

शृंखला सं. 72



SERIES NO. 72

मुख्य फसलों पर फसल  
प्राक्कलन सर्वेक्षण  
के समेकित परिणाम  
CONSOLIDATED RESULTS  
OF  
CROP ESTIMATION SURVEY  
ON PRINCIPAL CROPS



2019-20

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

GOVERNMENT OF INDIA  
MINISTRY OF STATISTICS &  
PROGRAMME IMPLEMENTATION  
NATIONAL SAMPLE SURVEY OFFICE  
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Addresses of the Headquarters of  
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72 वां अंक  
72<sup>nd</sup> Issue

प्रमुख फसलों  
पर  
फसल प्