marketable produce, procedure for drawing the sub-sample for driage experiments, quantity of produce kept for driage, duration of the driage experiment, level of application of driage ratios, etc.
- 13.2 Results of the driage experiments for different crops, relevant details about the number of experiments planned and analysed, percentage recovery etc., for the year 2018-19 are given in **Annex-X (a)**. The recovery percentage shown in the Annex relates to the State level, although in actual practice, district level recovery percentages are worked out and used for estimating yield rate and production.
- 13.3 In view of the practical difficulties experienced by the field staff in conducting driage experiments, it was considered desirable to examine if the driage experiments could be conducted at a central place. Exploratory studies conclusively established the feasibility of arranging driage experiments at a Central place and accordingly, central driage experiments were conducted as a part of the programme of supervision of CES in the State from 1960-61 to 1971-72. State Governments were also requested to arrange driage experiments at a few selected centres in the CES series of crop cutting experiments.



The results of the driage experiments are not being received from the States regularly. The results for Central driage experiments for 2018-19 were received only from Assam, Karnataka, Odisha and Rajasthan. These results are presented in **Annex-X (b)**. It may be noted that in Assam, Karnataka and Odisha, field driage experiments are not conducted for the crops for which central driage experiments are planned and driage ratios used for CES results of these crops are based on Central driage experiments. Only in Rajasthan, Central driage experiments are still planned along with field driage experiments. Column (7) of **Annex-X (b)** shows the recovery percentage according to field driage experiments only for one State viz., Rajasthan in 2018-19. In Rajasthan, it is seen that loss in driage as per central driage is less for all crops except Gram from field driage.

- 13.4 As it can be seen from the procedure of conducting driage experiments that various resources have to be engaged, the experimental results are to be observed on several days and then the driage factor is to be calculated. This procedure also leads to wastage of grains etc. Instead of the conventional procedure of the driage experiments, moisture meter may be used to obtain the driage ratio. Moisture meter is an instrument to measure the moisture content in the grains from which the driage ratio can be calculated. The instrument was used by Govt. of Uttar Pradesh and the results obtained were compared with those of the conventional method. It was observed that the driage ratios obtained by the two methods were comparable. Other States may also start using moisture meter for calculating the driage ratio.

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**(Annexures &**

**Appendices)**



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## ABBREVIATIONS USED IN ANNEXURES & APPENDICES

Agh.	Aghani
Agril.	Agricultural
Aut.	Autumn
Bha.	Bhadai
CAD	Command Area Development
CD	Cane Development
CES	Crop Estimation Surveys
Comb.	Combined
Comp.	Composite
Dev.	Development
E.	Early
Expts.	Experiments
F.C.	Food - Crops
Gar.	Garma
H	Hills
Ha.	Hectares
Hyv.	High Yielding Variety
Ir.	Irrigated
Kgs.	Kilograms
Kh	Kharif
Lv.	Local Variety
M x M	Meter x Meter
N.	Natu
NA	Not Available
NC	Not Collected/ Compiled
K/K/S	Kar/ Kuruvai / Sornavari
S/T/P	Samba/ Thalady/ Pishanam
N/K	Navarai / Kodai
NFC	Non Food Crops
NR.	Not Received
Plt.	Plant
Pln.	Plain
Reg.	Regular
Rt.	Ratoon
SASA	State Agricultural Statistics Authority
Stat.	Statistical
Sum.	Summer
Tra.	Traditional
V	Virginia
UI	Un- irrigated
Wint.	Winter
NAIS	National Agricultural Insurance Scheme
VIS	Village Insurance Scheme

**ANNEX-I (a) : SAMPLE SIZE-TOTAL NUMBER OF EXPERIMENTS PLANNED UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Number of experiments planned under CES during								
		K H A R I F			R A B I			T O T A L		
		Food Crops	Non-Food Crops	Total	Food Crops	Non-Food Crops	Total	Food Crops	Non-Food Crops	Total
1	2	3	4	5	6	7	8	9	10	11
1.	<b>Andhra Pradesh</b>	9036	4536	13572	7290	2212	9502	16326	6748	23074
2.	<b>Assam</b>	5200	600	5800	4200	1250	5450	9400	1850	11250
3.	<b>Bihar</b>	85522	400	85922	91378	1064	92442	176900	1464	178364
4.	<b>Chhattisgarh</b>	3864	592	4456	2224	644	2868	6088	1236	7324
5.	<b>Goa</b>	488	52	540	384	80	464	872	132	1004
6.	<b>Gujarat</b>	17193	21749	38942	36574	3820	40394	53767	25569	79336
7.	<b>Haryana *</b>	4096	940	5036	3278	1270	4548	7374	2210	9584
8.	<b>Himachal Pradesh</b>	4254	0	4254	4052	0	4052	8306	0	8306
9.	<b>Jammu &amp; Kashmir</b>	3178	0	3178	2076	242	2318	5254	242	5496
10.	<b>Jharkhand @</b>	28770	0	28770	36210	7830	44040	64980	7830	72810
11.	<b>Karnataka</b>	65392	20942	86334	40030	12644	52674	105422	33586	139008
12.	<b>Kerala</b>	27922	2524	30446	1577	720	2297	29499	3244	32743
13.	<b>Madhya Pradesh #</b>	9268	6166	15434	13240	2036	15276	22508	8202	30710
14.	<b>Maharashtra</b>	42074	18566	60640	29526	2678	32204	71600	21244	92844
15.	<b>Meghalaya</b>	1978	63	2041	316	0	316	2294	63	2357
16.	<b>Odisha</b>	44068	2067	46135	7321	3871	11192	51389	5938	57327
17.	<b>Punjab</b>	3044	676	3720	2664	566	3230	5708	1242	6950
18.	<b>Rajasthan</b>	103538	27796	131334	71132	35912	107044	174670	63708	238378
19.	<b>Tamil Nadu</b>	4168	1584	5752	2572	1176	3748	6740	2760	9500
20.	<b>Telangana</b>	9182	2576	11758	5420	1382	6802	14602	3958	18560
21.	<b>Uttarakhand</b>	4500	0	4500	3478	0	3478	7978	0	7978
22.	<b>Uttar Pradesh</b>	302266	23500	325766	289450	29084	318534	591716	52584	644300
23.	<b>West Bengal *</b>	17432	3132	20564	19399	8987	28386	36831	12119	48950
24.	<b>Dadra &amp; Nagar Haveli</b>	92	0	92	0	0	0	92	0	92
25.	<b>Daman &amp; Diu</b>	28	0	28	0	0	0	28	0	28
26.	<b>Puducherry</b>	94	0	94	210	0	210	304	0	304
<b>GRAND TOTAL</b>		<b>796647</b>	<b>138461</b>	<b>935108</b>	<b>674001</b>	<b>117468</b>	<b>791469</b>	<b>1470648</b>	<b>255929</b>	<b>1726577</b>

Note :

1. # : Figure repeated for the year 2013-14 in respect for crops Banana, Onion and Papaya and all other crop 2015-16 for Madhya Pradesh.
2. @ : Data repeated from the year 2016-17.
3. \* : Data repeated from the year 2015-16

**ANNEX -I (b): SAMPLE SIZE - KHARIF FOOD CROPS UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Number of Experiments Planned under the crops										Total	
		Paddy	Jowar	Bajra	Maize	Ragi	Red- gram	Green- gram	Black- gram	Sugarca	Others		
1	2	3	4	5	6	7	8	9	10	11	12	13	
1.	<b>Andhra Pradesh</b>	REG. Ir.	3572	0	0	0	0	0	0	0	0	0	
		REG.	0	0	0	0	0	0	0	0	0	0	
		REG. UI	232	0	0	0	0	0	0	0	0	0	
		Total	3804	178	488	234	200	1148	348	310	1602	724	9036
2.	<b>Assam</b>	Aut.	1500	0	0	0	0	0	0	700	0	0	
		Wint.	3000	0	0	0	0	0	0	0	0	0	
		Total	4500	0	0	0	0	0	0	700	0	5200	
3.	<b>Bihar</b>	Bha.Hyv.	0	0	0	41245	0	0	0	0	0	0	
		Bha.Lv.	0	0	0		0	0	0	0	0	0	
		Bha.Ir.	560	0	0		0	0	0	0	0	0	
		Bha.UI.	392	0	0		0	0	0	0	0	0	
		Bha.	0	0	0		200	0	260	0	0	0	
		Agh.Hyv.Ir.	41245	0	0	0	0	0	0	0	0	0	
		Agh.Hyv.UI.		0	0	0	0	0	0	0	0	0	
		Agh.Lv.Ir.		0	0	0	0	0	0	0	0	0	
		Agh.Lv.UI.		0	0	0	0	0	0	0	0	0	
		Total	42197	0	0	41245	200	0	260	0	800	820	85522
4.	<b>Chhattisgarh</b>	Ir. Hyv.	814	0	0	0	0	0	0	0	0	0	
		Ir.Lv.	532	0	0	0	0	0	0	0	0	0	
		UI.	1240	0	0	0	0	0	0	0	0	0	
		Total	2586	70	0	484	0	462	0	0	0	262	3864
5.	<b>Goa</b>		192	0	0	0	0	0	0	0	104	192	488
6.	<b>Gujarat</b>	Ir.	6623	0	0	0	0	0	0	0	0	0	
		UI.	1330	0	0	0	0	0	0	0	0	0	
		Total	7953	320	1440	3540	100	1580	760	1320	0	180	17193
7.	<b>Haryana *</b>	REG.	990	0	1532	144	0	360	0	0	1070	0	
		Total	990	0	1532	144	0	360	0	0	1070	0	4096
8.	<b>Himachal Pradesh</b>		1898	0	0	2570	0	0	0	0	0	0	4468
9.	<b>Jammu &amp; Kashmir</b>		1330	0	0	1392	0	0	0	0	0	456	3178
10.	<b>Jharkhand</b>	Bha.	600	0	0	7830	0	0	0	0	0	0	
		Agh.Hyv.	17520	0	0	0	0	0	0	0	0	0	
		Agh.Lv.		0	0	0	0	0	0	0	0	0	
		Total	18120	0	0	7830	450	0	0	510	240	1620	28770
11.	<b>Karnataka</b>	Hyv.Ir.	7071	996	820	4821	1588	0	0	0	0	0	
		Hyv.UI.	3552	2288	3074	8054	5771	0	0	0	0	22739	
		Tra.Ir.	545	4	0	3	12	0	0	0	0	0	
		Tra.UI.	1852	316	12	46	377	0	0	0	0	0	
		Total	13020	3604	3906	12924	7748	7390	3900	1290	810	10800	65392
12.	<b>Kerala</b>	Aut.	2352	0	0	0	0	0	0	0	0	0	
		Wint.	3268	0	0	0	0	0	0	0	0	0	
		Total	5620	0	0	0	0	0	0	0	45	1620	7285

Sl. No.	S T A T E	Number of Experiments Planned under the crops										
		Paddy	Jowar	Bajra	Maize	Ragi	Red-gram	Green-gram	Black-gram	Sugarca	Others	
1	2	3	4	5	6	7	8	9	10	11	12	13
13.	<b>Madhya Pradesh #</b>	Ir. Hyv.	790	0	0	0	0	0	0	0	0	0
		Ir.Lv.	560	0	0	0	0	0	0	0	0	0
		UI.	1410	0	0	0	0	0	0	0	0	0
		Total	2760	1746	320	1928	0	1650	0	0	864	9268
14.	<b>Maharashtra</b>	Ir.	0	0	0	0	0	0	0	0	0	0
		UI.	0	0	0	0	0	0	0	0	0	0
		Comp.	0	0	0	0	0	0	0	0	0	0
		Total	4064	3804	3364	726	890	6210	6186	4784	12046	0
15.	<b>Meghalaya</b>	Aut.	342	0	0	0	0	0	0	0	0	0
		Wint.	892	0	0	0	0	0	0	0	0	0
		Total	1234	0	0	0	0	0	0	0	744	1978
16.	<b>Odisha</b>	Aut.	3361	0	0	2902	819	0	524	731	0	0
		Wint.	27374	0	0	25	615	0	1258	1903	231	0
		Total	30735	0	0	2927	1434	0	1782	2634	231	4325
17.	<b>Punjab</b>		1980	0	0	360	0	0	0	0	704	0
18.	<b>Rajasthan</b>		3580	10500	25752	11656	0	0	15212	7348	450	29040
19.	<b>Tamil Nadu</b>	K/K/S	428	0	0	0	0	0	0	0	0	0
		S/T/P	1260	0	0	0	0	0	0	0	0	0
		N/K	0	0	0	0	0	0	0	0	0	0
		REG.Ir.	0	32	32	108	16	0	132	16	0	0
		REG.UI.	0	408	208	148	144	0	0	96	0	0
		REG.	0	0	0	0	0	336	0	0	468	336
		Total	1688	440	240	256	160	336	132	112	468	336
20.	<b>Telangana</b>	Ir.	2186									
		UI.	104									
		Total	2290	652	46	2082	30	2166	974	334	208	400
21.	<b>Uttarakhand</b>		2800	0	0		1110		0		0	590
22.	<b>Uttar Pradesh</b>		188454	8528	36240	29712	0	11718	2316	15656	9476	166
23.	<b>West Bengal *</b>	Aus.	2281	0	0	0	0	0	0	0	0	0
		Aman.	13308	0	0	0	0	0	0	0	0	0
		Total	15589	0	0	634	0	0	0	1209	0	0
24.	<b>Dadra &amp; N.Haveli</b>		70	0	0	0	22	0	0	0	0	92
25.	<b>Daman &amp; Diu</b>		20	0	8	0	0	0	0	0	0	28
26.	<b>Puducherry</b>		94	0	0	0	0	0	0	0	0	94
<b>Grand Total</b>		<b>357568</b>	<b>29842</b>	<b>73336</b>	<b>120644</b>	<b>12344</b>	<b>33020</b>	<b>31870</b>	<b>35507</b>	<b>28954</b>	<b>53139</b>	<b>776224</b>
% of area under CES to total area under the crop in the CES States (Ref.-Annex-V, Col.-4)		87	84	88	85	97	93	99	90	97@	-	-

**Note : -**

**1. Crops included under "Others" are:-**

<b>Andhra Pradesh:-</b>	<b>Korra (204) , Horsegram (120) and Chillies (400) under Regular Scheme.</b>
<b>Bihar :-</b>	<b>Potato Agh. (340) , Brinjal Agh. (340) and Tomato Agh. (140).</b>
<b>Chhattisgarh :-</b>	<b>Kodon-Kutki (288).</b>
<b>Goa :-</b>	<b>Cowpea(190)</b>
<b>Gujarat:-</b>	<b>Moth (0) and Gowar (186)</b>
<b>Jammu &amp; Kashmir:-</b>	<b>Saffron (114) and Potato (342).</b>
<b>Jharkhand</b>	<b>Potato Agh. (570), Tomato Agh. (660) and Brinjal (390).</b>
<b>Karnataka :-</b>	<b>Horsegram (2650), Navane (750), Save (340), Potato (590), Onion (2290), Chillies (800), Avare (280), Cowpea(1030), Tomato(1580), Turmeric(390) and Cabbage(100).</b>
<b>Kerala :-</b>	<b>Arecanut (1620), Tapioca (1593), Cashewnut (1518), Pepper (1614), Cocoa (793), Banana (2394), Jackfruit (1618 ), Plantain (1622), Turmeric (1553), Pineapple (1552), Ginger (1442), and Mango (1620), Tamarind(1592), Nutmeg(1382).</b>
<b>Madhya Pradesh:-</b>	<b>Kodon-Kutki (864).</b>
<b>Maharashtra :-</b>	<b>Arecanut (N.A.) and Cashewnut (N.A.).</b>
<b>Meghalaya:-</b>	<b>Ginger (630).</b>
<b>Odisha:-</b>	<b>Horsegram-Wint. (2271) and Potato-Wint. (2012).</b>
<b>Rajasthan :-</b>	<b>Chowla (1748), Moth (6812) and Gwar (21688)</b>
<b>Tamil Nadu:-</b>	<b>Horsegram (0) , Varagu (124), Samai (100), Cowpea(112)</b>
<b>Telangana :-</b>	<b>Horsegram (0) , Korra (10), Chillies (458)</b>
<b>Uttarakhand:-</b>	<b>Sawan (624).</b>
<b>Uttar Pradesh:-</b>	<b>Sawan (70) and Kodan (90).</b>

1. @ : Percentage includes both Kharif and Rabi seasons.
2. # : Figure repeated from the year 2013-14 in respect for crops Banana, Onion and Papaya and all other crop 2015-16 for Madhya Pradesh.
3. \* : Data repeated from the year 2015-16
4. @ : Data repeated from the year 2016-17.
5. : Crop Bitter Gourd is added in Kerala State.

**ANNEX- I (c) : SAMPLE SIZE - RABI FOOD CROPS UNDER CES 2018-19**

Sl. No.	S T A T E	Number of experiments planned under crops									
		Paddy	Jowar	Wheat	Maize	Barley	Gram	Green gram	Black gram	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12
1.	Andhra Pradesh	Reg.Ir	2994	0	0	0	0	0	0	0	0
		Reg.	0	482	0	554	0	1328	402	634	896 7290
		Total	2994	482	0	554	0	1328	402	634	896 7290
2.	Assam	Sum	2000	0	700	0	0	0	0	500	1000 4200
3.	Bihar	Rabi	0	0	0	41265	300	800	504	0	0
		Hyv.Ir	0	0	41265	0	0	0	0	0	0
		Hyv.UI	0	0		0	0	0	0	0	0
		Lv.Ir	0	0		0	0	0	0	0	0
		Lv.UI	0	0		0	0	0	0	0	0
		Gar.Hyv.	300	0	0		0	0	0	0	0
		Gar.Lv.	140	0	0		0	0	0	0	0
		Gar.	0	0	0	540	0	0	0	0	0
		Total	440	0	41265	41805	300	800	504	0	6264 91378
4.	Chhattisgarh	Hyv.Ir	0	0	432	0	0	0	0	0	
		Lv.Ir	0	0	212	0	0	0	0	0	
		Lv.UI	0	0	228	0	0	0	0	0	
		Total	0	0	872	0	24	538	0	0	790 2224
5.	Goa		192	0	0	0	0	0	0	0	192 384
6.	Gujarat	Ir	0	0	17291	0	0	0	0	0	0
		UI	0	0	220	0	0	0	0	0	0
		Total	0	0	17511	0	0	1895	220	100	16848 36574
7.	Haryana *		0	0	2200	0	516	562	0	0	0 3278
8.	Himachal Pradesh		0	0	2794	0	1258	0	0	0	0 4052
9.	Jammu & Kashmir		0	0	1908	0	0	0	0	0	168 2076
10.	Jharkhand &	Hyv.	0	0	17520	0	0	0	0	0	0
		Lv.	0	0		0	0	0	0	0	0
		Total	0	0	17520	0	0	7830	0	0	10860 36210
11.	Karnataka	Rabi Hyv.Ir	1459	1606	2228	2626	0	0	0	0	0
		Rabi Hyv.UI	0	6881	1252	700	0	0	0	0	0
		Rabi Tra.Ir	23	330	172	0	0	1888	0	0	0
		Rabi Tra.UI	0	1453	202	0	0	7514	0	0	0
		Rabi.Hyv.	0	0	0	0	0	0	0	0	0
		Rabi.HYV-UI	0	0	0	0	0	0	0	0	0
		Sum.Hyv. Ir	3528	0	0	200	0	0	0	0	0
		Sum. Tra. Ir.	12	0	0	0	0	0	0	0	0
		Rabi Ir	0	0	0	0	0	0	0	0	0
		Rabi UI	0	0	0	0	0	0	0	0	0
12.	Kerala	Total	5022	10270	3854	3526	0	9402	110	130	7716 40030
		Rabi	0	0	0	0	0	0	0	0	0
		Sum.	1577	0	0	0	0	0	0	0	0
13.	Madhya Pradesh #	Total	1577	0	0	0	0	0	0	0	0 1577
		Hyv.Ir	0	0	3150	0	0	0	0	0	0
		Lv.Ir	0	0	1380	0	0	2722	0	0	0
		Lv.UI	0	0	1300	0	0	2608	0	0	0
14.	Maharashtra	Total	0	0	5830	0	536	5330	0	0	1544 13240
		Ir	0	0	0	0	0	0	0	0	0
		UI	0	0	0	0	0	0	0	0	0
		Sum.	522	0	0	0	0	0	0	0	0
		Total	522	9168	8210	1158	0	10468	0	0	0 29526
15.	Meghalaya		0	0	0	0	0	0	0	0	316 316
16.	Odisha	Win.	0	0	0	0	0	0	0	0	0
		Sum.	4673	0	80	296	0	0	1746	447	0
		Total	4673	0	80	296	0	0	1746	447	79 7321
17.	Punjab		0	0	2326	0	242	96	0	0	0 2664
18.	Rajasthan	Ir	0	0	0	0	0	0	0	0	0
		UI	0	0	0	0	0	0	0	0	0
		Comp.	0	0	0	0	0	0	0	0	0
		Total	0	0	39648	0	5948	14824	0	0	10712 71132

**ANNEX 1(c ) (Contd....)**

Sl. No.	S T A T E	Number of experiments planned under crops										
		Paddy	Jowar	Wheat	Maize	Barley	Gram	green gram	Black gram	Others gram	Total	
1	2	3	4	5	6	7	8	9	10	11	12	
19.	Tamil Nadu	300	640	0	176	0	0	308	312	836	2572	
20.	Telangana	Reg.Ir	2324									
		Reg.										
		Total	2324	368	0	1636	0	694	156	104	138 5420	
21.	Uttarakhand		0	0	2800	0	678	0	0	0	3478	
22.	Uttar Pradesh	Zaid	0	0	0	0	0	0	606	710	626 1942	
		Total	0	0	229076	80	696	12918	606	710	45364 289450	
23.	West Bengal *	Sum.	11674	0	0	0	0	0	0	0	0	
		Total	11674	0	2528	0	0	725	697	0	3775 19399	
24.	Dadra & Nagar Haveli		0	0	0	0	0	0	0	0	0	
25.	Daman & Diu		0	0	0	0	0	0	0	0	0	
26.	Puducherry	I.	140	0	0	0	0	0	0	0		
		II.	70	0	0	0	0	0	0	0		
		Total	210	0	0	0	0	0	0	0	210	
<b>Grand Total</b>		<b>31928</b>	<b>20928</b>	<b>379122</b>	<b>49231</b>	<b>10198</b>	<b>67410</b>	<b>4749</b>	<b>2937</b>	<b>107498</b>	<b>674001</b>	
<b>% of area under CES to total area under the crop in the CES States.</b> <b>(Ref. Annex-v, col.-4)</b>		<b>89</b>	<b>79</b>	<b>96</b>	<b>71</b>	<b>88</b>	<b>98</b>	<b>85</b>	<b>45</b>	<b>-</b>	<b>-</b>	

Note :-

1. Crops included under "Others" are :-

Andhra Pradesh :- Ragi (170), Horsegram (270), Chillies (402) and Rajma Beans (54) under regular Scheme.

Assam :- Potato (850)

Bihar:- Lakh (420), Masur (980),Chillies(340), Banana (500), Mango(600),Guava (280),Potato(424) ,

Onion (424), Brinjal (340), Tomato (280), Cauliflower (340), Jackfruit (420), Lichi (300)

and Redgram (616).

Chhattisgarh :- Lakh (440), Potato (150), Chillies (26) and Onion (50) .

Goa:- Cowpea(190)

Gujarat:- Bajra-Sum.(9465), Cumin (4008), Fennel (400), Onion (Rabi:1405, Sum:40), Banana (280), Garlic (220) and Potato (1030)

Jammu & Kashmir :- Potato (168).

Jharkhand:- Redgram (660),Brinjal (480), Potato (7830),Tomato (540) , Onion (630) and Masur (720) .

Karnataka:- Ragi-Rabi-Hyv -Irr (600), HYV-UI (832) Sum.Hyv.(300), Horsegram (4632), Potato (250),

Onion- Rabi(390), Summer (170) and Chillies-Rabi (0), Summer (0),Avere UI (10), Summer(70), Tomato Rabi(280)Summer(60)

Madhya Pradesh:- Lakh (220), Chillies(80), Banana (138), Potato (432), Onion(642) and Papaya (32).

Meghalaya :- Potato-Sum.(312).

Odisha:- Ragi-Sum.(40) and Horsegram Sum. (23).

Tamil Nadu:- Cumbu(204), Ragi(200), Horsegram(320) and Cowpea(112)

Rajasthan :- Cumin (4888), Methi (1768), Masur (1348) and Coriander (3176).

Telangana :- Horsegram(0), Chillies(198)

Uttar Pradesh:- Masur (16152),Peas (8028), Sawan-Zaid (20), Potato (21512), Onion- Rabi (70)

and Onion- Zaid (620).

West Bengal:- Lakh (358), Masur (2537), Peas(314), Redgram (127) and Sugarcane(439).

1. # : Figure repeated from the year 2013-14 in respect for crops Banana, Onion and Papaya and all other crop 2015-16 for Madhya Pradesh.

2. & : Data repeated from the year 2016-17

3. \* : Data repeated from the year 2015-16

**ANNEX- I (d) : SAMPLE SIZE - KHARIF NON- FOOD CROPS UNDER CES 2018-19**

Sl. No.	S T A T E	Number of experiments planned under crops												
		Ground nut	Sesa- num	Castor	Coco- nut	Niger	Cotton	Jute	Mesta	Sun- flower	Soya- bean	Tobac co	Total	
1	2	3	4	5	6	7	8	9	10	11	12		13	
1.	Andhra Pradesh	2608	270	232	0	0	952	0	200	196	78		4536	
2.	Assam	0	0	0	0	0	0	600	0	0	0		600	
3.	Bihar	0	0	0	0	0	0	200	200	0	0		400	
4.	Chhattisgarh	236	158	0	0	0	0	0	0	0	198		592	
5.	Goa	52	0	0	0	0	0	0	0	0	0		52	
6.	Gujarat	Ir	0	0	0	0	6979	0	0	0	0		0	
		UI	0	0	0	0	2690	0	0	0	0		0	
		Total	8385	1000	2495	0	9669	0	0	0	0	200	21749	
7.	Haryana *	0	0	0	0	0	940	0	0	0	0		940	
8.	Himachal Pradesh	0	0	0	0	0	0	0	0	0	0		0	
9.	Jammu & Kashmir	0	0	0	0	0	0	0	0	0	0		0	
10.	Jharkhand &	0	0	0	0	0	0	0	0	0	0		0	
11.	Karnataka	Ir	1674	0	0	0	1490	0	0	1640	260	70		
		UI	6610	1890	210	0	2110	0	0	3024	1704	260		
		Total	8284	1890	210	0	3600	0	0	4664	1964	330	20942	
12.	Kerala	0	94	0	2430	0	0	0	0	0	0	0	2524	
13.	Madhya Pradesh #	954	1476	0	0	0	962	0	0	0	2774		6166	
14.	Maharashtra	Ir	0	0	0	0	0	0	0	0	0			
		UI	0	0	0	0	0	0	0	0	0			
		Comp.	0	0	0	0	0	0	0	0	0			
		Total	2804	928	0	0	410	8600	0	0	400	5424		18566
15.	Meghalaya	0	0	0	0	0	0	63	0	0	0		63	
16.	Odisha	Aut.	1044	173	0	0	0	0	40	0	0			
		Wint.	164	645	0	0	0	0	0	0	0			
		Total.	1208	818	0	0	0	0	40	0	0		2066	
17.	Punjab	0	0	0	0	0	676	0	0	0	0		676	
18.	Rajasthan	6960	6084	0	0	0	6796	0	0	0	7956		27796	
19.	Tamil Nadu	Reg.Ir	104	88	0	0	0	104	0	0	60	0		356
		Reg.UI	596	136	0	0	0	460	0	0	36	0		1228
		Reg.	0	0	0	0	0	0	0	0	0	0		0
		Total	700	224	0	0	0	564	0	0	96	0		1584
20.	Telangana	196	56	150	0	0	1372	0	0	0	802		2576	
21.	Uttarakhand	0	0	0	0	0	0	0	0	0	0		0	
22.	Uttar Pradesh	8464	14144	0	0	0	80	0	0	0	812		23500	
23.	West Bengal *	0	0	0	0	0	0	2910	222	0	0		3132	

Annex 1(d) ( Contd... )

Sl. No.	S T A T E	Number of experiments planned under crops											
		Ground nut	Sesa- num	Castor	Coco- nut	Niger	Cotton	Jute	Mesta	Sun- flower	Soya- bean	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	
24.	Dadra & N.Haveli	0	0	0	0	0	0	0	0	0	0	0	
25.	Daman & Diu	0	0	0	0	0	0	0	0	0	0	0	
26.	Puducherry	0	0	0	0	0	0	0	0	0	0	0	
Grand Total		40851	27142	3087	2430	410	34211	3813	622	5356	20008	530	138460
% of area under CES to total area under the crop in the CES States. (Ref. Annex-v, Col.-4)		96	93	98	30	68	92	99	98	99	97	-	

Note:-

1. & : Data repeated from the year 2016-17

2. # : Figure repeated from the year 2013-14 in respect for crops Banana, Onion and Papaya and all other crop 2015-16 for Madhya Pradesh

3. \* : Data repeated from the year 2015-16

**ANNEX 1(e) - SAMPLE SIZE - RABI NON -FOOD CROPS UNDER CES 2018-19**

Sl. No.	S T A T E	Number Of Experiments Planned under the Crops												
		Ground Nut.	Sesame mum	Rape & Lin- Mustar seed	Safflower	Sun- flower	Tara- Meer	Tobacco	Isab gol	Betel leaves	Cotton	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1.	Andhra Pradesh (Reg.)	842	310	0	0	0	368	0	(N) 296	0	0	0	1816	
									(V) 396	0	0	0	396	
		<b>Total</b>	<b>842</b>	<b>310</b>	<b>0</b>	<b>0</b>	<b>368</b>	<b>0</b>	<b>692</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2212</b>	
2.	Assam		0	0	1250	0	0	0	0	0	0	0	1250	
3.	Bihar		0	0	1064	0	0	0	0	0	0	0	1064	
4.	Chhattisgarh		0	0	386	258	0	0	0	0	0	0	644	
5.	Goa		80	0	0	0	0	0	0	0	0	0	80	
6.	Gujarat		1760	0	1860	0	0	0	0	200	0	0	3820	
7.	Haryana *		0	0	1040	0	0	230	0	0	0	0	1270	
8.	Himachal Pradesh		0	0	0	0	0	0	0	0	0	0	0	
9.	Jammu & Kashmir		0	0	230	12	0	0	0	0	0	0	242	
10.	Jharkhand &		0	0	7830	0	0	0	0	0	0	0	7830	
11.	Karnataka	Rabi-Ir	0	0	0	0	0	1762	0	0	0	0	20	1782
		Rabi UI	130	0	0	0	1770	2476	0	0	0	0	130	4506
		Sum.Ir	4856	0	0	0	0	1240	0	0	0	0	0	6096
		Sum.UI	0	0		0	0	0	0	0	0	0	0	0
		Rabi/Sum.	0	0	0	260	0	0	0	0	0	0	0	260
		<b>Total</b>	<b>4986</b>	<b>0</b>	<b>0</b>	<b>260</b>	<b>1770</b>	<b>5478</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>150</b>	<b>12644</b>
12.	Kerala		0	0	0	0	0	0	0	0	720	0	720	
13.	Madhya Pradesh #		0	0	1116	920	0	0	0	0	0	0	0	2036
14.	Maharashtra	Rabi	0	0	0	246	732	104	0	16	0	0	0	1098
		Sum.	1516	0	0	0	0	54	0	0	0	0	0	1570
		<b>Total</b>	<b>1516</b>	<b>10</b>	<b>0</b>	<b>246</b>	<b>732</b>	<b>158</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2678</b>
15.	Meghalaya		0	0	0	0	0	0	0	0	0	0	0	0
16.	Odisha	Wint.	0	0	2049	0	0	0	0	0	0	0	0	2049
		Sum.	1560	262	0	0	0	0	0	0	0	0	0	1822
		<b>Total</b>	<b>1560</b>	<b>262</b>	<b>2049</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3871</b>
17.	Punjab		0	0	566	0	0	0	0	0	0	0	0	566
18.	Rajasthan	Ir	0	0	0	0	0	0	0	0	0	0	0	0
		UI	0	0	0	0	0	0	0	0	0	0	0	0
		Comp.	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Total</b>	<b>0</b>	<b>0</b>	<b>30252</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1392</b>	<b>0</b>	<b>4268</b>	<b>0</b>	<b>0</b>	<b>35912</b>
19.	Tamil Nadu		460	256	0	0	0	204	0	0	0	0	0	1176
20.	Telangana		1112	198	0	0	0	36	0	36	0	0	0	1382
21.	Uttarakhand		0	0	0	0	0	0	0	0	0	0	0	0
22.	Uttar Pradesh	Rabi	0	0	0	0	0	0	0	100	0	0	0	100
		Zaid	0	0	0	0	0	170	0	20	0	0	0	190
		<b>Total</b>	<b>0</b>	<b>0</b>	<b>28654</b>	<b>140</b>	<b>0</b>	<b>170</b>	<b>0</b>	<b>120</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29084</b>
23.	West Bengal *		611	3183	5030	163	0	0	0	0	0	0	0	8987
24.	Dadra & N.Haveli		0	0	0	0	0	0	0	0	0	0	0	0
25.	Daman & Diu		0	0	0	0	0	0	0	0	0	0	0	0

**ANNEX 1(e) ( Contd....)**

Sl. No.	S T A T E	Number Of Experiments Planned under the Crops											
		Ground Nut.	Sesa- mum	Rape & Mustard seed	Lin- seed	Saffl- ower	Sun- flower	Tara- Meera	Tobacco	Isabgo	Eetal leav	Cotton	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
26.	Puducherry	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total		12927	4219	81327	1999	2502	6644	1392	864	4468	720	406	117468
% of area under CES to total area under the crop in the CES States.		88	92	94	89	100	94	68	77	99	0.01	78	-
(Ref. Annex-v, Col.4)													

Note :-

1. # : Figure repeated from the year 2015-16 for all Crops for Madhya Pradesh.
2. & : Data repeated from the year 2016-17.
3. \* : Data repeated from the year 2015-16.

**ANNEX - II : TRAINING OF PRIMARY WORKERS UNDER CES 2018-19**

Sl. No.	S T A T E	A G E N C Y	Number of Centres		Attendance of Primary Staff.					Trained by NSSO officer	
			Total	Covered by		Total Strength	Total Called	Total Attended			
				As training officers	As observers			In Numbers	In Percen- tage (%)		
1	2	3	4	5	6	7	8	9	10	11	
1.	Andhra Pradesh	Statistical	584	-	-	1906	1782	1773	99	-	
		Agriculture		-	-					-	
2.	Assam	Statistical	14	14	4	129	129	127	98	-	
3.	Bihar	Revenue	2	-	-	9859	9859	6708	68	-	
		Statistical	4	-	-					-	
		Agriculture	1	-	-					-	
4	Chhattisgarh	Statistical/Agriculture	27	-	27	4172	4172	3329	80	-	
		Agriculture				2556	2556	2236	87		
5.	Goa	Agriculture (Kharif)	1	-	-	24	22	22	100	-	
		Agriculture (Rabi)	1	-	-	22	21	21	100	-	
6.	Gujarat	Agriculture	49	-	-	3207	2997	2886	96	-	
7.	Haryana %	Agriculture (Kharif)	35	21	35	719	719	691	96	21	
		Revenue (Kharif)	-	-	-	6	6	6	-	-	
		Agriculture (Rabi)	35	21	35	758	758	710	94	21	
		Revenue (Rabi)	-	-	-	52	49	46	94	-	
8.	Himachal Pradesh	Revenue (Kharif)	7	6	5	280	280	236	84	32	
		Agriculture (Kharif)	7	4	5	160	160	132	83	29	
		Revenue (Rabi)	7	1	10	364	364	315	87	64	
		Agriculture (Rabi)	7	8	3	138	138	116	84	85	
9.	Jammu & Kashmir	Revenue (Kharif)	21	-	-	2490	2057	1996	97	-	
		Revenue (Rabi)									
10.	Jharkhand	Agriculture	N.A.								
11.	Karnataka	Revenue	176	-	-	11388	11388	10293	90	-	
		Agriculture		-	-	1960	1960	1778	91	-	
		Rural Development, Horticulture & Panchayati Raj		-	-	9899	9899	8724	88		
12.	Kerala	Statistical	-	-	-	995	981	924	94	-	
13.	Madhya Pradesh %	Revenue	34	-	34	4407	4407	3863	88	-	
14.	Maharashtra	Revenue (Kharif)	34			3366	3366	2177	65	-	
		Zila Parishad (Kharif)				882	882	442	50	-	
		Agriculture (Kharif)				2134	2134	1228	58	-	
		Revenue (Rabi)	29			2929	2929	1741	59	-	
		Zila Parishad (Rabi)				744	744	397	53	-	
		Agriculture (Rabi)				2085	2085	1070	51	-	
15.	Meghalaya \$	Statistical	2	-	-	55	55	55	100	-	
16.	Odisha	Statistical	30	-	30	607	607	607	100	-	

Sl. No.	S T A T E	A G E N C Y	Number of Centres		Attendance of Primary Staff.					
			Total	Covered by		Total Strength	Total Called	Total Attended		Trained by NSSO officer
				As training officers	As observers			In Numbers	In Percen- tage (%)	
1	2	3	4	5	6	7	8	9	10	11
17.	Punjab	Agriculture (Kharif)	77	0	77	812	812	715	88	-
		Agriculture (Rabi)	77	0	77	718	718	598	83	-
18.	Rajasthan	Statistical (Kharif)	174	16	134	8512	8512	8512	100	-
		Statistical (Rabi)	98	0	98	4269	4269	4269	100	3356
19.	Tamil Nadu	Agriculture	37	37	37	842	842	788	94	-
20.	Telangana	Statistical	80	-	-	2664	2271	2173	96	-
		Agriculture								
21.	Uttarakhand	Revenue (Kharif)	65	-	-	1804	1804	979	54	0
		Revenue (Plain)	49	-	-	1342	1342	979	73	N.A.
		Revenue (Hills)	16	-	-	462	462	242	52	N.A.
22.	Uttar Pradesh	Revenue (Kharif)	-	-	-	-	-	-	-	-
		Revenue (Rabi)	59	17	59	1430	1430	1376	96	-
		Revenue (Zaid)								
		Cane Dev. Staff	-	-	-	-	-	-	-	-
		Cotton Dev. Staff								
23.	West Bengal %	Statistical	22	-	-	254	254	254	100	-
24.	Dadra & Nagar Haveli	Development & Planning	1	-	-	13	13	13	100	-
		Division Soil Conservation		-	-	10	10	10	100	-
		Agriculture Deptt.		-	-	3	3	3	100	
25.	Daman & Diu	Rural Development	2	-	-	8	8	8	100	-
		Revenue Department		-	-	6	6	6	100	-
		Statistical Department		-	-	-	-	-	-	-
26.	Puducherry	Statistical (Kharif)	2	-	2	22	10	10	100	-
		(Rabi-I)								
		(Rabi-II)								
Total			1866	145	739	91464	91430	76566	84	3608

Note: (i) : Figures in col. 10 indicate the percentage of col. 9 to col. 8.

(ii) % : Figure repeated from the year 2015-16.

(iii) \$ : Figure repeated from the year 2016-17.

**ANNEX III(a):SUPERVISION OF FIELD WORK-ALL CROPS (SEASON-WISE) UNDER CES 2018-19**

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experi- ments planned	Number & percentage of experiments Supervised by												
					State Statistical Department				Other State Department				NSSO				
					Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1.	Andhra Pradesh	Kharif	Food	9036	351	4	315	3	Not Applicable				299	3	299	3	
			Non-Food	4536	150	3	140	3					146	3	143	3	
			Comb.	13572	501	4	455	3					445	3	442	3	
			Food	7290	226	3	226	3					167	2	162	2	
			Non-Food	2212	40	2	40	2					40	2	40	2	
			Comb.	9502	266	3	266	3					207	2	202	2	
		Rabi	Total	23074	767	3	721	3					652	3	644	3	
			Food	5200	684	13	678	13					253	5	183	4	
			Non-Food	600	104	17	100	17					28	5	21	4	
			Comb.	5800	788	14	778	13					281	5	204	4	
2.	Assam	Kharif	Food	4200	560	13	558	13	Not Applicable				148	4	108	3	
			Non-Food	1250	160	13	154	12					52	4	48	4	
			Comb.	5450	720	13	712	13					200	4	156	3	
			Total	11250	1508	13	1490	13					481	4	360	3	
		Rabi	Food	85522	336	0	336	0	0	0	0	0	359	0	249	0	
			Non-Food	400	Not Available												
			Comb.	85922	336	0	336	0	0	0	0	0	359	0	249	0	
			Food	91378	330	0.4	330	0.4	0	0	0	0	278	0.3	230.0	0.3	
3.	Bihar	Kharif	Non-Food	1064	40	4	40	4	Not Available				34	3	32	3	
			Comb.	92442	370	0.4	370	0.4					312	0	262	0	
			Total	178364	706	0.4	706	0					671	0.4	511	0.3	
		Rabi	Food	3864	184	5	184	5	928	24	916	24	198	5	195	5	
			Non-Food	592	0	0	0	0	64	11	64	11	Not Available				
			Comb.	4456	184	4	184	4	992	22	980	22	198	4	195	4	
			Food	2224	104	5	104	5	370	17	368	17	80	4	80	4	
4.	Chhattisgarh	Kharif	Non-Food	644	66	10	66	10	112	17	112	17	70	11	66	10	
			Comb.	2868	170	6	170	6	482	17	480	17	150	5	146	5	
			Total	7324	354	5	354	5	1474	20	1460	20	348	5	341	5	
		Rabi	Food	488	65	13	10	2	Not Applicable								
			Non-Food	52	0	0	0	0									
			Comb.	540	65	7	10	2									
			Food	384	42	11	4	1									
5.	Goa @	Rabi	Non-Food	80	0	0	0	0	Not Applicable								
			Comb.	464	42	9	4	1									
			Total	1004	107	11	14	1									
		Kharif	Food	17193	5238	30	4974	29	13286	77	12974	75	266	2	238	1	
			Non-Food	21749	6065	28	5891	27	8707	40	7918	36	466	2	400	2	
			Comb.	38942	11303	29	10865	28	21993	56	20892	54	732	2	638	2	
			Food	36574	7331	20	6951	19	14291	39	13819	38	169	0.46	151	0.41	
6.	Gujarat	Rabi	Non-Food	3820	519	14	420	11	780	20	780	20	50	1	43	1	
			Comb.	40394	7850	19	7371	18	15071	37	14599	36	219	0.54	194	0.48	
			Total	79336	19153	24	18236	23	37064	47	35491	45	951	1	832	1	

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experi- ments planned	Number & percentage of experiments Supervised by															
					State Statistical Department						Other State Department						NSSO			
					Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17				
7.	Haryana *	Kharif	Food	4096	116	3	108	3	512	13	498	12	264	6	264	6				
			Non-Food	940	16	2	14	1	124	13	122	13	56	6	56	6				
			Comb.	5036	132	3	122	2	636	13	620	12	320	6	320	6				
		Rabi	Food	3278	56	2	54	2	416	13	402	12	280	9	280	9				
			Non-Food	1270	32	3	24	2	202	16	174	14	100	8	100	8				
			Comb.	4548	88	2	78	2	618	14	576	13	380	8	380	8				
			Total	9584	220	2	200	2	1254	13	1196	12	700	7	700	7				
8.	Himachal Pradesh **	Kharif	Food	4254	196	5	196	5	122	3	122	3	150	4	136	3				
			Non-Food						Not Planned											
			Comb.	4254	196	5	196	5	122	3	122	3	150	4	136	3				
		Rabi	Food	4052	218	5	218	5	78	2	78	2	149	4	135	3				
			Non-Food						Not Planned											
			Comb.	4052	218	5	218	5	78	2	78	2	149	4	135	3				
			Total	8306	414	5	414	5	200	2	200	2	299	4	271	3				
9.	Jammu & Kashmir	Kharif	Food	3178	224	7	160	5	Not Available						154	5	154	5		
			Non-Food						Not Available											
			Comb.	3178	224	7	160	5							154	5	154	5		
		Rabi	Food	2076	168	8	120	6							108	5	108	5		
			Non-Food	242			Not Available								Not Available					
			Comb.	2318	168	7	120	5							108	5	108	5		
			Total	5496	392	7	280	5							262	5	262	5		
10.	Jharkhand \$	Kharif	Food	28770	92	0.32	92	0.32							116	0.40	116	0.40		
			Non-Food	0			Not Available								Not Available					
			Comb.	28770	92	0.32	92	0.32							116	0.40	116	0.40		
		Rabi	Food	36210	86	0.24	86	0.24							76	0.21	76	0.21		
			Non-Food	7830			Not Available								20	0.26	20	0.26		
			Comb.	44040	86	0.20	86	0.20							96	0.22	96	0.22		
			Total	72810	178	0.24	178	0.24							212	0.29	212	0.29		
11.	Karnataka	Kharif	Food	65392	3440	5	3440	5	5942	9	5942	9	382	1	270	0				
			Non-Food	20942	755	4	755	4	1396	7	1396	7	123	1	80	0				
			Comb.	86334	4195	5	4195	5	7338	8	7338	8	505	1	350	0				
		Rabi	Food	40030	1650	4	1650	4	3430	9	3430	9	152	0.4	106	0.3				
			Non-Food	12644	227	2	227	2	433	3	433	3	103	1	38	0				
			Comb.	52674	1877	4	1877	4	3863	7	3863	7	255	0	144	0.3				
			Total	139008	6072	4	6072	4	11201	8	11201	8	760	1	494	0				
12.	Kerala	Kharif	Food	27922	9442	34	1742	6							370	1	365	1		
			Non-Food	2524	2141	85	0	0							50	2	50	2		
			Comb.	30446	11583	38	1742	6							420	1	415	1		
		Rabi	Food	1577	762	48	666	42							97	6	96	6		
			Non-Food	720	720	100	0	0												
			Comb.	2297	1482	65	666	29							97	4	96	4		
			Total	32743	13065	40	2408	7							517	2	511	2		

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experi- ments planned	Number & percentage of experiments Supervised by																	
					State Statistical Department				Other State Department				NSSO									
					Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17						
13.	Madhya Pradesh #	Kharif	Food	9268	45	0.5	45	0.5	1854	20	1854	20	367	4	355	4						
			Non-Food	6166	88	1.4	88	1.4	1883	31	1883	31	189	3	181	3						
			Comb.	15434	133	0.9	133	0.9	3737	24	3737	24	556	4	536	3						
		Rabi	Food	13240	169	1.3	169	1.3	5262	40	5262	40	331	3	315	2						
			Non-Food	2036	25	1	25	1	804	39	804	39	112	6	108	5						
			Comb.	15276	194	1.3	194	1.3	6066	40	6066	40	443	3	423	3						
		Total		30710	327	1.1	327	1.1	9803	32	9803	32	999	3	959	3						
14.	Maharashtra	Kharif	Food	42074	Not Available								487	1	233	1						
			Non-Food	18566									226	1	184	1						
			Comb.	60640									713	1	417	1						
		Rabi	Food	29526									310	1	210	1						
			Non-Food	2678									22	1	20	1						
			Comb.	32204									332	1	230	1						
		Total		92844									1045	1	647	1						
15.	Meghalaya @@	Kharif	Food	1978	95	5	71	4	11	1	11	1	Not Applicable									
			Non-Food	63	Not Available																	
			Comb.	2041	95	5	71	3	11	1	11	1										
		Rabi	Food	316	18	6	13	4	2	1	2	1										
			Non-Food	Not Available																		
			Comb.	316	18	6	13	4	2	1	2	1										
		Total		2357	113	5	84	4	13	1	13	1										
16.	Odisha	Kharif	Food	44068	3265	7	3265	7	18947	43	18947	43	648	1	374	1						
			Non-Food	2067	145	7	145	7	194	9	194	9	0	0	0	0	0					
			Comb.	46135	3410	7	3410	7	19141	41	19141	41	648	1	374	1						
		Rabi	Food	7321	574	8	574	8	1903	26	1903	26	158	2	88	1						
			Non-Food	3871	247	6	247	6	364	9	364	9	Not Available									
			Comb.	11192	821	7	821	7	2267	20	2267	20	158	1	88	1						
		Total		57327	4231	7	4231	7	21408	37	21408	37	806	1	462	1						
17.	Punjab	Kharif	Food	3044	233	8	223	7	530	17	505	17	307	10	302	10						
			Non-Food	676	8	1	8	1	64	9	64	9	72	11	72	11						
			Comb.	3720	241	6	231	6	594	16	569	15	379	10	374	10						
		Rabi	Food	2664	175	7	145	5	581	22	539	20	279	10	279	10						
			Non-Food	566	24	0	22	4	78	14	76	13	40	7	40	7						
			Comb.	3230	199	6	167	5	659	20	615	19	319	10	319	10						
		Total		6950	440	6	398	6	1253	18	1184	17	698	10	693	10						
18.	Rajasthan ***	Kharif	Food	103538	1856	2	1336	1	93139	90	65318	63	351	0.34	335	0.32						
			Non-Food	27796	426	2	356	1	23843	86	16167	58	167	0.60	140	0.50						
			Comb.	131334	2282	2	1692	1	116982	89	81485	62	518	0.39	475	0.36						
		Rabi	Food	71132	1169	2	1169	2	42324	60	42324	60	345	0.49	318	0.45						
			Non-Food	35912	531	1	531	1	20762	58	20762	58	90	0.25	86	0.24						
			Comb.	107044	1700	2	1700	2	63086	59	63086	59	435	0.41	404	0.38						
		Total		238378	3982	2	3392	1	180068	76	144571	61	953	0.40	879	0.37						

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experi- ments planned	Number & percentage of experiments Supervised by																			
					State Statistical Department				Other State Department				NSSO											
					Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17								
19.	Tamil Nadu	Kharif	Food	4168	3576	86	3576	86	264	6	264	6	321	8	311	7								
			Non-Food	1584	1378	87	1378	87	79	5	79	5	98	6	88	6								
			Comb.	5752	4954	86	4954	86	343	6	343	6	419	7	399	7								
		Rabi	Food	2572	2237	87	2237	87	129	5	129	5	160	6	160	6								
			Non-Food	1176	1024	87	1024	87	59	5	59	5	100	9	100	9								
			Comb.	3748	3261	87	3261	87	188	5	188	5	260	7	205	5								
			Total	9500	8215	86	8215	86	531	6	531	6	679	7	604	6								
20.	Telangana	Kharif	Food	9182	1445	16	1445	16	Not Available						212	2	205	2						
			Non-Food	2576	506	20	506	20							98	4	94	4						
			Comb.	11758	1951	17	1951	17							310	3	299	3						
		Rabi	Food	5420	1244	23	1244	23							104	2	91	2						
			Non-Food	1382	306	22	306	22							Not Available									
			Comb.	6802	1550	23	1550	23							104	2	91	1						
			Total	18560	3501	19	3501	19							414	2	390	2						
21.	Uttarakhand	Kharif	Food	4500	294	7	294	7	664	15	664	15	78	2	77	2								
			Non-Food						Not Available															
			Comb.	4500	294	7	294	7	664	15	664	15	78	2	77	2								
		Rabi	Food	3478	336	10	336	10	774	22	774	22.3	60	2	60	2								
			Non-Food						Not Available															
			Comb.	3478	336	10	336	10	774	22	774	22	60	2	60	2								
			Total	7978	630	8	630	8	1438	18	1438	18	138	2	137	2								
22.	Uttar Pradesh	Kharif	Food	302266	Not Available								1176	0.4	1164	0.4								
			Non-Food	23500									34	0.14	32	0.14								
			Comb.	325766									1210	0.37	1196	0.37								
		Rabi	Food	289450									796	0.28	786	0.27								
			Non-Food	29084									99	0.34	93	0.32								
			Comb.	318534									895	0.28	879	0.28								
			Total	644300									2105	0.33	2075	0.32								
23.	West Bengal*	Kharif	Food	17432	1273	7	1273	7	97	0.6	97	0.6	260	1	257	1								
			Non-Food	3132	311	10	311	10	16	0.5	16	0.5	1437	46	1311	42								
			Comb.	20564	1584	8	1584	8	113	0.5	113	0.5	1697	8	1568	8								
		Rabi	Food	19399	1234	6	1234	6	16	0.1	16	0.1	140	1	140	1								
			Non-Food	8987	937	10	937	10	10	0.1	10	0.1	0	0	0	0								
			Comb.	28386	2171	8	2171	8	26	0.1	26	0.1	140	0	140	0								
			Total	48950	3755	8	3755	8	139	0.3	139	0.3	1837	4	1708	3								
24.	Dadra & Nagar Haveli @	Kharif	Food	92	44	48	44	48	48	52	48	52.2	Not Applicable											
			Non-Food				No Planning				No Planning													
			Comb.	92	44	48	44	48	48	52	48	52.2												
		Rabi	Food				No Planning				No Planning													
			Non-Food																					
			Comb.																					
			Total		92	44	48	44	48	48	52	48	52											

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experi- ments planned	Number & percentage of experiments Supervised by												
					State Statistical Department				Other State Department				NSSO				
					Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
25. Daman & Diu @		Kharif	Food	28	8	29	8	29	20	71	20	71	Not Planning				
			Non-Food														
			Comb.	28	8	29	8	29	20	71	20	71					
		Rabi	Food										No Planning				
			Non-Food														
			Comb.														
		Total		28	8	29	8	29	20	71	20	71	Not Applicable				
26. Puducherry		Kharif	Food	94	94	100	94	100									
			Non-Food						Not Available				Not Available				
			Comb.	94	94	100	94	100									
		Rabi	Food	210	210	100	210	100									
			Non-Food						Not Available				Not Available				
			Comb.	210	210	100	210	100									
		Total		304	304	100	304	100									
		TOTAL %	Kharif	Food	796647	32596	7	23909	5	136364	37	108180	29	7028	1	6092	1
				Non-Food	138461	12093	13	9692	10	36370	43	27903	33	3190	2	2852	2
				Comb.	935108	44689	8	33601	6	172734	38	136083	30	10218	1	8944	1
			Rabi	Food	674001	18899	5	18298	5	69576	24	69046	23	4397	1	3989	1
				Non-Food	117468	4898	6	4063	5	23604	34	23574	34	932	1	834	1
				Comb.	791469	23797	6	22361	5	93180	26	92620	25	5329	1	4823	1
		Grand Total		1726577	68486	7	55962	6	265914	33	228703	28	15547	1	13767	1	

## Note :-

- (i) % : Percentage figures given under Col.7, 9, 11, 13, 15 and 17 are based on total figures in col. 5. The data in column 5 have been excluded for percentage calculation at all India level where data under any of columns 6, 8, 10, 12, 14 and 16 has not been received from concerned States.
- (ii) %% : Figures repeated for the year 2015-16.
- (iii) # : Figure repeated from the year 2013-14 in respect for crops Banana, Onion & Papaya and all other crops 2015-16 for Madhya Pradesh.
- (iv) \$\$ : Data repeated from year 2011-12 for crops Linseed, Potato, R&M and Saffron, all other crop repeated from the year 2014-15.
- (v) @ : ICS Scheme is not operational in Goa, Dadar Nagr Haveli and Daman & Diu.
- (vi). % : Data of crops Greengram, Moth, Blackgram, Onion, Banana, Garlic & Tobacco and Data of State Statistical Department & Other State Department repeated from the year 2015-16.
- (vii) \* : Data repeated from the year 2015-16.
- (viii) \*\* : Data of State Statistical Department and Other State Department repeated from the year 2015-16.
- (ix) \*\*\* : Data of State Statistical Department and Other State Department repeated for Rabi season from the year 2016-17.
- (x) @@ : Data of State Statistical Department and Other State Department repeated from the year 2016-17 and ICS Scheme is not operational In Meghalaya.
- (xi) \$ : Data of State Statistical Department and Other State Department repeated from the year 2016-17.

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2018-19**

Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by											
				State Statistical Department				Other State Department				N.S.S.O.			
			Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Paddy															
1.	Andhra Pradesh	Kharif	3804	160	4	160	4	Not Available				158	4	158	4
		Rabi	2994	120	4	120	4					107	4	105	4
2.	Assam	Aut.	1500	154	10	154	10	Not Available				100	7	46	3
		Wint.	3000	446	15	440	15					113	4	113	4
		Sum.	2000	222	11	222	11					32	2	32	2
3.	Bihar	Bha.	952	52	5	52	5	Not Available				40	4	23	2
		Agh.	41245	244	1	244	1	0	0	0	0	240	0.6	185	0.4
		Gar.	440	24	5	24	5	Not Available				36	8	18	4
4.	Chhattisgarh		2586	80	3	80	3	720	28	708	27	79	3	77	3
5.	Goa @	Kharif	192	44	23	8	4	Not Available				Not covered in I.C.S.			
		Rabi	192	42	22	4	2					Not covered in I.C.S.			
6.	Gujarat	Kharif	7953	1267	16	1267	16	4085	51	4085	51	78	1.0	70	0.9
		Sum.						Not Planned							
7.	Haryana *		990	32	3	30	3	208	21	202	20	90	9	90	9
8.	Himachal Pradesh **		1626	74	5	74	5	36	2	36	2	60	4	54	3
9.	Jammu & Kashmir		1330	100	8	70	5	Not Available				68	5	68	5
10.	Jharkhand \$\$	Bha.	600	20	3	20	3	Not Available				20	3	20	3
		Agh.	17520	52	0.3	52	0.30					76	0.4	76	0.4
11.	Karnataka	Kharif	13020	872	7	872	7	1329	10	1329	10	112	1	93	1
		Rabi	1482	80	5	80	5	118	8	118	8	Not covered in I.C.S.			
		Sum.	3540	131	4	131	4	228	6	228	6	18	1	16	0.5
12.	Kerala	Aut.	2352	1128	48	893	38	Not Available				100	4	95	4
		Wint.	3268	1564	48	1308	40					100	3	100	3
		Sum.	1577	762	48	666	42					97	6	96	6
13.	Madhya Pradesh #		2760	14	0.5	14	0.5	722	26	722	26	94	3	93	3
14.	Maharashtra	Kharif	4064	Not Available								58	1	47	1
		Sum.	522									Not covered in I.C.S.			
15.	Meghalaya @	Aut.	342	18	5	14	4	2	1	2	1	Not covered in I.C.S.			
		Wint.	892	42	5	31	3	5	1	5	1	Not covered in I.C.S.			
16.	Odisha	Aut.	3361	375	11	375	11	2186	65	2186	65	218	6	50	1
		Wint.	27374	1655	6	1655	6	15768	58	15768	58	270	1	164	1
		Sum.	4673	405	9	405	9	1794	38	1794	38	120	3	50	1
17.	Punjab		1980	166	8	156	8	422	21	401	20	190	10	187	9
18.	Rajasthan ***	Kharif	3580	87	2	54	2	2902	81	1796	50	Not covered in I.C.S.			
19.	Tamil Nadu	K/K/S	428	373	87	373	87	21	5	21	5	36	8	36	8
		S/T/P	1260	1096	87	1096	87	63	5	63	5	55	4	55	4
		N/K	300	261	87	261	87	15	5	15	5	35	12	35	12
20.	Telangana	Kharif	2290	444	19	444	19	0	0	0	0	65	3	61	3
		Rabi	2324	510	22	510	22	0	0	0	0	77	3	66	3
21.	Uttarakhand		2800	204	7	204	7	492	18	492	18	42	2	41	1
22.	Uttar Pradesh		188454	Not Available								605	0.3	604	0.3
23.	West Bengal *	Aus.	2281	297	13	297	13	16	0.7	16	0.7	100	4	99	4
		Aman	13308	858	6	858	6	81	0.6	81	0.6	160	1	158	1
		Sum.	11674	534	5	534	5	5	0.04	5	0.04	140	1	140	1
24.	Dadra and Nagar Haveli @		70	34	49	34	44	44	56	44	56	Not covered in I.C.S.			
25.	Daman & Diu @	Kharif	20	0	0	0	0	20	100	20	100	Not covered in I.C.S.			
26.	Puducherry	I	94	94	100	94	100	Not Available				10	11	10	11
		II	140	140	100	140	100					10	7	10	7
		III	70	70	100	70	100					10	14	10	14
Total			389224	15347	4	14590	4	31282	8	30137	8	4019	1.0	3451	0.887

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2018-19**

Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by												
				State Statistical Department						Other State Department				N.S.S.O.		
				Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
<b>2. JOWAR.</b>																
1.	Andhra Pradesh	Kharif	178	Not Available												
		Rabi	482													
2.	Chhattisgarh		70	0	0	0	0	10	14	10	14	Not covered in I.C.S.				
3.	Gujarat	Kharif	320	55	17	29	9	237	74	237	74	Not covered in I.C.S.				
		Rabi		Not Planned												
4.	Karnataka	Kharif	3604	87	2	87	2	189	5	189	5	45	1	26	0.72	
		Rabi	10270	451	4	451	4	1225	12	1225	12	55	1	37	0.36	
		Sum.	0	0	0	0	0	0	0	0	0	Not covered in I.C.S.				
5.	Madhya Pradesh #		1746	12	0.7	12	0.7	442	25	442	25	88	5	80	5	
6.	Maharashtra	Kharif	3804	Not Available												
		Rabi	9168													
7.	Rajasthan ***	Kharif	10500	199	2	174	2	9886	94	7517	72	60	0.57	60	0.57	
8.	Tamil Nadu	Kharif	440	383	87	383	87	22	5	22	5	30	7	30	7	
		Rabi	640	557	87	557	87	32	5	32	5	26	4	26	4	
9.	Telangana	Kharif	652	118	18	118	18	0	0	0	0	36	6	36	6	
		Rabi	368	124	34	124	34	0	0	0	0	27	7	25	7	
10.	Uttar Pradesh		8528	Not Available												
		Total	50770	1986	4	1935	4	12043	24	9674	19	597	1	466	1	
<b>3. BAJRA.</b>																
1.	Andhra Pradesh.		488	40	8	40	8	Not Planned				38	8	38	8	
2.	Gujarat	Kharif	1440	297	21	288	20	505	35	505	35	106	7	101	7	
		Sum.	9465	486	5	486	5	769	8	769	8	Not Available				
3.	Haryana *		1532	44	3	40	3	186	12	182	12	104	7	104	7	
4.	Karnataka	Kharif	3906	156	4	156	4	300	8	300	8	45	1	22	1	
5.	Madhya Pradesh #		320	1	0.3	1	0.3	70	22	70	22	Not covered in I.C.S.				
6.	Maharashtra	Kharif	3364	Not Available												
7.	Rajasthan ***		25752	408	2	304	1	22770	88	16428	64	58	0.2	56	0.2	
8.	Tamil Nadu	Kharif	240	209	87	209	87	12	5	12	5	40	17	36	15	
		Rabi	204	178	87	178	87	10	5	10	5	Not covered in I.C.S.				
9.	Telangana		46	12	26	12	26	0	0	0	0	0	0	0	0	
10.	Uttar Pradesh		36240	Not Available												
11.	Daman & Diu @		8	8	100	8	100	0	0	0	0	Not covered in I.C.S.				
		Total	83005	1839	2	1722	2	24622	30	18276	22	591	0.7	530	0.6	
<b>4. MAIZE.</b>																
1.	Andhra Pradesh	Kharif	234	8	3	8	3	Not Available				Not covered in I.C.S.				
		Rabi	554	9	1	9	1									
2.	Bihar	Bha.	41245	40	0	40	0	Not Available				40	0.1	15	0.04	
		Rabi	41265	Not Available								Not covered in I.C.S.				
3.	Chhattisgarh		484	40	8	40	8	76	16	76	16	40	8	40	8	
4.	Gujarat		3540	1818	51	1589	44.89	1445	41	1445	41	36	1	32	0.9	
5.	Haryana *		144	Not Available				8	6	8	6	20	14	20	14	
6.	Himachal Pradesh **		2628	122	5	122	5	86	3	86	3	90	3	82	3	
7.	Jammu & Kashmir		1392	124	9	90	6	Not Available				86	6	86	6	
8.	Jharkhand \$\$	Bha.	7830	20	0.26	20	0.26	Not Available				20	0.3	20	0.3	
9.	Karnataka	Kharif	12924	703	5	703	5	1067	8	1067	8	40	0.3	34	0.3	
		Rabi	3326	108	3	108	3	149	4	149	4	Not covered in I.C.S.				
		Sum.	200	10	5	10	5	14	7	14	7					
10.	Madhya Pradesh #		1928	10	0.5	10	0.5	394	20	394	20	77	4	77	4	
11.	Maharashtra	Kharif	726	Not Available												
		Rabi	1158													

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2018-19**

Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by															
				State Statistical Department				Other State Department				N.S.S.O.							
				Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
12.	Odisha	Aut.	2902	358	12	358	12	452	16	452	16	40	1	40	1				
		Wint.	25	1	4	1	4	2	8	2	8	Not covered in I.C.S.							
		Sum.	296	43	15	43	15	10	3	10	3								
13.	Punjab		360	40	11	40	11	74	53	70	19	48	13	48	13				
14.	Rajasthan ***	Kharif	11656	188	2	156	1	11705	100	7841	67	50	0.4	46	0.4				
15	Tamil Nadu	Kharif	256	223	87	223	87	13	5	13	5	37	14	37	14				
		Rabi	176	153	87	153	87	9	5	9	5								
16	Telangana	Kharif	2082	326	16	326	16	0	0	0	0	40	2	40	2				
		Rabi	1636	370	23	370	23	0	0	0	0	0	0	0	0				
17.	Uttar Pradesh	Kharif	29712	Not Available								131	0	129	0				
		Rabi	80									Not covered in I.C.S.							
18.	West Bengal *		634	66	10	66	10	Not Available											
Total			169933	4780	3	4485	3	15504	9	11636	7	795	0.5	746	0.4				
5. RAGI.																			
1.	Andhra Pradesh	Kharif	200	6	1	6	1	Not Available				Not covered in I.C.S.							
		Rabi	170	6	2	6	2												
2.	Bihar	Bha.	200	Not Available								Not covered in I.C.S.							
3.	Goa @			Not Available								Not covered in I.C.S.							
4.	Gujarat		100	20	20	20	20	80	80	80	80	Not covered in I.C.S.							
5.	Jharkhand \$\$		450	Not Available								Not covered in I.C.S.							
6.	Karnataka	Kharif	7748	562	7	562	7	818	11	818	11	38	0.5	30	0.4				
		Rabi	1452	28	2	28	2	74	5	74	5	Not covered in I.C.S.							
		Sum.	300	14	5	14	5	19	6	19	6								
7.	Maharashtra		890	Not Available															
8.	Odisha	Aut.	819	73	9	73	9	6	1	6	1	Not covered in I.C.S.							
		Wint.	615	80	13	80	13	0	0	0	0								
		Sum.	65	2	3	2	3	0	0	0	0								
9.	Tamil Nadu	Kharif	160	139	87	139	87	8	5	8	5	40	25	40	25				
		Rabi	200	174	87	174	87	10	5	10	5								
10.	Telangana		30	8	27	8	27	0	0	0	0	Not covered in I.C.S.							
11.	Uttarakhand		1110	88	8	88	8	144	13	144	13	36	3	36	3				
12.	Dadra and Nagar Haveli @		22	10	45	10	45	4	55	4	55	Not covered in I.C.S.							
		Total	14531	1210	8	1210	8	1163	8	1163	8	114	1	106	1				
6. WHEAT.																			
1.	Assam		700	82	12	80	11	Not Available				50	7	24	3				
2.	Bihar		41265	226	1	226	1	0	0	0	0	205	0	175	0				
3.	Chhattisgarh		872	40	5	40	5	158	18	158	18	40	5	40	5				
4.	Gujarat		17511	3039	17	2904	17	4800	27	4800	27	135	0.77	123	0.70				
5.	Haryana *		2200	52	2	50	2	310	14	298	14	180	8	180	8				
6.	Himachal Pradesh **		2794	166	6	166	6	60	2	60	2	109	4	95	3				
7.	Jammu & Kashmir		1908	168	9	120	6	Not Available				108	6	108	6				
8.	Jharkhand \$\$		17520	32	0.2	32	0.2	Not Available				38	0.22	38	0.22				
9.	Karnataka		3854	148	4	148	4	344	9	344	9	45	1	27	0.70				
10.	Madhya Pradesh #		5830	81	1.4	81	1.4	2826	48	2826	48	215	4	203	3				
11.	Maharashtra		8210	Not Available								100	1	71	1				
12.	Odisha	Sum.	80	3	4	3	4	4	0	4	0								
13.	Punjab		2326	156	7	126	5	550	24	511	22	219	9	219	9				
14.	Rajasthan ***		39648	621	1.6	621	1.6	25202	64	25202	64	130	0.3	123	0.3				
15.	Uttarakhand		2800	304	11	304	11	702	25	702	25	60	2	60	2				
16.	Uttar Pradesh		229076	Not Available								560	0.24	553	0.24				
17.	West Bengal *		2528	374	15	374	15	10	0.4	10	0.4	110	4	107	4				
Total			379122	5492	1	5275	1	34966	9	34915	9	2304	0.61	2146	0.566				
7. BARLEY																			
1.	Bihar		300	Not Available								Not covered in I.C.S.							

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Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by															
				State Statistical Department				Other State Department				N.S.S.O.							
			Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
2.	Chhattisgarh		24	Not Available								Not covered in I.C.S.							
3.	Haryana *		516	4	1	4	1	40	8	40	8	30	6	30	6				
4.	Himachal Pradesh **		1258	52	4	52	4	18	1	18	1	40	3	40	3				
5.	Jharkhand \$\$		Not Available																
6.	Madhya Pradesh #		536	13	2	13	2	147	27	147	27	Not covered in I.C.S.							
7.	Punjab		242	17	7	17	7	27	11	25	10	30	12	30	12				
8.	Rajasthan ***		5948	254	4	254	4	3876	65	3876	65	80	1	80	1				
9.	Uttarakhand		678	32	5	32	5	72	11	72	11	Not covered in I.C.S.							
10.	Uttar Pradesh		696	Not Available															
11.	West Bengal *		Not Available																
Total			10198	372	4	372	4	4180	41	4178	41	180	2	180	2				
<b>8.GRAM (BENGALGRAM)</b>																			
1.	Andhra Pradesh		1328	60	5	60	5	Not Available				60	5	57	4				
2.	Bihar		772	40	5	40	5	0	0	0	0	37	5	37	5				
3.	Chhattisgarh		538	38	7	38	7	122	23	120	22	40	7	40	7				
4.	Gujarat		1895	288	15	288	15	412	22	412	22	34	2	28	1				
5.	Haryana *		562	Not Available				66	12	64	11	70	12	70	12				
6.	Jharkhand \$\$		7830	16	0.20	16	0.20	Not Available				18	0.23	18	0.23				
7.	Karnataka		9402	399	4	399	4	802	9	802	9	34	0.36	26	0.28				
8.	Madhya Pradesh #		5330	67	1	67	1	2223	42	2223	42	116	2	112	2				
9.	Maharashtra		10468	Not Available								83	1	64	1				
10.	Punjab		96	2	2	2	2	4	4	3	3	30	31	30	31				
11.	Rajasthan ***		14824	88	1	88	1	7724	52	7724	52	120	0.81	100	0.67				
12.	Telangana	Rabi	694	138	20	138	20	0	0	0	0	0	0	0	0				
13.	Uttar Pradesh		12918	Not Available								48	0.4	48	0.4				
14.	West Bengal *		725	33	5	33	5	Not Available				Not covered in I.C.S.							
Total			67382	1169	2	1169	2	11353	17	11348	17	690	1	630	0.935				
<b>9.REDGRAM (TUR/ARHAR)</b>																			
1.	Andhra Pradesh		1148	50	4	48	4	Not Available				48	4	48	4				
2.	Bihar	Rabi	616	40	6	40	6	Not Available											
3.	Chhattisgarh		462	24	6	24	6	64	14	64	14	39	8	38	8				
4.	Gujarat		1580	514	33	514	33	589	37	589	37	46	3	35	2				
5.	Haryana *		360	8	2	8	2	40	11	38	11	Not covered in I.C.S.							
6.	Jharkhand \$\$	Rabi	660	18	3	18	3	Not Available				20	3	20	3				
7.	Karnataka		7390	383	5	383	5	820	11	820	11	38	1	34	0				
8.	Madhya Pradesh #		1650	8	0.5	8	0.5	180	11	180	11	70	4	69	4				
9.	Maharashtra		6210	Not Available								72	1	59	1				
10.	Tamil Nadu		336	292	87	292	87	17	5	17	5	Not covered in I.C.S.							
11.	Telangana		2166	308	14	308	14	0	0	0	0	33	3	30	3				
12.	Uttar Pradesh		11718	Not Available								43	0.37	43	0.37				
13.	West Bengal *	Rabi	127	11	9	11	9	Not Available											
Total			34423	1656	5	1654	5	1710	5	1708	5	409	1	376	1				
<b>10.GREENGGRAM (MOONG)</b>																			
1.	Andhra Pradesh	Kharif	348	5	1	5	1	Not Available				Not covered in I.C.S.							
		Rabi	402	8	1	8	1												
2.	Bihar	Kharif	260	Not Available								Not covered in I.C.S.							
		Rabi	504																
3.	Gujarat	Kharif	760	Not Available								Not covered in I.C.S.							
		Sum.	220																
4.	Karnataka	Kharif	3900	196	5	196	5	420	11	420	11	30	0.8	6	0.2				
		Rabi	110	7	6	7	6	12	11	12	11	Not covered in I.C.S.							

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Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by											
				State Statistical Department				Other State Department				N.S.S.O.			
			Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
5.	Maharashtra	Kharif	6186	Not Available								98	2	2	0.0
6.	Odisha	Aut.	524	71	14	71	14	21	4	21	4	Not covered in I.C.S.			
		Wint.	1258	86	7	86	7	29	2	29	2				
		Sum.	1746	99	6	99	6	81	5	81	5	38	2	38	2
7.	Rajasthan ***	Kharif	15212	248	2	190	1	13434	88	9312	61	50	32	47	32
8.	Tamil Nadu	Kharif	132	114	86	114	86	7	5	7	5	16	12	16	12
		Rabi	308	268	87	268	87	15	5	15	5	35	11	35	11
9.	Telangana	Kharif	974	176	18	176	18	0	0	0	0	38	4	38	4
		Rabi	156	36	23	36	23	0	0	0	0	0	0	0	0
10.	Uttar Pradesh	Kharif	2316	Not Available								Not covered in I.C.S.			
		Zaid	606									34	6	34	6
11.	West Bengal *	Sum.	697	74	11	74	11	Not Available				Not covered in I.C.S.			
	Total		36619	1388	4	1330	4	14019	38	9897	27	339	0.93	216	0.59

**11. BLACKGRAM (URD/MATHIKALAI)**

1.	Andhra Pradesh	Kharif	310	5	2	5	2	Not Available				Not covered in I.C.S.							
		Rabi	634	8	1	8	1												
2.	Assam	Rabi	500	94	19	94	19					30	6	20	4				
3.	Gujarat	Kharif	1320	Not Available								Not covered in I.C.S.							
		Sum.	100																
4.	Jharkhand \$\$		510	Not Available															
5.	Karnataka	Kharif	1290	71	6	71	6	171	13	171	13								
		Rabi	130	8	6	8	6	10	8	10	8								
6.	Maharashtra	Kharif	4784	Not Available								74	2	17	0				
7.	Odisha	Aut.	731	44	6	44	6	71	10	71	10	Not covered in I.C.S.							
		Wint.	1903	141	7	141	7	58	3	58	3	40	2	40	2				
		Sum.	447	19	4	19	4	14	3	14	3	Not covered in I.C.S.							
8.	Rajasthan ***	Kharif	7348	121	2	94	1	4837	66	3597	49	40	0.5	39	0.5				
9.	Tamil Nadu	Kharif	112	97	87	97	87	6	5	6	5	36	32	30	27				
		Rabi	312	271	87	271	87	16	5	16	5	32	10	32	10				
10.	Telangana	Kharif	334	2	1	2	1	0	0	0	0	0	0	0	0				
		Rabi	104	26	25	26	25	0	0	0	0	0	0	0	0				
11.	Uttar Pradesh	Kharif	15656	Not Available								56	0.4	56	0.4				
		Zaid	710									34	5	33	5				
12.	West Bengal *		1209	52	4	52	4	Not Available											
	Total		38444	959	2	932	2	5183	13	3943	10	342	0.9	267	0.695				

**12. LAKH (KHESARI)**

1.	Bihar		448	Not Available								Not covered in I.C.S.			
2.	Chhattisgarh		574	26	0	26	0	90	16	90	16				
3.	Madhya Pradesh #		220	8	4	8	4	66	30	66	30				
4.	West Bengal		358	11	3	11	3	Not Available							
	Total		1600	45	3	45	3	156	10	156	10				

**13. MASUR**

1.	Bihar		980	Not Available								Not covered in I.C.S.			
2.	Jharkhand \$\$		720												
3.	Rajasthan ***		1120	21	2	21	2	298	27	298	27	15	0.1	15	0.1
4.	Uttar Pradesh		14800	Not Available								60	0.4	60	0.4
5.	West Bengal *		2537	152	6	152	6	1	0.1	1	0.1	Not covered in I.C.S.			
	Total		20157	173	1	173	1	299	1	299	1	75	0.4	75	0.4

**14. HORSEGRAM (KULTHI)**

1.	Andhra Pradesh	Kharif	120	5	4	5	4	Not Available				Not covered in I.C.S.			
		Rabi	270	8	3	8	2								

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Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by												
				State Statistical Department				Other State Department				N.S.S.O.				
			Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2.	Karnataka	Kharif	2650	74	3	74	3	159	6	159	6	Not covered in I.C.S.				
		Rabi	4644	192	4	192	4	347	7	347	7					
3.	Odisha	Wint.	2460	185	8	185	8	87	4	87	4	40	2	40	2	
		Sum.	14	3	21	3	21	0	4	0	4	Not covered in I.C.S.				
4.	Tamil Nadu		320	278	87	278	87	16	5	16	5	32	10	32	10	
5	Telangana	Kharif	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Rabi	10	0	0	0	0	0	0	0	0	0	0	0	0	
Total			10488	745	7	745	7	609	6	609	6	72	1	72	1	
15. PEAS																
1	Jharkhand \$\$											Not Available				
2	Uttar Pradesh		7368									Not Available				
3	West Bengal *		314	7	2	7	2									
Total			7682	7	0	7	0					Not Available				
16. MOTH																
1.	Gujarat	Kharif	180									Not Available				
2.	Rajasthan ***	Kharif	6620	263	4	104	2	5863	89	3910	59	60	1	56	1	
Total			6800	263	4	104	2	5863	86	3910	58	60	1	56	1	
17. CHOWLA																
1.	Rajasthan ***	Kharif	1868	64	3	36	2	2098	112	1308	70	Not covered in I.C.S.				
18. GUAR																
1.	Gujarat											Not Planned				
2	Rajasthan ***		20552	258	1	208	1	19343	94	13361	65	Not covered in I.C.S.				
Total			20552	258	1	208	1	19343	94	13361	65.01					
19. SAWAN (JHANGORA)																
1.	Uttarakhand		590	2	0.3	2	0.3	28	5	28	5	Not covered in I.C.S.				
2	Uttar Pradesh	Kharif	88													
		Zaid	20													
Total			698	2	0.3	2	0.3	28	4	28	4					
20. KORRA																
1.	Andhra Pradesh		204	4	1	4	1					Not Available				
2	Telangana		20	3	15	3	15	0	0	0	0	Not covered in I.C.S.				
Total			224	7	3	7	3	0	0	0	0	Not covered in I.C.S.				
21. KODON-KUTKI (KODRA)																
1.	Chhattisgarh		262	40	15	40	15	58	22	58	22	40	15	40	15	
2.	Madhya Pradesh #		864					46	5	46	5	38	4	36	4	
3.	Uttar Pradesh (Kodon)		78									Not Available				
Total			1204	40	3	40	3	104	9	104	9	78	6	76	6	
22. NAVANE																
1.	Karnataka		750	10	1	10	1	19	3	19	3	Not covered in I.C.S.				
23. SAVE																
1.	Karnataka		340	5	1	5	1	26	8	26	8	Not covered in I.C.S.				
24. SAMAI																
1.	Tamil Nadu		100	95	95	95	95	5	5	5	5	Not covered in I.C.S.				
25. VARAGU																
1.	Tamil Nadu		124	118	95	118	95	6	5	6	5	Not covered in I.C.S.				
26. SUGARCANE																
1.	Andhra Pradesh		1602	60	4	26	2	Not Available				55	3	55	3	
2.	Assam		700	84	12	84	12					40	6	24	3	
3.	Bihar		800	0	0	0	0					39	5	26	3	
4.	Goa @		104	21	20	2	2	Not Planned				Not covered in I.C.S.				
5.	Haryana *		1070	32	3	30	3	70	7	68	6	50	5	50	5	

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Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by																		
				State Statistical Department						Other State Department				N.S.S.O.								
				Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16							
6	Jharkhand \$\$		240	Not Available												Not covered in I.C.S.						
7.	Karnataka		810	51	6	51	6	90	11	90	11	34	4	25	3							
8.	Kerala		45	22	49	Not Available						Not covered in I.C.S.										
9.	Maharashtra		12046	Not Available												54 0 33 0						
10.	Odisha	Wint.	231	15	6	15	6	5	2	5	2	Not covered in I.C.S.										
11.	Punjab		704	27	3.8	27	3.8	34	5	34	5	69	10	67	10							
12.	Rajasthan ***		450	20	4	16	4	301	67	248	55	33	7	31	7							
13.	Tamil Nadu		468	340	73	340	73	78	17	78	17	31	7	31	7							
14.	Telangana		208	24	12	24	12	0	0	0	0	0	0	0	0							
15.	Uttar Pradesh		9476	Not Available												169 2 163 2						
16.	West Bengal *	Rabi	439	38	9	38	9	Not Available														
Total			29393	734	2	653	2	578	2	523	2	574	2	505	2							
27. COCOA																						
1.	Kerala		797	474	59	Not Available						Not covered in I.C.S.										
28. CHILLIES.																						
1.	Andhra Pradesh	Kharif	400	8	2	8	2	Not Available								Not covered in I.C.S.						
		Rabi	402	7	2	7	2															
2.	Bihar		340	Not Available																		
3.	Chhattisgarh		16	0	0	0	0	0	0	0	0	0	0	0	0							
4.	Karnataka	Kharif	800	42	5	42	5	54	7	54	7											
		Rabi	0	0	0	0	0	0	0	0	0											
		Sum.	0	0	0	0	0	0	0	0	0											
5.	Madhya Pradesh #		80	Not Available																		
6.	Telangana	Kharif	380	24	6	24	6	0	0	0	0											
		Rabi	128	40	31	40	31	0	0	0	0											
Total			2546	121	5	121	5	54	2	54	2											
29. CUMIN																						
1.	Gujarat		4008	266	7	156	4	663	17	663	17											
2.	Rajasthan ***		4908	20	0.41	20	0.41	2392	49	2392	49											
Total			8916	286	3	176	2	3055	34	3055	34											
30. FENNEL																						
1.	Gujarat*		400	47	12	47	12	242	61	242	61	Not covered in I.C.S.										
31. ARECANUT																						
1.	Kerala		1620	1433	88	Not Available						40	2	40	2							
2.	Maharashtra			Not Available																		
Total			1620	1433	88	Not Available						40	2	40	2							
32. PEPPER																						
1.	Kerala		1601	380	24	Not Available						40	2	40	2							
33. SAFFRON																						
1.	Jammu & Kashmir		114	Not Available				Not Available				Not covered in I.C.S.										
34. TURMERIC																						
1.	Karnataka		390	18	5	18	5	33	8	33	8											
2.	Kerala		1548	263	17			Not Available														
Total			1938	281	14	18	1	33	2	33	2											
35. GINGER																						
1.	Kerala		1411	243	17	Not Available																
2.	Meghalaya @		744	35	5	26	3	4	1	4	1											
Total			2155	278	13	26	1	4	0.2	4	0.2											

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Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by																		
				State Statistical Department						Other State Department				N.S.S.O.								
				Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16							
<b>36. GARLIC</b>																						
1.	Gujarat	Rabi	220		Not Available						Not covered in I.C.S.											
<b>37. CORIANDER</b>																						
1.	Rajasthan ***		3184	138	4	138	4	1887	59	1887	59	Not covered in I.C.S.										
<b>38. LICHI</b>																						
1.	Bihar		300		Not Available						Not covered in I.C.S.											
<b>39. BANANA</b>																						
1.	Bihar		500		Not Available																	
2	Gujarat		280		Not Available						Not covered in I.C.S.											
3	Kerala		2369	469	20	Not Available						50	2	50	2							
4	Madhya Pradesh #		138		Not Available																	
	Total		3287	469	14	0	0	0	0	0	0	50	2	50	2							
<b>40. MANGO</b>																						
1.	Bihar		600		Not Available						Not covered in I.C.S.											
2	Kerala				Not Available																	
	Total		600		Not Available																	
<b>41. GUAVA</b>																						
1.	Bihar		280		Not Available						Not covered in I.C.S.											
<b>42. JACKFRUIT</b>																						
1.	Bihar		420		Not Available						Not covered in I.C.S.											
2.	Kerala		1618	95	6	Not Available																
	Total		2038	95	5	Not Available																
<b>43. CASHEWNUT</b>																						
1.	Kerala		1514	613	40	Not Available						Not covered in I.C.S.										
2.	Maharashtra		0		Not Available																	
	Total		1514	613	40	0	0	0	0	0	0	Not covered in I.C.S.										
<b>44. TAPIOCA</b>																						
1.	Kerala		1584	452	29	434	31	Not Available				40	3	40	3							
<b>45. PINE APPLE</b>																						
1.	Kerala		1554	161	10	Not Available						Not covered in I.C.S.										
<b>46. POTATO</b>																						
1.	Assam		1000	162	16	162	16	Not Available				36	4	32	3							
2.	Bihar	Agh.	340		Not Available																	
		Rabi	424																			
3.	Chhattisgarh		150	0	0	0	0	0	0	0	0	Not Available										
4.	Gujarat	Rabi	1030	166	16	166	16	340	33	340	33											
5.	Jammu & Kashmir	Kh.	342		Not Available				Not Available				Not Available									
		Rabi	168																			
6.	Jharkhand \$\$	Agh.	570		Not Available																	
		Rabi	7830	20	0.26	20	0.26	Not Available				Not Available										
7.	Karnataka	Kh.	590	17	3	17	3	20	3	20	3											
		Rabi	250	22	9	22	9	12	5	12	5	Not Available										
8.	Madhya Pradesh #	Rabi	432		Not Available																	
9.	Meghalaya @	Sum.	316	18	6	13	4	2	1	2	1	Not Available										
10.	Odisha	Wint.	1865	181	10	181	10	262	14	262	14	40	2	40	2							
11.	Uttar Pradesh	Rabi	22480		Not Available																	
	Total		37787	586	2	581	2	636	2	636	2	136	0.4	130	0.3							

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2018-19**

Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by																			
				State Statistical Department						Other State Department				N.S.S.O.									
				Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16								
<b>47. ONION</b>																							
1.	Bihar		424	Not Available								Not covered in I.C.S.											
2.	Chhattisgarh		50	0	0	0	0	0	0	0	0	0											
3.	Gujarat	Rabi	1405																				
		Sum.	40																				
4.	Jharkhand \$\$		630	Not Available								Not covered in I.C.S.											
5.	Karnataka	Kh.	2290	72	3	72	3	185	8	185	8												
		Rabi	410	10	2	10	2	21	5	21	5												
		Sum.	170	4	2	4	2	6	4	6	4												
6.	Madhya Pradesh #		642	Not Available				Not Available				Not covered in I.C.S.											
7.	Uttar Pradesh	Rabi	70	Not Available																			
		Zaid	626																				
Total			6757	86	1	86	1	212	3	212	3												
<b>48. BRINJAL</b>																							
1.	Bihar	Agh.	340	Not Available								Not covered in I.C.S.											
		Rabi	340																				
2.	Jharkhand \$\$	Agh.	390	Not Available																			
		Rabi	480																				
3	Karnataka	Kharif	Not Planned																				
Total			1550	Not Available																			
<b>49.TOMATO</b>																							
1.	Bihar	Agh.	140	Not Available								Not covered in I.C.S.											
		Rabi	280																				
2.	Jharkhand \$\$	Agh.	660	Not Available																			
		Rabi	540																				
3.	Karnataka	Kharif	1580	68	4	68	4	131	8	131	8	Not covered in I.C.S.											
		Rabi	280	3	1	3	1	9	3	9	3												
		Summer	60	0	0	0	0	3	5	3	5												
Total			3540	71	2	71	2	143	4	143	4												
<b>50. CAULIFLOWER</b>																							
1.	Bihar		340	Not Available								Not covered in I.C.S.											
<b>51. PAPAYA (PAPITA)</b>																							
1.	Madhya Pradesh #		32	Not Available								Not covered in I.C.S.											
<b>52. PLANTAIN</b>																							
1.	Kerala		1622	258	16	Not Available						Not covered in I.C.S.											
<b>53. METHI</b>																							
1.	Rajasthan ***		1500	27	1.8	27	1.8	945	63	945	63	Not covered in I.C.S.											
<b>54. GROUNDNUT</b>																							
1.	Andhra Pradesh	Kharif	2608	110	4	110	4	Not Available				110	4	107	4								
		Rabi	842	40	5	40	5					40	5	40	5								
2.	Chhattisgarh		236	0	0	0	0	44	19	44	19	Not Available											
3.	Goa @	Kharif	52	Not Planned				Not Planned				Not covered in I.C.S.											
		Rabi	80																				
4.	Gujarat	Kharif	8385	936	11	936	11	2464	29	2324	28	150	2	140	2								
		Sum.	1760	88	5	88	5	603	34	603	34	Not Available											

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2018-19**

Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by											
				State Statistical Department				Other State Department				N.S.S.O.			
				Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
5.	Karnataka	Kharif	8284	361	4	361	4	629	8	629	8	56	1	38	0.5
		Rabi	130	16	12	16	12	23	18	23	18				
		Sum.	4856	89	2	89	2	193	4	193	4	23	0.5	16	0.33
6.	Madhya Pradesh #		954	12	1	12	1	369	39	369	39	36	4	36	4
7.	Maharashtra	Kharif	2804	Not Available								58	2	41	1
		Sum.	1516	Not Available								Not Available			
8.	Odisha	Aut.	1044	70	7	70	7	169	16	169	16				
		Wint.	164	17	10	17	10	2	1	2	1				
		Sum.	1560	127	8	127	8	111	7	111	7				
9.	Rajasthan ***		6960	86	1	72	1	4160	60	2952	42	40	0.6	28	0.4
10.	Tamil Nadu	Kharif	700	609	87	609	87	35	5	35	5	32	5	30	4
		Rabi	460	400	87	400	87	23	5	23	5	36	8	36	8
11.	Telangana	Kharif	196	52	27	52	27	0	0	0	0	37	19	33	17
		Rabi	1112	236	21	236	21	0	0	0	0	0	0	0	0
12.	Uttar Pradesh		8464	Not Available								Not Available			
13.	West Bengal		611	58	9	58	9	Not Available				Not Available			
	Total		53778	3307	6	3293	6	8825	16	7477	14	618	1	545	1

**55. SESAMUM (GINGELLY)**

1.	Andhra Pradesh	Kharif	270	Not Available											
		Rabi	310	Not Available											
2.	Chhattisgarh		158	0	0	0	0	12	8	12	8	Not Available			
3.	Gujarat		1000	120	12	118	12	386	39	386	39	50	5	45	5
4.	Karnataka		1890	87	5	87	5	146	8	146	8	Not Available			
5.	Kerala		94	28	30	Not Available				Not Available				Not Available	
6.	Madhya Pradesh #		1476	Not Available				218	15	218	15	30	2	24	2
7.	Maharashtra	Kharif	928	Not Available								Not Available			
		Rabi	10	Not Available								Not Available			
8.	Odisha	Aut.	173	8	5	8	5	18	10	18	10				
		Wint.	645	43	7	43	7	5	1	5	1				
		Sum.	262	10	4	10	4	2	1	2	1				
9.	Rajasthan ***		6084	118	2	106	2	4626	76	3372	55	80	1	68	1
10.	Tamil Nadu	Kharif	224	195	87	195	87	11	5	11	5	30	13	22	10
		Rabi	256	223	87	223	87	13	5	13	5	28	11	28	11
11.	Telangana	Kharif	56	34	61	34	61	0	0	0	0	0	0	0	0
		Rabi	198	34	17	34	17	0	0	0	0	0	0	0	0
12.	Uttar Pradesh		14144	Not Available								34	0.24	32	0.23
13.	West Bengal *		3183	274	9	274	9	Not Available				50	2	49	2
	Total		31361	1174	4	1132	4	5437	17	4183	13	302	0.96	268	0.855

**56. CASTOR**

1.	Andhra Pradesh		232	Not Available											
2.	Gujarat		2495	471	19	389	16	703	28	606	24	46	2	44	2
3.	Karnataka		210	4	2	4	2	10	5	10	5	Not Available			
4.	Telangana		150	80	53	80	53	0	0	0	0	30	20	30	20
	Total		3087	555	18	473	15	713	23	616	19.95	76	2	74	2

**57. RAPE & MUSTARD**

1.	Assam		1250	160	13	154	12	Not Available				52	4	48	4
2.	Bihar		1064	40	4	40	4	Not Available				34	3	32	3
3.	Chhattisgarh		386	26	7	26	7	80	21	80	21	30	8	26	7
4.	Gujarat		1860	415	22	316	17	151	8	151	8	50	3	43	2

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2018-19**

Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by											
				State Statistical Department				Other State Department				N.S.S.O.			
			Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
5.	Haryana *		1040	32	3	24	2	202	19	174	17	100	10	100	10
6.	Jammu & Kashmir		230	Not Available											
7.	Jharkhand \$\$		7830	Not Available								20	0.26	20	0.26
8.	Madhya Pradesh #		1116	12	1	12	1	547	49	547	49	40	4	38	3
9.	Odisha	Wint.	2049	110	5	110	5	251	0	251	12	Not Available			
10.	Punjab		566	24	4	22	4	78	14	76	13	40	7	40	7
11.	Rajasthan ***		30252	426	1	426	1	18353	61	18353	61	90	0.30	86	0.28
12.	Uttar Pradesh		28654	Not Available								99	0.3	93	0.3
13.	West Bengal *		5030	605	12	605	12	10	0.2	10	0.2	110	2	107	2
	Total		81327	1850	2	1735	2	19672	24	19642	24	665	0.82	633	0.778
	58. LINSEED														
1.	Chhattisgarh		258	40	16	40	16	32	12	32	12	40	16	40	16
2.	Jammu & Kashmir		12	Not Available								Not Available			
3.	Karnataka		260	2	1	2	1	0	0	0	0	Not Available			
4.	Madhya Pradesh #		920	13	1	13	1	257	28	257	28	72	8	70	8
5.	Maharashtra		246	Not Available											
6.	Uttar Pradeshr		140	Not Available								Not Available			
7.	West Bengal *		163	Not Available								Not Available			
	Total		1999	55	3	55	3	289	14	289	14	112	6	110	6
	59. SAFFLOWER														
1.	Karnataka	Rabi	1770	78	4	78	4	181	10	181	10	Not Available			
		Sum.	0	0	0	0	0	0	0	0	0				
2.	Maharashtra		732	Not Available								22	3	20	3
	Total		2502	78	3	78	3	181	7	181	7	22	1	20	1
	60. SUNFLOWER														
1.	Andhra Pradesh	Kharif	196	Not Available											
		Rabi	368												
2.	Haryana *	Rabi	230	Not Available											
3.	Karnataka	Kharif	4664	87	2	87	2	235	5	235	5	34	0.73	18	0.39
		Rabi	4238	56	1.3	56	1.3	101	2	101	2	36	0.85	20	0.47
		Sum.	1240	6	0	6	0	12	1	12	1	44	4	2	0
4.	Maharashtra	Kharif	400	Not Available								Not Available			
		Rabi	104												
		Sum.	54												
5.	Tamil Nadu	Kharif	96	83	86	83	86	5	5	5	5	Not Available			
		Rabi	204	178	87	178	87	10	5	10	5				
6.	Telangana	Kharif	0	0	0	0	0	0	0	0	0	0	0	0	0
		Rabi	36	28	78	28	78	0	0	0	0	0	0	0	0
7.	Uttar Pradesh	Zaid	170	Not Available								Not Available			
	Total		12000	438	4	438	4	363	3	363	3	114	1	40	0.3
	61. SOYABEAN														
1.	Andhra Pradesh		78	Not Available											
2.	Chhattisgarh		198	0	0	0	0	8	4	8	4	Not Available			
3.	Karnataka		1964	97	5	97	5	153	8	153	8	Not Available			
4.	Madhya Pradesh #		2774	58	2	58	2	978	35	978	35	83	3	81	3
5.	Maharashtra		5424	Not Available								62	1	43	1
6.	Rajasthan ***		7956	74	1	48	1	8431	106	5285	66	8	0.10	8	0.10
7.	Telangana		802	28	3	28	3	0	0	0	0	0	0	0	0
8.	Uttar Pradesh		812	Not Available								Not Available			
	Total		20008	257	1	231	1	9570	48	6424	32	153	1	132	1

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2018-19**

Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by															
				State Statistical Department				Other State Department				N.S.S.O.							
			Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
<b>62. TARA MEERA</b>																			
1.	Rajasthan ***		1392	32	2	32	2	978	70	978	70	Not covered in I.C.S.							
<b>63.COCONUT</b>																			
1.	Kerala		2430	2113	87	Not Available				50	2	50	2						
2.	Maharashtra		0	Not Available				Not Available				50	2	50	2				
<b>64. NIGER</b>																			
1.	Maharashtra		410	Not Available															
<b>65. COTTON</b>																			
1.	Andhra Pradesh		952	40	4	30	3	Not Available				36	4	36	4				
2.	Gujarat		9669	2245	23	2200	23	2521	26	2245	23	220	2	171	2				
3.	Haryana *		940	16	2	14	1	124	13	122	13	56	6	56	6				
4.	Karnataka	Kharif	3600	114	3	114	3	215	6	215	6	33	1	24	1				
		Rabi	150	0	0	0	0	5	3	5	3	Not covered in I.C.S.							
5.	Madhya Pradesh #		962	18	2	18	2	318	33	318	33	40	4	40	4				
6.	Maharashtra		8600	Not Available								106	1	100	1				
7.	Punjab		676	8	1	8	1	64	9	64	9	72	11	72	11				
8.	Rajasthan ***		6796	148	2	130	2	6626	97	4558	67	39	0.57	36	0.53				
9.	Tamil Nadu	Kharif	564	491	87	491	87	28	5	28	5	36	6	36	6				
		Rabi	256	223	87	223	87	13	5	13	5	36	14	36	14				
10	Telangana		1372	312	23	312	23	0	0	0	0	31	2	31	2				
11	Uttar Pradesh		80	Not Available															
Total			34617	3615	10	3540	10	9914	29	7568	22	705	2	638	2				
<b>66. JUTE</b>																			
1.	Assam		600	104	17	100	17	Not Available				28	5	21	4				
2.	Bihar		200	Not Available															
3.	Meghalaya @		63	Not Available								Not Available							
4.	Odisha	Aut.	41	7	17	7	17	1	2	1	2	Not Available							
5.	West Bengal *		2910	303	10	303	10	16	0.5	16	0.5	80	3	80	3				
Total			3814	414	11	410	11	17	0	17	0.4	108	3	101	3				
<b>67.MESTA</b>																			
1.	Andhra Pradesh		200	Not Available															
2.	Bihar		200	Not Available															
3.	West Bengal		222	8	4	8	4	Not Available				Not Available							
Total			622	8	1	8	1	0	0	0	0	0	0	0	0				
<b>68.TOBACCO</b>																			
1.	Andhra Pradesh		692	Not Available								Not covered in I.C.S.							
2.	Gujarat		200	48	24	48	24	112	56	112	56								
3.	Karnataka		330	5	2	5	2	8	2	8	2								
4.	Maharashtra		16	Not Available															
5.	Telangana		36	8	22	8	22	0	0	0	0								
6.	Uttar Pradesh	Rabi	100	Not Available															
		Zaid	20	Not Available															
Total			1394	61	4	61	4	120	21	120	9	Not covered in I.C.S.							
1.	Gujarat		200	16	8	16	8	26	13	26	13								
2.	Rajasthan ***		4268	73	2	73	2	1431	34	1431	34								
Total			4468	89	2	89	2	1457	33	1457	33	Not covered in I.C.S.							

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2018-19**

Sl. No	S T A T E	Season	Number of Expts	No.of Experiments Supervised by													
				State Statistical Department				Other State Department				N.S.S.O.					
			Planned	Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
<b>70. AVARE (SEM)</b>																	
1.	Karnataka	Kharif	280	19	7	19	7	31	11	31	11	Not covered in I.C.S.					
		Rabi	60	4	7	4	7	2	3	2	3						
		Summer															
		Total	340	23	7	23	7	33	10	33	10						
<b>71. COWPEA (LOBIA)</b>																	
1.	Goa	Kharif	192	Not Available								Not covered in I.C.S.					
		Rabi	192														
2	Karnataka	Kharif	1030	31	3	31	3	68	7	68	7	Not covered in I.C.S.					
		Rabi	50	2	0	2	0	1	0	1	0						
		Summer	40	0	0	0	0	0	0	0	0						
3	Kerala	Kharif	1990	586								Not covered in I.C.S.					
4	Tamil Nadu	Kharif	112	97	87	97	87	6	5	6	5						
		Rabi	112	97	87	97	87	6	5	6	5						
<b>72. TAMARIND</b>																	
1	Kerala							Not Available				Not covered in I.C.S.					
<b>73. NUTMEG</b>																	
1	Kerala	Kharif	1402	896	64	Not Available				Not covered in I.C.S.							
<b>74. BETAL LEAVES</b>																	
1	Kerala	Rabi	720	806	112	Not Available				Not covered in I.C.S.							
<b>75. CABBAGE</b>																	
1	Karnataka			100	3	3	3	3	12	12	11	11	Not covered in I.C.S.				
<b>76. BEANS</b>																	
1	Karnataka												Not covered in I.C.S.				
<b>77. BITTER GOURD</b>																	
1	Kerala			1627	405	25	Not Available				Not covered in I.C.S.						
<b>78. RAJMA BEANS</b>																	
1	Andhra Pradesh			54	Not Available				Not covered in I.C.S.								

Note :- (i) % : Percentage figures given under Col.6, 8, 10, 12, 14 and 16 are based on total figures in col. 4. The data in column 4 have been

excluded for percentage calculation at all India level where data under any of columns 5, 7, 9, 11, 13 and 15 has not been received from concerned States.

(ii)%% : Figures repeated from the year 2015-16.

(iii) # : Figure repeated from the year 2013-14 in respect for crops Banana, Onion & Papaya and all other crops 2015-16 for Madhya Pradesh .

(iv) \$\$ : Data repeated from year 2011-12 for crops Linseed, Potato, R&M and Saffron, all other crop repeated from the year 2014-15.

(v) @ : ICS Scheme is not operational & Data of State Statistical Department and Other State Department repeated from the year 2016-17.

(vi). % : Data of State Statistical Department and Other State Department repeated from the year 2016-17.

(vii) \* : Data repeated from the year 2015-16.

(viii) \*\* : Figure of State Statistical Department and Other State Department repeated from the year 2015-16.

(ix) \*\*\* : Data of State Statistical Department and Other State Department repeated from the year 2016-17.

(x). : Crops Bitter Gourd and Rajma Beans are added in Kerala State and Andhra Pradesh respectively.

**Annex-III ( C ) INCIDENCE OF ERRORS, USE OF EQUIPMENT AND DELEGATION OF WORK OF CROP CUTTING EXPERIMENTS DURING 2018-19**

S.No.	State	Season	% of expts where no error noticed	% of expts where e4 error noticed	% of expts where errors noticed ( sum of e1 to e8)	% of expts for which primary workers did not use supplied items				% of expts. for which the work was delegated	% of expts. for which the work was conducted by untrained workers
						Tape	Pegs	Balance	Weight		
1	2	3	4		5	6	7	8	9	10	11
1	Andhra Pradesh	Kharif	63	9	49	1	2	2	1	4	1
		Rabi	84	8	19	5	1	5	8	6	1
2	Assam	Early Kharif	66	2	37	16	9	16	17	1	0
		Late Kharif	60	0	40	16	7	14	15	0	0
		Rabi	89	1	11	6	3	17	14	0	0
		Summer	88	2	14	8	0	16	16	0	0
3	Bihar	Autumn (Bha.)	37	4	80	22	2	23	20	2	10
		Winter (Agh.)	49	3	53	24	17	25	24	1	17
		Rabi	51	3	55	21	8	21	21	4	16
		Summer	69	0	31	15	0	15	15	2	25
4	Chhattisgrah	Kharif	67	3	49	13	1	16	18	3	0
		Rabi	87	3	13	11	3	6	3	1	0
5	Gujarat	Kharif	73	3	24	34	5	37	20	17	0
		Rabi	85	0.4	15	31	10	35	28	1	0
6	Haryana	Kharif	78	11	20	14	10	12	8	3	1
		Rabi	90	6	11	11	6	13	4	5	1
7	Himachal Pradesh	Kharif	66	12	42	39	17	52	35	3	6
		Rabi	81	9	23	27	16	41	36	1	3
8	Jammu & Kashmir	Kharif	40	8	99	6	0	5	6	6	14
		Rabi	61	5	52	19	0	13	13	4	2
9	Jharkhand	Early Kharif	57		31	11	7	6	6	6	42
		Late Kharif	67		46	10	5	5	5	5	37
		Rabi	47	1	56	10	0	1	5	1	42
10	Karnataka	Kharif	52	2	60	22	3	19	8	1	1
		Rabi	53	1	56	22	1	33	12	5	0
		Summer	51	0	63	22	6	20	12	4	0
11	Kerala	Autumn	90	3	10	1	8	3	0	3	1
		Winter	86	7	16	3	6	4	1	3	1
		Summer	86	1	14	1	1	4	2	0	0
12	Madhya Pradesh	Kharif	58	3	45	47	21	42	37	1	5
		Rabi	82	1	22	24	18	32	30	2	3
13	Maharashtra	Kharif	46	10	86	25	16	22	16	2	1
		Rabi	42	4	66	27	18	20	19	13	0
14	Odisha	Autumn	91	1	8	10	1	2	9	1	1
		Winter	93	1	7	13	2	1	12	0	0
		Summer	93	1	7	0	1	0	0	0	0
15	Punjab	Kharif	57	9	54	7	0	1	1	1	0
		Rabi	84	5	19	6	4	6	2	1	1
16	Rajasthan	Kharif	55	10	52	25	20	24	25	0	3
		Rabi	56	13	52	24	15	25	26	0	2
17	TamilNadu	Kharif	74	4	36	15	10	11	14	3	0
		Rabi	72	9	49	12	15	14	12	2	6
18	Telangana	Kharif	68	5	37	9	3	10	12	4	5
		Rabi	73	1	33	14	1	13	13	2	1
19	Uttar Pradesh	Kharif	56	12	74	18	3	17	14	16	45
		Rabi	65	14	62	18	4	16	14	11	59
		Zaid Rabi	81	8	44	22	0	24	22	0	46
20	Uttarakhand	Kharif	29	22	87	12	11	17	15	49	1
		Rabi	47	9	65	7	6	11	9	2	4
21	West Bengal #	Aus.	76	4	27	1	1	4	4	1	12
		Aman	87	1	17	8	6	9	9	0	11
		Rabi	60	2	39	2	0	2	2	0	6
		Summer	76	2	25	0	0	0	0	0	8

**Annex-III ( C ) INCIDENCE OF ERRORS, USE OF EQUIPMENT AND DELEGATION OF WORK OF CROP CUTTING EXPERIMENTS DURING 2018-19**

S.No.	State	Season	% of expts where no error noticed	% of expts where e4 error noticed	% of expts where errors noticed ( sum of e1 to e8)	% of expts for which primary workers did not use supplied items				% of expts. for which the work was delegated	% of expts. for which the work was conducted by untrained workers
						Tape	Pegs	Balance	Weight		
1	2	3	4	5	6	7	8	9	10	11	
22	Puducherry	Kharif	90	0	10	0	0	5	0	0	
		Rabi I	80	0	20	0	0	0	0	0	
		Rabi II	95	0	35	0	0	5	0	12	
<b>For States Covered</b>		All Seasons	66	6	43	17	8	17	14	5	9

Note :-

1. e<sub>1</sub> = Error in selection of survey/sub-survey nos.
2. e<sub>2</sub> = Error in selection of field within survey/sub-survey nos.
3. e<sub>3</sub> = Error in measurement of field.
4. e<sub>4</sub> = Error in selection of random nos.,location and marking of plots.
5. e<sub>5</sub> = Error in weighment of produce.
6. e<sub>6</sub> = Error in reporting ancillary information.
7. e<sub>7</sub> = Inadequate arrangements for storing of produce for drage and incorrect reporting of constituents in crop mixture.
8. e<sub>8</sub> = Others.
9. \$ = In Kerala whole year data has been included in Summer season.
10. @ = For the year as a whole (total of all seasons).
11. # = ISI Equipments in place of Tape.
12. Sum total of percentages of Col. (4) and (5) can exceed 100% as in one experiment (more than one error may occur).

**ANNEX - IV(a):- RESPONSE UNDER CROP ESTIMATION SURVEY 2018-19**

Sl. No.	S T A T E	Kharif						Rabi						T O T A L					
		Food Crops			Non-Food Crops			Food Crops			Non-Food Crops								
		No. of Experiments		No. of Experiments		No. of Experiments		No. of Experiments		No. of Experiments		No. of Experiments							
		Planned	Analysed	Response %	Planned	Analysed	Response %	Planned	Analysed	Response %	Planned	Analysed	Response %	Planned	Analysed	Response %			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
1.	Andhra Pradesh	9036	8800	97	4536	4234	93	7290	7134	98	2212	2066	93	23074	22234	96			
2.	Assam	5200	4044	78	600	504	84	4200	2892	69	1250	978	78	11250	8418	75			
3.	Bihar	85522	55420	65	400	236	59	91378	70479	77	1064	978	92	178364	127113	71			
4.	Chhattisgarh	3864	2996	78	592	414	70	2224	1366	61	644	402	62	7324	5178	71			
5.	Goa	488	272	56	52	20	38	384	301	78	80	32	40	1004	625	62			
6.	Gujarat	17193	16221	94	21749	20034	92	36574	33394	91	3820	2838	74	79336	72487	91			
7.	Haryana *	4096	3470	85	940	908	97	3278	3049	93	1270	1056	83	9584	8483	89			
8.	Himachal Pradesh	4254	3302	78	NOT PLANNED			4052	3188	79	NOT PLANNED			8306	6490	78			
9.	Jammu & Kashmir	3178	2309	73				2076	1410	68	242	164	68	5496	3883	71			
10.	Jharkhand*	28770	23457	82	NOT AVAILABLE			36210	23612	65	7830	4860	62	72810	51929	71			
11.	Karnataka	65392	53640	82	20942	15634	75	40030	30404	76	12644	5053	40	139008	104731	75			
12.	Kerala	27922	27910	100	2524	2524	100	1577	1577	100	720	720	100	32743	32731	100			
13.	Madhya Pradesh #	9268	7828	84	6166	5385	87	13240	11118	84	2036	1798	88	30710	26129	85			
14.	Maharashtra	42074	34180	81	18566	17680	95	29526	27237	92	2678	1953	73	92844	81050	87			
15.	Meghalaya	1978	1849	93	63	54	86	316	310	98	NOT AVAILABLE			2357	2213	94			
16.	Odisha	44068	44068	100	2067	2067	100	7321	7321	100	3871	3871	100	57327	57327	100			
17.	Punjab	3044	3009	99	676	672	99	2664	2664	100	566	560	99	6950	6905	99			
18.	Rajasthan	103538	98139	95	27796	24827	89	71132	66293	93	35912	32691	91	238378	221950	93			
19.	Tamil Nadu	4168	4136	99	1584	1508	95	2572	2572	100	1176	1124	95.58	9500	9340	98			
20.	Telangana	9182	9162	100	2576	2560	99	5420	5418	100	1382	1382	100	18560	18522	100			
21.	Uttarakhand	4500	4481	100	NOT AVAILABLE			3478	3436	99	NOT AVAILABLE			7978	7917	99			
22.	Uttar Pradesh	302266	297369	98	23500	22220	95	289450	287183	99	29084	28630	98	644300	635402	99			
23.	West Bengal *	17432	16398	94	3132	2774	89	19399	17691	91	8987	7789	87	48950	44652	91			
24.	Dadra & Nagar Haveli	92	92	100	NOT PLANNED									92	92	100			
25.	Daman & Diu	28	28	100										28	28	100			
26.	Puducherry	94	94	100	Not Available			210	210	100	NOT AVAILABLE			304	304	100			
	Total	796647	722674	91	138461	124255	90	674001	610259	91	117468	98945	84	1726577	1556133	90			

Note :-

- 1. # : Figure repeated from the year 2013-14 in respect for crops Banana, Onion & Papaya and all other crops 2015-16 for Madhya Pradesh.
- 2. \* : Data repeated from the year 2015-16
- 3. @ : Data repeated from the year 2016-17.

**ANNEX-IV (b) :REASONS FOR LOSS OF EXPERIMENTS UNDER CROP ESTIMATION SURVEY DURING 2018-19**

SLN No.	STATE	Food / Non- Food Crops	No. of Expts.		No. of Expts. not conducted due to							Rejected by statistician due to							Total Cols. (12)+(18)+(19)	
			Planned	Analysed	A	B	C	D	E	F	Sub Total	P	Q	R	S	T	Sub Total	U		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1.	Andhra Pradesh	Food	16326	15934	0	0	0	0	0	392	392	0	0	0	0	0	0	0	0	392
		% age	97.6							2							0	0	0	2
		Non Food	6748	6300	0	0	0	0	0	448	448	0	0	0	0	0	0	0	0	448
		% age	93.4							7							0	0	0	7
		Total	23074	22234	0	0	0	0	0	840	840	0	0	0	0	0	0	0	0	840
		% age	96.4							4							0	0	0	4
2.	Assam	Food	9400	6936	0	0	0	1040	0	998	2038	0	0	0	0	426	426	0	2464	
		% age	73.8							22							5		0	26
		Non Food	1850	1482	0	0	0	172	0	160	332	0	0	0	0	36	36	0	368	
		% age	80.1							18							2		0	20
		Total	11250	8418	0	0	0	1212	0	1158	2370	0	0	0	0	462	462	0	2832	
		% age	74.8							21							4	0	0	25
3.	Bihar	Food	176900	125899	0	0	0	0	0	51001	51001	0	0	0	0	0	0	0	0	51001
		% age	71							29							0	0	0	29
		Non Food	1464	1214	0	0	0	0	0	250	250	0	0	0	0	0	0	0	0	250
		% age	82.9							17							0	0	0	17
		Total	178364	127113	0	0	0	0	0	51251	51251	0	0	0	0	0	0	0	0	51251
		% age	71							29							0	0	0	29
4.	Chhattisgarh	Food	6088	4362	0	0	0	0	0	1726	1726	0	0	0	0	0	0	0	0	1726
		% age	72							28							0	0	0	28
		Non Food	1236	816	0	0	0	0	0	420	420	0	0	0	0	0	0	0	0	420
		% age	66							34							0	0	0	34
		Total	7324	5178	0	0	0	0	0	2146	2146	0	0	0	0	0	0	0	0	2146
		% age	71							29							0	0	0	29
5.	Goa	Food	872	573	0	0	0	0	0	299	299	0	0	0	0	0	0	0	0	299
		% age	66							34							0	0	0	34
		Non Food	132	52	0	0	0	0	0	80	80	0	0	0	0	0	0	0	0	0
		% age	39							61										
		Total	1004	625	0	0	0	0	0	379	379	0	0	0	0	0	0	0	0	299
		% age	62							38							0	0	0	30
6.	Gujarat	Food	53767	49615	0	0	0	0	0	4152	4152	0	0	0	0	0	0	0	0	4152
		% age	92							8							0	0	0	8
		Non Food	25569	22872	0	0	0	0	0	2697	2697	0	0	0	0	0	0	0	0	2697
		% age	89							11							0	0	0	11
		Total	79336	72487	0	0	0	0	0	6849	6849	0	0	0	0	0	0	0	0	6849
		% age	91							9							0	0	0	9
7.	Haryana *	Food	7374	6519	0	0	0	0	0	108	108	0	0	0	0	0	0	0	0	747
		% age	88							1							0	0	0	12
		Non Food	2210	1964	0	0	0	0	0	16	16	0	0	0	0	0	0	0	0	230
		% age	89							1							0	0	0	11
		Total	9584	8483	0	0	0	0	0	124	124	0	0	0	0	0	0	0	0	977
		% age	89							1							0	0	0	11
8.	Himachal	Food	8306	6490	0	0	0	0	0	1816	1816	0	0	0	0	0	0	0	0	1816
		% age	78.1							22							0	0	0	22
		Non Food																		
		% age																		
		Total	8306	6490	0	0	0	0	0	1816	1816	0	0	0	0	0	0	0	0	1816
		% age	78.1							22							0	0	0	22
9.	Jammu & Kashmir	Food	5254	3719	0	0	0	168	0	1367	1535	0	0	0	0	0	0	0	0	1535
		% age	70.8							29							0	0	0	29
		Non Food	242	164	0	0	0	14	0	64	78	0	0	0	0	0	0	0	0	78
		% age	67.8							32							0	0	0	32
		Total	5496	3883	0	0	0	182	0	1431	1613	0	0	0	0	0	0	0	0	1613
		% age	70.7							29							0	0	0	29
10.	Jharkhand	Food	64980	47069	0	0	0	0	0	17911	17911	0	0	0	0	0	0	0	0	17911
		% age	72.4							28							0	0	0	28
		Non Food	7830	4860	0	0	0	0	0	2970	2970	0	0	0	0	0	0	0	0	2970
		% age	62.1							38							0	0	0	38
		Total	72810	51929	0	0	0	0	0	20881	20881	0	0	0	0	0	0	0	0	20881
		% age	71.3							29							0	0	0	29
11.	Karnataka	Food	105422	84044	0	0	0	0	0	21378	21378	0	0	0	0	0	0	0	0	21378
		% age	80							20							0	0	0	20
		Non Food	33586	20687	0	0	0	0	0	12899	12899	0	0	0	0	0	0	0	0	12899
		% age	62							38							0	0	0	38
		Total	139008	104731	0	0	0	0	0	34277	34277	0	0	0	0	0	0	0	0	34277
		% age	75							25							0	0	0	25
12.	Kerala	Food	29499	29487	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	12
		% age	100							0							0	0	0	0
		Non Food	3244	3244	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% age	100							0							0	0	0	0
		Total	32743	32731	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	12
		% age	100							0							0	0	0	0

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

Sl. No.	S T A T E	Food / Non-Food Crops	No. of Expt/Expts. not conducted due to							Rejected by statistician due to								Total Cols.		
			Planned	Analysed	A	B	C	D	E	F	Sub Total	P	Q	R	S	T	Sub Total	U	(12)+ (18)+ (19)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
13.	Madhya Pradesh #	Food	22508	18946	0	0	226		0	2930	3156	0	0	0	0	0	0	406	3562	
		% age	84								14							0	16	
		Non Food	8202	7183	0	0	74	0	0	747	821	0	0	0	0	0	0	198	1019	
		% age	88								10							0	12	
		Total	30710	26129	0	0	300	0	0	3677	3977	0	0	0	0	0	0	604	4581	
		% age	85								13							0	2	15
14.	Maharashtra	Food	71600	61417	0	0	527	0	0	8877	9404	304	0	0	0	475	779	0	10183	
		% age	86								13							1	14	
		Non Food	21244	19633	0	0	150	0	0	1201	1351	79	0	0	0	181	260	0	1611	
		% age	92								6							1	8	
		Total	92844	81050	0	0	677	0	0	10078	10755	383	0	0	0	656	1039	0	11794	
		% age	87								12							1	0	13
15.	Meghalaya	Food	2294	2159	0	0	0	0	0	135	135	0	0	0	0	0	0	0	0	135
		% age	94								6								0	6
		Non Food	63	54	0	0	0	0	0	9	9	0	0	0	0	0	0	0	0	9
		% age	86								14							0	0	14
		Total	2357	2213	0	0	0	0	0	144	144	0	0	0	0	0	0	0	0	144
		% age	94								6							0	0	6
16.	Odisha	Food	51389	51389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% age	100								0							0	0	0
		Non Food	5938	5938	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% age	100								0							0	0	0
		Total	57327	57327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% age	100								0							0	0	0
17.	Punjab	Food	5708	5673	0	0	0	0	0	35	35	0	0	0	0	0	0	0	0	35
		% age	99								1							0	0	0.6
		Non Food	1242	1232	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	10
		% age	99								1							0	0	0.8
		Total	6950	6905	0	0	0	0	0	45	45	0	0	0	0	0	0	0	0	45
		% age	99								1							0	0	0.6
18.	Rajasthan	Food	174670	164432	0	0	0	0	10238	0	10238	0	0	0	0	0	0	0	0	10238
		% age	94								6							0	0	6
		Non Food	63708	57518	0	0	0	0	6190	0	6190	0	0	0	0	0	0	0	0	6190
		% age	90								10							0	0	10
		Total	238378	221950	0	0	0	0	16428	0	16428	0	0	0	0	0	0	0	0	16428
		% age	93								7							0	0	7
19.	Tamil Nadu	Food	6740	6708	32	0	0	0	0	0	32	0	0	0	0	0	0	0	0	32
		% age	100								0							0	0	0.5
		Non Food	2760	2632	128	0	0	0	0	0	128	0	0	0	0	0	0	0	0	128
		% age	95								5							0	0	4.6
		Total	9500	9340	160	0	0	0	0	0	160	0	0	0	0	0	0	0	0	160
		% age	98								2							0	0	2
20.	Telangana	Food	14602	14580	0	0	0	0	0	22	22	0	0	0	0	0	0	0	0	22
		% age	100								0							0	0	0.2
		Non Food	3958	3942	0	0	0	0	0	16	16	0	0	0	0	0	0	0	0	16
		% age	100								0							0	0	0.4
		Total	18560	18522	0	0	0	0	0	38	38	0	0	0	0	0	0	0	0	38
		% age	100								0							0	0	0.2
21.	Uttarakhand	Food	7978	7917	0	0	0	0	0	45	45	0	0	16	0	0	16	0	0	61
		% age	99								1							0.2	0	0.8
		Non Food																		
		% age																0	0	
		Total	7978	7917	0	0	0	0	0	45	45	0	0	16	0	0	16	0	0	61
		% age	99								1							0.2	0	0.8
22.	Uttar Pradesh	Food	591716	584552	0	0	0	0	0	7164	7164	0	0	0	0	0	0	0	0	7164
		% age	99								1							0	0	1
		Non Food	52584	50850	0	0	0	0	0	1734	1734	0	0	0	0	0	0	0	0	1734
		% age	97								3							0	0	3
		Total	644300	635402	0	0	0	0	0	8898	8898	0	0	0	0	0	0	0	0	8898
		% age	99								1							0	0	1
23.	West Bengal*	Food	36831	34089	0	0	0	1409	0	1309	2718	0	0	0	24	0	24	0	0	2742
		% age	93								7							0.1	0	7
		Non Food	12119	10563	0	0	0	1556	0	0	1556	0	0	0	0	0	0	0	0	1556
		% age	87								13							0	0	13
		Total	48950	44652	0	0	0	2965	0	1309	4274	0	0	0	24	0	24	0	0	4298
		% age	91								9							0	0	9
24.	Dadra & Nagar Haveli	Food	92	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% age	100								0							0	0	0
		Non Food													No Planning					
		% age															0	0	0	
		Total	92	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% age	100								0							0	0	0

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

Sl. No.	S T A T E	Food / Non-Food Crops	No. of Expts.		No. of Expts. not conducted due to							Rejected by statistician due to							Total Cols.	
			Planned	Analysed	A	B	C	D	E	F	Sub Total	P	Q	R	S	T	Sub Total	U	(12)+ (18)+ (19)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
25.	Daman & Diu	Food	28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		% age	100								0						0		0	
		Non Food			No Planning															
		% age																		
		Total	28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		% age	100								0						0		0	
26.	Puducherry	Food	304	304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		% age	100								0						0		0	
		Non Food			Not Available															
		% age																		
		Total	304	304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		% age	100								0						0.0	0	0.0	
<b>Grand Total %</b>			<b>Food</b>	<b>1470648</b>	<b>1332933</b>	<b>32</b>	<b>0</b>	<b>753</b>	<b>2617</b>	<b>10238</b>	<b>121677</b>	<b>135317</b>	<b>304</b>	<b>0</b>	<b>16</b>	<b>24</b>	<b>901</b>	<b>1245</b>	<b>1153</b>	<b>137715</b>
			% age	91								9						0.1	0.1	9
		<b>Non Food</b>	<b>255929</b>	<b>223200</b>	<b>128</b>	<b>0</b>	<b>224</b>	<b>1742</b>	<b>6190</b>	<b>23721</b>	<b>32005</b>	<b>79</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>217</b>	<b>296</b>	<b>428</b>	<b>32729</b>	
			% age	87								13						0.1	0.2	13
		<b>Total</b>	<b>1726577</b>	<b>1556133</b>	<b>160</b>	<b>0</b>	<b>977</b>	<b>4359</b>	<b>16428</b>	<b>145398</b>	<b>167322</b>	<b>383</b>	<b>0</b>	<b>16</b>	<b>24</b>	<b>1118</b>	<b>1541</b>	<b>1581</b>	<b>170444</b>	
			% age	90.1	0.0	0.0	0.1	0.3	1	8	10	0	0	0	0	0	0.1	0.1	10	

Note : Sum total of percentages in Col. (5), (12), (18) and (19) may not always be 100.

1. % : Percentage figures given under Col. 5 to 20 are based on total figures in col. 4. The data in column 4 have been excluded for percentage calculation at all India level where data under any of columns from 5 to 20 has not been received from concerned States.

A - Primary worker being absent, on leave, transfer etc.

B - Primary worker not attending the work due to other assignments.

C - Primary worker not attending the work due to other reasons.

D - Prior harvest by cultivators.

E - Crop not available.

F - Other reasons.

P - Incomplete data.

Q - Discrepant data.

R - Unreliable data.

S - Late receipt of returns.

T - Other reasons.

U - Experiments for which reasons for non inclusion in analysis are not known.

2.# : Figure repeated from the year 2013-14 in respect of crops Banana, Onion, Papaya and all other crops 2015-16 for Madhya Pradesh.

3. @ : Data repeated from the year 2016-17.

4.\* : Data repeated from the year 2015-16.

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
		1	2	3	4	5	6	7	8	
<b>1. RICE</b>										
1.	Andhra Pradesh	(KharifIr.)	1496	81	3572	3572	100	3431	0.5	5131
		(KharifUL.)	68	55	232	232	100	2434	3.1	166
		Comb.	1564	80	3804	3804	100	3388	0.5	5297
		(Rabi.Ir.)	644	87	2994	2972	99	6972	0.5	4493
2.	Assam	(Aut.)	142	99	1500	850	57	1468	1.9	209
		(Wint.)	1880	100	3000	2768	92	2205	0.6	4083
		Comb.	2022	100	4500	3618	80	2153	0.5	4292
		Sum	401	88	2000	1356	68	2858	0.7	1146
3.	Bihar @	(Bha.Ir.)								
		(Bha.UL.)								
		Comb.	445	83	952	282	30	1382	N.A.	616
		(Agh.Hyv.Ir.)								
		(Agh.Hyv.UL.)								
		(Agh.Lv.Ir.)								
		(Agh.Lv.UL.)								
		Comb.	2654	100	41245	39829	97	3054	N.A.	5404
		Kh.Comb.	3099	98	42197	40111	95	2814	N.A.	6019
		(Gar.Hyv.)								
4.	Chhattisgarh	(Gar.Lv.)								
		Comb.	60	95	440	358	81	2256	N.A.	136
		Kh.(Ir.)	1294	93	1346	1086	81	1866	1.8	2910
5.	Goa	Kh. (UL.)	2546	84	1240	1032	77	1399	1.5	3693
		Comb.	3840	87	2586	2118	82	1556	1.2	6603
		Kharif	26	100	192	188	98	2719	N.A.	70
6.	Gujarat %	Rabi	11	100	192	135	70	2711	N.A.	29
		(Ir.)	624	99	6623	6220	94	3673	1	2294
		(UI.)	185	98	1330	1250	94	2354	9	435
		Comb.	809	99	7953	7470	94	3372	1.7	2729
7.	Haryana ###	Sum								
		Kharif	1206	76	990	864	87	3268	1.6	3941

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d				
8.	Himachal Pradesh \$\$\$	72	73	1626	1116	69	2270	1.8	147
9.	Jammu & Kashmir	(Plain)					N.A.		
		(Hills)					N.A.		
		Comb.	262	35	1330	1110	83	3454	4
10.	Jharkhand	(Bha.)	138	N.A.	600	452	75	1675	N.A.
		(Agh.Hyv.Ir.)					N.A.		
		(Agh.Hyv.UI.)	1204	N.A.	17520	14869	85	3265	N.A.
		(Agh.Lv.Ir.)					N.A.		
		(Agh.Lv.UI.)					N.A.		
		Comb.	1342	N.A.	18120	15321	85	2108	N.A.
11.	Karnataka % %	(KharifHyv.Ir.)							
		(KharifHyv.UI.)							
		(KharifTra.Ir.)							
		(KharifTra.UI.)							
		Comb.	1002	86	13020	11309	87	4576	1.4
		(Rabi Hyv.Ir.)							
		(Rabi Tra. Ir.)							
		Rabi Comb.	8	100	1482	962	65	4063	3.9
		(Sum.)	137	100	3540	2284	65	5073	3.5
		Rabi/Sum Comb	145	100	5022	3246	65	5017	3.3
12.	Kerala	(Aut.)	61	2	2352	2342	100	1679	3.3
		(Wint.)	88	3	3268	3268	100	3160	1.3
		Comb.	149	3	5620	5610	100	2557	1.3
		Sum	49	2	1577	1577	99	4027	1.9
13.	Madhya Pradesh ***	(Hyv. Ir.)	507	93	790	682	86	2063	20.6
		(Lv. Ir.)	190	96	560	396	71	2008	8.2
		Comb.	697	94	1350	1078	80	2048	15.3
		(UI.)	1238	90	1410	1238	88	608	2.9
		Comb.	1935	91	2760	2316	84	1127	10.0
14.	Maharashtra *	(Ir.)							
		(UL.)							
		(Comp.)							
		Comb.	1417	100	4064	3869	95	2203	0.8
		Sum	48	100	522	492	94	2778	1.58
15.	Meghalaya	(Aut.)	33	80	342	239	70	1458	0.01
		(Wint.)	64	100	892	872	98	1818	0.01
		Comb.	97	93	1234	1111	90	1695	0.01

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)		
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d						
		1	2	3	4	5	6	7	8		
16.	Odisha	(Aut.)	454	100	3361	3361	100	1161	1.6	527	
		(Wint.)	3131	100	27374	27374	100	2006	0.4	6280	
		Sum	274	100	4673	4673	100	3376	1	926	
17.	Punjab	Kharif	3103	100	1980	1978	100	2322	N.A.	12822	
18.	Rajasthan #	Kharif	198	99	3580	2853	80	3436	0.8	680	
19.	Tamil Nadu	(K/K/S)	280	97	428	428	100	4286	1.2	1198	
		(S/T/P)	1205	100	1260	1260	100	3271	1.0	3941	
		Comb.	1484	99	1688	1688	100	3462	0.83	5139	
		(N/K)	237	89	300	300	100	4188	2.0	992	
		Comb.	1721	98	1988	1988	100	3562	0.7	6132	
20.	Telangana	(KharifIr.)	1175	71	2186	2186	100	3493	0.7	4105	
		(KharifUL)	14	68	104	100	96	2138	3.7	30	
		Comb.	1189	71	2290	2286	100	3477	0.7	4135	
		(Rabi.Ir.)	743	73	2324	2324	100	3412	0.5	2534	
20.	Uttarakhand	Kharif	239	100	2800	2787	100	2127	0.92	562	
21.	Uttar Pradesh	Kharif	5895	100	188454	187973	100	2703	N.A.	15932	
22.	West Bengal % %	(Aus.)	248	100	2281	2011	88	2590	1.2	642	
		(Aman)	3963	100	13308	12739	96	2774	0.5	10997	
		Comb.	4211	100	15589	14750	95	2763	0.4	11639	
		Sum	1185	100	11674	10891	93	3379	0.7	863	
23.	Dadra & Nagar Haveli	Kharif	13	30	70	70	100	2027	22.7	28	
24.	Daman & Diu	Kharif	1.4	89	20	20	100	1833	8.6	3	
25.	Puducherry	(I)	4	100	94	94	100	3427	3.0	14	
		(II)	8.9	100	140	140	100	3121	2.5	28	
		(III)	4.5	100	70	70	100	3432	3.1	15	
		Comb. II & III	13	100	210	210	100	3226	1.95	43	
TOTAL		Kharif	38767	87	357296	345169	97	2515	0.4	102165	
		Rabi/Sum.	3810	89	31928	28534	89	4031	0.4	12183	
		Comb.	42577	87	389224	373703	96	2651	0.4	114347	

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
<b>2. JOWAR</b>										
1.	Andhra Pradesh	Kharif	15	82	178	152	85	129	76	2
		Rabi	141	87	482	456	89	1617	4	228
2.	Chhattisgarh	Kharif	3	39	70	32	46	990	16	3
3.	Gujarat %	Kharif	39	76	320	318	99	1336	N.A.	52
		Rabi								
4.	Karnataka %%	KharifHyv.Ir.)								
		(Kharif Hyv.) Ir. & UI.								
		KharifTra.IU.)								
		Comb.	69	27	3604	2069	57	1507	4.7	99
		(Rabi Hyv.Ir.)								
		(Rabi Hyv.Ir. & UI.)								
		(Rabi Tra.Ir.)								
		(Rabi.Tra. Ir. & UL.)								
		Comb.	810	73	10270	8602	84	832	1.8	640
		(Sum.Hyv.Ir.)								
5.	Madhya Pradesh ***	Kharif	190	90	1746	1378	79	1491	2.2	283
6.	Maharashtra *	Kharif	530	100	3804	3152	83	810	1.5	430
		(Rabi Ir.)								
		(Rabi UI.)								
		Comb.Rabi	1909	N.A.	9168	8412	92	402	0.93	768
7.	Rajasthan #	Kharif	564	99	10500	9763	93	832	1.1	470
8.	Tamil Nadu	Kharif	183	99	440	440	100	1149	2.8	210
		Rabi	203	99	640	640	100	1253	2.9	255
		Comb.	386	99	1080	1080	100	1204	2.0	464
9.	Telangana	Kharif	35	91	652	652	100	931	2.9	32
		Rabi	21	64	368	368	100	1653	2.4	35
10.	Uttar Pradesh	Kharif	147	85	8528	6900	81	1247	N.A.	184
TOTAL		Kharif	1776	84	29842	24856	83	994	0.8	1766
		Rabi/Sum.	3084	79	20928	18478	88	635	0.9	1925
		Comb.	4860	81	50770	43334	85	766	0.6	3690

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
<b>3. BAJRA</b>										
1.	Andhra Pradesh	Kharif	21	81	488	450	92	1014	6.3	21
2.	Gujarat %	Kharif	164	99	1440	1342	93	1397	N.A.	228
		Sum	228	99	9465	8575	91	2913	N.A.	664
3.	Haryana ###	Kharif	370	68	1532	1438	94	1762	1	652
4.	Karnataka %%	(Kharif Hyv.Ir.)								
		(Kharif Hyv.UI)								
		(Kharif Tra.)								
		Comb.	160	89	3906	2724	70	912	3.5	139
5.	Madhya Pradesh ***	Kharif	233	99	320	302	94	1575	3.5	366
6.	Maharashtra *	(Ir.)								
		(UI.)								
		(Comp.)								
		Comb.	610	100	3364	3075	91	545	2	332
7.	Rajasthan #	Kharif	4154	100	25752	25095	97	906	1.7	3765
8.	Tamil Nadu	Kharif	31	91	240	240	100	2845	3.8	88
		Rabi	16	96	204	204	100	1871	6.7	30
		Comb.	47	92	444	444	100	2517	3.3	118
9.	Telangana	Kharif	1	65	46	34	100	497	36.3	0.3
10.	Uttar Pradesh	Kharif	877	99	36240	35041	97	2029	N.A.	1779
11.	Daman & Diu	Kharif	0.5	100	8	8	100	1306	7.44	0.6
	T O T A L	Kharif.	6621	88	73336	69749	95	1115	1.2	7372
		Rabi/Sum.	244	99	9669	8779	91	2845	-	694
		Comb.	6865	89	83005	78528	95	1176	1.1	8066
<b>4. MAIZE</b>										
1.	Andhra Pradesh	Kharif	104	59	234	234	100	4177	4.3	436
		Rabi	162	65	554	512	92	6935	1.5	1122
2.	Bihar @	(Bha.Hyv.)								
		(Bha. Lv.)								

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
		Comb.	223	33	41245	13787	33	2078	N.A.	464
		Rabi	282	55	41265	22825	55	7432	N.A.	2098
		(Gar.Hyv.)								
		(Gar.Lv.)								
		Comb.	164	91	540	452	84	3854	N.A.	631
3.	Chhattisgarh	Kharif	118	54	484	368	76	2568	3	296
4.	Gujarat %	Kharif	311	99	3540	3471	98	1770	N.A.	550
5.	Haryana ###	Kharif	6	7	144	88	61	3000	12.6	18
6.	Himachal Pradesh \$\$\$	Kharif	267	100	2628	2186	83	2890	1.2	695
7.	Jammu & Kashmir	(Plain)								
		(Hills)								
		Comb.	262	35	1392	1024	74	2036	5	574
8.	Jharkhand	(Bha.)	124	N.A.	7830	6102	78	2172	N.A.	271
9.	Karnataka %%	(KharifHyv.Ir.)								
		(KharifHyv. Ir. & UL)								
		(Kharif Tra.Ir.)								
		(Kharif Tra.UI.)								
		Comb.	1189	100	12924	11067	86	2686	1.4	3034
		(Rabi Hyv.Ir.)								
		(Rabi Hyv.UI.)								
		(Rabi Tra.Ir.)								
		Comb.	75	100	3326	2266	68	3761	3.4	268
		(Sum.Hyv.)	6	100	200	136	68	4063	13.8	23
10.	Madhya Pradesh ***	Rabi/ Sum comb	81	100	3526	2402	68	3783	3.3	291
		Kharif	991	93	1928	1768	92	2308	1.7	2288
		Kharif	708	75	726	669	92	1928	2.5	1364.96
		Rabi	201	100	1158	724	63	1887	2.0	380
		(Aut.)	49	100	2902	2902	100	2307	2.7	113
12.	Odisha	(Wint.)	0.1	100	25	25	100	2448	13.0	0.2
		Comb.	49	100	2927	2927	100	2307	2.7	114
		Sum	3	100	296	296	100	2610	2.1	7
		Kharif	109	97	360	356	99	3625	N.A.	396
13.	Punjab	Kharif	845	100	11656	11580	99	2240	2	1893

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Respon- se % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
15.	Tamil Nadu	Kharif	169	48	256	256	100	7598	3.3	1284
		Rabi	222	36	176	176	100	6998	10.7	1551
		Comb.	391	41	432	432	100	7258	6.0	2834
16.	Telangana	Kharif	426	76	2082	2082	100	3105	1.9	1324
		Rabi	117	86	1636	1634	100	6502	1.0	759
17.	Uttar Pradesh	Kharif	674	98	29712	29107	98	2067	N.A.	1392
		Rabi	13	62	80	60	75	2804	N.A.	38
18.	West Bengal %%	Kharif	46	100	634	568	90	2692	2.0	125
T O T A L		Kharif	6623	85	120702	87640	73	2484	1.5	16518.6
		Rabi/Sum.	1245	71	49231	29081	59	3852	5.5	6878
		Comb.	7867	83	169933	116721	69	2700	1.6	23397
<b>5. RAGI (MANDUA)</b>										
1.	Andhra Pradesh	Kharif	24	84	200	200	100	1226	4.3	29
		Rabi	8	30	170	162	95	1699	4.96	14
2.	Bihar @	(Bha.)	3	88	200	124	62	1071	N.A.	3
3.	Goa									
4.	Gujarat %	Kharif	12	100	100	100	100	804	N.A.	10
5.	Jharkhand	Kharif	19	N.A.	450	276	61	1162	N.A.	23
6.	Karnataka %%	(KharifHyv.Ir.)								
		(KharifHyv. Ir. & UI.)								
		(KharifTra.)								
		Comb.	504	100	7748	6564	85	1169	2	560
		(Rabi Hyv.Ir.)								
		(Rabi Hyv.UI.)								
7.	Maharashtra *	Comb.	32	100	1452	966	67	1510	4.7	46
		(Sum. Hyv.Ir.)	3	100	300	261	87	1928	7.3	5
		Rabi/Sum Comb	35	100	1752	1227	70	1541	4.3	51
		Kharif	80	100	890	874	98	1164	1.8	93
8.	Odisha	(Aut.)	9	100	819	819	100	684	1.5	5.8
		(Wint.)	28	100	615	615	100	693	1.5	19
		Kharif Comb.	36	100	1434	1434	100	691	1.2	25
		Sum	0.2	100	65	65	100	624	13.8	0.1
9.	Tamil Nadu	Kharif	57	96	160	160	100	3145	3.8	179

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
		Rabi	22	84	200	200	100	3552	2.2	77
		Comb.	79	93	360	360	100	3257	2.7	256
10.	Telangana	Kharif	1	64	30	30	100	977	3.6	1.0
11.	Uttarakhand	Kharif	92	100	1110	1110	100	1272	1.4	110
12.	Dadra & N. Haveli	Kharif	1	60	22	22	100	2572	13.3	3
T O T A L		Kharif	830	97	12344	10894	88	1292	1.3	1036
		Rabi/Sum.	65	86	2187	1654	76	2233	2.0	142
		Comb.	894	96	14531	12548	86	1360	1.2	1178
<b>6. WHEAT</b>										
1.	Assam	Rabi	17	98	700	382	55	1398	1.2	24
2.	Bihar @	Rabi (Hyv.Ir.)								
		Rabi (Hyv.UI.)								
		Rabi ( Lv.Ir.)								
		Rabi (Lv.UI.)								
		Rabi Comb.	2157	100	41265	40385	98	2998	N.A.	6466
3.	Chhattisgarh	Rabi (Ir.)	86	76	644	398	62	1732	2	140
		Rabi (UI)	19	65	228	130	73	983	4	21
		Comb.	105	74	872	528	61	1596	2	130
4.	Gujarat %	Rabi (Ir.)	775	100	17291	16481	95	3083	N.A.	2391
		Rabi(UI.)	22	95	220	120	55	764	N.A.	17
		Rabi Comb.	797	100	17511	16601	95	3020	N.A.	2407
5.	Haryana ###	Rabi	2576	100	2200	2182	99	4407	0.7	11350
6.	Himachal Pradesh \$\$\$	Rabi	319	99	2794	2342	84	2360	1.2	677
7.	Jammu & Kashmir	(Plain)						N.A.		
		(Hills)						N.A.		
		Rabi Comb.	285	38	1908	1380	72	2294	3	668
8.	Jharkhand	(Hyv.Ir.)						N.A.		
		(Lv.Ir.)						N.A.		
		(Lv.UI.)						N.A.		
		Rabi Comb.	112	N.A.	17520	11902	68	2022	N.A.	227
9.	Karnataka % %	(Hyv.Ir.)								
		(Hyv.Ir & UI.)								

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d				
		(Tra.Ir.)							
		(Tra. Ir & UI.)							
		Rabi Comb.	177	60	3854	2835	74	949	6.9
10.	Madhya Pradesh ***	(Hyv. Ir.)	4044	100	3150	2824	90	3096	0.7
		(Lv.Ir.)	917	98	1380	1126	82	2698	1.4
		Comb.	4961	100	4530	3950	87	3022	0.7
		(UI.)	447	93	1300	1196	92	1498	1.6
		Rabi Comb.	5408	99	5830	5146	88	2896	0.6
11.	Maharashtra *	(Ir.)							
		(UI.)							
		Rabi (Comb.)	834	100	8210	7628	93	1497	0.53
12.	Odisha	Sum	0.15	100	80	80	100	2163	6.0
13.	Punjab	Rabi	3520	100	2326	2326	100	5188	N.A.
14.	Rajasthan #	(Ir.)							
		(UI.)							
		(Comp.)							
		Rabi Comb.	2998	100	39648	38263	97	3991	0.2
15.	Uttarakhand	Rabi	327	100	2800	2782	99	2859	0.814
16.	Uttar Pradesh	Rabi	9856	100	229076	228501	100	3860	N.A.
17.	West Bengal %%	Rabi	322	100	2528	2285	90	2682	0.9
<b>T O T A L</b>			<b>29810</b>	<b>96</b>	<b>379122</b>	<b>365548</b>	<b>96</b>	<b>3663</b>	<b>0.3</b>
<b>7. BARLEY</b>									
1.	Bihar @	Rabi	14	93	300	222	74	1990	N.A.
3.	Chhattisgarh		2	30	24	4	17	707	9.32
2.	Haryana ###		29	29	516	355	50	3414	1.6
4.	Himachal Pradesh \$\$\$	Rabi	23	53	1258	846	67	1735	2.7
5.	Jharkhand	Rabi							
6.	Madhya Pradesh ***	Rabi	72	89	536	500	93	1670	2.4
7.	Punjab	Rabi	7	99	242	242	100	3747	N.A.
8.	Rajasthan #	Rabi	226	97	5948	5832	98	3597	0.51
9.	Uttarakhand	Rabi	23	100	678	654	96	1451	1.377
10.	Uttar Pradesh	Rabi	151	90	696	588	84	3016	N.A.
<b>T O T A L</b>			<b>547</b>	<b>88</b>	<b>10198</b>	<b>9243</b>	<b>91</b>	<b>2902</b>	<b>0.5</b>
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**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
<b>8. GRAM ( BENGALGRAM )</b>										
1.	Andhra Pradesh	Rabi	478	97	1328	1328	100	508	2.64	478
2.	Bihar @	Rabi	56	93	772	719	93	1199	N.A.	68
3.	Chhattisgarh	Rabi	322	92	538	382	71	1044	1.3	330
4.	Gujarat %	Rabi	173	92	1895	1317	69	1358	N.A.	235
5.	Haryana ###	Rabi	42	40	562	512	91	619	N.A.	26
6.	Jharkhand	Rabi	52	N.A.	7830	5094	65	1120	N.A.	79
7.	Karnataka %%	(Ir.)								
		(UI.)								
		Rabi Comb.	1129	100	9402	7198	77	488	1.8	524
8.	Madhya Pradesh ***	Rabi	2623	99	5330	4306	81	1115	0.8	2924
9.	Maharashtra *	Rabi	1694	100	10468	9981	95	825	0.59	1396.96
10.	Punjab	Rabi	2	100	96	96	100	1330	N.A.	3
11.	Rajasthan #	(Ir.)								
		(UI.)								
		(Comp.)								
		Rabi Comb.	1597	100	14824	12645	85	1152	0.8	1840
12.	Telangana	Rabi	104.39	82	694	694	100	1569	1.75	164
13.	Uttar Pradesh	Rabi	572	96.87	12918	12551	97	1272	N.A.	728
14.	West Bengal %%	Rabi	28	100	725	630	87	1030	4.5	28
<b>T O T A L</b>			8872	98	67382	57453	85	962	0.4	8822
<b>9. REDGRAM (TUR/ ARHAR)</b>										
1.	Andhra Pradesh	Kharif	246	61	1148	1128	98	180	5.9	44
2.	Bihar @	Rabi	17	85	616	512	83	1852	N.A.	32
3.	Chhattisgarh	Kharif	68	61	462	286	62	397	2.9	68
4.	Gujarat %	Kharif	254	95	1580	1572	99	1209	2.6	307
5.	Haryana ###	Kharif	4	21	360	230	64	1068	N.A.	6
6.	Jharkhand	Rabi	1	N.A.	660	276	42	2076	N.A.	79
7.	Karnataka %%	Kharif	1506	99	7390	6705	91	607	1.7	869
8.	Madhya Pradesh ***	Kharif	505	87	1650	1274	77	644	2.9	325
9.	Maharashtra *	Kharif	1261	100	6210	6043	97	661	0.9	834

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
10.	Tamil Nadu	Kharif	37	97	336	336	100	1248	6.4	52
11.	Telangana	Kharif	296	94	2166	2166	100	648	1.5	192
12.	Uttar Pradesh	Kharif	251	80	11718	11217	96	1084	N.A.	272
13.	West Bengal %%	Rabi	3	100	127	100	79	1249	3.4	4
T O T A L			4449	93	34423	31845	93	675	0.8	3083
10. GREENGGRAM (MOONG)										
1.	Andhra Pradesh	Kharif	18	67	348	328	94	294	9.6	5
		Rabi	103	57	402	386	96	771	2.6	79
2.	Bihar @	(Bha.)	7	95	260	178	68	568	N.A.	4
		(Gar.)	160	85	504	472	94	705	N.A.	113
3.	Gujarat %	Kharif	63	77	760	648	85	334	N.A.	21.07
		Sum	24	30	220	178	81	1181	N.A.	28.09
4.	Karnataka %%	Kharif	396	99	3900	3331	85	351	2.7	132
		Rabi	4	100	110	90	82	219	12	0.8
5.	Maharashtra *	Kharif	481	100	6186	5903	95	424	0.9	204
6.	Odisha	(Aut.)	11	100	524	524	100	263	2.1	3
		(Wint.)	62	100	1258	1258	100	276	1.3	17
		Kh. Comb.	73	100	1782	1782	100	274	1.1	20
		Sum	144	100	1746	1746	100	354	1.7	51
7.	Rajasthan #	Kharif	2465	100	15212	14666	96	495	1.0	1221
8.	Tamil Nadu	Kharif	27	92	132	132	100	674	6.2	18
		Rabi	143	95	308	308	100	409	4.16	59
9.	Telangana	Kharif	66	86	974	970	100	629	2	41
		Rabi	7	56	156	156	100	948	3	6
10.	Uttar Pradesh	Kharif	51	75	2316	2260	98	424	N.A.	21
		(Zaid)	41	86	606	518	85	830	N.A.	34
11.	West Bengal %%	Sum	46	100	697	646	93	714	2.0	33
T O T A L		Kharif	3647	99	31870	30198	95	465	0.8	1688
		Rabi/ Sum.	672	85	4749	4500	95	602	1.2	404
		Comb.	4318	96	36619	34698	95	486	0.7	2092

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
<b>11. BLACKGRAM (URD /MATHIKALAI)</b>										
1.	Andhra Pradesh	Kharif	22	63	310	294	95	810	4.6	18
		Rabi	296	58	634	634	100	989	2.2	292
2.	Assam	Rabi	60	84	500	370	74	665	2.1	40
3.	Gujarat %	Kharif	106	93	1320	1195	91	580	2	62
		Sum.	4	39	100	58	58	1478	2	6
4.	Jharkhand	Kharif	36	N.A.	510	396	78	977	N.A.	35
5.	Karnataka %%	Kharif	80	100	1290	1127	87	512	3.7	39
		Rabi	2	100	130	86	66	592	12.9	1
6.	Maharashtra *	Kharif	367	100	4784	4662	97	424	0.9	154.5
7.	Odisha	(Aut.)	14	100	731	731	100	261	2.6	4
		(Wint.)	40	100	1903	1903	100	332	1.9	13
		Kh. Comb.	53	100	2634	2634	100	314	1.6	17
		Sum	5	100	447	447	100	511	5.8	2
8.	Rajasthan #	Kharif	751	100	7348	7211	98	501	0.9	376
9.	Tamil Nadu	Kharif	44	67	112	112	100	760	9.5	34
		Rabi	396	91	312	312	100	606	3.5	240
10.	Telangana	Kharif	27	84	334	334	100	845	2.0	23
		Rabi	5	50	104	104	100	1480	4.5	8
11.	Uttar Pradesh	Kharif	521	95	15656	15327	98	555	N.A.	290
		(Zaid)	46	78	710	588	83	786	N.A.	36
12.	West Bengal %%	Kharif	66	100	1209	1080	89	692	1.8	45
	T O T A L	Kharif	2073	90	35507	34372	97	498	0.7	1092
		Rabi/ Sum.	814	45	2937	2599	88	498	2.7	626
		Comb.	2887	78	38444	36971	96	498	1.0	1718
<b>12. LAKH (Khesari)</b>										
1.	Bihar @	Rabi	50	92	448	340	76	1018	N.A.	51
2.	Chhattisgarh	Rabi	183	90	574	416	72	699	5.5	114
3.	Madhya Pradesh ***	Rabi	50	68	220	204	93	738	1.2	37
4.	West Bengal	Sum	45	100	358	299	84	1173	8.7	55
	T O T A L		329	88	1600	1259	79	819	3.7	257
<b>13. MASUR</b>										
1.	Bihar @	Rabi	148	81	980	930	95	1001	N.A.	148
2.	Jharkhand	Rabi	9	N.A.	720	346	48	701	N.A.	6

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)		
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d						
3.	Rajasthan #	Rabi	20	98	1120	1104	99	1164	1.4	23	
4.	Uttar Pradesh	Rabi	476	93	14800	14519	98	1026	N.A.	488	
5.	West Bengal %%	Rabi	85	100	2537	2196	87	912	1.3	77	
T O T A L			738	90	20157	19095	95	1008	1.0	742	
<b>14. HORSEGRAM (KULTHI)</b>											
1.	Andhra Pradesh	Kharif	57	13	120	90	75	184	37.9	10.5	
		Rabi	62	17	270	250	93	450	5.8	28	
2.	Karnataka %%	Kharif	34	96	2650	1315	50	437	3.4	14	
		Rabi	142	100	4644	3604	78	519	2.0	70	
3.	Odisha	(Wint.)	24	100	2460	2460	100	368	1.5	9	
		Sum	0.04	100	14	14	100	355	15.3	0.01	
4.	Tamil Nadu	Rabi	73	91	320	320	100	690	2.4	51	
5.	Telangana	Kharif	0	0	0	0	0	0	0.0	0	
		Rabi	1	8	10	10	0	634	11.6	0	
T O T A L			392	72	10488	8063	77	475	2.5	182	
<b>15. PEAS</b>											
1	Jharkhand						N.A.				
2.	Uttar Pradesh	Rabi	333	81	7368	7028	95	1618	N.A.	539	
3.	West Bengal %%	Rabi	14	100	314	261	83	1121	9.0	15	
T O T A L			347	82	7682	7289	95	1598	6.3	554	
<b>16. MOTH</b>											
1.	Gujarat %		12	80	180	105	58	82	8	1	
2.	Rajasthan #	Kharif	978	100	6620	5544	84	228	2.3	223	
T O T A L			990	100	6800	5649	83	226	2.3	224	
<b>17. CHOWLA</b>											
1.	Rajasthan #	Kharif	70	98	1868	1778	95	548	2.2	38	
<b>18. GUAR</b>											
1.	Gujarat %	Kharif					Not Planned				
2.	Rajasthan #	Kharif	3088	100	20552	19242	94	334	1.1	1031	
T O T A L			3088	100	20552	19242	94	334	1.1	1031	
<b>19. SAWAN (JHANGORA)</b>											
1.	Uttarakhand	Kharif	49	100	590	584	99	1343	1.8	63	
2.	Uttar Pradesh	Kharif	3	94	88	68	77	698	N.A.	2	
		(Zaid)	42	94	20	10	50	904	N.A.	37	
T O T A L			94	97	698	662	95	1126	2.2	102	

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
<b>20. KORRA.</b>										
1.	Andhra Pradesh	Kharif	5	86	204	182	89	509	9.1	2
2.	Telangana	Kharif	0.1	82	20	20	100	1018	3.9	0.10
TOTAL			5	86	224	202	90	520	8.8	2
<b>21. KODON - KUTKI (KODRA)</b>										
1.	Chhattisgarh	Kharif	67	79	262	192	73	330	4.0	24
2.	Madhya Pradesh ***	Kharif	188	95	864	790	91	429	3.9	807
3.	Uttar Pradesh	Kharif	3	79	78	50	64	800	N.A.	3
T O T A L			258	91	1204	1032	86	408	3	834
<b>22. NAVANE</b>										
1.	Karnataka %%	Kharif	4	100	750	373	50	287	6	1
<b>23. SAVE</b>										
1.	Karnataka %%	Kharif	9	100	340	216	64	1309	12	11
<b>24. SAMAI</b>										
1.	Tamil Nadu	Kharif	14	94	100	100	100	1680	3	23
<b>25. VARAGU</b>										
1.	Tamil Nadu	Kharif	1	98	124	108	87	2050	7	3
<b>26. SUGARCANE</b>										
1.	Andhra Pradesh	(Plt.)	49	76	816	806	99	84000	1.1	4
		(Rt.)	53	83	786	784	100	75000	1.2	4
		(Comb.)	101	80	1602	1590	99	79320	0.8	8
2.	Assam	Kharif	31	92	700	426	61	35063	0.2	1094
3.	Bihar @	(Ir.)								
		(Ul.)								
		(Comb.)	226	97	800	688	86	89181	N.A.	20116
4.	Goa	Kharif	1	100	104	54	52	39761	N.A.	47
5.	Haryana ###	Kharif	93	66	1070	850	79	75183	N.A.	6992
6.	Jharkhand	Kharif	1	N.A.	240	170	71	46416	N.A.	37
7.	Karnataka %%	Kharif	376	100	810	762	94	95208	6.1	3403
8.	Kerala	Kharif	1	0.04	45	45	100	10505	N.A.	11
9.	Maharashtra *	Kharif	901	100	12046	5933	49	81400	4.6	73370
10.	Odisha	Kharif	7	100	231	231	100	61622	3.3	418
11.	Punjab	Kharif	95	98	704	675	96	81828	N.A.	7774
12.	Rajasthan #	Kharif	5	98	450	407	90	83447	2.7	448

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)		
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d						
13.	Tamil Nadu	Kharif	166	96	468	468	100	103000	1.9	17096	
14.	Telangana	(Plt.)	16	62	104	104	100	83000	2.2	1	
		(Rt.)	24	52	104	104	100	77000	2.5	2	
		(Comb.)	40	56	208	208	100	79386	2	3	
15.	Uttar Pradesh	Kharif	2224	98	9476	9426	99	80807	N.A.	179698	
16.	West Bengal % %	Rabi	21	100	439	383	87	75815	8.2	1550	
T O T A L			4290	97	29393	22316	76	83670	2.9	312065	
<b>27. COCOA</b>											
1.	Kerala	Kharif	14	1	797	797	100	965	N.A.	13	
<b>28. CHILLIES</b>											
1.	Andhra Pradesh	Kharif	143	76	400	348	84	3142	2.5	451	
		Rabi	15	69	402	380	95	3388	3.61	51	
2.	Bihar @	Rabi	4	78	340	316	93	1910	N.A.	3	
3.	Chhattisgarh	Rabi	5	3	16	4	25	626	2.1	3	
4.	Karnataka % %	Kharif	111	100	800	657	82	1462	10	154	
		Rabi	0	0	0	0	0	0	0	0	
		Sum	0	0	0	0	0	0	0	0	
5.	Madhya Pradesh ***	Rabi	75	44	80	48	60	533	29.6	40	
6.	Telangana	Kharif	75	65	380	380	100	4295	2.8	320	
		Rabi	8	64	128	128	100	6145	1.8	49	
T O T A L			436	73	2546	2261	89	2485	2.3	1071	
<b>29. CUMIN</b>											
1.	Gujarat %	Rabi	350	99.44	4008	3751	94	572	N.A.	200	
2.	Rajasthan #	Rabi	676	100	4908	4248	87	560	1.7	379	
T O T A L			1026	100	8916	7999	90	564	1.7	579	
<b>30. FENNEL</b>											
1.	Gujarat %	Rabi	43	85	400	386	97	1549	N.A.	66	
<b>31. ARECANUT</b>											
1.	Kerala	Kharif	96	4	1620	1620	100	1044	2.1	100	
2.	Maharashtra *							N.A			
T O T A L			96	4	1620	1620	100	1044	2.1	100	
<b>32. PEPPER</b>											
1.	Kerala	Kharif	83	3	1601	1601	100	444	3.3	37	

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		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d				
<b>33. SAFFRON</b>									
1.	Jammu & Kashmir	Kharif	4	N.A.	114	87	76	1	N.A. 0.004
<b>34. TURMERIC</b>									
1	Karnataka %%	Kharif	24	N.A.	390	367	94	30831	6 702
2.	Kerala	Kharif	2	0.1	1548	1548	100	2695	N.A. 7
<b>T O T A L</b>			26	N.A.	1938	1915	99	1336	N.A. 709
<b>35. GINGER</b>									
1.	Kerala	Kharif	3	0.2	1411	1411	100	4618	N.A. 15
2.	Meghalaya	Kharif	10	100	744	738	99	6586	0.01 66
<b>T O T A L</b>			13	75	2155	2149	100	6099	0.01 81
<b>36. GARLIC</b>									
1.	Gujarat %	Rabi	10	66	220	180	82	6813	2 67
<b>37. CORIANDER</b>									
1.	Rajasthan #	Rabi	69	97.2	3184	2823	89	1298	N.A. 89
<b>38. LICHI</b>									
1.	Bihar @	Rabi	9	86	300	244	81	6513	N.A. 57
<b>39. BANANA</b>									
1.	Bihar @	Rabi	11	96	500	264	53	16238	N.A. 171
2.	Gujarat %		36	81	280	196	70	77332	N.A. 28
3.	Kerala	Kharif	53	2	2369	2368	100	8111	1.8 429
4.	Madhya Pradesh ***	Rabi	N.A.	N.A.	138	80	58	N.A.	N.A. N.A.
<b>T O T A L</b>			100	11	3287	2908	88	34208	0.2 628
<b>40. MANGO</b>									
1.	Bihar @	Rabi	66	97	600	388	65	31092	N.A. 1764
2.	Kerala	Kharif							
<b>T O T A L</b>			66	97	600	388	65	31092	N.A. 1764
<b>41. GUAVA</b>									
1.	Bihar @	Rabi	1	69	280	156	56	10697	N.A. 10
<b>42. JACKFRUIT</b>									
1.	Bihar @	Rabi	4	88	420	232	55	22895	1.9 102
2.	Kerala	Kharif	91	4	1618	1618	100	2860	N.A. 260
<b>T O T A L</b>			95	8	2038	1850	91	3799	1.9 362

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
<b>43. CASHEWNUT</b>										
1.	Kerala	Kharif	39	2	1514	1514	100	403	N.A.	16
2.	Maharashtra *									
<b>T O T A L</b>			39	2	1514	1514	100	403	-	16
<b>44. TAPIOCA</b>										
1.	Kerala	Kharif	62	3	1584	1583	100	37576	1.1	2325
<b>45. PINE APPLE</b>										
1.	Kerala	Kharif	9	0.3	1554	1554	100	10162	N.A.	93
<b>46. POTATO</b>										
1.	Assam	Rabi	103	98	1000	784	78	7495	1.3	773
2.	Bihar @	(Agh.)	69	62	340	178	52	13430	N.A.	1257
		Rabi	231	70	424	418	99	14297	N.A.	1257
3.	Chhattisgarh	Rabi	10	11	150	14	9	5288	0.2	52
4.	Gujarat %	Rabi	121	100	1030	971	94	30100	N.A.	3656
5.	Jharkhand	(Agh.)	21	N.A.	570	412	72	7940	N.A.	166
		Rabi	25	N.A.	7830	4938	63	9159	N.A.	227
6.	Jammu & Kashmir	Kharif	2	N.A.	342	88	26	11425	N.A.	21
		Rabi	2	N.A.	168	30	18	11056	N.A.	17
7.	Karnataka %%	Kharif	20	97	590	454	77	8358	7.5	155
		Rabi	4	100	250	237	95	15713	7.8	65
8.	Madhya Pradesh ***	Rabi	82	70	432	346	80	18458	1.1	1118
9.	Meghalaya	Sum	12	100	316	310	98	9728	0.01	142
10.	Odisha	(Wint.)	5	100	1865	1865	100	11113	2.2	54
11.	Uttar Pradesh	Rabi	571	93	22480	22254	99	29851	N.A.	17057
<b>T O T A L</b>			1278	83	37787	33299	88	21997	0.4	26018
<b>47. ONION</b>										
1.	Bihar @	Rabi	13	73	424	356	84	14146	N.A.	186
2.	Chhattisgarh	Rabi	5	13	50	18	36	5928	3.3	29
3.	Gujarat %	Rabi	24	78	1405	1161	83	28222	1	673
		Sum	2	26	40	20	50	27543	1	51
4.	Jharkhand	Rabi	4	N.A.	630	364	58	8010	N.A.	29

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
5.	Karnataka % %	Kharif	173	100	2290	2043	89	7721	5.1	1274
		Rabi	6.4	100	410	369	90	12092	7.8	73
		Sum	1	100	170	97	57	11168	16.9	7
6.	Madhya Pradesh ***	Rabi	73	92	642	458	71	18760	2.4	1377
7.	Uttar Pradesh	Rabi	15	36	70	60	86	15479	N.A.	228
		(Zaid)	13	49	626	506	81	11777	N.A.	150
T O T A L		329	88	6757	5452	81	12604	2.1	4078	
<b>48. BRINJAL</b>										
1.	Bihar @	(Agh.)	18	69	340	218	64	11291	0.36	209
		Rabi	8	68	340	326	96	9057	7.82	72
2.	Jharkhand	(Agh.)	5	N.A.	390	304	78	5933	N.A.	32
		Rabi	4	N.A.	480	308	64	5352	N.A.	24
3.	Karnataka % %	Kharif	0	0	0	0	0	0	0	0
T O T A L		35	51	1550	1156	75	9319	2.4	337	
<b>49. TOMATO</b>										
1.	Bihar @	(Agh.)	8	46	140	136	97	13470	0.52	110
		Rabi	6	69	280	250	89	11940	4.39	73
2.	Jharkhand	(Agh.)	8	N.A.	660	476	72	5590	N.A.	47
		Rabi	5	N.A.	540	384	71	5712	N.A.	37
3 .	Karnataka % %	Kharif	28	N.A.	1580	1468	93	13852	3.87	373
		Rabi	4	N.A.	280	249	89	9811	10.98	33
		Sum	1	N.A.	60	57	95	10271	14.28	5
T O T A L		59	13	3540	3020	85	11529	0.6	678	
<b>50. CAULIFLOWER</b>										
1.	Bihar @	Rabi	27	73	340	314	92	13455	N.A.	408
<b>51. PAPAYA (PAPITA)</b>										
1.	Madhya Pradesh ***	Rabi	N.A.	N.A.	32	30	94	N.A.	N.A.	N.A.
<b>52. PLANTAIN</b>										
1.	Kerala	Kharif	56	2	1622	1622	100	6815	N.A.	383
<b>53. METHI</b>										
1.	Rajasthan #	Rabi	45	96	1500	1378	92	1306	N.A.	59

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)		
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d						
<b>54. GROUNDNUT</b>											
1.	Andhra Pradesh	Kharif	687	87	2608	2432	93	484	2.49	333	
		Rabi	61	65	842	812	96	2122	1.9	129	
2.	Chhattisgarh	Kharif	30	64	236	148	63	1283	3.41	40	
3.	Goa	Kharif	0.2	100	52	20	38	2370	N.A.	0.5	
		Rabi	0.2	100	80	32	53	2320	N.A.	0.5	
4.	Gujarat %	Kharif	1566	100	8385	7417	88	1368	3	2143	
		Sum	28	89	1760	803	46	2156	N.A.	60	
5.	Karnataka %%	(KharifIr.)	N.A.								
		(KharifUI.)	N.A.								
		(Comb.)	383	100	8284	6740	81	617	2.7	225	
		(Rab.UI.)	3	N.A.	130	130	100	2209	15.6	6	
		(Sum. Ir.)	N.A.								
		(Sum. UI.)	N.A.								
6.	Madhya Pradesh ***	Sum (Comb.)	61	N.A.	4856	2360	49	897	5	52	
		Rabi/Sum comb	335	96.7	1160	1160	100	2717	1	911	
7.	Maharashtra *	Kharif	201	86	954	792	83	1141	3.2	229	
8.	Odisha	Sum	27	98	1516	1400	92	1319	2.5	35.38	
		(Aut.)	11	100	1044	1044	100	1024	2.4	11	
9.		(Wint.)	2	100	164	164	100	1350	3.8	3	
		Kh. comb.	335	97	1160	1160	100	2717	1.5	911	
		Sum	15	100	1560	1560	100	1453	2.9	22	
10.	Rajasthan #	Kharif	669	99	6960	5305	76	2056	1.0	1375	
11.	Tamil Nadu	Rabi	197	97	700	700	100	2169	1.7	426	
		Comb.	139	96	460	460	100	3491	2.4	485	
		Sum	335	97	1160	1160	100	2717	1.5	911	
12.	Telangana	Kharif	13	84	196	196	100	2504	5.2	33	
		Rabi	113	82	1112	1112	100	2489	1.79	282	
13.	Uttar Pradesh	Kharif	101	88	8464	8344	99	994	N.A.	100	
14.	West Bengal %%	Rabi	55	100	611	524	87	2536	3.7	139	
		Kharif	4078	96	40851	35859	88	1259	1.1	5123	
		Rabi/Sum.	501	88	12927	9193	71	2313	1.3	1210	
		Comb.	4579	95	53778	45052	84	1374	1.0	6333	

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
<b>55. SESAMUM ( GINGELLY)</b>										
1.	Andhra Pradesh	Kharif	17	71	270	262	97	270	4.4	4
		Rabi	31	59	310	310	100	267	3.9	8
2.	Chhattisgarh	Kharif	21	47	158	86	54	321	11.7	7
3.	Gujarat %	Kharif	80	94	1000	965	97	462	N.A.	37
4.	Karnataka %%	Kharif	23	100	1890	1318	70	695	5.7	15
5.	Kerala	Kharif	0.38	0.01	94	94	100	418	N.A.	0.16
6.	Madhya Pradesh ***	Kharif	370	92	1476	1324	90	411	1.9	152
7.	Maharashtra *	Kharif	37	100	928	755	81	169	2	6
		Rabi	0.88	100	10	10	0	109	3	1
8.	Odisha	(Aut.)	2	100	173	173	100	308	27.4	0
		(Wint.)	11	100	645	645	100	232	3.1	3
		Kh. Comb.	335	97	1160	1160	100	2717	1.5	911
		Sum	2	100	262	262	100	201	2.2	0.45
9.	Rajasthan #	Kharif	242	97	6084	5693	94	348	1.8	84
10.	Tamil Nadu	Kharif	9.5	60	224	192	86	475	3.3	4
		Rabi	35	68	256	256	100	567	2.9	20
		(Comb.)	45	66	480	448	93	547	2.5	24
11.	Telangana	Kharif	1	48	56	56	100	170	19.4	0.1
		Rabi	17	82	198	198	100	701	1.7	12
12.	Uttar Pradesh	Kharif	327	94	14144	12984	92	226	N.A.	74
13.	West Bengal %%	Sum	233	100	3183	2737	86	924	1.2	215
TOTAL		Kharif	1140	93	27142	24547	90	341	1.4	388
		Rabi/Sum.	319	92	4219	3773	89	802	1.0	257
		(Comb.)	1459	92	31361	28320	90	442	0.9	645
<b>56. CASTOR</b>										
1.	Andhra Pradesh	Kharif	35	83	232	232	100	419	6.9	15
2.	Gujarat %	Kharif	522	100	2495	2399	96	1809	N.A.	944
3.	Karnataka %%	Kharif	0.1	100	210	85	40	840	8.3	0.11
4.	Telangana	Kharif	19	70	150	150	100	762	5.8	15
TOTAL			576	98	3087	2866	93	1690	1.4	974
<b>57. RAPE &amp; MUSTARD</b>										
1.	Assam	Rabi	286	100	1250	978	78	643	1.5	184

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
2.	Bihar @	Rabi	81	79	1064	978	92	1290	N.A.	104
3.	Chhattisgarh	Rabi	42	51	386	230	60	488	3.5	18
4.	Gujarat %	Rabi	196	97	1860	1860	100	1784	1	348
5.	Haryana ###	Rabi	482	64	1040	990	95	1434	0.5	691
6.	Jammu & Kashmir	Rabi	47	N.A.	230	158	69	1157	N.A.	54
7.	Jharkhand	Rabi	64	N.A.	7830	4860	62	935	N.A.	60
8.	Madhya Pradesh ***	Rabi	600	92	1116	996	89	1178	2.0	707
9.	Odisha	(Wint.)	6	100	2049	2049	100	275	2.8	2
10.	Punjab	Rabi	31	98	566	560	99	1524	N.A.	47
11.	Rajasthan #	(Ir.)								
		(UI.)								
		(Comp.)								
		Rabi Comb.	2765	100	30252	28472	94	1728	0.3	4779
12.	Uttar Pradesh	Rabi	753	94	28654	28390	99	1483	N.A.	1117
13.	West Bengal % %	Rabi	459	100	5030	4397	87	1077	0.9	495
	<b>T O T A L</b>		5811	94	81327	74918	92	1481	0.3	8605
	<b>58. LINSEED (ALSI)</b>									
1.	Chhattisgarh	Rabi	18	63	258	172	67	271	3.1	5
2.	Jammu & Kashmir	Rabi	0.2	N.A.	12	6	50	1113	N.A.	0.2
3.	Karnataka % %	Rabi	0	100	260	50	19	219	26	0.06
4.	Madhya Pradesh ***	Rabi	94	92	920	802	87	553	4	42
5.	Maharashtra * *	Rabi	7	100	246	202	82	380	4	3
6.	Uttar Pradesh	Rabi	28	92	140	130	93	631	N.A.	18
7.	West Bengal % %	Rabi	7	100	163	131	80	370	28	2
	<b>T O T A L</b>		154	89	1999	1493	75	518	4	70
	<b>59. SAFFLOWER</b>									
1.	Karnataka % %	Rabi	14	100	1770	858	48	593	6.3	8
2.	Maharashtra * *	Rabi	25	100	732	256	35	475	5.0	11.9
	<b>T O T A L</b>		39	100	2502	1114	45	518	3.9	20
	<b>60. SUNFLOWER</b>									
1.	Andhra Pradesh	Kharif	3	78	196	146	74	556	7.0	2
		Rabi	10	76	368	300	82	731	4.8	7
2.	Haryana ###	Rabi	8	N.A.	230	66	29	1644	N.A.	13
3.	Karnataka % %	(KharifIrr.)								

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
		(Kharif UI.)								
		Comb.	82	100	4664	2420	52	811	3.6	
		(Rabi Ir.)								
		(Rabi UI.)								
		Comb.	35	100	4238	1333	31	526	8.7	
		(Sum. Ir.)	2	100	1240	230	19	875	14.9	
		Rabi/Sum. Combi	37	100	5478	1563	29	549	7.9	
		Kharif	21	100	400	226	57	194	9	
		Rabi	16	100	104	22	21	162	23	
		Sum	0.3	100	54	47	87	1285	8	
		Rabi/Sum. Combi	16	100	158	69	44	182	20	
	4. Maharashtra *	Kharif	0.5	55	96	52	54	1734	9	
		Rabi	5	94	204	152	75	577	7	
		Sum	16	100	158	69	44	182	20	
	5. Tamil Nadu	Kharif	1	63	170	20	12	1365	N.A.	
		Rabi	2	46	36	36	87	1960	7	
	6. Uttar Pradesh	Kharif	0	0	0	0	0	0	0	
		Rabi	107	99	5356	2844	53	684	3.3	
	7. Telangana	Kharif	79	94	6644	2206	33	662	3.9	
		Rabi	187	97	12000	5050	42	675	2.5	
T O T A L		Kharif	11530	97	20008	18909	95	790	1.2	
<b>61. SOYABEAN</b>										
1.	Andhra Pradesh	Kharif	1.4	90	78	28	36	1921	7	
2.	Chhattisgarh	Kharif	93	94	198	180	91	640	11.5	
3.	Karnataka %%	Kharif	242	100	1964	1741	89	1068	2.9	
4.	Madhya Pradesh ***	Kharif	6014	95	2774	2450	88	457	3.9	
5.	Maharashtra *	Kharif	4075	100	5424	5373	99	1132	0.8	
6.	Rajasthan #	Kharif	932	100	7956	7539	95	1254	0.7	
7.	Telangana	Kharif	148	84	802	786	98	1584	2.0	
8.	Uttar Pradesh	Kharif	23	93	812	812	100	901	N.A.	
T O T A L			11530	97	20008	18909	95	790	1.2	
<b>62. TARA MEERA</b>										
1.	Rajasthan #	Rabi	54	68	1392	683	49	711	N.A.	
<b>63. COCONUT ##</b>										
1.	Kerala	Kharif	761	29	2430	2430	100	6964	0.7	
2.	Maharashtra *							N.A.		
T O T A L			761	30	2430	2430	100	6964	0.7	
<b>5299</b>										

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
<b>64. NIGER</b>										
1.	Maharashtra *	Kharif	11	68	410	319	78	122	2.4	1.3
<b>65. COTTON \$ (Lint)</b>										
1.	Andhra Pradesh	Kharif	617	80	952	934	98	1214	3.9	749
2.	Gujarat %	Kharif (Ir.)	1856	100	6979	6811	98	1335	1	2478
		Kharif (UI.)	804	95	2690	2242	83	620	2	498
		Kharif Comb.	2660	98	9669	9053	94	1119	0.9	2976
3.	Haryana ###	Kharif	615	45	940	908	97	275	N.A.	995
4.	Karnataka %%	(Ir.)								
		(UI.)								
		Kharif Comb.	685	N.A.	3600	3021	84	347	3.2	133
		Rabi	2	N.A.	150	92	61	73	22.0	0
5.	Madhya Pradesh ***	Kharif	557	98	962	819	85	1227	2.1	4017
6.	Maharashtra *	(Ir.)								
		(UI.)								
		(Comp.)								
		Kharif Comb.	4219	100	8600	8450	98	238	0.7	5909
7.	Punjab	Kharif	268	100	676	672	99	776	N.A.	1223
8.	Rajasthan #	Khaif	629	99	6796	6290	93	1656	0.8	6080
9.	Tamil Nadu	Kharif	70	95	564	564	100	368	1.8	152
		Rabi	65	78	256	256	100	441	4.4	169
		Comb.	135	87	820	820	100	403	2.5	320
10.	Telangana	Kharif	1840	71	1372	1372	100	1171	1.1	2155
11.	Uttar Pradesh	Kharif	6	85	80	80	100	343	N.A.	2
TOTAL		Kharif	12166	92	34211	32163	94	765	0.6	24391
		Rabi	67	78	406	348	86	430	4.4	169
		Comb.	12233	92	34617	32511	94	763	1	24560
<b>66. JUTE. @@</b>										
1.	Assam	Kharif	66	97	600	504	84	2084	1.1	762
2.	Bihar @	Kharif	71	95	200	158	79	2367	N.A.	167
3.	Meghalaya	Kharif	7	78	63	54	86	967	0.05	69
4.	Odisha	Kharif	0.2	100	41	41	100	1560	6.4	0
5.	West Bengal %%	Kharif	522	100	2910	2573	88	2720	0.5	8188
TOTAL		Kharif	665	99	3814	3330	87	2602	0.5	9186

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Resp- onse % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)			
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d							
<b>67. MESTA. @@</b>												
1.	Andhra Pradesh	Kharif	3	97	200	200	100	1820	1.4	5		
2.	Bihar @	Kharif	14	97	200	78	39	1935	N.A.	28		
3.	West Bengal %%	Kharif	14	100	222	201	91	2040	3.2	162		
<b>T O T A L</b>			31	98	622	479	77	1971	2.7	195		
<b>68. TOBACCO</b>												
1.	Andhra Pradesh	(N)	22	75	296	290	98	2750	4.4	62		
		(V)	61	79	396	354	89	1091	5.0	67		
		Rabi (Comb.)	84	78	692	644	93	1534	3.3	128		
2.	Gujarat %	Kharif	62	97	200	200	100	1849	3	114		
3.	Karnataka %%	Kharif	56	100	330	309	94	914	6	49		
4.	Maharashtra *	Rabi	0.5	100	16	16	100	1745	11	1		
5.	Telangana	(N)	0.5	39	10	10	100	5224	1.0	3		
		(V)	2	25	26	26	100	2690	1.2	6		
		Rabi (Comb.)	3	28	36	36	100	3159	8.9	9		
6.	Uttar Pradesh	Rabi	25	81	100	80	80	2146	N.A.	54		
		(Zaid)	1	19	20	10	50	2412	N.A.	2.0		
		Comb.	26	78	120	90	75	2156	-	56		
<b>T O T A L</b>			Kharif	118	99	530	509	96	1403	3.0	163	
<b>T O T A L</b>			Rabi	113	77	864	786	91	1720	2.9	194	
<b>T O T A L</b>			Comb.	231	88	1394	1295	93	1558	2	357	
<b>69. ISABGOL</b>												
1.	Gujarat %	Rabi	7	82	200	175	88	700	N.A.	5		
2.	Rajasthan #	Rabi	336	99	4268	3536	83	576	N.A.	194		
<b>T O T A L</b>			344	99	4468	3711	83	579	N.A.	199		
<b>70. AVARE (SEM)</b>												
1.	Karnataka %%	Kharif	2	98	280	247	88	690	3.4	1		
		Rabi	9	99	60	58	97	607	14.2	5		
<b>71. COWPEA (LOBIA)</b>												
1.	Goa	Kharif	0.2	100	192	30	16	818	NA	0		
		Rabi	6.03	100	192	166	86	1024	NA	6		

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Area under Crop		No. of Experiments		Respon- se % age	Estimat- ed yield rate (Kg/ha.)	Standar- d Error % age	Total Product- ion (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse- d					
2.	Karnataka %%	Kharif	38	99	1030	747	73	106	34	0
		Rabi	0.1	N.A.	50	27	54	6177	NA	36
		Summer	0.33	N.A.	40	20	50	818	NA	0.1
		Rabi/Sum. Combi	0.47	N.A.	90	47	52	2414	NA	36
3.	Kerala	Kharif	6	N.A.	1990	1990	100	6177	NA	36
4.	Tamil Nadu	Kharif	45	88	112	96	86	789	6	35
		Rabi	20	77	112	112	100	851	4	17
	Total		116	85	3718	3235	87	859	NA	167
<b>72. TAMARIND</b>										
1.	KERALA	Kharif								
<b>73. NUTMEG</b>										
1.	KERALA	Kharif	23	1	1402	1402	100	647	N.A.	15
<b>74. BETEL LEAVES</b>										
1.	KERALA	Rabi	0.2	0.01	720	720	100	46117	N.A.	11
<b>75. CABBAGE</b>										
1.	KARNATAKA	Kharif	2.3	N.A.	100	95	95	25781	19	57
<b>76. BEANS</b>										
1.	KARNATAKA	Kharif								
<b>77. BITTER GOURD</b>										
1.	KERALA	Kharif	2	N.A.	1627	1627	100	6953	N.A.	16
<b>78. RAJMA BEANS</b>										
1.	ANDHRA PRADESH	Rabi	11	36	54	54	100	762	9.5	9

Note :-

1. : All primary data have been supplied by concerned SASA.
2. # : Standard Error % repeated for Rabi & Summer Season Crops from the year 2016-17.
3. \*\* : Estimated average yield is in number of Jackfruits/hec. and production in million numbers for Kerala State.
4. ## : Estimated average yield is in number of coconuts/hec. and production in million nuts.
5. \$ : Production of cotton in `000' bales of 170 Kgs. each.
6. \* : Coverage % & Sampling Error repeated for the crops of Rice Kh, Ragi, Redgram, Greengram, Blackgram, Groundnut (Kh & Rabi), Sesamum (Kh & Rabi), Linseed, Safflower, Sunflower (Kh, Rabi & Sum), Soyabean, Niger & Tobacco and Area, Coverage, Yield, Sampling Error, & Production repeated for crops Rice Sum., Jowar (Kharif & Rabi), Bajra Kharif, Wheat, Gram Kharif, Sugarcane and Cotton from the year 2011-12.
7. @@ : Production of Jute and Mesta in `000' bales of 180 Kgs. each.
8. %% : Coverage % age repeated from the year 2015-16 .
9. \$\$ : Data repeated from the year 2011-12 Linseed, Potato, R&M and Saffron.
10. @ : coverage percentage repeated from the year 2013-14 .
11. : N.A. = Not Available
12. \$\$\$ : Coverage Percentage repeated from the year 2014-15.
13. \*\*\* : Figure repeated from the year 2013-14 in respect for crops Banana, Onion and Papaya and all other crop 2015-16 for Madhya Pradesh.
14. % : Coverage % age and Standard Error % repeated from the year 2016-17 .
15. ### : Data repeated from the year 2015-16.

**ANNEX - VI : COMPARISON OF SURVEY ESTIMATES AND OFFICIAL ESTIMATES IN RESPECT OF**

Sl. No.	S T A T E	SURVEY ESTIMATES			OFFICIAL ESTIMATES			
		Area in 000'ha.	Production in "000" tonnes	Yield in Kg./ha.	Area in `000'ha.	Production in "000" tonnes	Yield in Kg./ha.	
1	2	3	4	5	6	7	8	
<b>1. RICE</b>								
1	Andhra Pradesh	Rabi	644	4493	6972	644	2991	4645
2	Assam	Kharif	2022	4292	2153	2024	4075	2013
3	Bihar	Kharif	3099	6019	2814	3099	6019	1942
4	Chhattisgarh	Kharif	3840	6603	1556	3606	6527	1810
5	Gujarat	Kharif	809	2729	3372	809	1819	2248
6	Haryana	Kharif	1206	3941	3268	1447	4516	3121
7	Himachal Pradesh	Kharif	72	147	2270	72	115	1600
8	Jammu & Kashmir	Kharif	262	924	3454	262	616	2350
9	Jharkhand	Kharif	1342	4163	2108	1527	2894	1895
10	Karnataka	Kharif	1002	4357	2108	985	2945	2989
		Rabi	145	692	5017	154	486	3160
11	Kerala	Kharif	149	381	2557	152	430	2826
		Rabi	49	197	4027	46	149	3232
12	Madhya Pradesh	Kharif	1935	2120	1127	2373	4450	1875
13	Meghalaya	Kharif	97	238	1695	97	160	1644
14	Odisha	Kharif	274	926	3376	3585	6808	1899
15	Punjab	Kharif	3103	12822	2322	3103	12822	4132
16	Rajasthan	Kharif	198	680	3436	198	453	2291
17	Tamil Nadu	Kharif	1484	5139	3462	1573	5470	3478
		Rabi	1721	6132	3562	149	661	4450
18	Uttarakhand	Kharif	239	562	2127	239	562	2350
		Rabi	1185	863	3379	1280	4350	3400
19	Dadra & Nagar Haveli	Kharif	13	28	2027	14	30	2106
20	Daman & Diu	Kharif	1	3	1833	1	2	1273
21	Puducherry	Kharif	4	14	3427	13	47	3500
		Rabi	13	43	3226	5	17	3682
<b>2. JOWAR</b>								
1	Chhattisgarh	Kharif	3	3	990	3	3	986
2	Karnataka	Kharif	69	99	1507	108	156	1444
		Rabi	810	640	832	835	735	881
3	Madhya Pradesh	Kharif	190	283	1491	75	164	2189
<b>3. BAJRA</b>								
1	Andhra Pradesh	Kharif	21	21	1014	22	23	1031
2	Gujarat	Kharif	164	228	1397	392	893	2280
3	Haryana	Kharif	370	652	1762	425	878	2068
4	Karnataka	Kharif	160	139	912	184	176	957
5	Madhya Pradesh	Kharif	233	366	1575	327	628	1921
6	Maharashtra	Kharif	610	332	1575	610	332	545
7	Rajasthan	Kharif	4154	3765	545	4180	3808	911
8	Tamil Nadu	Kharif	31	88	2845	47	118	2517
9	Telangana	Kharif	1	0.3	497	8	4	497
<b>4. MAIZE</b>								
1	Bihar	Rabi	282	2098	7432	446	2019	4524
2	Haryana	Kharif	6	18	3000	6	16	2644
3	Himachal Pradesh	Kharif	267	695	2890	287	726	2530
4	Jammu & Kashmir	Kharif	262	574	2036	262	574	2189
5	Jharkhand	(Bha.)	124	271	2172	261	455	1744
6	Karnataka	Kharif	1189	3034	2686	1231	3392	2755
7	Karnataka	Rabi	81	291	3783	108	366	3377
8	Madhya Pradesh	Kharif	991	2288	2308	1256	4090	3256
9	Maharashtra	Rabi	201	380	1887	219	400	1833
10	Odisha	Rabi	3	7	2610	3	7	2610
11	Uttar Pradesh	Rabi	13	38	2804	59	133	2254
12	West Bengal	Kharif	46	125	2692	54	182	3396
<b>5. RAGI (MANDUA)</b>								
1	Andhra Pradesh	Kharif	24	29	1226	32	43	1348
2	Jharkhand	Kharif	19	23	1162	14	11	805

**ANNEX - VI : COMPARISON OF SURVEY ESTIMATES AND OFFICIAL ESTIMATES IN RESPECT OF**

Sl. No.	S T A T E	SURVEY ESTIMATES			OFFICIAL ESTIMATES			
		Area in 000'ha.	Production in "000" tonnes	Yield in Kg./ha.	Area in `000'ha.	Production in "000" tonnes	Yield in Kg./ha.	
1	2	3	4	5	6	7	8	
3	Karnataka	Kharif	504	560	1169	527	678	1285
4	Tamil Nadu	Kharif	57	179	3145	79	256	3257
5	Uttarakhand	Kharif	92	110	1272	92	110	1194
6	Dadra & N. Haveli	Kharif	1	3	2572	0.85	1	1440
<b>6. WHEAT</b>								
1	Chhattisgarh	Rabi	105	130	1596	105	163	1548
2	Haryana	Rabi	2576	11350	4407	2553	12574	4925
3	Himachal Pradesh	Rabi	319	677	2360	319	565	1770
4	Jharkhand	Rabi	112	227	2022	164	303	1847
5	Karnataka	Rabi	177	160	949	150	164	1090
6	Madhya Pradesh	Rabi	5408	15664	2896	5520	16521	2993
7	Rajasthan	Rabi	2998	11963	3991	2880	10083	3501
8	Uttar Pradesh	Rabi	9856	38040	3860	9540	32741	3432
9	West Bengal	Rabi	322	863	2682	112	338	3012
<b>7. BARLEY</b>								
1	Chhattisgarh	Rabi	2	1	707	2	1	792
2	Haryana	Rabi	29	99	3414	15	58	3866
3	Himachal Pradesh	Rabi	23	37	1735	20	36	1770
4	Madhya Pradesh	Rabi	72	158	1670	83	164	1981
<b>8. GRAM (BENGALGRAM)</b>								
1	Andhra Pradesh	Kharif	246	44	180	478	243	508
2	Bihar	Rabi	17	32	1852	56	68	1199
3	Chhattisgarh	Kharif	68	68	397	321	330	1026
4	Gujarat	Kharif	254	307	1209	173	235	1358
5	Haryana	Kharif	4	6	1068	45	62	1385
6	Jharkhand	Rabi	1	79	2076	233	286	1228
7	Karnataka	Kharif	1506	869	607	1265	783	619
8	Madhya Pradesh	Kharif	505	325	644	3590	4595	1280
9	Maharashtra	Kharif	1261	834	661	2000	1834	917
10	Punjab	Kharif	37	52	1248	2	3	1330
11	Rajasthan	Kharif	296	192	648	1597	1839	1152
12	Uttar Pradesh	Kharif	251	272	1084	572	728	1272
13	West Bengal	Rabi	3	4	1249	36	42	1179
<b>9. REDGRAM (TUR/ARHAR)</b>								
1	Chhattisgarh	Kharif	68	68	397	68	32	480
2	Haryana	Kharif	4	6	1068	2	2	1211
3	Jharkhand	Rabi	1	79	2076	231	234	1014
4	Karnataka	Kharif	1506	869	607	1483	948	639
5	Madhya Pradesh	Kharif	505	325	644	213	180	846
6	Tamil Nadu	Kharif	37	52	1248	41	52	1248
7	West Bengal	Rabi	3	4	1249	4	6	1543
<b>10. GREENGRAM (MOONG)</b>								
1	Bihar	Kharif	7	4	568	9	5	581
2	Karnataka	Kharif	396	132	351	415	142	341
3	Karnataka	Rabi	4	1	219	6	1	171
4	Telangana	Rabi	7	6	948	7	7	948
5	West Bengal	Sum	46	33	714	3	2	751
<b>11. BLACKGRAM (URD /MATHIKALAI)</b>								
1	Gujarat	Kharif	106	62	580	106	68	640
2	Jharkhand	Kharif	36	35	977	129	108	841
3	Karnataka	Kharif	80	39	512	81	41	508
4	Karnataka	Rabi	2	1	592	4	2	500
5	Telangana	Rabi	5	8	1480	5	7	1480
6	West Bengal	Kharif	66	45	692	75	52	693
<b>12. LAKH (KHESARI)</b>								
1	Chhattisgarh	Rabi	183	114	699	183	114	620
2	West Bengal	Rabi	45	55	1173	4	5	1097

**ANNEX - VI : COMPARISION OF SURVEY ESTIMATES AND OFFICIAL ESTIMATES IN RESPECT OF**

Sl. No.	S T A T E	SURVEY ESTIMATES			OFFICIAL ESTIMATES			
		Area in 000'ha.	Production in "000" tonnes	Yield in Kg./ha.	Area in `000'ha.	Production in "000" tonnes	Yield in Kg./ha.	
1	2	3	4	5	6	7	8	
<b>13. MASUR</b>								
1	Jharkhand	Rabi	9	6	701	57	50	875
2	West Bengal	Rabi	85	77	912	170	141	831
<b>14. HORSEGRAM (KULTHI)</b>								
1	Andhra Pradesh	Kharif	57	11	184	57	10	175
2	Karnataka	Kharif	34	14	437	38	16	421
3	Karnataka	Rabi	142	70	519	115	13	116
4	Telangana	Rabi	1	0	634	1	1	1000
<b>15. PEAS</b>								
1	West Bengal	Rabi	14	15	1121	17	20	1173
<b>16. GROUNDNUT</b>								
1	Andhra Pradesh	Kharif	687	333	484	484	687	333
		Rabi	61	129	2122	2122	61	129
2	Chhattisgarh	Kharif	30	40	1283	1283	30	40
3	Gujarat	Kharif	1566	2143	1368	1368	1566	2143
		Rabi	28	60	2156	2156	28	60
4	Karnataka	Kharif	383	225	617	617	378	393
		Rabi	335	911	2717	2717	137	111
5	Madhya Pradesh	Kharif	201	229	1141	1141	223	412
6	Maharashtra	Kharif	217	204	936	936	217	203
		Rabi	27	35	1319	1319	27	35
7	Odisha	Kharif	335	911	2717	2717	13	14
		Rabi	15	22	1453	1453	15	22
8	Rajasthan	Kharif	669	1375	2056	2056	673	1382
9	Tamil Nadu	Kharif	197	426	2169	2169	197	426
		Rabi	139	485	3491	3491	139	485
10	Telangana	Kharif	13	33	2504	2504	13	33
		Rabi	113	282	2489	2489	113	281
11	Uttar Pradesh	Kharif	101	100	994	994	101	100
12	West Bengal	Rabi	55	139	2536	2536	146	163
<b>17. SESAMUM ( GINGELLY )</b>								
1	Andhra Pradesh	Kharif	17	4	270	270	48	13
2	Chhattisgarh	Kharif	21	7	321	321	21	7
3	Gujarat	Kharif	80	37	462	462	98	49
4	Karnataka	Kharif	23	15	695	695	24	29
5	Madhya Pradesh	Kharif	370	152	411	411	248	139
6	Maharashtra	Kharif	37	6	169	169	39	7
7	Odisha	Kharif	335	911	2717	2717	15	4
8	Rajasthan	Kharif	242	84	348	348	242	84
9	Tamil Nadu	Kharif	9	4	475	475	45	24
10	Telangana	Kharif	1	0	170	170	18	12
11	Uttar Pradesh	Kharif	327	74	226	226	327	74
<b>18. CASTOR</b>								
1	Andhra Pradesh	Kharif	35	15	419	37	15	415
<b>19. SAFFLOWER</b>								
1	Karnataka	Rabi	14	8	593	16	10	617
<b>20. SUNFLOWER</b>								
1	Andhra Pradesh	Kharif	3	2	593	3	2	557
		Rabi	10	7	475	10	7	731
2	Haryana	Rabi	8	13	518	10	18	1905
3	Karnataka	Kharif	82	63	811	90	81	896
		Rabi	37	19	549	47	25	531
4	Tamil Nadu	Rabi	5	3	577	5	3	577
5	Telangana	Rabi	2	5	1960	2	4	1960
<b>21. SOYABEAN</b>								
1	Andhra Pradesh	Kharif	1	3	1921	0.53	2	1926
2	Chhattisgarh	Kharif	93	65	640	93	65	699
3	Madhya Pradesh	Kharif	6014	2748	457	5419	6671	1231

**ANNEX - VI : COMPARISION OF SURVEY ESTIMATES AND OFFICIAL ESTIMATES IN RESPECT OF**

Sl. No.	S T A T E	SURVEY ESTIMATES			OFFICIAL ESTIMATES			
		Area in 000'ha.	Production in "000" tonnes	Yield in Kg./ha.	Area in `000'ha.	Production in "000" tonnes	Yield in Kg./ha.	
1	2	3	4	5	6	7	8	
<b>22. COTTON \$ (Lint)</b>								
1	Andhra Pradesh	Kharif	617	749	1214	620	1491	409
2	Gujarat	Kharif	2660	2976	1119	2660	6279	401
3	Haryana	Kharif	615	995	275	708	2013	483
4	Karnataka	Kharif	685	133	347	718	1400	331
5	Madhya Pradesh	Kharif	557	4017	1227	614	2329	645
6	Maharashtra	Kharif	4219	5909	238	4218	6593	266
7	Rajasthan	Kharif	629	6080	1656	629	2026	548
8	Tamil Nadu	Kharif	70	152	368	133	269	344
9	Telangana	Kharif	1840	2155	1171	1839	3847	356
<b>23. JUTE</b>								
1	Bihar	Kharif	71	167	2367	71	929	2367
2	Meghalaya	Kharif	7	69	967	7	69	1847
3	West Bengal	Kharif	522	8188	2720	518	7697	2673
<b>24. MESTA</b>								
1	Andhra Pradesh	Kharif	3	5	1820	3	30	1820
2	Bihar	Kharif	14	28	1935	14	156	1935
3	West Bengal	Kharif	14	162	2040	11	73	1218

Note :-

1. @@ : Production of Jute and Mesta in `000' bales of 180 Kgs. each.
2. \$ : Production of cotton in `000' bales of 170 Kgs. each.
3. : Data for Survey Estimates is repeated for the States: Haryana, Jharkhand, Madhya Pradesh

**ANNEX-VII : ESTIMATES OF YIELD RATES FROM IRRIGATED AND UN-IRRIGATED PLOTS UNDER CES DURING 2018-19**

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS		
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.
1	2	3	4	5	6	7	8	9
1. RICE								
1.	Andhra Pradesh	Kh.	3572	5062	1496	232	2430	68
		Rabi	2972	6741	644	-	-	-
2.	Assam	Aut.	36	1680	N.A.	924	1375	N.A.
		Wint.	88	2140	N.A.	2860	2088	N.A.
		Sum.	929	2918	N.A.	193	2058	N.A.
3.	Bihar @@	Bha.	130	2098	200	152	2053	245
		Agh.	32052	3510	2021	7777	1585	633
		Gar.	358	3385	60			
4.	Chhattisgarh		1086	1866	1201	1032	1399	2153
5.	Goa	Kh.				188	2719	26
		Rabi	135	2711	11			
6.	Gujarat	Kh.	6220	3673	624	1250	2354	185
		Sum.			N.A			
7.	Haryana \$\$\$	Kh.	974	3124	1277	-	-	-
8.	Himachal Pradesh				N.A.			
9.	Jammu & Kashmir		1017	3454	236	93	3232	26
10.	Jharkhand				N.A.			
11.	Karnataka	Kh.	6635	4823	793	4674	3635	209
		Rabi	962	4062	8			
		Sum.	2284	5073	137			
12.	Kerala	Aut.	617	665	21	1725	2225	39
		Wint.	2701	3267	84	567	1142	4
		Sum.	1569	4027	49	8	837	0.001
13.	Madhya Pradesh		1078	2050	697	1238	608	1238
14.	Maharashtra	Kh.	1073	2385	299	1323	2032	677
		Comp.	1560	2353	449			
		Sum.	492	2778	48			
15.	Meghalaya	Aut.	239	1458	33			
		Wint.	872	1818	64	2	1291	0.001
16.	Odisha	Aut.	421	1542	11	2940	1170	444
		Wint.	9811	2241	929	17563	1833	2201
		Sum.	4673	3376	274			
17.	Punjab		1970	4366	3065			
18.	Rajasthan							
19.	Tamil Nadu	K/K/S	N.A.	N.A.	279	0	N.A.	1
		S/T/P	N.A.	N.A.	1089	0	N.A.	115
		N/K	N.A.	N.A.	237	0	N.A.	N.A.
20.	Telangana	Kh.	2186	3483	1175	104	2143	13
		Rabi	2324	3378	743	-	-	-
21.	Uttarakhand		2068	3891	171	719	1741	69
22.	Uttar Pradesh				N.A.			
23.	West Bengal	Aus.	1423	2505	N.A.	588	2250	N.A.
		Aman.	6872	3114	N.A.	5867	2616	N.A.
		Sum.	10847	3319	N.A.	44	3097	N.A.
24.	Dadra & Nagar Haveli		-	-	-	70	2027	13
25.	Daman & Diu		-	-	-	20	1833	1
26.	Puducherry	I	94	3427	4	-	-	-
		II	140	3121	9	-	-	-

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS		
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.
1	2	3	4	5	6	7	8	9
		III	70	3432	5	-	-	-
	<b>T O T A L</b>		<b>112550</b>	<b>3457</b>	-	<b>52153</b>	<b>2014</b>	-
	<b>2. JOWAR</b>							
1.	Andhra Pradesh	Kh.				152	221	15
		Rabi				456	708	141
2.	Chhattisgarh		32	990	1343			
3.	Gujarat	Kh.	318	1336	39			
		Rabi			N.A.			
4.	Karnataka	Kh.	522	2699	8	1547	1354	61
		Rabi	1596	1809	75	7006	732	725
		Sum.						
5.	Madhya Pradesh					1378	1491	N.A.
6.	Maharashtra	Kh.	3152	810	530			
		Rabi	3277	735	351	5135	327.2	1559
7.	Rajasthan							
8.	Tamil Nadu	Kh.	140	N.A.	149	300	N.A.	15
		Rabi	318	N.A.	184	322	N.A.	23
9.	Telangana	Kh.	546			106	786	34
		Rabi	195	1786	11	173	1180	8
10.	Uttar Pradesh				N.A.			
	<b>T O T A L</b>		<b>10096</b>	<b>938</b>	<b>2689</b>	<b>16575</b>	<b>700</b>	-
	<b>3. BAJRA</b>							
1.	Andhra Pradesh	Kh.				450	919	21
2.	Gujarat	Kh.	1342	1397	164			
		Sum.	8575	2913	228			
3.	Haryana \$\$\$	Kh.	1456	1738	393			
4.	Karnataka	Kh.	533	1359	21	2191	845	139
5.	Madhya Pradesh	Kh.				302	1444	N.A.
6.	Maharashtra		457	1142	23	875	599	306
7.	Rajasthan	Kh.			N.A.			
8.	Tamil Nadu	Kh.	188	N.A.	410	52	N.A.	6
		Rabi	127	N.A.	15	77	N.A.	1
9.	Telangana	Kh.	32					
10.	Uttar Pradesh	Kh.			N.A.			
11.	Daman & Diu	Kh.	0	0	0	8	1306	0.496
	<b>T O T A L</b>		<b>12710</b>	<b>891</b>	<b>1254</b>	<b>3955</b>	<b>601</b>	-
	<b>4. MAIZE</b>							
1.	Andhra Pradesh	Kh.				234	3898	104
		Rabi				512	6846	162
2.	Bihar	Bha.	7124	2714	93	6663	1628	131
		Rabi				22825	7432	282
		Gar.				452	3854	164
3.	Chhattisgarh	Kh.	-	-	-	368	2668	64
4.	Gujarat	Kh.	3471	1770	311			
5.	Haryana \$\$\$	Kh.	76	2000	9	-	-	-
6.	Himachal Pradesh	Kh.				N.A.		
7.	Jammu & Kashmir		97	2014	20	927	2014	243
8.	Jharkhand	Bha.				N.A.		
9.	Karnataka	Kh.	4185	3788	292	6882	2327	897
		Rabi	2044	3837	71	222	2474	4
		Sum.	136	4063	6		N.A.	

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS		
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.
1	2	3	4	5	6	7	8	9
10.	Madhya Pradesh		21	2710	N.A.	1747	1772	N.A.
11.	Maharashtra	Kh.	669	1928	708			
		Rabi	724	1887	201			
12.	Odisha	Aut.	17	1974	0.06	2885	2307	49
		Wint.	20	2696	0.05	5	1415	0.01
		Sum.	296	2610	3			
13.	Punjab		285	3877	2183	51	1709	16
14.	Rajasthan	Kh.						
15.	Tamil Nadu	Kh.	108	N.A.	202	148	N.A.	45
		Rabi	112	N.A.	155	64	N.A.	67
16.	Telangana	Kh.	1201	5888	88	881	2441	337
		Rabi	1623	6431	116	10	4178	0.03
17.	Uttar Pradesh				N.A.			
18.	West Bengal		161	3798	N.A.	407	2488	N.A.
<b>T O T A L</b>			<b>22370</b>	<b>2851</b>	-	<b>45283</b>	<b>4561</b>	-
<b>5. RAGI</b>								
1.	Andhra Pradesh	Kh.				200	1098	24
		Rabi				162	2508	8
2.	Bihar					124	1071	3
3.	Goa					10	696	0.015
4.	Gujarat		100	804	12			
5.	Jharkhand				N.A.			
6.	Karnataka	Kh.	1160	1989	27	5404	1123	477
		Rabi	526	1858	16	440	1167	16
		Sum.	261	1928	3			N.A.
7.	Maharashtra		874	1164	80			
8.	Odisha	Aut.	3	674	0.02	816	684	8
		Wint.				615	693	28
		Sum.	65	624	0.2			
9.	Uttarakhand		2	950	0.1	1108	1272	92
10.	Tamil Nadu	Kh.	115	N.A.	101	45	N.A.	2718
		Rabi	200	N.A.	5	0	N.A.	16515
11.	Telangana					30	989	0.845
12.	Dadra & Nagar Haveli					22	2572	1.04
<b>T O T A L</b>			<b>3306</b>	<b>652</b>	<b>244</b>	<b>8976</b>	<b>2014</b>	<b>19892</b>
<b>6. WHEAT</b>								
1.	Assam	Rabi	99	950	N.A.	545	1325	N.A.
2.	Bihar	Rabi	38940	3039	2041	1445	2272	108
3.	Chhattisgarh	Rabi	398	1732	69	130	983	12
4.	Gujarat	Rabi	16481	3083	775	120	764	22
5.	Haryana \$\$\$	Rabi	1917	3979	2628	-	-	-
6.	Himachal Pradesh	Rabi			N.A.			
7.	Jammu & Kashmir		510	2143	81	870	1987	204
8.	Jharkhand	Rabi			N.A.			
9.	Karnataka	Rabi	2125	1476	95	710	348	83
10.	Madhya Pradesh	Rabi	3950	3024	4944	1196	1498	447
11.	Maharashtra	Rabi	7178	1810	565	450	835	269
12.	Odisha	Sum.	80	1815	0.15	-	-	-
13.	Punjab	Rabi	2320	5068	3497	10	3041	15
14.	Rajasthan	Rabi			N.A.			
15.	Uttarakhand	Rabi	1763	3272	201	1019	1507	126

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS		
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.
1	2	3	4	5	6	7	8	9
16	Uttar Pradesh	Rabi				N.A.		
17.	West Bengal	Rabi	2264	2628	N.A.	21	1716	N.A.
T O T A L			78025	2299	-	6516	1530	-
<b>7. BARLEY</b>								
1.	Bihar @@	Rabi	-	-	-	222	1990	14
2.	Chhattisgarh	Rabi	-	-	-	4	707	0.56
3.	Haryana \$\$\$	Rabi	358	3143	35	-	-	-
4.	Himachal Pradesh	Rabi				N.A.		
5.	Jharkhand	Rabi				N.A.		
6.	Madhya Pradesh	Rabi	-	-	-	500	1670	N.A.
7.	Punjab	Rabi	240	3854	8	-	-	-
8.	Rajasthan	Rabi				N.A.		
9.	Uttarakhand	Rabi	43	1593	0.422	611	611	23
10.	Uttar Pradesh	Rabi				N.A.		
T O T A L			641	3255	43	1337	906	-
<b>8. GRAM (BENGALGRAM )</b>								
1.	Andhra Pradesh	Rabi	-	-	-	1328	471	478
2.	Bihar	Rabi	-	-	-	719	1199	56
3.	Chhattisgarh	Rabi	-	-	-	382	1044	295
4.	Gujarat	Rabi	1317	1358	173			
5.	Haryana \$\$\$	Rabi	251	728	32	266	290	50
6.	Jharkhand	Rabi				N.A.		
7.	Karnataka	Rabi	1470	665	164	5728	458	965
8.	Madhya Pradesh	Rabi	2104	1260	N.A.	2202	1013	N.A.
9.	Maharashtra	Rabi	4286	881	684	5695	786	1010
10.	Punjab	Rabi	100	1126	1.7	-	-	-
11.	Rajasthan	Rabi				N.A.		
12.	Telangana	Rabi	260	1867	40	430	1202	61
13.	Uttar Pradesh	Rabi				N.A.		
14.	West Bengal	Rabi	104	1067	N.A.	526	1023	N.A.
T O T A L			9892	839	-	17276	715	-
<b>9. REDGRAM ( TUR/ ARHAR)</b>								
1.	Andhra Pradesh	Kh.	-	-	-	1128	200	246
2.	Bihar	Rabi	-	-	-	512	1852	17
3.	Chhattisgarh	Kh.	-	-	-	286	397	41.29
4.	Gujarat	Kh.	1572	1209	254			
5.	Haryana \$\$\$	Kh.	248	991	5	-	-	-
6.	Jharkhand	Rabi				N.A.		
7.	Karnataka	Kh.	764	532	104	5941	613	1402
8.	Madhya Pradesh	Kh.	280	841	N.A.	994	572	N.A.
9.	Maharashtra	Kh.	6043	661	1261			
10.	Tamil Nadu	Kh.	24	N.A.	745	312	N.A.	36175
11.	Telangana	Kh.	1952	705	7	214	659	285
12.	Uttar Pradesh	Kh.				N.A.		
13.	West Bengal	Rabi	3	-	N.A.	97	1192	N.A.
T O T A L			10886	722	-	9484	295	-
<b>10. GREENGRAM (MOONG)</b>								
1.	Andhra Pradesh	Kh.	-	-	-	328	331	18
		Rabi	-	-	-	386	788	103
2.	Bihar	Bha.	-	-	-	178	568	7
		Gar.	-	-	-	472	705	160

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS		
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.
1	2	3	4	5	6	7	8	9
3.	Gujarat	Kh.	255	435	25	393	233.5	38
			178	1181	24			
4.	Karnataka	Kh.		N.A.		3331	351	396
		Rabi		N.A.		90	219	4
5.	Maharashtra		5903	424	481			
6.	Odisha	Aut.	0	0	0	524	263	11
		Wint.	19	291	0.0	1239	276	62
		Sum.	624	451	30	1122	331	113
7.	Rajasthan	Kh.			N.A.			
8.	Tamil Nadu	Kh.	32	N.A.	1	100	N.A.	26
		Rabi	16	N.A.	10	292	N.A.	133
9.	Telangana	Kh.	207	544	0.224	763	550	62
		Rabi	85	944	2	71	1194	2
10.	Uttar Pradesh	Kh.			N.A.			
		Zaid			N.A.			
11.	West Bengal	Sum.	151	960	N.A.	495	799	N.A.
T O T A L			7470	464	-	9784	413	-
<b>11. BLACKGRAM (URD/MATHIKALAI)</b>								
1.	Andhra Pradesh	Kh.	-	-	-	294	805	22
		Rabi	-	-	-	634	948	296
2.	Assam	Rabi	-	-	-	472	668	N.A.
3.	Gujarat	Kh.	472	621	42	723	539	64
		Sum.	58	1478	4			
4.	Karnataka	Kh.		N.A.		1127	512	80
		Rabi		N.A.		86	591	2
5.	Maharashtra	Kh.	4662	421	367			
6.	Odisha	Aut.	0	0	0	731	261	14
		Wint.	29	299	0.1	1874	332	39
		Sum.	217	525	2	230	496	2
7.	Rajasthan @	Kh.			N.A.			
8.	Tamil Nadu	Kh.	112	N.A.	13	0	N.A.	32
		Rabi	72	N.A.	88	240	N.A.	308
9.	Telangana	Kh.	214	N.A.	N.A.	118	651	25
		Rabi	104	1616	3	0	0	0
10.	Uttar Pradesh	Kh.			N.A.			
		Zaid			N.A.			
11.	West Bengal	Kh.	34	583	N.A.	1046	684	N.A.
T O T A L			5974	458	-	7575	530	-
<b>12. LAKH (KHESARI)</b>								
1.	Bihar	Rabi	-	-	-	340	1018	50
2.	Chhattisgarh	Rabi	-	-	-	416	699	164
3.	Madhya Pradesh	Rabi	-	-	-	204	760	N.A.
4.	West Bengal	Sum.	30	1005	N.A.	269	1080	N.A.
T O T A L			30	1005	-	1229	881	-
<b>13. MASUR</b>								
1.	Bihar	Rabi	-	-	-	872	1068	138
2.	Rajasthan	Rabi				N.A.		
3.	Uttar Pradesh	Rabi				N.A.		
4.	West Bengal	Rabi	442	826	N.A.	1754	815	N.A.
T O T A L			442	826	-	2626	899	-

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS			
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	
1	2	3	4	5	6	7	8	9	
<b>14. HORSEGRAM (KULTHI)</b>									
1.	Andhra Pradesh	Kh.	-	-	-	90	261	57	
		Rabi	-	-	-	250	403	62	
2.	Karnataka	Kh.	N.A			1315	437	34	
		Rabi	N.A			3604	519	142	
3.	Odisha	Wint.	24	354	0.04	2436	368	24	
		Sum.	-	-	-	14	355	0.04	
4.	Tamil Nadu	Rabi	42	N.A.	308	278	N.A.	74	
5	Telangana	Kh.	-	-	-	-	-	-	
		Rabi	10	N.A.	N.A.	-	-	-	
<b>T O T A L</b>			76	354	308	7987	430	392	
<b>15. PEAS</b>									
1.	Uttar Pradesh	Rabi	N.A.						
2.	West Bengal	Rabi	97	1054	N.A.	164	1207	N.A.	
<b>T O T A L</b>			97	1054	-	164	1207	-	
<b>16. MOTH</b>									
1.	Gujarat		N.A.						
2	Rajasthan	Kh.	-	-	-	-	-	-	
<b>T O T A L</b>			-	-	-	-	-	-	
<b>17. CHOWLA</b>									
1.	Rajasthan	Kh.	N.A.						
<b>18 . GUAR</b>									
1.	Gujarat	Kh.	N.A.						
2	Rajasthan @	Kh.	N.A.						
<b>T O T A L</b>			N.A.						
<b>19 . SAWAN (JHANGORA)</b>									
1.	Uttarakhand	Kh.				584	1343	49	
2	Uttar Pradesh	Kh.	N.A.						
		Zaid	N.A.						
<b>T O T A L</b>			N.A.			584	1343	49	
<b>20. KORRA</b>									
1.	Andhra Pradesh	Kh.				182	480	5	
2	Telangana	Kh.	0	0	0	10	1405	0.059	
<b>T O T A L</b>			0	N.A.	0	192	492	5	
<b>21. KODON-KUTKI (KODRA)</b>									
1.	Chhattisgarh	Kh.	-	-	-	192	929	53	
2.	Madhya Pradesh	Kh.	-	-	-	790	450	N.A	
3.	Uttar Pradesh	Kh.	N.A.						
<b>T O T A L</b>			-	-	-	982	544	-	
<b>22. NAVANE</b>									
1.	Karnataka	Kh.	N.A			373	286	4	
<b>23. SAVE</b>									
1.	Karnataka	Kh.	N.A			216	1309	9	
<b>24. SAMAI</b>									
1.	Tamil Nadu	Kh.	100	N.A.	14501.2	0	N.A.	50	
<b>25. VARAGU</b>									
1.	Tamil Nadu	Kh.	108	N.A.	2012	0	N.A.	1363	
<b>26. SUGARCANE</b>									
1.	Andhra Pradesh	Plt.	806	86000	49	-	-	-	
		Rt.	784	76000	53	-	-	-	

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS			
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	
1	2	3	4	5	6	7	8	9	
2.	Assam	Kh.	-	-	-	530	35573	N.A.	
3.	Bihar	Kh.	277	59091	208	313	59525	26	
4.	Goa	Kh.	-	-	-	54	39761	0.9	
5	Haryana \$\$\$	Kh.	848	73281	96	-	-	-	
6	Jharkhand	Kh.				N.A.			
7.	Karnataka	Kh.	762	95208	376	N.A.			
8.	Kerala	Kh.				N.A.			
9.	Maharashtra	Kh.	5933	81.4	901				
10.	Odisha	Kh.	231	61622	7	-	-	-	
11.	Punjab	Kh.	1970	83580	96	-	-	-	
12.	Rajasthan	Kh.				N.A.			
13.	Tamil Nadu	Kh.	468	N.A.	167	-	-	-	
14.	Telangana	Plt.	104	83	11.337	-	-	-	
		Rt.	104	77	18.267	-	-	-	
15.	Uttar pradesh	Kh.				N.A.			
16.	West Bengal	Rabi	364	29578	N.A.	19	62387	N.A.	
T O T A L			12651	37160	1982	916	44561	26	
27. COCOA									
1.	Kerala	Kh.				N.A.			
28. CHILLIES									
1.	Andhra Pradesh	Kh.	296	3554	137	-	-	-	
		Rabi	380	3581	15	-	-	-	
2.	Bihar	Rabi	-	-	-	218	1910	1.51	
3.	Chhattisgarh	Rabi	4	626	0.14	-	-	-	
4.	Karnataka	Kh.	382	2922	49.89	275	271	61.12	
		Rabi				N.A			
		Sum.				N.A			
5.	Madhya Pradesh	Rabi	48	573	N.A	-	-	-	
6.	Telangana	Kh.	370	4423	70	10	3527	2	
		Rabi	128	5953	6	-	-	-	
T O T A L			1608	3705	277	503	427	65	
29. CUMIN									
1	Gujarat	Rabi	3751	572	350	-	-	-	
2.	Rajasthan @	Rabi	-	-	-	-	-	-	
T O T A L			3751	6137	350	-	-	-	
30. FENNEL									
1.	Gujarat	Rabi	386	1549.47	42.75	-	-	-	
31. ARECANUT									
1.	Kerala	Kh.				N.A.			
2.	Maharashtra					N.A.			
T O T A L			-	-	-	-	-	-	
32. PEPPER									
1.	Kerala	Kh.				N.A.			
33. SAFFRON									
1.	Jammu & Kashmir	Kh.				N.A.			
34. TURMERIC									
1.	Kerala	Kh.				N.A.			
35. GINGER									
1.	Kerala	Kh.				N.A.			
2.	Meghalaya	Kh.	-	-	-	738	6586	10	
T O T A L			-	-	-	738	6586	10	

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS		
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.
1	2	3	4	5	6	7	8	9
<b>36. GARLIC</b>								
1.	Gujarat	Rabi	180	6812	10	-	-	-
<b>37. CORIANDER</b>								
1.	Rajasthan	Rabi				N.A.		
<b>38. LICHI</b>								
1.	Bihar	Rabi	-	-	-	244	6513	9
<b>39. BANANA</b>								
1.	Bihar	Rabi	-	-	-	264	16238	11
2	Gujarat		196	77332	36.41			
3	Kerala	Kh.				N.A.		
4	Madhya Pradesh ##	Rabi	80	158733	N.A.	-	-	-
<b>T O T A L</b>			276	100926	-	264	16238	11
<b>40. MANGO</b>								
1.	Bihar	Rabi	-	-	-	388	31092	57
<b>41. GUAVA</b>								
1.	Bihar	Rabi	-	-	-	156	10697	0.92
<b>42. JACKFRUIT</b>								
1.	Bihar	Rabi	-	-	-	232	22895	4.5
2.	Kerala					N.A.		
<b>T O T A L</b>			-	-	-	232	22895	4.5
<b>43. CASHEWNUT</b>								
1.	Kerala	Kh.				N.A.		
2.	Maharashtra					N.A.		
<b>T O T A L</b>			-	-	-	-	-	-
<b>44. TAPIOCA</b>								
1.	Kerala	Kh.				N.A.		
<b>45. PINE APPLE</b>								
1.	Kerala	Kh.				N.A.		
<b>46. POTATO</b>								
1.	Assam	Rabi	88	1345	-	492	835	N.A.
2.	Bihar	Agh.	-	-	-	178	13430	68
		Rabi	-	-	-	398	14297	88
3.	Chhattisgarh	Rabi	-	-	-	14	5288	1.11
4.	Gujarat	Rabi	971	30100	121	-	-	-
5.	Jammu & Kashmir	Kh.				N.A.		
		Rabi				N.A.		
6.	Jharkhand	Agh.				N.A.		
		Rabi				N.A.		
7.	Karnataka	Kh.	121	12841	2.04	333	7836	17
		Rabi	237	15713	4.37	-	-	-
8.	Madhya Pradesh	Rabi	346	14329	N.A.	-	-	-
9.	Meghalaya	Sum.	-	-	-	310	9728	12
10.	Odisha	Wint.	1865	11113	5	-	-	-
11.	Uttar Pradesh	Rabi				N.A.		
<b>T O T A L</b>			3628	16623	-	1725	8226	-
<b>47. ONION</b>								
1.	Bihar	Rabi	-	-	-	290	14146	13
2.	Chhattisgarh	Rabi	18	5928	0.66	-	-	-
3.	Gujarat	Rabi	1161	28222	24	-	-	-
		Sum.	20	27543	2			
4.	Jharkhand	Rabi				N.A.		

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS			
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	
1	2	3	4	5	6	7	8	9	
5.	Karnataka	Kh.	1322	11412	89	721	3857	85	
		Rabi	369	12091	6	383	12999	13	
		Sum.	97	11176	0.7	141	13049	1.45	
6.	Madhya Pradesh ##	Rabi	454	14061	N.A.	554	595	N.A.	
7.	Uttar Pradesh	Rabi			N.A.				
		Zaid			N.A.				
T O T A L			3441	17564	-	2089	6717	-	
48. BRINJAL									
1.	Bihar	Agh.	-	-	-	218	11291	19	
		Rabi	-	-	-	258	9057	8	
2.	Jharkhand	Agh.			N.A.				
		Rabi			N.A.				
T O T A L			-	-	-	476	10070	28	
49. TOMATO									
1.	Bihar	Agh.	-	-	-	136	13470	8	
		Rabi	-	-	-	200	11940	6	
2.	Jharkhand	Agh.			N.A.				
		Rabi			N.A.				
T O T A L			-	-	-	336	12813	14	
50. CAULIFLOWER									
1.	Bihar	Rabi	-	-	-	266	13455	30	
51. PAPAYA (PAPITA)									
1.	Madhya Pradesh ##	Rabi	30	N.A.	N.A.	-	-	-	
52. PLANTAIN									
1.	Kerala	Kh.			N.A.				
53. METHI									
1.	Rajasthan	Rabi			N.A.				
54. GROUNDNUT									
1.	Andhra Pradesh	Kh.	166	317.51	15	2266	437	672	
		Rabi	812	2250	61	-	-	-	
2.	Chhattisgarh	Kh.	-	-	-	148	1223	19	
3.	Goa	Kh.	-	-	-	20	2370	0.21	
		Rabi	32	2320	0	-	-	-	
4.	Gujarat	Kh.	7417	1368	1566	-	-	-	
		Sum.	803	2156	28	-	-	-	
5.	Karnataka	Kh.	1114	1166	24	5626	580	359	
		Rabi	-	-	-	130	2209	3	
		Sum.	2360	897	61	-	-	-	
6.	Madhya Pradesh	Kh.	124	634	N.A.	668	1061	N.A.	
7.	Maharashtra	Kh.	2557	936	217				
		Sum.	1400	1319	27				
8.	Odisha	Aut.	11	1580	0.02	1033	1023	1096	
		Wint.	51	1453	1.5	113	1001	0.45	
		Sum.	1012	1905	5	548	1274	10	
9.	Rajasthan @	Kh.							
10.	Tamil Nadu	Kh.	679	N.A.	21	21	N.A.	14	
		Rabi	446	N.A.	112	14	N.A.	26	
11.	Telangana	Kh.	196	2485	7	0	0	0	
		Rabi	1112	2465	111	0	0	0	
12.	Uttar Pradesh	Kh.			N.A.				
13.	West Bengal	Rabi	462	2387	N.A.	62	1946	N.A.	

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS		
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.
1	2	3	4	5	6	7	8	9
	T O T A L		20754	1422	-	10649	749	-
<b>55. SESAMUM (GINGELLY)</b>								
1.	Andhra Pradesh	Kh.	-	-	-	262	269	17
		Rabi	-	-	-	310	173	31
2.	Chhattisgarh	Kh.	-	-	-	86	321	10
3.	Gujarat	Kh.	965	462	80.1	-	-	-
4.	Karnataka	Kh.		N.A		1318	695	23
5.	Kerala	Kh.			N.A.			
6.	Madhya Pradesh	Kh.	-	-	-	1314	374	N.A.
7.	Maharashtra	Kh.	755	169	37			
		Rabi	10	117	0.88			
8.	Odisha	Aut.				173	308	2
		Wint.	2	196	N.A.	643	232	11
		Sum.	153	203	1.24	109	201	1
9.	Rajasthan @	Kh.						
10.	Tamil Nadu	Kh.	84	N.A.	3	108	N.A.	6
		Rabi	222	N.A.	42	34	N.A.	28
11.	Telangana	Kh.	26	N.A.	N.A.	30	163	0.503
		Rabi	198	668	16	0	0	0
12.	Uttar Pradesh	Kh.			N.A.			
13.	West Bengal	Sum.	2098	913	N.A.	639	760	N.A.
	T O T A L		4513	631	-	5026	466	-
<b>56. CASTOR.</b>								
1.	Andhra Pradesh	Kh.	-	-	-	232	352	35
2.	Gujarat	Kh.	2399	1809	522	-	-	-
3.	Karnataka	Kh.		N.A		85	854	0.13
4.	Rajasthan	Kh.				N.A.		
5.	Telangana	Kh.	150	618	19.3	0	0	0.018
	T O T A L		2549	1739	541	317	39	35
<b>57. RAPE &amp; MUSTARD</b>								
1.	Assam	Rabi	24	667	N.A.	1064	679	N.A.
2.	Bihar	Rabi	-	-	-	1018	1245	83
3.	Chhattisgarh	Rabi	-	-	-	230	488	22.915
4.	Gujarat	Rabi	1860	1783.59	195.36	-	-	-
5.	Haryana \$\$\$	Rabi	835	1434	482	-	-	-
6.	Jammu & Kashmir	Rabi			N.A.			
7.	Jharkhand	Rabi			N.A.			
8.	Madhya Pradesh	Rabi	512	1013	N.A.	484	634	N.A.
9.	Odisha	Wint.	670	561	1	1379	205	4.84
10.	Punjab	Rabi	565	1508	30	1	1959	0.1
11.	Rajasthan @	Rabi			N.A.			
12.	Uttar Pradesh	Rabi			N.A.			
13.	West Bengal	Rabi	3969	997	N.A.	428	695	N.A.
	T O T A L		8435	1213	-	4604	650	-
<b>58. LINSEED</b>								
1.	Chhattisgarh	Rabi	-	-	-	172	271	11.224
2.	Jammu & Kashmir	Rabi			N.A.			
3.	Karnataka	Rabi		N.A		50	219	0.3
4.	Madhya Pradesh	Rabi	-	-	-	802	448	N.A.
5.	Maharashtra	Rabi	202	380	7.02			
6.	Uttar Pradesh	Rabi			N.A.			

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS		
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.
1	2	3	4	5	6	7	8	9
7.	West Bengal	Rabi	-	-	-	122	254	N.A.
<b>T O T A L</b>			<b>202</b>	<b>380</b>	<b>7.02</b>	<b>1146</b>	<b>391</b>	<b>12</b>
<b>59. SAFFLOWER</b>								
1.	Karnataka	Rabi		N.A		858	593	14
2.	Maharashtra	Rabi	256	475	25			
<b>T O T A L</b>			<b>256</b>	<b>475</b>	<b>25</b>	<b>858</b>	<b>593</b>	<b>14</b>
<b>60. SUNFLOWER</b>								
1.	Andhra Pradesh	Kh.	-	-	-	146	299	3
		Rabi	-	-	-	300	378	10
2.	Haryana \$\$\$	Rabi	92	4571	7	-	-	-
3.	Karnataka	Kh.	843	1336	17	1577	673	65
		Rabi	651	1010	11	682	296	24
		Sum.	230	875	2	-	-	-
4.	Maharashtra	Kh.	226	194	21			
		Rabi	22	162	16			
		Sum.	47	1285	0			
5.	Tamil Nadu	Kh.	48	N.A.	457	4	N.A.	32
		Rabi	56	N.A.	598	96	N.A.	3958
6.	Telangana	Kh.	0	0	0	0	0	0
		Rabi	36	1805	0.928	0	0	0
7.	Uttar Pradesh	Zaid		N.A.				
<b>T O T A L</b>			<b>2251</b>	<b>1145</b>	<b>1131</b>	<b>2805</b>	<b>506</b>	<b>4092</b>
<b>61. SOYABEAN</b>								
1.	Andhra Pradesh	Kh.	-	-	-	28	1776	1
2.	Chhattisgarh	Kh.	-	-	-	180	640	93
3.	Karnataka	Kh.	176	1433	10	1565	1053	233
4.	Madhya Pradesh	Kh.	-	-	-	2450	457	N.A.
5.	Maharashtra *	Kh.	5373	1132	4075.17			
6.	Rajasthan @	Kh.						
7.	Telangana	Kh.	523	1934	14.474	263	1496	133
8.	Uttar Pradesh	Kh.		N.A.				
<b>T O T A L</b>			<b>6072</b>	<b>1135</b>	<b>4099</b>	<b>4486</b>	<b>741</b>	<b>460</b>
<b>62. TARA MEERA</b>								
1.	Rajasthan	Rabi		N.A.				
<b>63. COCONUT #</b>								
1.	Kerala	Kh.		N.A.				
2.	Maharashtra			N.A.				
<b>T O T A L</b>			-	-	-	-	-	-
<b>64. NIGER</b>								
1.	Maharashtra	Kh.		N.A.				
<b>65. COTTON (LINT)</b>								
1.	Andhra Pradesh	Kh.	310	2101	103	624	981	514
2.	Gujarat	Kh.	6811	1335	1856	2242	620	804
3.	Haryana \$\$\$	Kh.	696	509	647	-	-	-
4.	Karnataka	Kh.	1280	556	192	1741	266	493
		Rabi	6	228	0.01	86	73	2.01
			-	-	-	-	-	-
5.	Madhya Pradesh	Kh.	588	1317	N.A.	231	982	N.A.
6.	Maharashtra *	Kh.	5232	358	2128	-	-	-
7.	Punjab	Kh.	680	709	291	-	-	-
8.	Rajasthan	Kh.	-	-	-	-	-	-

ANNEX -VII ( Contd...)

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS			
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	
1	2	3	4	5	6	7	8	9	
9.	Tamil Nadu	Kh.	62	N.A.	13649	502	N.A.	56528	
		Rabi	54	N.A.	25010	202	N.A.	37514	
10	Telangana	Kh.	396	1412	268	976	1127	1572	
11	Uttar Pradesh					N.A.			
<b>T O T A L</b>			<b>16115</b>	<b>900</b>	<b>44145</b>	<b>6604</b>	<b>575</b>	<b>97427</b>	
<b>66. JUTE</b>									
1.	Assam	Kh.	-	-	-	517	2130	N.A.	
2.	Bihar	Kh.	-	-	-	92	2392	83	
3.	Meghalaya	Kh.	-	-	-	54	967	6.662	
4.	Odisha	Kh.	0	0	0	39	1568	0.2	
5.	West Bengal	Kh.	1948	2940	N.A.	625	2437	N.A.	
<b>T O T A L</b>			<b>1948</b>	<b>2940</b>	-	<b>1327</b>	<b>2229</b>	<b>90</b>	
<b>67. MESTA</b>									
1.	Andhra Pradesh	Kh.	0	0	0	200	1812	2.934	
2.	Bihar	Kh.	-	-	-	72	1568	83	
3.	West Bengal	Kh.	77	2570	N.A.	124	1658	N.A.	
<b>T O T A L</b>			<b>77</b>	<b>2570</b>	-	<b>396</b>	<b>1719</b>	-	
<b>68. TOBACCO</b>									
1.	Andhra Pradesh	(N)	-	-	-	290	3416	22.372	
		(V)	-	-	-	354	1001	61.37	
2.	Gujarat	Kh.	200	1849	62	-	-	-	
3.	Karnataka	Kh.	66	1397	5	193	987	84	
4.	Maharashtra	Rabi	16	1745	0.46				
5	Telangana	(N)	10	1476	0.179	0	0	0	
		(V)	26	2675	0.515	0	0	0	
6	Uttar Pradesh				N.A.				
<b>T O T A L</b>			<b>318</b>	<b>146</b>	<b>68</b>	<b>837</b>	<b>494</b>	<b>168</b>	
<b>69. ISABGOL</b>									
1	Gujarat	Rabi	175	700.37	7.34				
2	Rajasthan	Rabi			N.A.				
<b>T O T A L</b>			-	-	-	-	-	-	
<b>70. AVARE (SEM)</b>									
1	Karnataka	Kharif		N.A.		247	690	2	
		Rabi		N.A.		58	607	8.64	
<b>T O T A L</b>			-	-	-	<b>305</b>	<b>623</b>	<b>11</b>	
<b>71. COWPEA (LOBIA)</b>									
1	Goa	Kharif	-	-	-	30	818	0.17	
		Rabi	166	1024	6	-	-	-	
2	Karnataka	Kharif	-	-	-	747	386	38	
		Rabi	-	-	-	27	292	0.14	
		Sum.	20	107	0.33	-	-	-	
3	Kerala	Kharif	-	-	-	35	959	0.195	
		Rabi	148	867	5	-	-	-	
4	Tami Nadu	Kharif	0	N.A.	N.A.	96	N.A.	44	
		Rabi	24	N.A.	1689	88	N.A.	18	
<b>T O T A L</b>			<b>168</b>	<b>823</b>	<b>6</b>	<b>809</b>	<b>387</b>	<b>39</b>	
<b>72. TAMARIND</b>									
1.	Kerala	Kharif			N.A.				
<b>73. NUTMEG</b>									
1.	Kerala	Kharif			N.A.				

**ANNEX -VII ( Contd...)**

Sl. No.	S T A T E	Season	IRRIGATED PLOTS			UN - IRRIGATED PLOTS		
			No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.	No. of Expts. Analysed	Yield Rate Kg/ha.	Area '000' ha.
1	2	3	4	5	6	7	8	9
<b>74. BETAL LEAVES</b>								
1.	Kerala	Rabi				N.A.		
<b>75. CABBAGE</b>								
1.	Karnataka	Kharif				N.A.		
<b>76. BEANS</b>								
1.	Karnataka	Kharif				N.A.		
<b>77. BITTER GOURD</b>								
1.	Kerala	Kharif				N.A.		
<b>78. RAJMA BEANS</b>								
1.	Andhra Pradesh	Rabi				N.A.		

Note:-

1. @ : Figures repeated from the year 2011-12 for Crops Soyabean, Cumin, Blackgram, Guar, Groundnut, Sesamum, Cumin and Rape & Mustard in Rajasthan.
2. ## : Figures repeated from the year 2013-14 for the crops Banana, Onion and Papaya for Madhya Pradesh.
3. @ @ : Figures repeated for the crops Rice (Bhadai & Garma) and Barley from the year 2013-14 in the State of Bihar.
4. \$\$\$ : Figures repeated from the year 2014-15.

**ANNEX - VIII:- ESTIMATES OF YIELD RATE FOR IRRIGATED AND UNIRRIGATED PLOTS ACCORDING TO HIGH YIELDING AND LOCAL VARIETIES UNDER CES 2018-19**

Sl. No.	STATE	IRRIGATED						UN-IRRIGATED						
		HIGH YIELDING VARIETIES			LOCAL VARIETIES			HIGH YIELDING VARIETIES			LOCAL VARIETIES			
		NO. OF EXPTS.	YIELD RATES Kg/ha.	AREA '000' ha.	NO. OF EXPTS.	YIELD RATES Kg/ha.	AREA '000' ha.	NO. OF EXPTS.	YIELD RATES Kg/ha.	AREA '000' ha.	NO. OF EXPTS.	YIELD RATES Kg/ha.	AREA '000' ha.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1. RICE														
1.	Andhra Pradesh	Kh.	3572	5062	1496	-	-	-	232	2430	68	-	-	
		Rabi	2972	6741	644	-	-	-	-	-	-	-	-	
2.	Assam	Aut.	36	1680	N.A.	104	1605	N.A.	32	2163	N.A.	678	1338	
		Wint.	72	2819	N.A.	31	2541	N.A.	453	2506	N.A.	2212	2106	
		Sum.	765	3028	N.A.	325	2666	N.A.	73	2362	N.A.	193	1644	
3.	Bihar @@	Bha.	130	2098	200	-	-	-	-	-	-	152	2053	
		Agh.	22622	3960	1424	9430	2450	597	3975	1644	331	3802	1522	
		Gar.	236	3502	46	122	3017	15	N.A.					
4.	Chhattisgarh		656	2509	667	430	1063	534	-	-	-	1032	1399	
5.	Goa	Kh.	-	-	-	-	-	188	2719	26	-	-	-	
		Rabi	135	2711	11	-	-	-	-	-	-	-	-	
6.	Gujarat	Kh.	5802	3426.1	582	418	246.97	42	933	1756.8	138	317	597.01	
		Sum.	N.A.											
7.	Haryana		408	3514	535	566	2817	742	-	-	-	-	-	
8.	Himachal Pradesh		N.A.											
9.	Jammu & Kashmir		334	3282	55	683	3507	181	63	3261	19	30	3153	7
10.	Jharkhand	Agh.	N.A.											
11.	Karnataka	Kh.	6090	4852	779	545	3254	14	2822	3932	156	1852	2771	53
		Rabi	941	4071	8	21	3582	0.15	-	-	-	-	-	-
		Sum.	2276	5073	137	8	3639	0.01	-	-	-	-	-	-
12.	Kerala	Aut.	600	662	21	17	2095	0.05	1552	2244	39	173	1390	0.87
		Wint.	2254	3335	80	447	1825	4	207	1066	2	360	1231	2
		Sum.	1499	4031	49	70	1405	0.073	8	1101	0.001			
13.	Madhya Pradesh		682	2063	N.A.	396	2008	N.A.	-	-	-	1238	608	1238
14.	Maharashtra	Kh.	1073	2385.3	299	-	-	-	1323	2031.9	677	-	-	-
		Comp.	1560	2353	4491	-	-	-	-	-	-	-	-	-
		Sum.	492	2777.8	48	N.A.								
15.	Meghalaya	Aut.	-	-	-	239	1458	33	-	-	-	-	-	-
		Wint.	11	3072	0.07	861	1818	63.795	-	-	-	2	1291	0.001
16.	Odisha	Aut.	391	1533	10	30	2033	0.21	2392	1187	388	548	1053	56
		Wint.	9475	2245	916	336	1989	13	15787	1850	2062	1776	1576	139
		Sum.	4673	3376	274	-	-	-	-	-	-	-	-	-
17.	Punjab		1970	4366	3065	-	-	-	-	-	-	-	-	-
18.	Rajasthan		N.A.											
19.	Tamil Nadu	K/K/S	428	N.A.	277	-	-	2	-	-	0.54	-	-	0.42
		S/T/P	1260	N.A.	1086	-	-	3	-	-	115	-	-	0.68
		N/K	300	N.A.	236	-	-	1	-	-	0.26	-	-	0.111
20.	Telangana	Kh.	2186	3483	1175	-	-	-	104	2143	13	-	-	-
		Rabi	2324	3378	743	-	-	-	-	-	-	-	-	-

Sl. No.	STATE	IRRIGATED						UN-IRRIGATED						
		HIGH YIELDING VARIETIES			LOCAL VARIETIES			HIGH YIELDING VARIETIES			LOCAL VARIETIES			
		NO. OF EXPTS.	YIELD RATES	AREA `000'	NO. OF EXPTS.	YIELD RATES	AREA `000'	NO. OF EXPTS.	YIELD RATES	AREA `000'	NO. OF EXPTS.	YIELD RATES	AREA `000'	
ANALY- SED	Kg/ha.	ha.	ANALY- SED	Kg/ha.	ha.	ANALY- SED	Kg/ha.	ha.	ANALY- SED	Kg/ha.	ha.	ANALY- SED	Kg/ha.	ha.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
21.	Uttarakhand	708	4807	140	1360	3113	31	0	0	0.361	719	1746	68.147	
22.	Uttar Pradesh							N.A.						
23.	West Bengal	Aus.	1388	2521	N.A.	35	1853	N.A.	470	2352	N.A.	118	1843	N.A.
		Aman	6469	3163	N.A.	403	2336	N.A.	4940	2723	N.A.	927	2043	N.A.
		Sum.	10681	3321	N.A.	403	2336	N.A.	4940	2723	N.A.	-	-	N.A.
24.	Dadra & Nagar Haveli		-	-	-	-	-	-	-	-	70	2027	13	
25.	Daman & Diu		-	-	-	-	-	-	12	2627	1	8	2292	0.43
26.	Puducherry	I	94	3427	4				-	-	-	-	-	-
		II	140	3121	9				-	-	-	-	-	-
		III	70	3432	5				-	-	-	-	-	-
	2. JOWAR													
1.	Andhra Pradesh	Kh.	-	-	-	-	-	-	-	-	152	221	15	
		Rabi	-	-	-	-	-	-	-	-	456	708	141	
2.	Chhattisgarh		-	-	-	32	990	1343	-	-	-	-	-	-
3.	Gujarat	Kh.	164	687	20	154	649.02	19	-	-	-	-	-	-
		Rabi						N.A.						
4.	Karnataka	Kh.	518	2701	8	4	1083	0.01	1299	1472	50	248	825	11
		Rabi	1298	2019	62	298	754	12	5610	777	616	1396	500	119
		Sum.	-	-	-	-	-	-	-	-	-	-	-	-
5.	Madhya Pradesh		-	-	-	-	-	-	676	1591	N.A.	702	1021	N.A.
6.	Maharashtra	Kh.	3148	810	530.31	-	-	-	-	-	-	-	-	-
		Rabi	3277	735	351	-	-	-	5135	327	1559	-	-	-
7.	Rajasthan							N.A.						
8.	Tamil Nadu	Kh.	40	N.A.	8.3	100	N.A.	0.1	300	N.A.	12	-	N.A.	3
		Rabi	148	N.A.	18.7	170	N.A.	0.2	322	N.A.	20	-	N.A.	3
9.	Telangana	Kh.	546	N.A.	N.A.	-	-	-	-	-	106	786	34	
		Rabi	195	1786	11	-	-	-	-	-	173	1180	8	
10.	Uttar Pradesh							N.A.						
	3. BAJRA													
1.	Andhra Pradesh		-	-	-	-	-	-	-	-	450	919	21	
2.	Gujarat	Kh.	1304	1357	159	38	40	5	-	-	-	-	-	-
		Sum.	8350	2836	222	225	76	6	-	-	-	-	-	-
3.	Haryana		1378	1557	365	78	1307	28	-	-	-	-	-	-
4.	Karnataka	Kh.	533	1359	21	-	-	-	2179	846	139	12	335	0.3
5.	Madhya Pradesh		-	-	-	-	-	-	224	1637	N.A.	78	890	N.A.
6.	Maharashtra		457	1142	23	-	-	-	875	599	306	-	-	-
7.	Rajasthan							N.A.						
8.	Tamil Nadu	Kh.	126	N.A.	386	62	N.A.	24	52	N.A.	6	-	N.A.	0.16
		Rabi	75	N.A.	1	52	N.A.	15	77	N.A.	1	-	N.A.	0.02

Sl. No.	STATE	IRRIGATED						UN-IRRIGATED						
		HIGH YIELDING VARIETIES			LOCAL VARIETIES			HIGH YIELDING VARIETIES			LOCAL VARIETIES			
		NO. OF EXPTS.	YIELD RATES	AREA '000'	NO. OF EXPTS.	YIELD RATES	AREA '000'	NO. OF EXPTS.	YIELD RATES	AREA '000'	NO. OF EXPTS.	YIELD RATES	AREA '000'	
ANALY- SED	Kg/ha.	ha.	ANALY- SED	Kg/ha.	ha.	ANALY- SED	Kg/ha.	ha.	ANALY- SED	Kg/ha.	ha.	ANALY- SED	Kg/ha.	ha.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
9	Telangana	-	-	-	32	N.A.	N.A.	-	-	-				
9.	Uttar Pradesh													
10	Daman & Diu	-	-	-	-	-	-	-	-	-	8	1306	0	
4. MAIZE														
1	Andhra Pradesh	Kh.	-	-	-	-	-	-	-	-	234	3898	104	
			Rabi	-	-	-	-	-	-	-	512	6846	162	
2.	Bihar	Bha.	7124	2714	93	-	-	-	336	3929	133	6663	1628	131
			Rabi	-	-	-	-	-	-	-	22825	7432	282	
			Gar.			-	-	-	-	-	116	3534	31	
3.	Chhattisgarh		-	-	-	-	-	-	-	-	368	2668	64	
4.	Gujarat		2872	1465	257	599	305	54	-	-	-	-	-	-
5.	Haryana		52	2409	6	24	2070	3	-	-	-	-	-	-
6.	Himachal Pradesh													
7.	Jammu & Kashmir		19	2261	2	78	1984	17	217	2097	73	710	1979	170
8.	Jharkhand													
9.	Karnataka	Kh.	4182	3788	292	3	2831	0.01	6837	2327	896	45	2380	0.27
			Rabi	2044	3837	71	-	-	222	2474	4	-	-	-
		Sum.	136	4063	6	-	-	-	-	-	-	-	-	-
10.	Madhya Pradesh		15	2733	N.A.	6	2561	N.A.	648	1899	N.A.	1099	1679	N.A.
11.	Maharashtra	Kh.	669	1928	708									
			Rabi	724	1887	201								
12.	Odisha	Aut.	16	1980	0	1	1600	-	1613	2446	43	1272	1247	6
			Wint.	20	2696	0			5	1415	0			
			Sum.	288	2611	3	8	2183	0.01	-	-	-	-	-
13.	Punjab	Kh.	277	3988	89	8	32	2094	26	1557	8	25	1867	8
14.	Rajasthan	Kh.	-	-	-	-	-	-	-	-	-	-	-	-
15.	Tamil Nadu	Kh.	108	N.A.	79	-	N.A.	123	148	N.A.	45	-	N.A.	0.19
		Rabi	112	N.A.	0.13	-	N.A.	155	64	N.A.	66	-	N.A.	0.33
16.	Telangana	Kh.	1201	5888	88	-	-	-	881	2441	337	-	-	-
		Rabi	-	-	-	1824	6782	165				10	4178	0
17.	Uttar Pradesh													
18.	West Bengal		112	4107	N.A.	49	3093	N.A.	207	3040	N.A.	200	1917	N.A.
5. WHEAT														
1.	Assam		8	1550	N.A.	40	1370	N.A.	66	1845	N.A.	268	387	N.A.
2.	Bihar		25803	3196	1566	13137	2518	475	670	2266	40	775	2277	68
3.	Chhattisgarh		268	1745	43	130	1710	26	-	-	-	130	983	12
4.	Gujarat		14051	2628	661	2430	455	1114	98	624	18	22	140	4
5.	Haryana		1822	3846	2498	95	3314	130	-	-	-	-	-	-

Sl. No.	STATE	I R R I G A T E D						U N - I R R I G A T E D					
		HIGH YIELDING VARIETIES			LOCAL VARIETIES			HIGH YIELDING VARIETIES			LOCAL VARIETIES		
		NO. OF EXPTS.	YIELD ANALY- SED	AREA '000' Kg/ha.	NO. OF EXPTS.	YIELD ANALY- SED	AREA '000' Kg/ha.	NO. OF EXPTS.	YIELD ANALY- SED	AREA '000' Kg/ha.	NO. OF EXPTS.	YIELD ANALY- SED	AREA '000' Kg/ha.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
6.	Himachal Pradesh							N.A.					
7.	Jammu & Kashmir	197	2360	43	313	1983	38	295	2003	111	575	1968	93
8.	Jharkhand							N.A.					
9.	Karnataka	1981	1542	87	144	661	7	554	403	58	156	216	24
10.	Madhya Pradesh	2824	3096	4044	1126	2698	900	0	0	0	1196	1498	0
11.	Maharashtra	7178	1810	565	-	-	-	450	835	269	-	-	-
12.	Odisha	Sum.	76	1842	0	4	1040	0	-	-	-	-	-
13.	Punjab	2320	5068	3497	0	0	0	10	3041	15	0	0	0
14.	Rajasthan							N.A.					
15.	Uttarakhand	1353	3781	173	410	2452	28	10	2309	5	1009	1793	121
16.	Uttar Pradesh							N.A.					
17.	West Bengal	2167	2648	N.A.	97	2181	N.A.	15	1716	N.A.	6	-	N.A.

**Note:**

1. \* : Data repeated from the year 2015-16

2. # : Figure repeated for the year 2013-14 in respect for crops Banana, Onion and Papaya and all other crop 2015-16 for Madhya Pradesh.

**ANNEX - IX : PERCENTAGE AREA UNDER IMPROVED AGRICULTURAL PRACTICES UNDER CES 2018-19**

Sl. No.	S T A T E	P E R C E N T A G E    A R E A    U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
<b>1. PADDY</b>										
1.	Andhra Pradesh	Kh.Ir.	-	93	7	54	45	1	62	38
		Kh.UI.	-	70	30	26	50	24	12	88
		Rabi.Ir.	-	97	3	82	18	0	91	9
2.	Assam	Aut.	-	8	92	39	12	49	16	84
		Wint.	-	4	96	11	44	45	7	93
		Sum.	-	45	55	70	21	9	15	85
3.	Bihar	Bha.	13		87					
		Agh.	76		24					
		Gar.	17		83					
4.	Chhattisgarh	Hyv.Ir.	-	90	10	96	1	3	0	100
		Lv. Ir.	-	60	40	97	3	0	0	100
		UI.	-	57	43	73	15	12	0	100
5.	Goa	Kh.	90	-	-	70	15	15	20	80
		Rabi	100	-	-	80	15	5	30	70
6.	Gujarat	Ir.								
		UI.								
		Sum.								
7.	Haryana		-	58	42	100	0	0	71	29
8.	Himachal Pradesh									
9.	Jammu & Kashmir									
10.	Jharkhand	Bha.	-	-	100	70	30	-	-	-
		Agh.	60	-	40	40	60	-	-	-
11.	Karnataka ***	Kh. Hyv.Ir.	100	-	0	96	1	4	45	55
		Kh.Hyv.UI.	100	-	0	92	5	4	17	83
		Kh.Tra.Ir.	0	-	100	94	5	1	20	80
		Kh.Tra.UI.	0	-	100	98	2	0	27	73
		Rabi Hyv.Ir.	100	-	0	71	4	25	21	79
		Rabi. Tra.Ir.	0	45	55	94	6	0	19	81
		Sum. Hyv.Ir.	100	-	0	86	1	13	39	61
12.	Kerala	Aut.	0	92	8	80	15	5	51	49
		Wint.	0	75	25	83	14	3	62	38
		Sum.	0	96	4	90	8	2	67	33
13.	Madhya Pradesh	Hyv. Ir.	-	100	-	96	1	3	100	0
		Lv. Ir.	-	-	100	99	0	1	100	0
		UI.	-	-	100	70	5	25	100	0
14.	Maharashtra *	Kh. Ir.								
		Kh. UI..								
		Kh. Comp.								
		Sum.								

ANNEX -IX ( Contd...)

Sl. No.	S T A T E	P E R C E N T A G E      A R E A      U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
15.	Meghalaya	Aut.	-	0	100	5	1	95	17	83
		Wint.	-	2	98	27	13	53	7	93
16.	Odisha	Aut.	88	0	12	83	10	7	32	68
		Wint.	95	0	5	93	4	4	46	54
		Sum.	100	0	0	96	2	2	62	38
17.	Punjab		-	100	0	100	0	0	97	3
18.	Rajasthan		-	56	44	60	0	39	69	31
19.	Tamil Nadu	K/K/S	100	0	0	59	39	2	17	83
		S/T/P	100	0	0	62	34	4	14	86
		N/K	100	0	0	58	39	3	1	99
20.	Telangana	Kh. Ir.	-	75	25	96	0	4	45	55
		Kh. UI.	-	86	14	98	0	2	59	41
		Rabi	-	77	23	98	0	2	46	54
21.	Uttarakhand		0	25	75	56	44	0	21	79
22.	Uttar Pradesh						N.A.			
23.	West Bengal	Aus.	-	97	3	97	-	3	82	18
		Aman	-	92	8	94	-	6	59	41
		Sum.	-	98	2	98	-	2	80	20
24.	Dadra & Nagar Haveli		-	-	100	0	100	0	0	100
25.	Daman & Diu		-	82	18	0	100	0	100	0
26.	Puducherry	I	100	-	-	-	48	52	20	80
		II	100	-	-	-	31	69	41	59
		III	100	-	-	-	34	66	30	70
<b>2. JOWAR</b>										
1.	Andhra Pradesh	Kh.	-	-	69	31	41	35	24	29
		Rabi	-	-	62	38	69	27	4	62
2.	Chhattisgarh		-	0	100	13	30	57	0	100
3.	Gujarat	Kh.	-	0.0	49	55	28	17	33	67
		Rabi								
4.	Karnataka ***	Kh.Hyv.Ir.	100	-	0	92	4	4	9	91
		Kh.Hyv.UI.	0	-	100	96	3	2	0	100
		Kh.Tra.Ir.	-	-	100	61	28	12	-	100
		Kh.Tra.UI.	-	-	100	91	7	2	1	99
		Rabi Hyv.Ir.	100	-	-	82	3	15	12	88
		Rabi Hyv.UI	100	-	0	89	4	7	4	96
		Rabi Tra.Ir.	0	-	100	95	3	3	7	93
		Rabi Tra.UI.	-	-	100	84	4	12	2	98
		Sum.Hyv.Ir.	100	-	0	100	0	0	13	87

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E      A R E A      U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
5.	Madhya Pradesh	-	49	51	53	3	44	0	100	
6.	Maharashtra	Kh.				N.A.				
		Rabi Ir.				N.A.				
		Rabi UI.				N.A.				
7.	Rajasthan	-	54	47	55	2	43	9	91	
8.	Tamil Nadu	Kh.	87	0	13	37	46	17	8	92
		Rabi	98	0	2	21	34	45	1	99
9.	Telangana	Kh.	-	27	73	86	5	9	21	79
		Rabi	-	22	78	83	2	15	17	83
10.	Uttar Pradesh					N.A.				
<b>3. BAJRA</b>										
1.	Andhra Pradesh	-	63	37	43	33	24	12	88	
2.	Gujarat	Kh.	97	0	3	66	21	13	53	47
		Sum.	97	0	3	69	14	16	44	56
3.	Haryana	-	73	28	100	0	0	65	35	
4.	Karnataka ***	Kh.Hyv.Ir.	100	-	0	61	35	5	0	100
		Kh.Hyv.UI.	100	-	-	86	2	12	2	98
		Kh.Tra.UI.	0	-	100	70	3	27	0	100
5.	Madhya Pradesh	-	9	91	93	1	6	0	100	
6.	Maharashtra	Kh. Ir.				N.A.				
		Kh. UI..				N.A.				
		Kh. Comp.				N.A.				
	Rajasthan	-	54	46	38	5	58	5	95	
8.	Tamil Nadu	Kh.	98	0	2	5	9	86	1	99
		Rabi	98	0	2	5	9	86	1	99
9.	Telangana	-	66	34	78	0	22	0	100	
10.	Uttar Pradesh					N.A.				
11.	Daman & Diu	-	0	100	0	100	0	100	0	
<b>4. MAIZE</b>										
1.	Andhra Pradesh	Kh.	-	92	8	92	2	6	26	74
		Rabi	-	98	2	96	0	4	54	45
2.	Bihar	Bha.	38		62					
		Rabi	86		14					
		Gar.	82		18					

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E    A R E A    U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
3.	Chhattisgarh	0	41	59	55	21	24	0	100	
4.	Gujarat	83	0	17	63	28	9	63	37	
5.	Haryana	-	91	9	100	0	0	72	28	
6.	Himachal Pradesh									N.A.
7.	Jammu & Kashmir									N.A.
8.	Jharkhand	10	-	90	50	50	-	-	-	
9.	Karnataka ***	Kh. Hyv.Ir.	100	-	0	95	4	1	3	97
		Kh. Hyv.UI.	100	-	-	98	1	1	4	97
		Kh. Tra.Ir.	0	-	100	78	17	5	0	100
		Rabi Hyv.Ir.	100	-	0	86	7	7	1	99
		Rabi Hyv.UI	100	-	-	86	12	2	3	97
		Rabi. Tra.Ir.	-	-	-	-	-	-	-	-
		Sum.Hyv.UI.	100	-	0	94	3	3	4	96
10.	Madhya Pradesh	-	43	57	73	17	10	0	100	
11.	Maharashtra	Kh.								N.A.
		Rabi								N.A.
12.	Odisha	Aut.	88	0	12	51	30	19	10	90
		Wint.	100	0	0	64	16	20	8	92
		Sum.	100	0	0	89	7	4	23	77
13.	Punjab	0	83	17	98	0	3	75	25	
14.	Rajasthan	Kh.	-	43	57	66	14	20	5	95
15.	Tamil Nadu	Kh.	100	0	0	54	45	1	21	79
		Rabi	98	1	1	58	42	0	34	66
16.	Telangana	Kh.	-	77	23	96	0	4	21	79
		Rabi	-	63	37	96	0	4	54	46
17.	Uttar Pradesh									N.A.
18.	West Bengal	-	66	34	70	-	30	6	94	
<b>5. RAGI</b>										
1.	Andhra Pradesh	Kh.	-	7	93	3	31	66	1	99
		Rabi	-	40	60	35	51	14	17	83
2.	Bihar				100					
3.	Goa	100	0	0	90	10	-	20	80	
4.	Gujarat	0	0	100	0	63	37	0	100	
5.	Jharkhand	-	-	100	30	70	-	-	-	
6.	Karnataka ***	Kh. Hyv.Ir.	100	-	0	94	5	1	1	99
		Kh. Hyv.UI.	100	-	-	97	2	1	0	100
		Kh. Tra. Ir.	0	-	100	84	9	7	4	96
		Kh.Tra.UI.	-	-	100	96	0	4	0	100

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E      A R E A      U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
		Rabi Hyv.Ir.	100	-	0	96	3	2	2	99
		Rabi Hyv.UI	100	-	0	67	30	3	0	100
		Sum. Hyv.Ir.	100	-	0	74	26	0	0	100
7	Maharashtra					N.A.				
8	Odisha	Aut.	-	-	100	18	42	40	3	97
		Wint.	-	-	100	12	34	54	2	98
		Sum.	-	-	100	43	18	38	3	97
9.	Tamil Nadu	Kh.	100	0	0	41	42	17	6	94
		Rabi	97	0	3	45	43	12	33	67
10.	Telangana		-	18	82	100	0	0	0	100
11.	Uttarakhand		0	0	100	0	100	0	0	100
12.	Dadra & Nagar Haveli	0	-	100	0	100	0	0	0	100
<b>6. WHEAT</b>										
1.	Assam	0	19	81	15	85	0	0	100	
2.	Bihar	89		11						
3.	Chhattisgarh	Hyv.Ir.	0	89	11	94	3	3	0	100
		Lv..Ir.	0	49	51	84	3	13	0	100
		UI.	0	38	62	66	1	33	0	100
4.	Gujarat	Ir.	85	0	15	71	15	14	51	49
		UI.	82	0	18	41	30	29	37	63
5.	Haryana	-	90	10	100	0	0	72	28	
6.	Himachal Pradesh					N.A.				
7.	Jammu & Kashmir									
8.	Jharkhand		40	-	60	70	30	-	-	
9.	Karnataka ***	Hyv.Ir.	100	-	0	90	6	4	3	97
		Hyv.UI.	100	-	0	76	10	14	1	99
		Tra.Ir.	0	-	100	73	22	5	4	96
		Tra.UI.	0	-	100	86	7	7	5	95
10.	Madhya Pradesh	Hyv.Ir.	-	100	0	97	1	2	0	100
		Lv.Ir.	-	-	100	96	1	3	1	99
		Lv.UI.	-	6	94	53	11	31	0	100
11.	Maharashtra	Ir.					N.A.			
		UI.					N.A.			
12.	Odisha	Sum.	97	0	3	99	1	0	24	76
13.	Punjab		0	100	0	100	0	0	97	3
14.	Rajasthan						N.A.			
15.	Uttarakhand		0	49	51	47	53	0	26	74
16.	Uttar Pradesh						N.A.			
17.	West Bengal		-	99	1	98	-	2	44	56
<b>7. BARLEY</b>										
1.	Bihar				100					
2.	Chhattisgarh		-	0	100	0	50	50	0	100

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E      A R E A      U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
3.	Haryana	-	89	11	100	0	0	6	94	
4.	Himachal Pradesh				N.A.					
5.	Jharkhand				N.A.					
6.	Madhya Pradesh	-	-	100	69	4	27	100	0	
7.	Punjab	-	100	0	98	0	3	57	43	
8.	Rajasthan				N.A.					
9.	Uttarakhand	0	0	100	0	100	0	0	100	
10.	Uttar Pradesh				N.A.					
<b>8. GRAM ( BENGALGRAM )</b>										
1.	Andhra Pradesh	-	77	23	63	33	4	78	22	
2.	Bihar			100						
3.	Chhattisgarh	0	36	64	81	5	14	0	100	
4.	Gujarat		81	0	19	47	21	32	53	47
5.	Haryana	-	76	24	100	0	0	75	26	
6.	Jharkhand	30	-	70	30	70	-	-	-	
7.	Karnataka *** Ir .	100	-	0	82	15	3	23	77	
		98	-	2	86	10	4	43	57	
8.	Madhya Pradesh Ir .	-	29	61	85	3	12	0	100	
		-	13	87	59	7	34	0	100	
9.	Maharashtra				N.A.					
10.	Punjab	0	89	12	53	0	47	81	19	
11.	Rajasthan				N.A.					
12.	Telangana	-	34	66	85	5	10	37	63	
13.	Uttar Pradesh				N.A.					
14.	West Bengal	-	15	85	61	-	39	43	57	
<b>9. REDGRAM (TUR/ARHAR)</b>										
1.	Andhra Pradesh	-	92	8	49	41	10	59	41	
2.	Bihar			100						
3.	Chhattisgarh	0	9	91	38	10	52	0	100	
4.	Gujarat	76	0	24	45	40	16	46	54	
5.	Haryana	-	95	5	100	0	0	0	100	
6.	Jharkhand	20	-	80	30	70	-	-	-	
7.	Karnataka	0	100	0	3	12	86	21	79	
8.	Madhya Pradesh	-	22	78	36	1	63	0	100	
9.	Maharashtra				N.A.					
10.	Tamil Nadu	99	0	1	43	46	11	57	43	
11.	Telangana	-	25	75	94	2	4	56	44	
12.	Uttar Pradesh				N.A.					
13.	West Bengal (Rabi)	-	4	96	3	-	97	4	96	

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E    A R E A    U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
<b>10. GREENGRAM (MOONG)</b>										
1.	Andhra Pradesh	Kh.	-	75	25	45	37	18	47	53
		Rabi	-	69	31	16	10	74	52	48
2.	Bihar	Bha.	4		96					
		Gra.	80		20					
3.	Gujarat	Kh.	83	0	17	45	44	11	71	29
4.	Karnataka	Kh.	0	99	1	5	8	87	9	91
		Rabi	0	64	36	2	29	69	15	85
5.	Maharashtra						N.A.			
6.	Odisha	Aut.	-	-	100	40	6	53	23	77
		Wint.	-	-	100	14	9	77	15	85
		Sum.	-	-	100	25	3	72	25	75
7.	Rajasthan		-	56	44	32	5	63	41	59
8.	Tamil Nadu	Kh.	99	1	0	40	54	6	65	35
		Rabi	96	0	4	69	12	19	60	40
9.	Telangana	Kh.	-	40	60	73	2	25	59	41
		Rabi	-	58	42	74	2	24	42	58
10.	Uttar Pradesh	Kh.					N.A.			
		Zaid					N.A.			
11.	West Bengal	Rabi	-	28	72	72	-	28	74	26
<b>11. BLACKGRAM (URD/MATHIKALAI)</b>										
1.	Andhra Pradesh	Kh.	-	95	5	55	22	23	70	30
		Rabi.	-	90	10	26	6	68	30	70
2.	Assam		0	0	100	0	21	79	0	100
3.	Gujarat		96	0	4	62	28	9	63	37
4.	Karnataka	Kh.	0	98	2	8	3	88	8	92
		Rabi	0	12	88	21	3	76	6	94
5.	Maharashtra						N.A.			
6.	Odisha	Aut.	-	-	100	39	17	45	18	82
		Wint.	-	-	100	9	12	78	11	89
		Sum.	-	-	100	28	2	70	29	71
7.	Rajasthan		-	57	43	39	1	60	59	41
8.	Tamil Nadu	Kh.	98	0	2	24	52	24	24	76
		Rabi	96	0	4	69	12	19	60	40
9.	Telangana	Kh.	-	16	84	93	1	6	41	59
		Rabi	-	78	22	84	3	13	53	47
10.	Uttar Pradesh	Kh.					N.A.			
		Zaid					N.A.			
11.	West Bengal		-	23	77	31	-	69	35	65

ANNEX -IX ( Contd...)

Sl. No.	S T A T E	P E R C E N T A G E      A R E A      U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
<b>12. LAKH</b>										
1.	Bihar			100						
2.	Chhattisgarh	-	1	99	8	1	91	0	100	
3.	Madhya Pradesh	-	4	96	38	0	62	0	100	
4.	West Bengal	-	2	98	33	-	67	3	97	
<b>13. MASUR</b>										
1.	Bihar	-	-	100	-	-	-	-	-	
2.	Jharkhand	-	-	100	-	100	-	-	-	
3.	Rajasthan					N.A.				
4.	Uttar Pradesh					N.A.				
5.	West Bengal	-	14	86	54	-	46	14	86	
<b>14. HORSEGRAM (KULTHI)</b>										
1.	Andhra Pradesh	Kh.	-	11	89	43	22	35	6	94
		Rabi	-	36	64	6	20	74	4	96
2.	Karnataka	Kh.	0	86	14	13	17	70	3	97
		Rabi	0	30	70	17	11	72	3	97
3.	Odisha	Wint.	0	0	100	10	13	77	8	92
		Sum.	0	0	100	0	0	100	0	100
4.	Tamil Nadu		91	0	9	11	72	17	2	98
5.	Telangana	Kh.	-	0	0	0	0	0	0	0
		Rabi	0	0	100	0	0	100	0	100
<b>15. PEAS</b>										
1.	Uttar Pradesh					N.A.				
2.	West Bengal	-	14	86	51	-	49	17	83	
<b>16. MOTH</b>										
1.	Gujarat	57	0	43	53	36	11	77	23	
2.	Rajasthan	-	37	63	12	1	87	26	74	
<b>17. CHOWLA</b>										
1.	Rajasthan	-	46	54	6	3	92	4	96	
<b>18. GUAR</b>										
1.	Gujarat					N.A.				
2.	Rajasthan	-	38	62	18	2	80	32	68	
<b>19. SAWAN(JHANGORA)</b>										
1.	Uttrakhand		0	0	100	0	100	0	0	100
2.	Uttar Pradesh	Kh.					N.A.			
	Zaid						N.A.			

Sl. No.	S T A T E	P E R C E N T A G E      A R E A      U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
<b>20. KORRA</b>										
1.	Andhra Pradesh	-	35	65	82	7	11	19	81	
2	Telangana	-	40	60	73	0	27	0	100	
<b>21. KODON-KUTKI (KODRA)</b>										
1.	Chhattisgarh	-	2	98	10	9	81	0	100	
2.	Madhya Pradesh	-	0	100	4	4	92	0	100	
3.	Uttar Pradesh      Kodon						N.A.			
<b>22. NAVANE</b>										
1.	Karnataka	0	98	2	5	22	73	8	92	
<b>23. SAVE</b>										
1.	Karnataka	0	77	23	2	26	72	8	92	
<b>24. SAMAI</b>										
1.	Tamil Nadu	96	0	4	15	76	9	0	100	
<b>25. VARAGU</b>										
1.	Tamil Nadu	91	0	9	41	47	12	1	99	
<b>26. SUGARCANE</b>										
1.	Andhra Pradesh	Plt.	-	59	41	26	73	1	21	79
		Rt.	-	56	44	31	65	4	28	72
2.	Assam	0	1	99	35	15	50	0	100	
3.	Bihar	-	-	100	-	-	-	-	-	
4.	Goa	0	100	0	95	5	0	10	90	
5.	Haryana	-	57.50	42.50	100.00	0.00	0.00	64.70	35.30	
6.	Jharkhand	-	20.00	80.00	30.00	70.00	-	-	-	
7.	Karnataka	0.00	100.00	0.00	0.52	5.78	93.70	12.47	87.53	
8.	Kerala					N.A.				
9.	Maharashtra					N.A.				
10.	Odisha      Wint.	0.00	0.00	100.00	97.84	0.43	1.73	49.35	50.65	
11.	Punjab	0.00	100.00	0.00	97.90	0.00	2.10	88.70	11.30	
12.	Rajasthan @	-	61.70	38.30	89.23	8.07	2.70	48.50	51.50	
13.	Tamil Nadu	100	0	0	53	43	4	25	75	
14.	Telangana	Plt.	-	12	88	100	0	0	24	76
		Rt.	-	13	87	100	0	0	22	78
15.	Uttar Pradesh					N.A.				
16.	West Bengal	-	55	45	100	-	0	67	33	
<b>27. COCOA</b>										
1.	Kerala					N.A.				

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E    A R E A    U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
<b>28. CHILLIES</b>										
1.	Andhra Pradesh	Kh.	-	98	2	50	49	1	92	8
		Rabi	-	78	22	59	38	3	69	31
2.	Bihar			100						
3.	Chhattisgarh		-	0	100	0	0	100	0	100
4.	Karnataka	Kh.	0	86	14	2	8	90	37	63
		Rabi								
		Sum.								
5.	Madhya Pradesh		-	100	0	0	100	0	0	100
6.	Telangana	Kh.	-	61	39	86	0	14	75	25
		Rabi	-	100	0	72	0	28	65	35
<b>29. CUMIN</b>										
1.	Gujarat		91	0	9	78	11	11	52	48
2.	Rajasthan						N.A.			
<b>30. FENNEL</b>										
1.	Gujarat		99	0	1	60	25	15	33	68
<b>31. ARECANUT</b>										
2.	Maharashtra						N.A.			
<b>32. PEPPER</b>										
1.	Kerala						N.A.			
<b>33. SAFFRON</b>										
1.	Jammu & Kashmir						N.A.			
<b>34. TURMERIC</b>										
1.	Kerala						N.A.			
2.	Karnataka		0	100	0	1	1	98	60	40
<b>35. GINGER</b>										
1.	Kerala						N.A.			
2.	Meghalaya		-	0	100	1	14	85	0	100
<b>36. GARLIC</b>										
1.	Gujarat		74	0	26	65	28	6	56	44
<b>37. CORIANDER</b>										
1.	Rajasthan						N.A.			
1.	Kerala						N.A.			
<b>38. LICHI</b>										
1.	Bihar					100				

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E		A R E A		U N D E R				
		Seed Variety		Fertilized/Manure			Pesticides			
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
<b>39. BANANA</b>										
1.	Bihar			100						
2.	Gujarat				N.A.					
3	Kerala				N.A.					
4	Madhya Pradesh #				N.A.					
<b>40. MANGO</b>										
1.	Bihar			100						
2.	Kerala				N.A.					
<b>41. GUAVA</b>										
1.	Bihar			100						
<b>42. JACKFRUIT</b>										
1.	Bihar			100						
2.	Kerala				N.A.					
<b>43. CASHEWNUT</b>										
1.	Kerala				N.A.					
2.	Maharashtra				N.A.					
<b>44. TAPIOCA</b>										
1.	Kerala	-	31	69	33	59	8	0	100	
<b>45. PINE APPLE</b>										
1.	Kerala				N.A.					
<b>46. POTATO</b>										
1.	Assam	Rabi.	-	12	88	28	51	21	12	
2.	Bihar	Agh.			100					
		Rabi.			100					
3.	Chhattisgarh		0	38	62	67	0	33	0	
4.	Gujarat		100	0	0	67	30	3	75	
5.	Jammu & Kashmir	Kh.				N.A.				
		Rabi.				N.A.				
6.	Jharkhand	Agh.	40	-	60	70	30	-	-	
		Rabi.	40	-	60	50	50	-	-	
7.	Karnataka	Kh.	0	98	2	1	15	84	70	
		Rabi.	0	100	0	3	3	94	87	
		Summer							14	
8.	Madhya Pradesh		-	91	9	94	0	6	0	
9.	Meghalaya	Sum.	-	-	100	62	33	5	19	
10.	Odisha	Wint.	-	-	100	95	3	3	36	
11.	Uttar Pradesh					N.A.				

## **ANNEX -IX ( Contd...)**

1	2	3	4	5	6	7	8	9	10	
Sl. No.	S T A T E	P E R C E N T A G E			A R E A		U N D E R			
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des.	
1	2	3	4	5	6	7	8	9	10	
<b>47. ONION</b>										
1.	Bihar			100	4	0	96	0	100	
2.	Chhattisgarh	-	0	0	57	27	16	72	28	
3.	Gujarat				N.A.					
4.	Jharkhand	25	-	75	50	50	-	-	-	
5.	Karnataka ***	Kh.	0	94	6	1	12	87	30	70
		Rabi	0	95	5	1	10	89	40	60
		Sum.	0	90	10	0	15	85	47	53
6.	Madhya Pradesh #	-	44	56	92	6	2	-	100	
7.	Uttar Pradesh	Zaid			N.A.					
<b>48. BRINJAL</b>										
1.	Bihar	Agh.		100						
		Rabi.		100						
2.	Jharkhand	Agh.	25	-	75	50	50	-	-	
		Rabi.	30	-	70	30	70	-	-	
3.	Karnataka									
<b>49. TOMATO</b>										
1.	Bihar	Agh.		100						
		Rabi		100						
2.	Jharkhand	Agh.	40	-	60	70	30	-	-	
		Rabi	40	-	60	20	80	-	-	
3.	Karnataka	Kharif	0	100	0	2	8	89	74	26
		Rabi	0	100	0	1	10	89	76	24
		Summer	0	100	0	0	14	86	79	21
<b>50. CAULIFLOWER</b>										
1.	Bihar			100						
<b>51. PAPAYA (PAPITA)</b>										
1.	Madhya Pradesh #				N.A.					
<b>52. PLANTAIN</b>										
1.	Kerala				N.A.					
<b>53. METHI</b>										
1.	Rajasthan				N.A.					
<b>54. GROUNDNUT</b>										
1.	Andhra Pradesh	Kh.	-	98	2	41	56	3	54	46
		Rabi	-	79	21	36	63	1	80	20
2.	Chhattisgarh		0	34	66	65	15	20	0	100
3.	Goa	Kh.	10	0	90	0	0	100	0	100
		Rabi	10	0	90	0	10	90	0	100
4.	Gujarat	Kh.	82	0	18	65	20	15	33	68
		Sum.	89	0	11	66	19	15	74	26

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E      A R E A      U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
5.	Karnataka ***	Kh.Ir.	100	-	0	82	16	2	29	71
		Kh.UI.	77	-	23	94	3	3	13	87
		Rabi.UI.	100	-	0	74	7	20	41	59
		Sum.Ir.	100	-	0	97	12	1	40	60
		Sum.UI.	0	-	100	63	38	-	50	50
6.	Madhya Pradesh		-	39	61	64	5	31	3	97
7.	Maharashtra	Kh.								
		Sum.								
8.	Odisha	Aut.	-	-	100	63	7	30	22	78
		Wint.	-	-	100	45	24	30	20	80
		Sum.	-	-	100	85	2	13	37	63
9.	Rajasthan		-	51	49	88	3	9	75	25
10.	Tamil Nadu	Kh.	100	0	0	42	51	7	35	65
		Rabi	99	0	1	55	42	3	71	29
11.	Telangana	Kh.	-	76	24	99	0	1	89	11
		Rabi	-	27	73	94	1	5	75	25
12.	Uttar Pradesh									
13.	West Bengal		-	90	10	57	-	43	43	57
<b>55. SESAMUM (GINGELLY)</b>										
1.	Andhra Pradesh	Kh.	-	28	72	26	51	23	17	83
		Rabi	-	38	62	37	34	29	21	79
2.	Chhattisgarh		-	18	82	56	8	36	0	100
3.	Gujarat		75	0	25	61	13	26	35	65
4.	Karnataka		0	83	17	13	10	77	2	98
5.	Kerala									
6.	Madhya Pradesh		-	82	18	22	27	51	0	100
7.	Maharashtra	Kh.								
		Rabi								
8.	Odisha	Aut.	-	-	100	19	18	64	3	97
		Wint.	-	-	100	23	12	65	9	91
		Sum.	-	-	100	33	4	63	16	84
9.	Rajasthan		-	38	62	22	2	76	8	92
10.	Tamil Nadu	Kh.	94	0	6	43	52	4	33	65
		Rabi	98	1	1	57	32	11	47	53
11.	Telangana	Kh.	-	4	96	77	0	23	29	71
		Rabi	-	42	58	93	0	7	1	99
12.	Uttar Pradesh									
13.	West Bengal		-	42	59	51	-	49	22	78
<b>56. CASTOR</b>										
1.	Andhra Pradesh		-	91	9	52	36	12	72	28

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E      A R E A      U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
2.	Gujarat	100	0	0	74	15	11	62	38	
3.	Karnataka ***	0	28	72	18	13	69	15	85	
4.	Telangana	-	69	31	98	2	0	62	38	
<b>57. RAPE &amp; MUSTARD</b>										
1.	Assam	-	1	99	41	30	29	6	94	
2.	Bihar	15		85						
3.	Chhattisgarh	0	12	88	37	25	38	0	100	
4.	Gujarat	95	0	5	67	22	11	33	67	
5.	Haryana	-	72	28	100	0	0	76	24	
6.	Jammu & Kashmir	N.A.								
7.	Jharkhand	-	-	100	20	80	-	-	-	
8.	Madhya Pradesh	-	64	36	83	6	11	0	100	
9.	Odisha Wint.	0	0	100	40	15	44	23	78	
10.	Punjab	-	91	9	94	0	6	50	51	
11.	Rajasthan	N.A.								
12.	Uttar Pradesh	N.A.								
13.	West Bengal	-	75	25	96	-	4	55	45	
<b>58. LINSEED</b>										
1.	Chhattisgarh	-	2	98	4	7	89	0	100	
2.	Jammu & Kashmir	N.A.								
3.	Karnataka ***	0	100	0	0	0	100	0	100	
4.	Madhya Pradesh	-	12	88	15	6	79	0	100	
5.	Maharashtra	N.A.								
6.	Rajasthan	N.A.								
7.	Uttar Pradesh	N.A.								
8.	West Bengal	-	1	99	23	-	77	-	100	
<b>59. SAFFLOWER</b>										
1.	Karnataka	0	78	22	0	3	96	3	97	
2.	Maharashtra	N.A.								
<b>60. SUNFLOWER</b>										
1.	Andhra Pradesh	Kh.	-	86	14	36	48	16	37	63
		Rabi	-	36	64	51	42	7	57	43
2.	Haryana	Rabi	-	100	0	100	0	0	0	100

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E    A R E A    U N D E R								
		Seed Variety			Fertilized/Manure			Pesticides		
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des	
1	2	3	4	5	6	7	8	9	10	
3.	Karnataka ***	Kh.Ir.	100	-	0	98	1	1	26	74
		Kh.UI.	100	-	0	94	3	3	15	85
		Rabi.Ir.	99	-	1	99	0	1	25	75
		Rabi.UI.	100	-	0	98	1	1	18	82
		Sum.	100	-	0	99	1	1	42	59
4.	Maharashtra	Kh.	N.A.							
		Rabi	N.A.							
		Sum.	N.A.							
5.	Tamilnadu	Kh.	100	0	0	48	52	0	37	63
		Rabi	97	0	3	58	36	6	29	71
6.	Telangana	Kh.	-	0	0	0	0	0	0	0
		Rabi	-	100	0	95	0	5	22	78
7.	Uttar Pradesh	Zaid	N.A.							
<b>61. SOYABEAN</b>										
1.	Andhra Pradesh	-	92	8	88	12	0	76	24	
2.	Chhattisgarh	0	52	48	78	0	22	0	100	
3.	Karnataka	0	100	0	0	1	99	5	95	
4.	Madhya Pradesh	-	4	96	95	1	4	0	100	
5.	Maharashtra	N.A.								
6.	Rajasthan	-	71	29	47	2	51	64	36	
7.	Telangana	-	78	22	98	0	2	28	72	
8.	Uttar Pradesh	N.A.								
<b>62. TARA MEERA</b>										
1.	Rajasthan	N.A.								
<b>63. COCONUT</b>										
1.	Kerala	N.A.								
2.	Maharashtra	N.A.								
<b>64. NIGER</b>										
1.	Maharashtra	N.A.								
<b>65. COTTON</b>										
1.	Andhra Pradesh	-	97	3	59	39	2	91	9	
2.	Gujarat	Ir.	99	0	9	76	16	7	76	24
		UI.	97	0	3	58	14	28	71	29
3.	Haryana	-	66	34	100	0	0	59	41	
4.	Karnataka ***	kh. Ir.	99	-	1	99	1	-	69	31
		UI.	99	-	1	98	1	1	55	45
		Rabi Ir.	100	-	0	100	-	-	30	70
		Rabi UI.	70	-	30	99	-	1	7	93
		Sum.	100	-	-	100	-	-	0	100
5.	Madhya Pradesh	-	96	4	84	6	10	88	12	

## **ANNEX -IX ( Contd...)**

Sl. No.	STATE	PERCENTAGE			AREA		UNDER		
		Seed Variety			Fertilized/Manure			Pesticides	
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des
1	2	3	4	5	6	7	8	9	10
6.	Maharashtra	Ir. UL.. Comp.						N.A.	
								N.A.	
								N.A.	
7.	Punjab	-	99	1	99	0	1	100	0
8.	Rajasthan	-	95	5	95	1	4	93	7
9.	Tamil Nadu	Kh.	100	0	0	54	34	12	78
		Rabi	97	0	3	58	36	6	29
10	Telangana	-	59	41	98	0	2	65	35
11	Uttar Pradesh	N.A.							
<b>66. JUTE</b>									
1.	Assam	-	33	67	39	45	16	0	100
2.	Bihar				100				
3.	Meghalaya	-	0	100	7	12	81	0	100
4.	Odisha	-	0	100	83	12	5	46	54
5.	West Bengal	-	92	8	94	-	6	51	49
<b>67. MESTA</b>									
1.	Andhra Pradesh	-	51	49	9	62	29	1	99
2.	Bihar				100				
3.	West Bengal	-	75	25	90	-	10	22	78
<b>68. TOBACCO</b>									
1.	Andhra Pradesh	(N)	-	65	35	55	40	5	63
		(V)	-	95	5	73	25	2	91
2.	Gujarat	100	0	0	50	39	11	50	50
3.	Karnataka	0	100	0	1	11	89	58	42
4.	Maharashtra	N.A.							
5.	Telangana	(N)	-	100	0	100	0	0	40
		(V)	-	100	0	100	0	0	23
6.	Uttar Pradesh	Rabi	N.A.						
		Zaid	N.A.						
<b>69. ISABGOL</b>									
1.	Gujarat	88	0	12	77	16	7	28	72
2.	Rajasthan	-	31	69	92	1	8	22	78
<b>70. AVARE (SEM)</b>									
1.	Karnataka	Kharif	0	100	0	13	15	73	30
		Rabi	0	100	0	12	16	72	79
<b>71. COWPEA (LOBIA)</b>									
1.	Karnataka	Kharif	0	100	0	21	15	64	24
		Rabi	0	100	0	32	4	64	12
		Summer	0	50	50	0	0	100	0
2.	Goa	Kh.	0	0	100	20	30	50	10
		Rabi	10	0	90	20	20	60	20

**ANNEX -IX ( Contd...)**

Sl. No.	S T A T E	P E R C E N T A G E			A R E A		U N D E R		
		Seed Variety			Fertilized/Manure			Pesticides	
		High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured	Treated with Pestici- des.	Not treated with pestici- des
1	2	3	4	5	6	7	8	9	10
3.	Tamil Nadu	Kh.	73	0	27	74	17	9	50
		Rabi	79	0	21	78	14	8	61
<b>72. TAMARIND</b>									
1.	Kerala						N.A.		
<b>73. NUTMEG</b>									
1.	Kerala						N.A.		
<b>74. BETAL LEAVES</b>									
1.	Kerala						N.A.		
<b>75. CABBAGE</b>									
1.	Karnataka	0	100	0	4	4	92	54	46
<b>76. BEANS</b>									
1.	Karnataka	0	95	5	3	8	89	84	16
<b>77. BITTER GOURD</b>									
1.	Kerala						N.A.		

**Note :-**

- 1 \*\*\* : Figures repeated from the year 2011-12 in respect of Crop Cowpea and all other crops repeated from the year 2014-15..
2. # : Figure repeated from the year 2013-14 in respect for corp Banana, Onion and Papaya for Madhya Pradesh.

**ANNEX : X(a) :- RESULTS OF FIELD DRIAGE EXPERIMENTS UNDER CES 2018-19**

CROP	STATE	No. Of Experiments		Percentage recovery
		Planned	Analysed	
1	2	3	4	5
PADDY	Andhra Pradesh	Kh.Ir.	3572	761
		Kh.Ul.	232	57
		Rabi Ir.	2994	724
	Bihar	Bha.Ir.	280	121
		Bha.UI.	196	97
		Agh.Hyv.Ir.	13968	13565
		Agh.Hyv.UI.	3528	3466
		Agh.Lv.Ir.	6207	6055
		Agh.Lv.UI.	1056	1056
		Gar.Hyv.	150	79
		Gar.Lv.	70	45
	Chhattisgarh	Hyv.Ir.	814	656
		Lv.Ir.	532	430
		Ul.	1240	1032
	Goa	Kh.	192	188
		Rabi	192	135
	Gujarat	Ir.		6220
		Ul.		1250
		Sum.		
	Haryana %		990	864
	Himachal Pradesh		1898	1200
	Jammu & Kashmir		448	250
	Jharkhand	Agh.Hyv.Ir.		
		Agh.Hyv.UI.		
		Agh.Lv.Ir.		
		Agh.Lv.UI.		
		Bha.		N.A.
	Kerala	Aut.	540	540
		Wint.	669	669
		Sum.	430	430
	Madhya Pradesh	Hyv.Ir.	598	518
		Lv.Ir.	376	290
		Ul.	1108	1043
	Maharashtra **	Kh.	1106	712
		Sum.		N.C
	Meghalaya	Aut.	58	52
		Wint.	174	174
	Punjab		220	220
	Rajasthan		3580	2853
	Tamil Nadu	K/K/S	214	214
		S/T/P	630	630
		N/K	150	150
	Telangana	Ir.	2186	540
		Ul.	104	28
		Rabi	2324	469
	Uttarakhand		813	561
	Uttar Pradesh		N.A.	N.A.
	West Bengal	Aus.	647	647
		Aman.	7871	7871
		Sum.	6649	6649
	Dadra & Nagar Haveli		70	70
	Daman & Diu		20	20
	Puducherry	I	94	94
		II	140	140
		III	70	70

ANNEX - X(a) ( Contd....)

CROP	STATE	No. Of Experiments		Percentage recovery
		Planned	Analysed	
1	2	3	4	5
JOWAR	Andhra Pradesh	Kh.	178	48
		Rabi.	482	112
	Chhattisgarh		70	32
	Gujarat	Kh.	-	318
		Rabi	-	-
	Madhya Pradesh		600	584
	Maharashtra **	Kh.	2128	1543
		Rabi	2228	1472
	Rajasthan		10500	9763
	Tamil Nadu	Ir.	220	220
		UI.	320	320
	Telangana	Kh.	652	153
		Rabi	368	93
	Uttar Pradesh		N.A.	N.A.
BAJRA	Andhra Pradesh		488	171
	Gujarat	Kh.	-	1342
		Sum.	-	8575
	Haryana %		1532	1438
	Madhya Pradesh		252	228
	Maharashtra **		856	511
	Rajasthan		25752	25095
	Tamil Nadu	Ir.	120	120
		UI.	102	92
	Telangana		46	10
	Uttar Pradesh #		N.A.	N.A.
	Daman & Diu		8	8
MAIZE	Andhra Pradesh	Kh.	234	72
		Rabi	554	164
	Bihar	Bha.Hyv.	280	222
		Bha.Lv.	350	275
		Rabi	380	179
		Gar.Hyv.	190	130
		Gar.Lv.	60	36
	Chhattisgarh		484	368
	Gujarat	Kh.	-	3471
	Haryana %		144	88
	Himachal Pradesh		2570	2268
	Jammu & Kashmir		488	250
	Jharkhand	Bha.		N.A.
	Madhya Pradesh		1418	1293
	Maharashtra ***	Kh.	112	90
		Rabi	84	58
	Punjab		92	56
	Rajasthan	Kh.	11656	11580
	Tamil Nadu	Ir.	128	128
		UI.	88	88
	Telangana	Kh.	2082	439
		Rabi	1636	415
	Uttar Pradesh		N.A.	N.A.
	West Bengal		225	225

ANNEX - X(a) ( Contd....)

CROP	STATE	No. Of Experiments		Percentage recovery
		Planned	Analysed	
1	2	3	4	5
RAGI	Andhra Pradesh \$	Kh.	200	55
		Rabi	170	44
	Bihar	Bha.	112	59
	Goa			N.A.
	Gujarat		-	100
	Jharkhand			N.A.
	Maharashtra **		492	332
	Tamil Nadu	Ir.	80	80
		UI.	100	100
	Telangana		30	10
	Uttarakhand		554	451
	Dadra & Nagar Haveli		22	22
WHEAT	Bihar	Hyv.Ir.	18642	18241
		Hyv.UI.	21	21
		Lv.Ir.	5763	5763
		Lv.UI.	333	333
	Chhattisgarh	Hyv.Ir.	432	268
		Lv.Ir.	212	130
		UI.	228	130
	Gujarat	Ir.	-	16481
		UI.	-	120
	Haryana %		2200	2182
	Himachal Pradesh		2666	2236
	Jammu & Kashmir		358	78
	Jharkhand	Hyv.Ir.		N.A.
		Hyv.UI.		
		Lv.Ir.		
		Lv.UI.		
	Madhya Pradesh	Hyv.Ir.	2498	2204
		Lv.Ir.	974	974
		UI.	1060	966
	Maharashtra **		464	256
	Punjab		282	278
	Rajasthan		39648	38263
	Uttarakhand		793	544
	Uttar Pradesh		N.A.	N.A.
	West Bengal		766	766
BARLEY	Bihar		150	90
	Chhattisgarh		16	4
	Haryana %		516	355
	Himachal Pradesh		1160	750
	Jharkhand			N.A.
	Madhya Pradesh		430	396
	Punjab		110	76
	Rajasthan		5948	5832
	Uttarakhand		339	247
	Uttar Pradesh		N.A.	N.A.

ANNEX - X(a) ( Contd....)

CROP	STATE	No. Of Experiments		Percentage recovery
		Planned	Analysed	
1	2	3	4	5
GRAM	Bihar		400	89.00
	Chhattisgarh		538	93.50
	Gujarat	-	1317	70
	Haryana %		562	88.70
	Jharkhand			N.A.
	Madhya Pradesh	UI	2608	91.56
		Ir	1078	96.33
	Maharashtra **		2200	94.62
	Punjab		32	97.84
	Rajasthan		14824	97.15
	Uttar Pradesh		N.A.	98.10
	West Bengal		252	56.57
REDGRAM (TUR)	Bihar		308	75.00
	Jharkhand			N.A.
	Maharashtra *		3602	83.45
	Uttar Pradesh		N.A.	65.10
	West Bengal	(Rabi)	83	52.14
GREENGRAM (MOONG)	Bihar	Bha.	120	40.00
		Gar.	252	81.00
	Rajasthan		15212	96.01
	Uttar Pradesh	Kh.	N.A.	92.74
		Zaid	N.A.	N.A.
BLACKGRAM	West Bengal	Sum.		N.A.
	Rajasthan		7348	94.69
	Uttar Pradesh	Kh.	N.A.	92.74
		Zaid.	N.A.	94
LAKH (KHESARI)	West Bengal		326	44.20
	Bihar		210	81.00
	Chhattisgarh		574	N.A.
MASUR	West Bengal		170	52.02
	Bihar		490	77.00
	Jharkhand			N.A.
	Rajasthan		1120	96.68
	Uttar Pradesh		N.A.	94.86
PEAS	West Bengal		658	54.97
	Uttar Pradesh		N.A.	94.87
	West Bengal		133	56.13
MOTH	Rajasthan		6620	98.39
CHOWLA	Rajasthan		1868	96.73
GUAR	Rajasthan		20552	96.41
SAWAN	Uttarakhand		311	57.99
	Uttar Pradesh	Kh.	N.A.	85.87
		Zaid	N.A.	85.87
SAMAI	Tamil Nadu		50	91.94
VARAGU	Tamil Nadu		62	91.63
SUGARCANE	Bihar		238	88.00
	Punjab		N.A.	N.A.
KORRA	Andhra Pradesh		204	73.45
	Telangana		20	73.55
KODON- KUTKI	Chhattisgarh		298	91.10
	Madhya Pradesh		180	90.36
	Uttar Pradesh (Kodan)		N.A.	95.17
CHILLIES	Andhra Pradesh	Kh.	400	44.13
		Rabi	402	43.62

ANNEX - X(a) ( Contd....)

CROP	STATE	No. Of Experiments		Percentage recovery
		Planned	Analysed	
1	2	3	4	5
SAFFRON	Bihar		170	109.00
	Telangana	Kh.	380	129.00
		Rabi	128	32.00
SAFFRON	Jammu & Kashmir		114	84
CORIANDER	Rajasthan		3184	2823
ARECANUT	Maharashtra ****		180	21
CASHEWNUT	Maharashtra			N.C
CUMIN SEED	Rajasthan		4908	4248
METHI	Rajasthan		1500	1378
GROUNDNUT	Andhra Pradesh	Kh.	2608	646
		Rabi	842	258
	Chhattisgarh		236	147
	Gujarat	Kh.	-	7417
		Sum.	-	803
	Goa	Kh.	52	20
		Rabi	80	32
	Madhya Pradesh		480	384
	Maharashtra **		1386	948
	Rajasthan		6960	5305
	Tamil Nadu	Ir.	350	350
		UL.	230	230
	Telangana	Kh.	196	55
		Rabi	1112	218
	Uttar Pradesh		N.A.	N.A.
	West Bengal		199	199
SESAMUM	Maharashtra *	Kh.	674	512
		Rabi	202	93
	Rajasthan		6084	5693
	Uttar Pradesh		N.A.	N.A.
	West Bengal		1020	1020
CASTOR	Andhra Pradesh		232	76
	Telangana		150	33
RAPE & MUSTARD	Bihar		532	503
	Haryana %		1040	990
	Jammu & Kashmir		142	12
	Jharkhand			N.A.
	Punjab		254	198
	Rajasthan		30252	28472
	Uttar Pradesh		N.A.	N.A.
	West Bengal		1513	1513
LINSEED	Jammu & Kashmir		8	2
	Maharashtra *		882	675
	Rajasthan			N.A.
	Uttar Pradesh		N.A.	N.A.
	West Bengal		73	73
				33.63
SUNFLOWER	Andhra Pradesh	Kh.	196	46
		Rabi	368	83
	Haryana %	Rabi	260	92
		Kh.	680	524
	Maharashtra*	Rabi	578	463
		Sum.		N.A.
		Kh.		N.A.
	Telangana	Rabi	36	11
		Zaid	N.A.	N.A.
	Uttar Pradesh			92.21

ANNEX - X(a) ( Contd....)

CROP	S T A T E	No. Of Experiments		Percentage recovery
		Planned	Analysed	
1	2	3	4	5
SAFFLOWER	Karnataka ###	Rabi UI.	98	28.20
	Maharashtra *		2538	61.54
	Rajasthan			N.A.
	Uttar Pradesh		N.A.	92.91
BANANA	Bihar		250	10.00
MANGO	Bihar		300	32
GUAVA	Bihar		140	42
LICHI	Bihar		150	29
POTATO	Bihar	Agh.	170	51
		Rabi	210	94
ONION	Bihar	Rabi	210	66
BRINJAL	Bihar	Agh.	170	51
		Rabi	170	54
TOMATO	Bihar	Agh.	70	46
		Rabi	140	70
CAULIFLOWER	Bihar		170	54
JACKFRUIT	Bihar		210	24
TARA MEERA	Rajasthan		1392	97.27
COTTON	Madhya Pradesh		N.A.	
	Maharashtra *		3364	84.20
	Punjab		56	95.30
	Rajasthan		6796	100
	Uttar Pradesh		N.A.	90.93
JUTE	Bihar		100	53.00
	Meghalaya		28	3.60
	West Bengal		640	6.99
MESTA	Andhra Pradesh		200	78.86
	Bihar		100	43.00
	West Bengal		240	6.99
TOBACCO	Maharashtra *		72	72.22
	Uttar Pradesh	Rabi	N.A.	26.65
		Zaid	N.A.	N.A.
ISABGOL	Rajasthan		4268	96.56
AVARE	Karnataka	UI.	88	37.21

Note: -

- 1 \* :- Figures have been given from the year 1994-95 as no results of driage experiments was received ever since the year 1995-96 to 2009-10 by SASA Maharashtra.
- 2. \*\*\* :- Figures given are for 1998-99 as no information was received ever since the year 1999-2000 to 2009-10.
- 3. \*\*\*\* :- Figures given are for 2001-02 as no information was received ever since the year 2002-03 to 2009-10.
- 4. % :- Percentage recovery repeated from the year 2013-14 for Haryana.
- 5. ### :- Figures repeated from the year 2014-15.
- 6. \$ :- Figure repeated from the year 2016-17.

**ANNEX-X(b):RESULTS OF CENTRAL DRIAGE EXPERIMENTS ORGANISED BY STATE  
UNDER C.E.S. DURING 2018-19**

Sl. No.	S T A T E	C R O P		No. Of Experiments		Percentage Recovery	Percentage recovery as per field driage
				Planned	Analysed		
1	2	3		4	5	6	7
1.	Assam	Paddy	Aut.	230	140	89	No Field driage
			Wint.	450	440	89	No Field driage
			Sum.	300	202	88	No Field driage
		Wheat		-	-	94.98	No Field driage
		Blackgram		-	-	94.49	No Field driage
		Rape & Mustard		-	-	91.17	No Field driage
		Jute		300	252	6	No Field driage
		Sugarcane		-	-	-	
2.	Karnataka	Paddy	Kh.Hyv.Ir.	784	598	76.92	No Field driage
			Kh.Hyv.UI.	468	452	83.21	No Field driage
			Kh.Tra.Ir.	80	80	89.94	No Field driage
			Kh.Tra.UI.	82	82	88.74	No Field driage
			Rabi Hyv. Ir.	54	54	81.21	No Field driage
			Rabi Tra. Ir.	-	-	-	No Field driage
			Sum.Hyv.Ir.	222	216	73.04	No Field driage
			Sum.Tra.Ir.	-	-	-	No Field driage
		Jowar	Kh.Hyv.Ir.	84	82	48.37	No Field driage
			Kh.Hyv.UI.	210	168	46.45	No Field driage
			Kh.Tra.UI.	-	-	-	No Field driage
			Rabi Hyv.Ir.	172	114	52.37	No Field driage
			Rabi Hyv.UI.	404	352	46.54	No Field driage
			Rabi Tra.Ir.	-	-	-	No Field driage
			Rabi Tra.UI.	-	-	-	No Field driage
			Sum. Hyv. Ir.	4	4	42.25	No Field driage
		Bajra	Kh.Hyv.Ir.	112	66	43.27	No Field driage
			Kh.Hyv.UI.	308	178	45.41	No Field driage
			Kh. Tra. Ir.	-	-	-	No Field driage
			Kh.Tra.UI.	-	-	-	No Field driage

**ANNEX X (b) ( Contd..)**

Sl. No.	S T A T E	C R O P	No. Of Experiments		Percen- tage recovery	Percentage recovery as per field driage	
			Planned	Analysed			
1	2	3	4	5	6	7	
Maize		Kh.Hyv.Ir.	376	324	55.32	No Field driage	
		Kh.Hyv.UI.	876	680	50.12	No Field driage	
		Kh.Tra.Ir.	-	-	-	No Field driage	
		Kh.Tra.UI.	-	-	-	No Field driage	
		Rabi Hyv. Ir.	210	158	52.66	No Field driage	
		Rabi Hyv. UI.	40	40	43.72	No Field driage	
		Sum Hyv Ir.	14	14	72.36	No Field driage	
		Rabi Tra.Ir.	-	-	-	No Field driage	
		Ragi	Kh.Hyv.Ir.	232	202	45.93	No Field driage
			Kh.Hyv.UI.	686	650	45.82	No Field driage
			Kh.Tra.UI.	-	-	-	No Field driage
			Rabi Hyv.Ir.	44	44	41.34	No Field driage
			Rabi Hyv.UI.	18	18	39.72	No Field driage
			Sum.Hyv. Ir.	40	40	40.33	No Field driage
		Wheat	Hyv.Ir.	130	104	77.23	No Field driage
			Hyv.UI.	98	64	79.90	No Field driage
			Tra.Ir.	-	-	-	No Field driage
			Tra.UI.	-	-	-	No Field driage
		Gram	Ir.	186	148	58.10	No Field driage
			UI.	400	354	50.78	No Field driage
		Redgram	Ir.	118	76	53.93	No Field driage
			UI.	808	486	45.72	No Field driage
		Greengram	Kh.	386	308	44.04	No Field driage
			Rabi	14	10	37.05	No Field driage
		Blackgram	Kh.	168	144	41.15	No Field driage
			Rabi	-	-	-	No Field driage
		Horsegram	Kh.	218	198	29.41	No Field driage
			Rabi	408	342	27.31	No Field driage
		Navane		74	50	26.64	No Field driage
		Save		32	26	27.15	No Field driage
		Chillies	Ir.	36	36	38.79	No Field driage
			UI.	36	36	33.09	No Field driage
		Groundnut	Kh.Ir.	236	156	45.99	No Field driage
			Kh.UI.	802	706	41.76	No Field driage

ANNEX X (b) ( Contd..)

Sl. No.	S T A T E	C R O P	No. Of Experiments		Percen- tage recovery	Percentage recovery as per field driage
			Planned	Analysed		
1	2	3	4	5	6	7
		Rabi UI.	20	20	55.30	No Field driage
		Sum. Ir.	154	140	44.30	No Field driage
		Sum UI.	-	-	-	No Field driage
		Sesamum	194	180	22.33	No Field driage
		Castor	-	-	-	No Field driage
		Linseed	18	14	37.49	No Field driage
		Safflower	110	102	35.60	No Field driage
		Sunflower	Kh.Ir.	172	110	40.80
			Kh.UI.	302	176	35.59
			Rabi.Ir.	80	72	39.95
			Rabi.UI.	94	66	42.02
			Sum.Ir.	46	46	42.93
		Soyabean	Ir.	-	-	No Field driage
			UI.	106	86	46.87
		Tobacco	-	-	-	No Field driage
		Avare	44	37	29.97	No Field driage
		Cowpea	96	82	28.25	No Field driage
3.	Odisha **	Paddy	Aut.	-	-	85.26
			Wint.	-	-	87.34
			Sum.	-	-	87.74
		Maize	Aut.	-	-	34.42
			Wint.	-	-	31.90
			Sum.	-	-	30.98
		Ragi	Aut.	-	-	41.00
			Wint.	-	-	41.42
			Sum.	-	-	38.60
		Wheat	Sum.	-	-	92.10
		Greengram	Aut.	-	-	93.42
			Wint.	-	-	94.36
			Sum.	-	-	94.46
		Blackgram	Aut.	-	-	93.95
			Wint.	-	-	94.44
			Sum.	-	-	94.44

**ANNEX X (b) ( Contd..)**

Sl. No.	S T A T E	C R O P	No. Of Experiments		Percen- tage recovery	Percentage recovery as per field driage
			Planned	Analysed		
1	2	3	4	5	6	7
		Horsegram	Wint.	-	-	94.38
			Sum.	-	-	95.07
		Groundnut	Aut.	-	-	51.53
			Wint.	-	-	54.96
			Sum.	-	-	54.52
		Sesamum	Aut.	-	-	93.73
			Wint.	-	-	93.38
			Sum.	-	-	94.69
		Rape & Mustard	Wint.	-	-	82.59
			Jute	Aut.	-	5.73
						No Field driage
4.	Rajasthan	Jowar		46	43	53.86
		Bajra		50	50	56.54
		Maize	Kh.	40	38	59.10
		Wheat		58	52	97.58
		Gram		56	54	94.88
						89.37

Note :

- 1:-            \*\* Average driage ratio on the basis of preceeding 10 years is adopted in respect of all the crops.
- 2:-            \$   Figures given are for 2007-08 as no information was received of Central Driage ever since the year 2008-09.

APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2018-19							
Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape		Stratum	Pre-stratification
1	2	3	4	Dimentions (MxM)	Size (ha.)	6	7
<b>1. ANDHRA PRADESH</b>							
Paddy	Kh.	1945-46	1954-55	5 x 5	1/400	MANDAL	Ir. - UI. Ir.
	Rabi	1945-46	1954-55	5 x 5	1/400	MANDAL	
Jowar	Kh.	1951-52	1955-56	5 x 5	1/400	MANDAL	
	Rabi	1951-52	1955-56	5 x 5	1/400	MANDAL	
Bajra		1951-52	1955-56	5 x 5	1/400	MANDAL	
Maize	Kh.	1951-52	1955-56	5 x 5	1/400	MANDAL	
	Rabi	1951-52	1955-56	5 x 5	1/400	MANDAL	
Ragi	Kh.	1951-52	1955-56	5 x 5	1/400	MANDAL	
	Rabi	1951-52	1955-56	5 x 5	1/400	MANDAL	
Redgram		1958-59	1960-61	10 x10	1/100	MANDAL	
Greengram	Kh.	1976-77	1976-77	5 x 5	1/400	MANDAL	
	Rabi	1976-77	1976-77	5 x 5	1/400	MANDAL	
Blackgram	Kh.	1962-63	1963-64	5 x 5	1/400	MANDAL	
	Rabi	N. A.	N.A.	5 x 5	1/400	MANDAL	
Horsegram	Kh.	1980-81	1980-81	5 x 5	1/400	MANDAL	
	Rabi	N. A.	N. A.	5 x 5	1/400	MANDAL	
Bengalgram	Rabi	2001-02	2001-02	5 x 5	1/400	MANDAL	
Korra		1976-77	1976-77	5 x 5	1/400	MANDAL	
Sugarcane	Plt. - Rt	1954-55	1957-58	5 x 5	1/400	MANDAL	.
Chillies	Kh.	1976-77	1976-77	5 x 5	1/400	MANDAL	
	Rabi	2002-03	2002-03	5 x 5	1/400	MANDAL	
Groundnut	Kh.	1957-58	1959-60	5 x 5	1/400	MANDAL	
	Rabi	1957-58	1959-60	5 x 5	1/400	MANDAL	
Sesamum	Kh.	1957-58	1959-60	10 x 10	1/100	MANDAL	
	Rabi	1957-58	1959-60	10 x 10	1/100	MANDAL	
Castor		1957-58	1964-65	10 x 10	1/100	MANDAL	
Cotton		1957-58	1965-66	10 x 10	1/100	MANDAL	
Mesta		1976-77	1976-77	5 x 5	1/400	MANDAL	
Tobacco	(N & V)	1957-58	1963-64	5 x 5	1/400	MANDAL	
Sunflower	Kh.	1992-93	1992-93	5 x 5	1/400	MANDAL	
	Rabi	N. A.	N. A.	5 x 5	1/400	MANDAL	
Soyabean	Kh.	2003-04	2003-04	5 x 5	1/400	MANDAL	
<b>2. ASSAM @</b>							
Paddy	Aut.	1947-48	1951-52	5 x 5	1/400	R.Circle	
	Wint.	1947-48	1951-52	5 x 5	1/400	R.Circle	
	Sum.	1974-75	1974-75	5 x 5	1/400	Sub-Division	
Wheat		1973-74	1973-74	5 x 5	1/400	Sub-Division	
Blackgram		1962-63	1962-63	5x5	1/400	Sub-Division	
Sugarcane		1957-58	1957-58	5x5	1/400	Sub-Division	
Potato		1950-51	1952-53	5M x 7 Rows	-	R.Circle	
R&M		1957-58	1958-59	5x5	1/400	R.Circle	
Jute		1951-52	1951-52	5x5	1/400	Sub-Division	

APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2018-19							
Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape		Stratum	Pre-stratification
				Dimensions (MxM)	Size (ha.)		
1	2	3	4	5	6	7	
<b>3. Bihar</b>							
Paddy	Bha.	1945-46	1948-49	10 x 5	1/200	ANCHAL	Ir.- UI.
	Agh.	1945-46	1948-49	10 x 5	1/200	ANCHAL	{Hyv.(Ir./UI.)}
	Gar.	1969-70	1969-70	10 x 5	1/200	ANCHAL	{Lv.(Ir./UI.) }
							Hyv./Lv.
Maize	Bha.	1959-60	1959-60	10 x 5	1/200	ANCHAL	Hyv./Lv.
	Rabi	1976-77	1976-77	10 x 5	1/200	ANCHAL	
	Gar.	1959-60	1959-60	10 x 5	1/200	ANCHAL	Hyv./Lv.
Ragi	Bha.	1976-77	1976-77	10 x 5	1/200	ANCHAL	
Wheat		1945-46	1948-49	10 x 5	1/200	ANCHAL	{Hyv.(Ir./UI.)}
Barley		1945-46	1950-51	10 x 5	1/200	ANCHAL	{Lv.(Ir./UI.) }
Gram		1945-46	1949-50	10 x 5	1/200	ANCHAL	
Tur		1962-63	1962-63	5 x 5	1/400	ANCHAL	
Greengram	Bha.	1976-77	1977-78	10 x 5	1/200	ANCHAL	
	Gar.	1977-78	1977-78	10 x 5	1/200	ANCHAL	
Lakh		1966-67	1966-67	10 x 5	1/200	ANCHAL	
Masur		1945-46	1966-67	10 x 5	1/200	ANCHAL	
Sugarcane		1958-59	1958-59	5 x 5	1/400	ANCHAL	Ir.- UI.
Chillies		1970-71	1970-71	5 x 5	1/400	ANCHAL	
Lichi		1963-64	1963-64	2 trees	—	ANCHAL	
Banana		1964-65	1964-65	2 trees	—	ANCHAL	
Mango		1963-64	1963-64	2 trees	—	ANCHAL	
Guava		1976-77	1976-77	2 trees	—	ANCHAL	
Potato	Agh.	1964-65	1964-65	5 x 5	1/400	ANCHAL	
	Rabi	1964-65	1964-65	5 x 5	1/400	ANCHAL	
Onion		1970-71	1970-71	5 x 5	1/400	ANCHAL	
Brinjal	Agh.	1972-73	1972-73	5 x 5	1/400	ANCHAL	
	Rabi	1972-73	1972-73	5 x 5	1/400	ANCHAL	
Tomato	Agh.	1972-73	1972-73	5 x 5	1/400	ANCHAL	
	Rabi	1972-73	1972-73	5 x 5	1/400	ANCHAL	
Cauliflower		1973-74	1973-74	5 x 5	1/400	ANCHAL	
Jackfruit		1965-66	1965-66	2 trees	—	ANCHAL	
Rape & Mustard		1966-67	1966-67	5 x 5	1/400	ANCHAL	
Jute		1958-59	1958-59	5 x 5	1/400	ANCHAL	
Mesta		1959-60	1962-63	5 x 5	1/400	ANCHAL	
<b>4. CHHATTISGARH</b>							
Paddy		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE	Ir.(Hyv./Lv.) & UI.
Jowar		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE	
Maize		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE	
Wheat		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE	Ir.(Hyv./Lv.) & UI.(Lv)
Barley		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE	

APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2018-19						
Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape	Stratum	Pre-stratification
1	2	3	4	Dimentions (MxM)	Size (ha.)	7
Gram		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Tur		2000-01	2000-01	10 x 5	1/200	R.I. CIRCLE
Lakh		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Soyabean		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Kodan-Kutki		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Chillies		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Potato		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Onion		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Groundnut		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Sesamum		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Rape & Mustard		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
Linseed		2000-01	2000-01	5 x 5	1/400	R.I. CIRCLE
5. GOA						
Paddy	Kh. Rabi	1967-68 1967-68	1967-68 1967-68	5 x 5 5 x 5	1/400 1/400	TALUKA TALUKA
Ragi		1970-71	1970-71	5 x 5	1/400	TALUKA
6. GUJARAT						
Paddy	Kh. Sum	1945-46 2000-01	1956-57 2000-01	5 x 5 5 x 5	1/400 1/400	TALUKA TALUKA
Jowar	Kh. Rabi	1956-57 1945-46	1956-57 1956-57	5 x 5 5 x 5	1/400 1/400	TALUKA TALUKA
Bajra	Kh. Sum	1946-47 1974-75	1956-57 1974-75	5 x 5 5 x 5	1/400 1/400	TALUKA TALUKA
Maize		1951-52	1951-52	5 x 5	1/400	TALUKA
Ragi		1951-52	1955-56	5 x 5	1/400	TALUKA
Wheat		1945-46	1956-57	5 x 5	1/400	TALUKA
Blackgram		2004-05	2004-05	5 x 5	1/400	TALUKA
Gram		1951-52	1956-57	5 x 5	1/400	TALUKA
Redgram		1976-77	1984-85	10M X Av. rows in 5M	1/200	TALUKA
Greengram		1977-78	1984-85	5 x 5	1/400	TALUKA
Gwar		1994-95	-	5 x 5	1/400	TALUKA
Moth		2004-05	2004-05	5 x 5	1/400	TALUKA
Cumin		1964-65	1971-72	5 x 5	1/400	TALUKA
Fennel		1964-65	1971-72	5 x 5	1/400	TALUKA
Onion		1968-69	1984-85	5 x 5	1/400	TALUKA
Potato		1972-73	1984-85	5 x 5	1/400	TALUKA
Groundnut	Kh. Sum.	1951-52 1977-78	1957-58 1983-84	5 x 5 5 x 5	1/400 1/400	TALUKA TALUKA

APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2018-19						
Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape	Stratum	Pre-stratification
1	2	3	4	Dimentions (MxM)	Size (ha.)	7
Rape & Mustard		1984-85	1984-85	5 x 5	1/400	TALUKA
Sesamum		1961-62	1964-65	5 x 5	1/400	TALUKA
Castor		1961-62	1964-65	10M X Av. rows in 5 M	1/200	TALUKA
Cotton		1946-47	1957-58	10M X Av. rows	1/200	TALUKA
Tobacco		1946-47	1951-52	5 x 5	1/400	TALUKA
Isabgol		1964-65	1983-84	5 x 5	1/400	TALUKA
<b>7. HARYANA</b>						
Paddy		1951-52	1957-58	5 x 5	1/400	TEHSIL
Bajra		1952-53	1952-53	5 x 5	1/400	TEHSIL
Maize		1952-53	1952-53	5 x 5	1/400	TEHSIL
Wheat		1943-44	1951-52	5 x 5	1/400	TEHSIL
Barley		1951-52	1956-57	5 x 5	1/400	TEHSIL
Gram		1951-52	1951-52	5 x 5	1/400	TEHSIL
Redgram		2004-05	2004-05	5 x 5	1/400	TEHSIL
Sugarcane		1951-52	1961-62	5 x 5	1/400	TEHSIL
Rape & Mustard		1951-52	1968-69	5 x 5	1/400	TEHSIL
Sunflower		2002-03	2002-03	5 x 5	1/400	TEHSIL
Cotton		1951-52	1996-97	5 x 5	1/400	TEHSIL
<b>8. HIMACHAL PRADESH</b>						
Paddy		1952-53	1953-54	10 x 2	1/500	KANUNGO CIRCLE
Maize		1952-53	1959-60	10 x 2	1/500	KANUNGO CIRCLE
Wheat		1951-52	1953-54	10 x 2	1/500	KANUNGO CIRCLE
Barley		1960-61	1964-65	10 x 2	1/500	KANUNGO CIRCLE
<b>9. JAMMU &amp; KASHMIR</b>						
Paddy	Plain & Hill	1958-59	1963-64	10 x 5	1/200	TEHSIL
Maize	Plain & Hill	1958-59	1963-64	10 x 5	1/200	TEHSIL
Wheat	Plain & Hill	1958-59	1963-64	10 x 5	1/200	TEHSIL
Potato	Kh.	2003-04	2003-04	N.A	N.A	TEHSIL
	Rabi	2003-04	2003-04	N.A	N.A	TEHSIL
Saffron		1969-70	**	4 x 4	1/625	TEHSIL
Rape & Mustard		1969-70	**	10 x 5	1/200	TEHSIL
Linseed		1969-70	**	10 x 5	1/200	TEHSIL
<b>10. JHARKHAND</b>						
Paddy	Agh.	2001-02	2001-02	10 x 5	1/200	ANCHAL
	Bha.	2002-03	2002-03	10 x 5	1/200	ANCHAL

**APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2018-19**

Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape		Stratum	Pre-stratification
				Dimentions (MxM)	Size (ha.)		
1	2	3	4	5	6	7	
Maize	Bha.	2002-03	2002-03	10 x 5	1/200	ANCHAL	
Ragi		2002-03	2002-03	10 x 5	1/200	ANCHAL	
Wheat		2001-02	2001-02	10 x 5	1/200	ANCHAL	Hyv. & Lv.
Barley		2001-02	2001-02	10 x 5	1/200	ANCHAL	
Gram		2001-02	2001-02	10 x 5	1/200	ANCHAL	
Tur		2001-02	2001-02	10 x 5	1/200	ANCHAL	
Masur		2001-02	2001-02	10 x 5	1/200	ANCHAL	
Sugarcane	Bha.	2002-03	2002-03	10 x 5	1/200	ANCHAL	
Potato	Agh.	2001-02	2001-02	5 x 5	1/400	ANCHAL	
	Rabi	2001-02	2001-02	5 x 5	1/400	ANCHAL	
Onion	Rabi	2005-06	2005-06	5 x 5	1/400	ANCHAL	
Brinjal	Agh.	2003-04	2003-04	5 x 5	1/400	ANCHAL	
	Rabi	2001-02	2001-02	5 x 5	1/400	ANCHAL	
Tomato	Agh.	2001-02	2001-02	5 x 5	1/400	ANCHAL	
	Rabi	2003-04	2003-04	5 x 5	1/400	ANCHAL	
Rape & Mustard		2001-02	2001-02	5 x 5	1/400	ANCHAL	
<b>11. KARNATAKA</b>							
Paddy	Kh.	1945-46	1945-46	5 x 5	1/400	TALUK	Hyv (Ir./UI) & Tra. (Ir./UI)
	Rabi	1970-71	1970-71	5 x 5	1/400	TALUK	{Ir(Hyv. / Tra)}.
	Sum.	1970-71	1970-71	5 x 5	1/400	TALUK	Hyv.Ir.
Jowar	Kh.	1945-46	1945-46	5 x 5	1/400	TALUK	Hyv (Ir./UI) & Tra. UI
Jowar	Rabi	1945-46	1945-46	5 x 5	1/400	TALUK	{Hyv (Ir./UI) } & Tra (Ir./UI.)
Bajra	Kh.	1946-47	1946-47	5 x 5	1/400	TALUK	{Hyv (Ir./UI) } & Tra.UI.
Maize	Kh.	1970-71	1970-71	5 x 5	1/400	TALUK	Hyv.(Ir./UI) & Tra (Ir/UI)
	Rabi	1970-71	1970-71	5 x 5	1/400	TALUK	Hyv.(Ir./UI) & Tra Ir.
	Sum.	1970-71	1970-71	5 x 5	1/400	TALUK	Hyv.(Ir.)
Ragi	Kh.	1950-51	1950-51	5 x 5	1/400	TALUK	Hyv.(Ir./UI) & Tra.UI
	Rabi	1984-85	1984-85	5 x 5	1/400	TALUK	Hyv.(Ir./UI.)
	Sum.	1975-76	1977-78	5 x 5	1/400	TALUK	Hyv. Ir.
Wheat	Rabi	1945-46	1945-46	5 x 5	1/400	TALUK	Hyv.(Ir./UI) & Tra.(Ir./UI)
Gram	Rabi	1951-52	1951-52	5 x 5	1/400	TALUK	Ir.- UI.
Redgram	Kh.	1957-58	1957-58	10 x 5	1/200	TALUK	Trad.(Ir./ UI)
Greengram	Kh.	1971-72	1971-72	5 x 5	1/400	TALUK	
	Rabi	1981-82	1981-82	5 x 5	1/400	TALUK	

APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2018-19							
Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape		Stratum	Pre-stratification
1	2	3	4	Dimentions (MxM)	Size (ha.)	6	7
Blackgram	Kh.	1971-72	1971-72	5 x 5	1/400	TALUK	
	Rabi	1981-82	1981-82	5 x 5	1/400	TALUK	
Horsegram	Kh.	1970-71	1970-71	5 x 5	1/400	TALUK	
	Rabi	1981-82	1981-82	5 x 5	1/400	TALUK	
Soyabean	Kh.	1991-92	1991-92	5 x 5	1/400	TALUK	Ir.- UI.
Navane	Kh.	1970-71	1970-71	5 x 5	1/400	TALUK	
Save	Kh.	1971-72	1971-72	5 x 5	1/400	TALUK	
Sugarcane	Annual	1958-59	1958-59	5 x 5	1/400	TALUK	
Chillies	Kh.	2002-03	2002-03	5 x 5	1/400	TALUK	Ir.- UI.
Potato	Kh.	2000-01	2000-01	5 x 5	1/400	TALUK	Ir.- UI.
	Rabi	2000-01	2000-01	5 x 5	1/400	TALUK	
Onion	Kh.	2000-01	2000-01	5 x 5	1/400	TALUK	Ir.- UI.
	Rabi	2000-01	2000-01	5 x 5	1/400	TALUK	
Groundnut	Sum.	2007-08	2007-08	5 x 5	1/400	TALUK	
	Kh.	1957-58	1957-58	5 x 5	1/400	TALUK	Ir.- UI.
	Sum.	1970-71	1970-71	5 x 5	1/400	TALUK	Ir.- UI.
Sesamum	Rabi	2005-06	2005-06	5 x 5	1/400	TALUK	UI.
	Kh.	1957-58	1957-58	5 x 5	1/400	TALUK	
Castor	Kh.	1957-58	1957-58	10 x 5	1/200	TALUK	
Linseed	Rabi	1957-58	1957-58	5 x 5	1/400	TALUK	
Safflower	Rabi	1977-78	1977-78	5 x 5	1/400	TALUK	
Sunflower	Kh.	1978-79	1978-79	10 x 5	1/200	TALUK	Ir.- UI.
	Rabi	1988-89	1988-89	10 x 5	1/200	TALUK	Ir.- UI.
	Sum.	1988-89	1988-89	10 x 5	1/200	TALUK	Ir.
Cotton	Annual	1957-58	1957-58	10 x 5	1/200	TALUK	Ir.- UI.
Tobacco	Annual	1971-72	1971-72	10 x 5	1/200	TALUK	Ir.- UI.
Avare	Kh.	2007-08	2007-08	5 x 5	1/400	TALUK	
Cowpea	Kh.	2007-08	2007-08	5 x 5	1/400	TALUK	
12. KERALA							
Paddy	Aut.	1950-51	1950-51	5 x 5	1/400	TALUKA	
	Wint.	1950-51	1950-51	5 x 5	1/400	TALUKA	
	Sum.	1950-51	1950-51	5 x 5	1/400	TALUKA	
Sugarcane		1982-83	1982-83	5 x 5	1/400	TALUKA	
Arecanut		1976-77	1976-77	5 bearing trees	—	TALUKA	
Cashewnut		1976-77	1976-77	5 bearing trees	—	TALUKA	
Turmeric		1989-90	1989-90	2 x 2	1/2500	TALUKA	
Pepper		1976-77	1976-77	5 bearing trees	—	TALUKA	
	Ginger	2004-05	2004-05	N.A.	N.A.	TALUKA	
Cocoa		1982-83	1982-83	5 bearing trees	—	TALUKA	
	Banana	1985-86	1985-86	3 plants	—	TALUKA	
Mango		2004-05	2004-05	N.A.	N.A.	TALUKA	

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Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape		Stratum	Pre-stratification			
1	2	3	4	Dimentions (MxM)	Size (ha.)	5	6	7		
<b>Jackfruit</b>		<b>1988-89</b>	<b>1988-89</b>	<b>2 bearing trees</b>		<b>—</b>	<b>TALUKA</b>			
<b>Pine Apple</b>		<b>1981-82</b>	<b>1981-82</b>	<b>5 bearing trees</b>		<b>—</b>	<b>TALUKA</b>			
<b>Plantain</b>		<b>1986-87</b>	<b>1986-87</b>	<b>3 pits</b>	<b>—</b>	<b>TALUKA</b>				
<b>Tapioca</b>		<b>1963-64</b>	<b>1963-64</b>	<b>2 x 2</b>	<b>1/2500</b>	<b>TALUKA</b>				
<b>Coconut</b>		<b>1976-77</b>	<b>1976-77</b>	<b>5 bearing trees</b>		<b>—</b>	<b>TALUKA</b>			
<b>Sesamum</b>		<b>1984-85</b>	<b>1984-85</b>	<b>5 x 5</b>	<b>1/400</b>	<b>TALUKA</b>				
<b>13. MADHYA PRADESH</b>										
<b>Paddy</b>		<b>1945-46</b>	<b>1955-56</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>	<b>Ir.(Hyv./Lv.) &amp; UI.</b>			
<b>Jowar</b>		<b>1946-47</b>	<b>1955-56</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Bajra</b>		<b>1954-55</b>	<b>1956-57</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Maize</b>		<b>1952-53</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Wheat</b>		<b>1944-45</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>	<b>Ir.(Hyv./Lv.) &amp; UI.</b>			
<b>Barley</b>		<b>1951-52</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Gram</b>		<b>1950-51</b>	<b>1955-56</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Tur</b>		<b>1950-51</b>	<b>1957-58</b>	<b>10 x 5</b>	<b>1/200</b>	<b>R.I. CIRCLE</b>				
<b>Lakh</b>		<b>1957-58</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Soyabean</b>		<b>1980-81</b>	<b>1983-84</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Kodon Kutki</b>		<b>1950-51</b>	<b>1955-56</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Chillies</b>		<b>1957-58</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Banana</b>		<b>1957-58</b>	<b>1957-58</b>	<b>25 trees</b>	<b>—</b>	<b>TALUKA</b>				
<b>Potato</b>		<b>1957-58</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Onion</b>		<b>1957-58</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Papaya</b>		<b>1957-58</b>	<b>1957-58</b>	<b>25 trees</b>	<b>—</b>	<b>TALUKA</b>				
<b>Groundnut</b>		<b>1957-58</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Sesamum</b>		<b>1957-58</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Rape &amp; Mustard</b>		<b>1957-58</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Linseed</b>		<b>1957-58</b>	<b>1957-58</b>	<b>5 x 5</b>	<b>1/400</b>	<b>R.I. CIRCLE</b>				
<b>Cotton</b>		<b>1944-45</b>	<b>1957-58</b>	<b>10 M x 11 Rows</b>	<b>-</b>	<b>R.I. CIRCLE</b>				
<b>14. MAHARASHTRA</b>										
<b>Paddy</b>	<b>Kh.</b>	<b>1945-46</b>	<b>1952-53</b>	<b>10 x 10</b>	<b>1/100</b>	<b>TEHSIL</b>	<b>Ir./UI./Comp.</b>			
		<b>Sum.</b>	<b>1984-85</b>	<b>1993-94</b>	<b>10 x 5</b> <b>10 x 10</b> <b>10 x 5</b>		<b>TEHSIL</b>			
<b>Jowar</b>	<b>Kh.</b>	<b>1946-47</b>	<b>1952-53</b>	<b>10 x 10</b>	<b>1/100</b>	<b>TEHSIL</b>				
		<b>Rabi</b>	<b>1945-46</b>	<b>1952-53</b>	<b>10 x 10</b>		<b>TEHSIL</b>			
<b>Bajra</b>		<b>1946-47</b>	<b>1958-59</b>	<b>10 x 10</b>	<b>1/100</b>	<b>TEHSIL</b>				
<b>Maize</b>	<b>Kh.</b>	<b>1976-77</b>	<b>1958-59</b>	<b>10 x 10</b>	<b>1/100</b>	<b>TEHSIL</b>				
		<b>Rabi</b>	<b>1990-91</b>	<b>—</b>	<b>10 x 10</b>		<b>TEHSIL</b>			
<b>Ragi</b>		<b>1946-47</b>	<b>1951-52</b>	<b>10 x 5</b>	<b>1/200</b>	<b>TEHSIL</b>				
		<b>Wheat</b>	<b>1945-46</b>	<b>1951-52</b>	<b>10 x 10</b>		<b>TEHSIL</b>			

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Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape	Stratum	Pre-stratification
1	2	3	4	Dimenstions (MxM)	Size (ha.)	7
Gram		1946-47	1957-58	10 x 10	1/100	TEHSIL
Tur		1951-52	1967-68	20 x 10	Jan-50	TEHSIL
Greengram		2001-02	2001-02	N.A.	N.A.	TEHSIL
Blackgram		2001-02	2001-02	N.A.	N.A.	TEHSIL
Sugarcane		1959-60	1964-65	5 x 5	1/400	TEHSIL
Arecaanut		1959-60	1959-60	Cluster of 9 palms	—	TEHSIL
Cashewnut		1967-68	1967-68	Cluster of 6 trees	1/100	TEHSIL
Groundnut	Kh. Sum.	1946-47 2001-02	1957-58 2001-02	10 x 10 10 x 10	1/100 1/100	TEHSIL TEHSIL
Sesamum	Kh. Rabi	1959-60 1959-60	1960-61 1960-61	10 x 10 10 x 10	1/100 1/100	TEHSIL TEHSIL
Linseed		1959-60	1970-71	10 x 10	1/100	TEHSIL
Safflower		1966-67	1966-67	10 x 10	1/100	TEHSIL
Sunflower	Kh. Sum Rabi	1983-84 1989-90 N.A.	1992-93 1993-94 N. A.	10 x 10 10 x 10 10 x 10	1/100 1/100 1/100	TEHSIL TEHSIL TEHSIL
Coconut		1959-60	1959-60	Cluster of 6 palms	—	TEHSIL
Niger		1966-67	1975-76	10 x 10	1/100	TEHSIL
Soyabean		2001-02	2001-02	N. A.	N. A.	TEHSIL
Cotton		1946-47	1957-58	20 x 10	Jan-50	TEHSIL
Tobacco		1951-52	1958-59	10 x 10	1/100	TEHSIL
<b>15. MEGHALAYA</b>						
Paddy	Aut. Wint.	1971-72 1971-72	1973-74 1973-74	5 x 5 5 x 5	1/400 1/400	DISTRICT DISTRICT
Potato Jute	Sum.	1973-74 1973-74	1977-78 Not adopted	NOT FIXED 5 x 5	— 1/400	DISTRICT DISTRICT
<b>16. ODISHA</b>						
Paddy	Aut. Wint. Sum.	1944-45 1944-45 1963-64	1959-60 1959-60 1963-64	5 x 5 5 x 5 5 x 5	1/400 1/400 1/400	C.D.BLOCK C.D.BLOCK C.D.BLOCK
Maize	Aut. Wint. Sum.	1976-77 1976-77 1976-77	1990-91 1990-91 1990-91	5 x 5 5 x 5 5 x 5	1/400 1/400 1/400	C.D.BLOCK C.D.BLOCK C.D.BLOCK
Ragi	Aut. Wint. Sum.	1976-77 1976-77 1976-77	1990-91 1990-91 1990-91	5 x 5 5 x 5 5 x 5	1/400 1/400 1/400	C.D.BLOCK C.D.BLOCK C.D.BLOCK
Wheat	Sum.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK
Greengram	Aut. Wint. Sum.	1976-77 1976-77 1976-77	1990-91 1990-91 1990-91	5 x 5 5 x 5 5 x 5	1/400 1/400 1/400	C.D.BLOCK C.D.BLOCK C.D.BLOCK
Blackgram	Aut. Wint. Sum.	1976-77 1976-77 1976-77	1990-91 1990-91 1990-91	5 x 5 5 x 5 5 x 5	1/400 1/400 1/400	C.D.BLOCK C.D.BLOCK C.D.BLOCK
Horsegram	Wint. Sum.	1976-77 1976-77	1990-91 1990-91	5 x 5 5 x 5	1/400 1/400	C.D.BLOCK C.D.BLOCK
Sugarcane	Wint.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK

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Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape		Stratum	Pre-stratification	
1	2	3	4	Dimenstions (MxM)	Size (ha.)	5	6	7
Potato	Wint.	1967-68	1967-68	5 Mx 8 rows.	-	C.D.BLOCK		
Groundnut	Aut.	1967-68	1990-91	5 x 5	1/400	C.D.BLOCK		
	Wint.	1967-68	1990-91	5 x 5	1/400	C.D.BLOCK		
	Sum.	1967-68	1990-91	5 x 5	1/400	C.D.BLOCK		
Sesamum	Aut.	1967-68	1990-91	5 x 5	1/400	C.D.BLOCK		
	Wint.	1967-68	1990-91	5 x 5	1/400	C.D.BLOCK		
	Sum.	1967-68	1990-91	5 x 5	1/400	C.D.BLOCK		
Rape & Mustard	Wint.	1967-68	1990-91	5 x 5	1/400	C.D.BLOCK		
Jute	Aut.	1957-58	1959-60	5 x 5	1/400	C.D.BLOCK		
17. PUNJAB								
Paddy		1951-52	1957-58	5 x 5	1/400	C.D.BLOCK		
Maize		1952-53	1952-53	5 x 5	1/400	C.D.BLOCK		
Wheat		1943-44	1951-52	5 x 5	1/400	C.D.BLOCK		
Barley		1951-52	1956-57	5 x 5	1/400	C.D.BLOCK		
Gram		1951-52	1951-52	5 x 5	1/400	C.D.BLOCK		
Sugarcane		1958-59	1961-62	5 x 5	1/400	C.D.BLOCK		
Rape & Mustard		1958-59	1972-73	5 x 5	1/400	C.D.BLOCK		
Cotton		1958-59	1979-80	10 x 5	1/200	C.D. BLOCK		
18. RAJASTHAN								
Paddy		1976-77	1976-77	5 x 5	1/400	TEHSIL		
Jowar		1952-53	1953-54	5 x 5	1/400	TEHSIL		
Bajra		1952-53	1956-57	5 x 5	1/400	TEHSIL		
Maize	Kh.	1952-53	1953-54	5 x 5	1/400	TEHSIL		
Wheat		1949-50	1952-53	5 x 5	1/400	TEHSIL	Ir./UL/Comp.	
Barley		1951-52	1953-54	5 x 5	1/400	TEHSIL		
Gram		1951-52	1956-57	5 x 5	1/400	TEHSIL		Ir./UL/Comp.
Greengram		1994-95	1994-95	5 x 5	1/400	TEHSIL		
Blackgram		1994-95	1994-95	5 x 5	1/400	TEHSIL		
Moth		1994-95	1994-95	5 x 5	1/400	TEHSIL		
Chowla		1994-95	1994-95	5 x 5	1/400	TEHSIL		
Masur		1997-98	1997-98	5 x 5	1/400	TEHSIL		
Cumin Seed		1997-98	1998-99	5 x 5	1/400	TEHSIL		
Corinder		1997-98	1998-99	5 x 5	1/400	TEHSIL		
Methi		1997-98	1998-99	5 x 5	1/400	TEHSIL		
Soyabean		1988-89	1988-89	5 x 5	1/400	TEHSIL		
Sugarcane		1970-71	1970-71	5 x 5	1/400	TEHSIL		
Groundnut		1970-71	1970-71	5 x 5	1/400	TEHSIL		
Sesamum		1957-58	1957-58	5 x 5	1/400	TEHSIL		
Rape & Mustard		1957-58	1957-58	5 x 5	1/400	TEHSIL	Ir./UL/Comp	
Linseed		1957-58	1958-59	5 x 5	1/400	TEHSIL		
Tara Meera		1997-98	1998-99	5 x 5	1/400	TEHSIL		
Cotton		1953-54	1956-57	10 x 5	1/200	TEHSIL		

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Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape	Stratum	Pre-stratification
1	2	3	4	Dimentions (MxM)	Size (ha.)	7
<b>Isabgol</b>		<b>1997-98</b>	<b>1998-99</b>	<b>5 x 5</b>	<b>1/400</b>	<b>TEHSIL</b>
<b>19. TAMIL NADU</b>						
Paddy	K/K/S S/T/P N/K	1944-45 1944-45 1985-86	1955-56 1955-56 1985-86	5 x 5 5 x 5 5 x 5	1/400 1/400 1/400	BLOCK BLOCK BLOCK
Jowar		1950-51	1955-56	5 x 5	1/400	BLOCK
Bajra		1950-51	1955-56	5 x 5	1/400	BLOCK
Ragi		1950-51	1955-56	5 x 5	1/400	BLOCK
Redgram		1976-77	1976-77	10 x 5	1/200	BLOCK
Greengram		1977-78	1977-78	10 x 5	1/200	BLOCK
Blackgram		1976-77	1976-77	10 x 5	1/200	BLOCK
Horsegram		1986-87	1986- 87	10 x 5	1/200	BLOCK
Sugarcane		1954-55	1964-65	5 x 5	1/400	BLOCK
Groundnut		1959-60	1973-74	5 x 5	1/400	BLOCK
Sesamum		1973-74	1973-74	10 x 5	1/200	BLOCK
Cotton		1959-60	1964-65	10 x 5	1/200	BLOCK
Sunflower		1983-84	1983-84	10 x 5	1/200	BLOCK
Varagu		1986-87	1986-87	5 x 5	1/400	BLOCK
Samai		1986-87	1986-87	5 x 5	1/400	BLOCK
<b>20. Telangana</b>						
Paddy	Kh. Rabi	1945-46 1945-46	1954-55 1954-55	5 x 5 5 x 5	1/400 1/400	MANDAL
Jowar	Kh. Rabi	1951-52 1951-52	1955-56 1955-56	5 x 5 5 x 5	1/400 1/400	MANDAL
Bajra		1951-52	1955-56	5 x 5	1/400	MANDAL
Maize	Kh. Rabi	1951-52 1951-52	1955-56 1955-56	5 x 5 5 x 5	1/400 1/400	MANDAL
Ragi	Kh. Rabi	1951-52 1951-52	1955-56 1955-56	5 x 5 5 x 5	1/400 1/400	MANDAL
Redgram		1958-59	1960-61	10 x10	1/100	MANDAL
Greengram	Kh. Rabi	1976-77 1976-77	1976-77 1976-77	5 x 5 5 x 5	1/400 1/400	MANDAL
Blackgram	Kh. Rabi	1962-63 N. A.	1963-64 N.A.	5 x 5 5 x 5	1/400 1/400	MANDAL
Horsegram	Kh. Rabi	1980-81 N. A.	1980-81 N. A.	5 x 5 5 x 5	1/400 1/400	MANDAL
Bengalgram	Rabi	2001-02	2001-02	5 x 5	1/400	MANDAL
Korra		1976-77	1976-77	5 x 5	1/400	MANDAL
Sugarcane	Plt. - Rt	1954-55	1957-58	5 x 5	1/400	MANDAL
Chillies	Kh. Rabi	1976-77 2002-03	1976-77 2002-03	5 x 5 5 x 5	1/400 1/400	MANDAL
Groundnut	Kh. Rabi	1957-58 1957-58	1959-60 1959-60	5 x 5 5 x 5	1/400 1/400	MANDAL

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Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape	Stratum	Pre-stratification
1	2	3	4	Dimenitons (MxM)	Size (ha.)	7
Sesamum	Kh. Rabi	1957-58 1957-58	1959-60 1959-60	10 x 10 10 x 10	1/100 1/100	MANDAL MANDAL
Castor		1957-58	1964-65	10 x 10	1/100	MANDAL
Cotton		1957-58	1965-66	10 x 10	1/100	MANDAL
Mesta		1976-77	1976-77	5 x 5	1/400	MANDAL
Tobacco	(N & V)	1957-58	1963-64	5 x 5	1/400	MANDAL
Sunflower	Kh. Rabi N. A.	1992-93 N. A.	1992-93 N. A.	5 x 5 5 x 5	1/400 1/400	MANDAL MANDAL
Soyabean	Kh.	2003-04	2003-04	5 x 5	1/400	MANDAL
<b>21. UTTAR PRADESH</b>						
Paddy		1945-46	1950-51	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Jowar		1950-51	1950-51	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Bajra		1950-51	1950-51	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Maize		1950-51	1950-51	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Wheat		1943-44	1949-50	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Barley		1949-50	1949-50	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Gram	Plain	1949-50	1949-50	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Tur/Arhar		1950-51	1950-51	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Greengram	Kh.	1965-66	1965-66	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
	Zaid.	1978-79	not adopted	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Blackgram	Kh.	1965-66	1965-66	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
	Zaid.	N.A.	N.A.	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Masur		1964-65	1964-65	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK
Peas		1959-60	1959-60	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK

**APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2018-19**

Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape		Stratum	Pre-stratification
				Dimentions (MxM)	Size (ha.)		
1	2	3	4	5	6	7	
Sawan / Jhongora	Kh.	1976-77	1976-77	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK	
		Zaid	1976-77	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK	
Kodan		1978-79	N. A.	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK	
Soyabean		1988-89	Not adopted	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK	
Potato		1979-80	1979-80	5 x 5	1/400	BLOCK	
Onion	Zaid Rabi	1958-59	1959-60	5 x 5	1/400	BLOCK	
		2005-06	2005-06	5 x 5	1/400	BLOCK	
Sugarcane		1959-60	1960-61	5 x 5	1/400	BLOCK	
Groundnut		1956-57	1957-58	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK	
Rape & Mustard		1956-57	1957-58	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK	
Linseed		1959-60	1959-60	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK	
Sesamum		1958-59	1959-60	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK	
Sunflower	Zaid	1991-92	1991-92	Equilateral Triangle of side 10 mts.	1/230.8	BLOCK	
Cotton		1958-59	1960-61	20 x 10	1/50	BLOCK	
Tobacco	Rabi Zaid	1988-89	-	5 x 5	1/400	BLOCK	
		N.A.	N.A	5 x 5	1/400	BLOCK	
<b>22. UTTARAKHAND</b>							
Paddy		1945-46	1950-51	Equilateral Triangle of side 10 mts. In Plain area and 30 Sq.mt in Hill Area.	1/230.8	TEHSIL	
Ragi		1945-46.	1950-51	Equilateral Triangle of side 10 mts. In Plain area and 30 Sq.mt in Hill Area.	1/230.8	TEHSIL	

**APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2018-19**

Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape		Stratum	Pre-stratification
				Dimentions (MxM)	Size (ha.)		
1	2	3	4	5	6	7	
Wheat		1945-46	1950-51	Equilateral Triangle of side 10 mts. In Plain area and 30 Sq.mt in Hill Area.	1/230.8	TEHSIL	
Barley		1945-46	1950-51	Equilateral Triangle of side 10 mts. In Plain area and 30 Sq.mt in Hill Area.	1/230.8	TEHSIL	
Sawan/Jhangora		1945-46	1950-51	Equilateral Triangle of side 10 mts. In Plain area and 30 Sq.mt in Hill Area.	1/230.8	TEHSIL	
<b>23. WEST BENGAL</b>							
Paddy	Aus.	1975-76	1975-76	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
	Aman.	1944-45	1944-45	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
	Sum.	1980-81	1980-81	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Maize	Kh.	1980-81	1980-81	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Wheat		1951-52	1951-52	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Barley		1951-52	1951-52	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Gram		1951-52	1951-52	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Redgram		1951-52	1951-52	10 x 10 feet	1/435.6 acres	BLOCK	
Greengram		1951-52	1951-52	10 x 10 feet	1/435.6 acres	BLOCK	
Blackgram		1951-52	1951-52	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Lakh		1951-52	1951-52	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	

**APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2018-19**

Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape		Stratum	Pre-stratification
				Dimensions (MxM)	Size (ha.)		
1	2	3	4	5	6	7	
Masur		1951-52	1951-52	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Peas		1951-52	1951-52	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Sugarcane		1951-52	1951-52	10 x 10 feet	1/435.6 acres	BLOCK	
Rape & Mustard		1951-52	1951-52	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Sesamum	Rabi	1980-81	1980-81	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Linseed		1952-53	1952-53	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Jute		1951-52	1951-52	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
Mesta		1980-81	1980-81	Circle of radius of 1.7145 mts. approx.	1/435.6 acres	BLOCK	
<b>24. DADRA &amp; NAGAR HAVELI</b>							
Paddy		1967-68	1967-68	5 x 5	1/400	PATELAD	
Ragi		1968-69	1968-69	5 x 5	1/400	PATELAD	
<b>25. DAMAN &amp; DIU</b>							
Paddy	Kh.	1967-68	1967-68	5 x 5	1/400	TALUKA	
Bajra		1976-77	1976-77	5 x 5	1/400	TALUKA	
<b>26. PUDUCHERRY</b>							
Paddy	I.	1974-75	1974-75	5 x 5	1/400	TALUKA	
	II.	1971-72	1971-72	5 x 5	1/400	TALUKA	
	III.	1974-75	1974-75	5 x 5	1/400	TALUKA	

Note 1. : \*\* :- In actual practice results are not adopted for official estimates due to small size and considered not reliable at district level

2. : \* :- For minor crops, surveys are conducted periodically but not regularly

3. : @ :- Excluding Darjeeling district

**APPENDIX - II : CROP COVERAGE UNDER CES DURING 2018-19**

SL.No	CROPS	STATES COVERING THE CROP UNDER C.E.S.	
1	2	3	
<b>1. FOOD CROPS</b>			
<b>(A) CEREALS</b>			
1	Paddy	Andhra Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttarakhand, Uttar Pradesh, West Bengal, Dadra & Nagar Haveli, Daman & Diu and Puducherry.	26
2	Jowar	Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Telangana and Uttar Pradesh.	10
3	Bajra	Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and Daman & Diu.	11
4	Maize	Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.	18
5	Ragi	Andhra Pradesh, Bihar, Goa, Gujarat, Jharkhand, Karnataka, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttarakhand and Dadra & Nagar Haveli.	12
6	Wheat	Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Telangana, Uttarakhand, Uttar Pradesh and West Bengal.	18
7	Barley	Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Madhya Pradesh, Punjab, Rajasthan, Uttarakhand and Uttar Pradesh.	9
<b>(B) PULSES &amp; BEANS</b>			
1	Gram (Bengalgram)	Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Telangana, Uttar Pradesh and West Bengal.	14
2	Redgram (Tur/Arhar)	Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.	13
3	Greengram (Moong)	Andhra Pradesh, Bihar, Gujarat (on pilot basis), Karnataka, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.	11
4	Blackgram (Urd/Mathikalai)	Andhra Pradesh, Assam, Gujarat, Jharkhand, Karnataka, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.	12
5	Lakh (Khesari)	Bihar, Chhattisgarh, Madhya Pradesh and West Bengal.	4
6	Masur	Bihar, Jharkhand, Rajasthan, Uttar Pradesh and West Bengal.	5
7	Horsegram (Kulthi)	Andhra Pradesh, Karnataka, Odisha, Tamil Nadu and Telangana.	5
8	Peas	Jharkhand, Uttar Pradesh and West Bengal.	3
9	Moth	Gujarat and Rajasthan.	2
10	Chowla	Rajasthan.	1
11	Cowpea (Lobia)	Karnataka	1
12	Guar	Gujarat and Rajasthan	2
13	Rajma Beans	Andhra Pradesh	1

SL.No	CROPS	STATES COVERING THE CROP UNDER C.E.S.	
1	2	3	
<b>(C) SMALL MILLETS</b>			
1	Sawan (Jhangora)	Uttarakhand, Uttar Pradesh.	2
2	Korra	Andhra Pradesh and Telangana	2
3	Kodon-Kutki (Kodan)	Chhattisgarh, Madhya Pradesh and Uttar Pradesh.	3
4	Navane	Karnataka.	1
5	Save	Karnataka.	1
6	Samai	Tamil Nadu	1
7	Varagu	Tamil Nadu.	1
<b>(D) SUGAR</b>			
1	Sugarcane	Andhra Pradesh ,Assam, Bihar, Haryana ,Jharkhand , Karnataka, Kerala, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh ,West Bengal and Goa.	16
2	Cocoa	Kerala.	1
<b>(E) CONDIMENTS &amp; SPICES</b>			
1	Chillies	Andhra Pradesh, Bihar, Chhattisgarh, Karnataka, Madhya Pradesh and Telangana.	6
2	Cumin	Gujarat and Rajasthan.	2
3	Fennel	Gujarat.	1
4	Arecanut	Kerala and Maharashtra.	2
5	Pepper	Kerala.	1
6	Saffron	Jammu and Kashmir.	1
7	Turmeric	Kerala.	1
8	Ginger	Kerala.	1
9	Garlic	Gujarat	1
10	Corinder	Rajasthan.	1
11	Methi	Rajasthan.	1
12	Betel Leaves	Kerala	1
<b>(F) FRUITS &amp; VEGETABLES</b>			
1	Lichi	Bihar	1
2	Banana	Bihar, Kerala and Madhya Pradesh.	3
3	Mango	Bihar. Kerala	2
4	Guava	Bihar.	1
5	Jackfruit	Bihar and Kerala .	2
6	Cashewnut	Kerala and Maharashtra	2
7	Tapioca	Kerala.	1
8	Pine Apple	Kerala.	1
9	Potato	Assam, Bihar, Chhattisgarh, Gujarat, Jammu & Kashmir Jharkhand, Karnataka, Madhya Pradesh, Meghalaya, Odisha, and Uttar - Pradesh	11
10	Onion	Bihar, Chhattisgarh, Gujarat (On Pilot basis), Jharkhand, Karnataka, Madhya Pradesh and Uttar Pradesh.	7
11	Brinjal	Bihar and Jharkhand.	2
12	Tomato	Bihar and Jharkhand.	2
13	Cauliflower	Bihar.	1
14	Papaya	Madhya Pradesh.	1
15	Plantain	Kerala.	1
16	Avare (Sem)	Karnataka	1
17	Tamarind	Kerala.	1
18	Cabbage	Karnataka	1
19	Beans	Karnataka	1
20	Bitter Gourd	Kerala	1

Sl.No	CROPS	STATES COVERING THE CROP UNDER C.E.S.	
1	2	3	
<b>2. NON - FOOD CROPS</b>			
<b>(A) OIL SEEDS</b>			
1	Groundnut	Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Goa and West Bengal.	13
2	Sesamum (Gingelly)	Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.	13
3	Castor	Andhra Pradesh, Gujarat, Karnataka and Telangana.	4
4	Rape & Mustard	Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Odisha, Punjab, Rajasthan, Uttar Pradesh and West Bengal	13
5	Linseed (Alsi)	Chhattisgarh, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Uttar Pradesh and West Bengal.	7
6	Safflower	Karnataka and Maharashtra.	2
7	Sunflower	Andhra Pradesh, Haryana, Karnataka, Maharashtra, Tamil Nadu, Telangana and Uttar Pradesh	7
8	Soyabean	Andhra Pradesh, Chhattisgarh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Telangana and Uttar Pradesh.	8
9	Tara Meera	Rajasthan	1
10	Coconut	Kerala and Maharashtra	2
11	Niger	Maharashtra	1
<b>(B) FIBRES</b>			
1	Cotton	Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh,	12
2	Jute	Assam, Bihar, Meghalaya, Odisha and West Bengal.	5
3	Mesta	Andhra Pradesh, Bihar and West Bengal	3
<b>(C) DRUGS &amp; NARCOTICS</b>			
1	Tobacco	Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Telangana and Uttar Pradesh	6
2	Isabgol	Gujarat and Rajasthan	2
3	Betel Leaves	Kerala	1

Note:- Figures in col.(3) indicate the total no. of States.

**APPENDIX - III: PRIMARY FIELD AGENCY FOR CROP CUTTING EXPERIMENTS UNDER CES 2018-19**

<b>Sl. No.</b>	<b>State</b>	<b>Agency</b>	<b>Designation</b>	<b>Crops covered (Percentage)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1</b>	<b>Andhra Pradesh</b>	1. Statistical	1. Assistant Statistical Officer	All Crops 50 %.
		2.Agriculture	2. Agriculture Extension Officer	All Crops 50 %.
<b>2</b>	<b>Assam</b>	Statistical	Field Assistant	All Crops. (100%)
<b>3</b>	<b>Bihar</b>	1. Revenue	Circle Inspector	16.3 Percent of the planned experiments.
		2. Statistical	1. Block Statistical Supervisor. 2 Junior Field Investigator 3 Accredited Statistical Volunteer	8.4 Percent of the planned experiments.
		3.Agriculture	Block Agricultural Officer.	75.30 Percent of the planned experiments.
<b>4</b>	<b>Chhattisgarh</b>	1. Revenue	1. Revenue Inspector	All Crops (100%)
		2. Agriculture	1. Headquarter Patwari 2. Rural Agriculture Extension Officer	
<b>5</b>	<b>Goa</b>	Agriculture	Investigator	All Crops.
<b>6</b>	<b>Gujarat</b>	Agriculture	Gram Sevak	All Crops
<b>7</b>	<b>Haryana</b>	1.Agriculture	Asstt. Development Officer	Paddy (100), Bajra (100), Maize (47), Sugarcane (100), Cotton (100), Wheat (100), Gram (100), Redgram (100), Rape & Mustard (100) and Sunflower (100) , Barley (47)
		2. Revenue	Girdawar Kanungo	Barley (53) and Maize (53).
<b>8</b>	<b>Himachal Pradesh</b>	1. Revenue	Field Kanungo	All Crops – 77.58
		2. Agriculture	Agricultural Inspector	All Crops – 22.42

**APPENDIX - III: PRIMARY FIELD AGENCY FOR CROP CUTTING EXPERIMENTS UNDER CES 2018-19**

<b>Sl. No.</b>	<b>State</b>	<b>Agency</b>	<b>Designation</b>	<b>Crops covered (Percentage)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>9</b>	<b>Jammu &amp; Kashmir (Data repeated for the year 2011-12)</b>	Revenue	1. Office Qanungo 2. Girdawar Qanungo 3. Backward Class Girdawar 4 . Statistical Girdawar 5 . Patwari	72%  28%
<b>10</b>	<b>Jharkhand (Data repeated for the year 2009-10)</b>	1. Agriculture 2. Statistics 3. Revenue	Block Agriculture Officer Block Statistical Supervisor Circle Inspector	All Crops (25%)  All Crops (25%)  All Crops (50%)
<b>11</b>	<b>Karnataka</b>	1. Revenue 2.Agriculture 3. Rural Development & Panchayati Raj	Village Accountant Agriculture Asstt. Gram Panchayat Secretary	43.11%  39.28%  17.61%
<b>12</b>	<b>Kerala</b>	Statistical	Investigator	All Crops
<b>13</b>	<b>Madhya Pradesh</b>	Revenue	1. Revenue Inspector 2. Headquarter Patwari	All Crops (97%)
<b>14</b>	<b>Maharashtra</b>	1. Revenue 2. Zila Parishad 3.Agricultural	Revenue Inspector Gram Sevak Agricultural Assistant	All Kharif & Rabi Crops (38) %  All Kharif & Rabi Crops (29) %  All Kharif& Rabi Crops (33) %
<b>15</b>	<b>Meghalaya</b>	Statistical	Field Assistant	All Crops.

**APPENDIX - III: PRIMARY FIELD AGENCY FOR CROP CUTTING EXPERIMENTS UNDER CES 2018-19**

<b>Sl. No.</b>	<b>State</b>	<b>Agency</b>	<b>Designation</b>	<b>Crops covered (Percentage)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>16</b>	<b>Odisha</b>	Directorate of Economics & Statistics	Statistical Field Surveyor	All Crops.
<b>17</b>	<b>Punjab</b>	Agriculture	1. Agricultural Inspector 2. Compost Inspector	All Crops
<b>18</b>	<b>Rajasthan</b>	Revenue	Inspector Land Records	All Crops
<b>19</b>	<b>Tamil Nadu</b>	1.Agricultural Department (GCES,NAIS)  2.Statistical Department (GCES,NAIS)  3.Horticulture Department (GCES,NAIS)	Agricultural Officer  Block Statistical Inspector  Assistant Horticulture Offficer	All Crops
<b>20</b>	<b>Telangana</b>	1. Statistical 2.Agriculture	1. Assistant Statistical Officer 2. Agriculture Extension	All Crops 50 %. All Crops 50 %.
<b>21</b>	<b>Uttarakhand</b>	Revenue	1. Patwari / Lekhpal 2. Revenue Inspector	All Crops (100%)
<b>22</b>	<b>Uttar Pradesh</b>	1 .Revenue  2. Cane Development  3.Cotton Development	Revenue Inspector  Cane Inspector  Cotton Supervisor & Kamdar	All Crops  Sugarcane crop (only in factory areas)  Cotton Crop.
<b>23</b>	<b>West Bengal</b>	1. Agricultural Statistics (B.A.E & S)  2. Agriculture Department	Asstt.Investigator  Krishi Prajukti Sahayak (K.P.S)	All Crops

**APPENDIX - III: PRIMARY FIELD AGENCY FOR CROP CUTTING EXPERIMENTS UNDER CES 2018-19**

<b>Sl. No.</b>	<b>State</b>	<b>Agency</b>	<b>Designation</b>	<b>Crops covered (Percentage)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>24</b>	<b>Dadra &amp; Nagar Haveli</b>	1. Block Deptt.	Gram Sewak	All Crops (27%)
		2. SDSCO	Agri. Asstt.	All Crops (38%)
		3. Agri. Deptt.	Agri. Asstt. (Agri.)	All Crops (12%)
		4. Development & Planning Office	Panchayat Secretary	All Crops (23%)
<b>25</b>	<b>Daman &amp; Diu</b>	1. Revenue	Talathi	All Crops (43%)
	(Data repeated for the year 2014-15)	2. Statistical	Statistical Investigator	
		3. Rural Deptt.	(i) Gram Sevak (ii) Village Panchayat Secretary	All Crops (36%) All Crops (21%)
<b>26</b>	<b>Puducherry</b>	Directorate of Economics & Statistics	Statistical Investigator	All Crops

**APPENDIX -IV : WORK LOAD OF PRIMARY FIELD STAFF ON ACCOUNT OF  
CROP CUTTING EXPERIMENTS UNDER CES DURING 2018-19**

Sl. No.	STATE	Agency for field work	Total Strength	Total number of Experiments assigned			No. of Primary workers with more than		
				Kharif	Rabi / Sum	Total	12 Expts.		20 Expts.
							Kharif	Rabi/Sum	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Andhra Pradesh	Statistical	1906	13572	9502	23074	208	136	357
		Agriculture					197		
2	Assam	Statistical	129	5800	5450	11250	90	90	90
3.	Bihar	Revenue	1068	85922	92442	178364	82	94	52
		Statistical	543						
		Agriculture	8248						
4	Chhattisgarh	Statistical/Agriculture	2556	4456	2868	7324	31	46	147
		Revenue	4172						
5	Goa	Agriculture (Kh.)	24	540	464	1004	16	17	17
		(Rabi)	22						
6	Gujarat	Agriculture	3207	38942	40394	79336	1281	997	1256
7	Haryana *	Agriculture (Kh.)	719	5036	4548	9584	----- NC -----		
		(Rabi)	758				----- NC -----		
		Revenue (Kh.)	6				----- NC -----		
		(Rabi)	52				----- NC -----		
8	Himachal Pradesh \$	Agriculture (Kh.)	258	4254	4052	8306	----- NC -----		
		(Rabi)	139				----- NC -----		
		Revenue (Kh.)	258				----- NC -----		
		(Rabi)	139				----- NC -----		
9	Jammu & Kashmir	Revenue	2490	3178	2318	5496	0	0	0
10	Jharkhand	Revenue	-	28770	44040	72810	----- NC -----		
		Statistical					----- NC -----		
		Agriculture					----- NC -----		
11	Karnataka	Revenue	11388	39243	24406	63649	0	0	0
		Agricultural	1960	14299	9571	23870	0	0	0
		Horticulture	1113	7425	3485	10910	0	0	0
		RDPR	8786	25367	15212	40579	0	0	0
12	Kerala	Statistical	995	30446	2297	32743	775	811	811
13	Madhya Pradesh *	Revenue	4407	15434	15276	30710	1072	1275	1285
14	Maharashtra	Revenue (Kh.)	3366	60640	32204	92844	0	0	0
		Zila Parishad (Kh.)	882				0	0	0
		Agriculture (Kh.)	2134				0	0	0
		Revenue (Rabi)	2929				0	0	0
		Zila Parishad (Rabi)	744				0	0	0
		Agriculture (Rabi)	2085				0	0	0
15	Meghalaya	Statistical	55	2041	316	2357	55	0	55
16	Odisha	Statistical	607	46135	11192	57327	607	607	607
17	Punjab	Agriculture (Kh.)	812	3720	3230	3230	10	-	0
		(Rabi)	718				-	10	0
18	Rajasthan \$	Agriculture (Kh.)	8512	131334	107044	238378	----- NC -----		
		(Rabi)	4269				----- NC -----		

Appendix-IV (Cont..)

Sl. No.	STATE	Agency for field work	Total Strength	Total number of Experiments assigned			No. of Primary workers with more than			
				Kharif	Rabi / Sum	Total	12 Expts.		20 Expts.	
							Kharif	Rabi/Sum	Annual	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
19	Tamil Nadu	Agriculture	842	5752	3748	9500	0	0	0	
20	Telangana	Statistical	407	5268	3434	8702	73	44	100	
		Agriculture	2257	6490	3368	9858	222	163		
21	Uttarakhand	Revenue ( Plain)	1342	4500	3478	7978	1	2	0	
		Revenue ( Hills)	462				-	-	-	
22	Uttar Pradesh \$	Revenue (Kh.)	1267	325766	318534	644300	----- NC -----			
		(Rabi)	1063				----- NC -----			
		(Zaid)	1158				----- NC -----			
		Cane Dev. Staff	-				-	-	-	
		Cotton Dev. Staff					-	-	-	
23	West Bengal	Agricultural Statistics	254	20564	28386	48950	210	242	183	
24	Dadra & Nagar Haveli	Development & Planning	13	45	0	45	0	0	0	
		Division Soil Conservation	10	32	0	32	0	0	0	
		Agriculture Deptt.	3	15	0	15	0	0	0	
25	Daman & Diu	Rural Dev. (Kh.)	8	16	0	16	0	0	0	
		Rev. Dept. (Kh.)	6	12	0	12	0	0	0	
		Stat. Dept. (Kh.)	0	0	0	0	0	0	0	
26	Puducherry	Statistical (Kh.)	22	94	0	94	0	0	0	
		Rabi -I	22	-	140	140	0	7	0	
		Rabi -II	14	-	70	70	0	0	0	
Total			84814	935108	791469	1726577	4875	4649	4905	
Percentage %							7.3	7.0	7.4	

Note : 1. # : Percentage figures given under Col.8 , 9 and 10 are based on total figures in col. 4. Those states have been excluded for percentage

calculation where data under column (8) to (10) has not been received.

2. \* : Data repeated from the year 2015-16.

3. \$ : Data given under Col. 4 is repeated from the year 2016-17.

## APPENDIX - V ESTIMATION PROCEDURE UNDER CES

The methodology generally adopted for estimating the average yield of a crop and its sampling error is outlined below:

At the stratum level, the average yield of the crop is obtained as a simple arithmetic mean of plot yields (net) within it.

If

$X_{ijk}$  = The plot yield (net) in gms/plot of the  $k^{\text{th}}$  plot in the  $j^{\text{th}}$  village in the  $i^{\text{th}}$  stratum

$n_{ij}$  = No of experiments analysed in the  $j^{\text{th}}$  village of  $i^{\text{th}}$  stratum,

$m_i$  = Number of villages in which experiments are analysed in the  $i^{\text{th}}$  stratum .

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

$S$  = The number of strata in a district

$a_i$  = The area (net) of the crop in the  $i^{\text{th}}$  stratum

$\bar{x}_{ij}$  = The sample arithmetic mean of the green yield of the  $i^{\text{th}}$  stratum,

$\bar{x}$  = The district average yield of the dry marketable produce

$d$  = The driage ratio

and  $f$  = The conversion factor for converting the green yield per plot into the yield of dry marketable produce per hectare.

We have the stratum level average of the green yield as

$$\bar{x}_{ij} = \frac{1}{n_i} \sum_{j=1}^{m_i} \sum_{k=1}^{n_{ij}} X_{ijk}$$

and the district level average yield of the dry marketable produce per hectare is given by

## APPENDIX - V ESTIMATION PROCEDURE UNDER CES

$$\bar{x} = d.f. \frac{\sum_{i=1}^s a_i - x_{ij}}{\sum_{i=1}^s a_i}$$

The sampling variance of the mean  $\bar{x}$  is obtained as

$$V(\bar{x}) = \frac{d^2 \cdot f^2 \left[ W \sum_{i=1}^s \frac{a_i^2}{n_i} + (B - W) \sum_{i=1}^s \frac{a_i^2}{\lambda_i n_i^2} \right]}{\left[ \sum_{i=1}^s a_i \right]^2}$$

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

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

$$B = \frac{s \sum_{i=1}^s \frac{\left( \sum_{j=1}^{m_i} \sum_{k=1}^{n_{ij}} x_{ijk} \right)^2}{n_{ij}} - \frac{\left( \sum_{j=1}^{m_i} \sum_{k=1}^{n_{ij}} x_{ijk} \right)^2}{n_i}}{\sum_{i=1}^s (m_i - 1)}$$

$$\text{the mean square between villages}$$

## **APPENDIX - V ESTIMATION PROCEDURE UNDER CES**

$$\sum_{i=1}^s \left[ \frac{\sum_{j=1}^{m_i} \sum_{k=1}^{n_{ij}} x_{ijk}^2 - \sum_{j=1}^{m_i} \frac{(\sum_{k=1}^{n_{ij}} x_{ijk})^2}{n_{ij}}}{\sum_{j=1}^{m_i} (n_j - m_i)} \right]$$

$W = \frac{\sum_{i=1}^s (n_i - m_i)}{\sum_{i=1}^s (n_i - m_i)}$

the mean square within villages

The percentage standard error is given by

$$\% \text{ SE } (\bar{x}) = \frac{\sqrt{V(\bar{x})}}{\bar{x}} \times 100$$

### **Note:**

- (i) In case the crop sown is pure, the net yield is the same as the actual yield obtained from the plot.
- (ii) If the crop is sown in mixture, then the net yield is obtained by dividing the actual yield by the eye estimate of the proportion of area occupied by the concerned crop as per the primary worker at time of crop cutting experiments.
- (iii) Net area under the crop in a stratum is the sum of the area under the pure crop and the apportioned area under the crop from all mixed crops having the crop as component, the apportionment being done at the field level on the basis of eye estimation at the time of area enumeration in some states and at district level in others on the basis of conventional ratio.

**APPENDIX-VI: PROCEDURE FOR DRIAGE EXPERIMENTS UNDER CES 2018-19**

Sl No.	State	Crops	Contents of produce for weighment		Sub-sampling not done/done at the level of Village/field/both	Sampling produce to be dried part (Weight or whole)	Duration of driage (Codes)	Level of Application Stratum/District/ State
			First	Final				
1	2	3	4	5	6	7	8	9
1	Andhra Pradesh	Paddy (Kh.& Rabi)	Wet Paddy	Dry Paddy	Village	1 Kg.	C.W.	State
		Jowar (Kh.& Rabi)	Cobs	Dry Grains	Village	2 Kgs.	C.W.	State
		Bajra,	Cobs	Dry Grains	Village	2 Kgs	C.W.	State
		Maize (Kh.& Rabi)	Cobs	Dry Grains	Village	2 Kgs	C.W.	State
		Ragi (Kh.& Rabi)	Cobs	Dry Grains	Village	2 Kgs	C.W.	State
		Korra	Cobs	Dry Grains	Village	2 Kgs	C.W.	State
		Chillies (Kh.& Rabi)	Wet Chillies	Dry Grains	Village	500 gms.	C.W.	State
		Castor	Wet Capsules	Dry Capsules	Village	500 gms. Each picking	C.W.	State
		Groundnut (Kh.&Rabi)	Green Pods	Dry Pods	Village	2 Kgs.	C.W.	State
		Sunflower (Kh. & Rabi)	Green seed	Dry Seed	Village	500 gms.	C.W.	State
2	Assam	Mesta	Wet Plants	Dry Fibre	Village	25 Kgs.	C.W.	State
		Paddy. (Aut.Wint. & Sum)	Wet Paddy	Dry Paddy	Village	1 Kg.	C.W.	Stratum
		Wheat	Wet Grain	Dry Grain	Village	1 Kg.	C.W.	Stratum
		Blackgram	Wet Grain	Dry Grain	Village	1 Kg.	C.W.	Stratum
		Rape & Mustard	Wet Grain	Dry Grain	Village	1 Kg.	C.W.	Stratum
3	Bihar	Jute	Wet Plants	Dry Fibre	Village	Whole	Weight Dry Fibre	Stratum
		Paddy(Bha.Agh.&Gar.)	Wet Paddy	Dry Paddy	Village	Whole	15 days	District
		Maize(Bha.Rabi.,&Gar.)	Wet Grain	Dry Grain	Village	Whole	31 days	District
		Ragi	Wet Grain	Dry Grain	Village	Whole	31 days	District
		Wheat	Wet Grain	Dry Grain	Village	Whole	31 days	District
		Barley	Wet Grain	Dry Grain	Village	Whole	31 days	District
		Gram	Wet Grain	Dry Grain	Village	Whole	31 days	District
		Redgram	Wet Grain	Dry Grain	Village	Whole	31 days	District
		Greengram (Bha & Gar.)	Wet Grain	Dry Grain	Village	Whole	15 days	District
		Lakh	Wet Grain	Dry Grain	Village	Whole	15 days	District
		Masur	Wet Grain	Dry Grain	Village	Whole	15 days	District
		Rape & Mustard	Wet Grain	Dry Grain	Village	Whole	15 days	District
		Chillies	Wet Chillies	Dry chillies	Both	Whole	15 days	District
4	Chhattisgarh	jute	Wet Plants	Dry Fibre	Village	Whole	17 days	District
		Mesta	Wet Plants	Dry Fibre	Village	Whole	17 days	District
		Paddy	Wet Paddy	Dry Paddy	Village	Whole	15 days	District
		Jowar	Cobs	Dry grain	Village	Whole	15 days	District
		Maize	Cobs	Dry grain	Village	Whole	15 days	District
		Wheat	Cobs	Dry grain	Village	Whole	15 days	District
		Barley	Cobs	Dry grain	Village	Whole	15 days	District
		Gram	Cobs	Dry grain	Village	Whole	15 days	District
5	Goa	Kodan Kutki	Wet grain	Dry grain	Village	Whole	15 days	District
		Groundnut	Wet Pods	Dry pods	Village	whole	15 days	District
6	Gujrat	Paddy (Kh. & Rabi)	Wet Paddy	Dry Paddy	Village	5 Kgs.	10 to 15 days	Stratum
		Paddy (Kh.& Sum.)	Wet Paddy	Dry Paddy	Not done	1 Kg.	part	Stratum
		Jowar (Kh.& Rabi)	Wet grain	Dry grain	Not done	1 Kg.	C.W.	Stratum
		Bajra (Kh.& Sum.)	Wet grain	Dry grain	Not done	1 Kg.	C.W.	Stratum
		Maize	Wet grain	Dry grain	Not done	1 Kg.	C.W.	Stratum
		Ragi	Wet grain	Dry grain	Not done	1 Kg.	C.W.	Stratum
		Wheat	Wet grain	Dry grain	Not done	1 Kg.	C.W.	Stratum

Sl No.	State	Crops	Contents of produce for weighment		Sub-sampling not done/done at the level of Village/field/both	Sampling produce to be dried part (Weight or whole)	Duration of driage (Codes)	Level of Application Stratum/District/ State
			First	Final				
1	2	3	4	5	6	7	8	9
7	Haryana	Gram	Wet grain	Dry grain	Not done	1 Kg.	C.W.	Stratum
		Groundnut(Kh.& Sum.)	Wet grain	Dry grain	Not done	1 Kg.	C.W.	Stratum
		Paddy	Wet Paddy	Dry padyy	Not done	Whole	15 days	State
		Bajra	Cobs	Dry grain	Not done	Whole	22 days	State
		Maize	Cobs with sheath	Dry grain	Not done	Whole	22 days	State
		Wheat	Wet grain	Dry grain	Not done	Whole	15 days	State
		Barley	Wet grain	Dry grain	Not done	Whole	15 days	State
8	Himachal Pradesh	Gram	Wet grain	Dry grain	Not done	Whole	15 days	State
		Rape & Mustard	Wet grain	Dry grain	Not done	Whole	15 days	State
		Paddy	Wet Paddy	Dry Paddy	Village	Whole	15 days	State
		Maize	Cobs	Dry grain	Village	Whole	31 days	State
		Wheat	Wet grain	Dry grain	Village	Whole	15 days	State
		Barley	Wet grain	Dry grain	Village	Whole	15 days	State
		Paddy	Wet Paddy	Dry Paddy	Village	2 Kgs.	15 days	District
9	Jammu & Kashmir	Maize	Wet cobs	Dry cobs	Village	2 Kgs.	25 days	District
		Wheat	Wet grain	Dry grain	Village	2 Kgs.	15 days	District
		Saffron	Wet bristles	Dry bristles	Field	Whole	10 days	District
		Rape & Mustard	Wet grain	Dry grain	Village	1 Kg.	15 days	District
		Linseed	Wet grain	Dry grain	Village	1 Kg.	15 days	District
		Paddy (Agh.)	Wet Paddy	Dry Paddy	Village	Whole	15 days	District
		Wheat	Wet grain	Dry grain	Village	Whole	31 days	District
10	Jharkhand	Barley	Wet grain	Dry grain	Village	Whole	31 days	District
		Gram	Wet grain	Dry grain	Village	Whole	31 days	District
		Redgram	Wet grain	Dry grain	Village	Whole	31 days	District
		Masur	Wet grain	Dry grain	Village	Whole	15 days	District
		Rape & Mustard	Wet grain	Dry grain	Village	Whole	15 days	District
		Paddy (Kh.Rabi.&Sum.)	Wet Paddy	Dry Paddy	Expts.	1 Kg.	C.W.	District
		Jowar (Kh.Rabi.&Sum.)	Cobs	Dry grain	Expts.	1 Kg.	C.W.	District
11	Karnataka	Bajra (Kh.)	Cobs	Dry grain	Expts.	1 Kg.	C.W.	District
		Maize(Kh.Rabi.&Sum.)	Cobs	Dry grain	Expts.	1 Kg.	C.W.	District
		Ragi (Kh.Rabi.&Sum.)	Cobs	Dry grain	Expts.	1 Kg.	C.W.	District
		Navane	Cobs	Dry grain	Expts.	1 Kg.	C.W.	District
		Wheat	Wet grain	Dry grain	Expts.	1 Kg.	C.W.	District
		Gram	Plants	Dry grain	Expts.	1 Kg.	C.W.	District
		Redgram	Plants	Dry grain	Expts.	1 Kg.	C.W.	District
		Greengram (Kh.& Rabi)	Plants	Dry grain	Expts.	1 Kg.	C.W.	District
		Blackgram (Kh. &Rabi)	Plants	Dry grain	Expts.	1 Kg.	C.W.	District
		Horsegram (Kh. &Rabi)	Plants	Dry grain	Expts.	1 Kg.	C.W.	District
		Soyabean	Plants	Dry grain	Expts.	1 Kg.	C.W.	District
		Sesamum	Plants	Dry grain	Expts.	1 Kg.	C.W.	District
		Save	Plants	Dry grain	Expts.	1 Kg.	C.W.	District
		Groundnut (Kh. &Sum.)	Wet pods	Dry grain	Expts.	1 Kg.	C.W.	District
		Castor	Capsules	Dry seeds	Expts.	1 Kg.	C.W.	District
		Linseed	Plants	Dry seeds	Expts.	1 Kg.	C.W.	District
		Safflower	Plants	Dry seeds	Expts.	1 Kg.	C.W.	District

Sl No.	State	Crops	Contents of produce for weighment		Sub-sampling not done/done at the level of Village/field/both	Sampling produce to be dried part (Weight or whole)	Duration of driage (Codes)	Level of Application Stratum/District/ State
			First	Final				
1	2	3	4	5	6	7	8	9
		Sunflower(Kh. Rabi & Sum.)	Flower	Grain	Expts.	1 Kg.	C.W.	District
		Tobacco	Green leaves	Cured leaves	Expts.	1 Kg.	C.W.	District
12	Kerala	Paddy (Aut. Wint. & Sum)	Wet Paddy	Dry Paddy	Both	250 grms.	C.W.	District
13	Madhya Pradesh	Paddy	Wet Paddy	Dry Paddy	Village	Whole	15 days	District
		Jowar	Cobs	Dry grain	Village	Whole	15 days	District
		Bajra	Cobs	Dry grain	Village	Whole	15 days	District
		Maize	Cobs	Dry grain	Village	Whole	15 days	District
		Wheat	Cobs	Dry grain	Village	Whole	15 days	District
		Barley	Cobs	Dry grain	Village	Whole	15 days	District
		Gram	Cobs	Dry grain	Village	Whole	15 days	District
		Kodan Kutki	Wet grain	Dry grain	Village	Whole	15 days	District
		Groundnut	Wet pods	Dry pods	Village	Whole	15 days	District
14	Maharashtra	Paddy (Kh. & Rabi)	Wet Paddy	Dry Paddy	Village	5 Kgs.	15 days	District
		Jowar (Kh. & Rabi)	Wet Grain	Dry grain	Village	5 Kgs.	C.W.	District
		Bajra	Wet Grain	Dry grain	Village	5 Kgs.	C.W.	District
		Maize (Kh. & Rabi)	Wet Grain	Dry grain	Village	5 Kgs.	C.W.	District
		Ragi	Wet Grain	Dry grain	Village	5 Kgs.	C.W.	District
		Wheat	Wet Grain	Dry grain	Village	5 Kgs.	C.W.	District
		Gram	Wet Grain	Dry grain	Village	5 Kgs.	C.W.	District
		Groundnut	Wet Pods	Wet Pods	Village	5 Kgs.	15 days	District
		Arecanut	Asoli	Rotha	Village	5 Kgs.	21-28 days	District
		Cashewnut	Wet Nut	Dry Nut	Village	5 Kgs.	C.W.	District
15	Meghalaya	Paddy (Aut. & Wint.)	Wet Paddy	Dry Paddy	Both	Whole	7-10 days	District
		Jute	Wet Plants	Dry Nut	Both	Whole	20-28 days	District
16	Odisha	Paddy (Aut. Wint. & Sum)	Wet Paddy	Dry Paddy	Both	1 Kgs.	C.W.	District
		Maize (Aut. Wint. & Sum)	Cobs	Dry grain	Both	1 Kgs.	C.W.	State
		Ragi (Aut. Wint. & Sum)	Pods	Dry grain	Both	1 Kgs.	C.W.	State
		Wheat (Sum.)	Wet grain	Dry grain	Both	1 Kgs.	C.W.	State
		Greengram (Aut. Wint. & Sum)	Wet grain	Dry grain	Both	250 gms.	C.W.	State
		Blackgram (Aut. Wint. & Sum)	Wet grain	Dry grain	Both	250 gms.	C.W.	State
		Horsegram Wint. & Sum)	Wet grain	Dry grain	Both	250 gms.	C.W.	State
		Groundnut (Aut., Wint & Sum.)	Wet Pods	Kernal	Both	250 gms.	C.W.	State
		Sesamum (Aut., Wint & Sum.)	Wet Pods	Dry grain	Both	250 gms.	C.W.	State
		Rape & Mustard (Wint.)	Wet Pods	Dry grain	Both	250 gms.	C.W.	State
		Jute	Wet Plants	Dry Fibre	Both	1 kgs.	C.W.	State
17	Punjab	Paddy	Wet Paddy	Dry Paddy	Village	Whole	15 Days	State
		Maize	Cobs with Sheath	Dry grain	Not Done	5 kgs.	20 Days	State
		Wheat	Wet grain	Dry grain	Village	Whole	15 Days	State
		Barley	Wet grain	Dry grain	Village	Whole	15 Days	State
		Gram	Wet grain	Dry grain	Village	Whole	15 Days	State
		Rape & Mustard	Wet grain	Dry grain	Village	Whole	15 Days	State
		Cotton	Wet Kapas	Dry grain	Village	Whole II Picking	15 Days	State
18	Rajasthan	Paddy	Wet Paddy	Dry Paddy	Not done	Whole	15 days	District
		Jowar	Cobs	Dry grain	Village	Whole	22 days	District
		Bajra	Cobs	Dry grain	Village	Whole	22 days	District

Sl No.	State	Crops	Contents of produce for weighment		Sub-sampling not done/done at the level of Village/field/both	Sampling produce to be dried part (Weight or whole)	Duration of driage (Codes)	Level of Application Stratum/District/ State
			First	Final				
1	2	3	4	5	6	7	8	9
19	Tamil Nadu	Maize (Kh. & Rabi)	Cobs	Dry grain	Village	Whole	22 days	District
		Wheat	Wet grain	Dry grain	Village	Whole	15 days	District
		Barley	Wet grain	Dry grain	Village	Whole	15 days	District
		Gram	Wet grain	Dry grain	Village	Whole	15 days	District
		Chowla						District
		Greengram						District
		Blackgram			N.A.			District
		Moth						District
		Cumin						District
		Soyabean	Wet grain	Dry Paddy	Village	Whole	15 days	District
		Groundnut	Wet Pods	Dry grain	Not done	Whole	15 days	District
		Sesamum	Wet grain	Dry grain	Not done	Whole	15 days	District
		Rape & Mustard	Wet grain	Dry grain	Not done	Whole	15 days	District
		Linseed	Wet grain	Dry grain	Not done	Whole	15 days	District
		Tarameera	Wet grain	Dry grain	Not done	Whole	N.A.	District
20	Telangana	Paddy (K/K/S., S/T/P,& N/K)	Wet Paddy	Dry Paddy	Village	2 kgs.	C.W.	Block
		Bajra	Wet cobs	Dry Cobs	Village	2 kgs.	C.W.	Block
		Jowar	Wet cobs	Dry Cobs	Village	2 kgs.	C.W.	Block
		Ragi	Wet cobs	Dry Cobs	Village	2 kgs.	C.W.	Block
		Turmeric	Wet Turmeric	Dry Turmeric	Not Done	1 Kgs.	C.W.	Taluka
		Chillies	Wet Chillies	Dry Chillies	Not Done	1 Kgs.	3 to 4 days	Taluka
		Coriander	Wet Corinder	Dry Corinder	Not Done	1 Kgs.	C.W.	Taluka
		Varagu	Wet grain	Dry grain	Village	2 kgs.	C.W.	Block
		Samai	Wet grain	Dry grain	Village	2 kgs.	C.W.	Block
		Groundnut	Wet pods	Dry pods	Village	2 kgs.	C.W.	Block
21	Uttar Pradesh	Paddy (Kh. & Rabi)	Wet Paddy	Dry Paddy	Village	1 Kgs.	C.W.	State
		Paddy (Kh. & Rabi)	Cobs	Dry grain	Village	2 kgs.	C.W.	State
		Bajra	Cobs	Dry grain	Village	2 kgs.	C.W.	State
		Maize (Kh. & Rabi)	Cobs	Dry grain	Village	2 kgs.	C.W.	State
		Ragi (kh. & Rabi)	Cobs	Dry grain	Village	2 kgs.	C.W.	State
		Korra	Cobs	Dry grain	Village	2 kgs.	C.W.	State
		Chillies (kh. & Rabi)	Wet Chillies	Dry grain	Village	500 gms.	C.W.	State
		Castor	Wet Capsules	Dry Capsules	Village	500 gms.	C.W.	State
		Groundnut (kh. & Rabi)	Green Pods	Dry Pods	Village	2 kgs.	C.W.	State
		Sunflower (kh. & Rabi)	Green Seed	Dry Seed	Village	500 gms.	C.W.	State
		Mesta	Wet Plants	Dry Fibre	Village	25 kgs.	C.W.	State
		Paddy	Wet Paddy	Dry Paddy	Village	5 Kgs.	15 days	District
		Jowar	Cobs	Dry grain	Village	10 kgs.	15 days	District
		Bajra	Cobs	Dry grain	Village	10 kgs.	15 days	District
		Maize	Cobs	Dry grain	Village	10 kgs.	15 days	District
		Ragi	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Wheat (Pln.)	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Barley (Pln.)	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Gram	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Greengram(kh. & Zaid.)	Wet grain	Dry grain	Village	5 Kgs.	15 days	District

Sl No.	State	Crops	Contents of produce for weightment		Sub-sampling not done/done at the level of Village/field/both	Sampling produce to be dried part (Weight or whole)	Duration of driage (Codes)	Level of Application Stratum/District/ State
			First	Final				
1	2	3	4	5	6	7	8	9
		Blackgram( kh. & Zaid.)	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Masur	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Soyabean	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Peas	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Sawan/ Jhangora (Pln)	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Kodan	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Kutki	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Tur	Pods	Dry grain	Village	5 Kgs.	15 days	District
		Groundnut	Pods	Dry pods	Village	5 Kgs.	15 days	District
		Sesamum	Pods	Dry pods	Village	10 kgs.	15 days	District
		Rape & Mustard	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Linseed	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Sunflower	N.A.	N.A.	N.A.	N.A.	N.A.	District
		Cotton (Desi/American)	Wet Cotton	Dry Cotton	Expts.	Whole	Same day	District
		Tobacco	Wet leaf & Stalk	Dry leaf & Stalk	Village	10 kgs.	20 days	District
22	Uttarakhand	Paddy	Wet Paddy	Dry Paddy	Village	5 Kgs.	15 days	District
		Wheat (Pln.)	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
		Barley (Pln.)	Wet grain	Dry grain	Village	5 Kgs.	15 days	District
23	West Bengal	Paddy (Aus. Aman & Sum.)	Wet Paddy	Dry Paddy	Expts.	500 gms.	12 days	Block
		Wheat	Ear heads	Dry grain	Expts.	500 gms.	12 days	Block
		Barley	Ear heads	Dry grain	Expts.	500 gms.	12 days	Block
		Maize	Ears without cover	Dry Corns	Expts.	500 gms.	12 days	Block
		Gram	Pods	Seeds	Expts.	500 gms.	12 days	Block
		Redgram	Pods	Seeds	Expts.	500 gms.	12 days	Block
		Blackgram	Pods	Seeds	Expts.	500 gms.	12 days	Block
		Lakh	Pods	Seeds	Expts.	500 gms.	12 days	Block
		Masur	Pods	Seeds	Expts.	500 gms.	12 days	Block
		Peas	Pods	Seeds	Expts.	500 gms.	12 days	Block
		Rape & Mustard	Pods	Seeds	Expts.	500 gms.	12 days	Block
		Linseed	Seed buds	Seeds	Expts.	500 gms.	12 days	Block
		Sesamum	Seed buds	Seeds	Expts.	500 gms.	12 days	Block
		Jute	Plants	Dry Fibre	Expts.	20 kgs.	12 days	Block
24	Dadar & Nagar Haveli	Mesta	Plants	Dry Fibre	Expts.	20 kgs.	12 days	Block
		Paddy	Wet Paddy	Dry Paddy	Expts.	1 kg / Sample	3 days	Stratum
		Ragi	Wet grain	Dry grain	Expts.	1 kg / Sample	3 days	Stratum
25	Daman & Diu	Paddy	Wet Paddy	Dry Paddy	Village	5 kgs.	C.W-3	Taluka
		Bajra	Wet Cobs	Dry Cobs	Expts.	5 kgs.	C.W-3	Taluka
26	Puducherry	Paddy ( I, II, III )	Wet Paddy	Dry Paddy	Not Done	Part	6 to 9 days	Regional Level.

Note : 1. C.W. = Constant Weight for unspecified consecutive weightment.

2. C.W. - 3 = Constant Weight for 3 consecutive weightment.

**APPENDIX -VII:- SAMPLE SIZE UNDER I.C.S. KHARIF (CENTRAL SAMPLES) DURING 2018-19**

Sl. No	State	Number of experiments planned under crops												Sub- Total
		Rice	Jowar	Bajra	Maize	Ragi	Tur	Cotton	Jute	Sugar-Cane	Ground-nut	Other *-Crops		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	Andhra Pradesh	160	-	40	-	-	50	40	-	60	110	-	-	460
2	Assam	Aut.	100	-	-	-	-	-	30	40	-	-	-	
		Wint.	120											290
3	Bihar	Aut.	40	-	-	40	-	-	-	40	-	-	-	
		Wint.	240											360
4	Chhattisgarh	80	-	-	40	-	40	-	-	-	-	-	40	200
5	Gujarat	80	-	110	40	-	46	220	-	-	150	104	750	
6	Haryana	90	-	104	20	-	-	56	-	50	-	-	-	320
7	Himachal Pradesh	60	-	-	90	-	-	-	-	-	-	-	-	150
8	Jammu & Kashmir	70	-	-	90	-	-	-	-	-	-	-	-	160
9	Jharkhand	Aut.	20	-	-	20	-	-	-	-	-	-	-	
		Wint.	80											120
10	Karnataka	144	50	50	50	40	40	56	-	40	70	80	620	
11	Kerala	Aut.	100	-	-	-	-	-	-	-	-	-	-	
		Wint.	100											200
12	Madhya Pradesh	100	100	-	80	-	80	48	-	-	40	180	628	
13	Maharashtra	82	80	60	-	-	100	140	-	68	60	260	850	
14	Odisha	Aut.	220	-	-	40	-	-	-	-	-	-	-	
		Wint.	270											120
15	Punjab	190	-	-	48	-	-	72	-	70	-	-	-	380
16	Rajasthan	-	60	60	50	-	-	40	-	40	40	230	520	
17	Tamil Nadu	Ph-I	100	40	40	40	-	-	40	-	40	40	120	
		Ph-II	-	-	-	-		-	-	-	-	-	-	460
18	Telangana	70	40	-	50	-	40	40	-	-	40	80	360	
19	Uttar Pradesh	660	40	150	170	-	60	-	-	200	-	100	1380	
20	Uttrakhand	50	-	-	-	40	-	-	-	40	-	-	-	130
21	West Bengal	Aut.	100	-	-	-	-	-	80	-	-	-	-	
		Wint.	160											340
22	Puducherry	10	-	-	-	-	-	-	-	-	-	-	-	10
	<b>TOTAL</b>	<b>3496</b>	<b>410</b>	<b>614</b>	<b>868</b>	<b>80</b>	<b>456</b>	<b>752</b>	<b>110</b>	<b>688</b>	<b>590</b>	<b>1334</b>	<b>9338</b>	

Other crops (Kharif) :- Gujarat -Sesamum(Til)-54,Castor-50,

Karnataka -Greengram(Moong)-40,Sunflower-40, Madhya Pradesh - Soyabean - 100,Kodo-Kutki- 40, Sesamum(Til)- 40,

Chhattisgarh - Kodo-Kutki-40, Maharashtra - Greengram(Moong)-110, Blackgram(Urad)- 80 , Soyabean-70, Odisha -Potato- 40 (Wint.),

Blackgram-40(Wint.),Horsegram-40(Wint.), Rajasthan - Sesamum (Til)-80,Greengram (Moong)- 50, Moth -60, Blackgram (Urd) -40,

Tamil Nadu - Gingelly(Sesamum)-40, Blackgram-40, Coconut- 40

Uttar Pradesh -Blackgram(Urad)-60 ,Sesamum(Til)-40, Telangana- Castor -40,Greengram(Moong) -40

Tamil Nadu -Variety of Paddy include in Phase - I & Phase - II respectively ( I= Kar,Kurvai, Sornavari, II=Samba,Thalady,Pishanam).

Ph-I= Phase-I, Ph-II= Phase-II

Aut.= Autumn, Wint.=Winter,Bha.=Bhadai, Agh.= Aghani. AE & PT\* = Area Enumeration and Page Totalling.( only for State sample)

C= Central , S= State.

**APPENDIX -VII:- SAMPLE SIZE UNDER I.C.S. (CENTRAL SAMPLES) DURING 2018-19**

Number of experiments planned for Rabi & Summer crops													
Sl. No	State	Rice (Sum.)	Jowar (Rabi)	Maize (Sum.)	Wheat	Barley	Gram	Ground -nut	Rape & Mustard	Other Crops **	Sub- Total	Total for all Crops	
1	2	3	4	5	6	7	8	9	10	11	12	13	
1	<b>Andhra Pradesh</b>	120	-	-	-	-	60	40	-	-	220	680	
2	<b>Assam</b>	40	-	-	50	-	-	-	70	70	230	520	
3	<b>Bihar</b>	40	-	-	230	-	40	-	40	40	390	750	
4	<b>Chhattisgarh</b>	-	-	-	40	-	40	-	30	40	150	350	
5	<b>Gujarat</b>	-	-	-	150	-	40	-	50	-	240	990	
6	<b>Haryana</b>	-	-	-	180	30	70	-	100	-	380	700	
7	<b>Himachal Pradesh</b>	-	-	-	110	40	-	-	-	-	150	300	
8	<b>Jammu &amp; Kashmir</b>	-	-	-	120	-	-	-	-	-	120	280	
9	<b>Jharkhand</b>	-	-	-	40	-	20	-	20	20	100	220	
10	<b>Karnataka</b>	40	70	-	50	-	40	40	-	40	280	900	
11	<b>Kerala</b>	100	-	-	-	-	-	-	-	220	320	520	
12	<b>Madhya Pradesh</b>	-	-	-	250	-	140	-	60	74	524	1152	
13	<b>Maharashtra</b>	-	150	-	150	-	100	-	-	50	450	1300	
14	<b>Odisha</b>	140	-	-	-	-	-	-	-	40	180	830	
15	<b>Punjab</b>	-	-	-	220	30	30	-	40	-	320	700	
16	<b>Rajasthan</b>	-	-	-	130	80	120	-	90	-	420	940	
17	<b>Tamil Nadu</b>	40	40	-	-	-	-	40	-	200	320	780	
18	<b>Telangana</b>	80	40	-	-	-	-	-	-	-	120	480	
19	<b>Uttar Pradesh</b>	-	-	-	570	-	50	-	100	200	920	2300	
20	<b>Uttrakhand</b>	-	-	-	60	-	-	-	-	-	60	190	
21	<b>West Bengal</b>	140	-	-	110	-	-	-	110	50	410	750	
22	<b>Puducherry (I)</b>	10	-	-	-	-	-	-	-	-	10		
	<b>(II)</b>	10	-	-	-	-	-	-	-	-	10	30	
	<b>TOTAL</b>	760	300	0	2460	180	750	120	710	1044	6324	15662	

**Other crops (Rabi/Sum.) :-**Assam -Blackgram-30, Potato-40, Bihar - Arhar/Redgram /Tur-40, Jharkhand -Arhar/Redgram /Tur-20, Karnataka - Sunflower -Rabi- 40, Kerala -Pepper-40,Banana-50, Arecaanut - 40, Tapioca-40, Coconut-50, Madhya Pradesh - Linseed / Alsi -74, Chhattisgarh - Linseed/Alsi - 40, Maharashtra - Safflower -50, Tamil Nadu -Sesamum(Gingelly) - 40 Black Gram-40,Green Gram-40, Odisha - Greengram/Moong - 40 (Sum.), Uttar Pradesh - Masur- 60, Potato-60, Moong-40, Urd-40 West Bengal -Sesamum/Til-50 (Sum.).

**Tamil Nadu**-Phase-III= Navarai-Summer, R-I=Rabi-I,R-II=Rabi-II, Sum.= Summer.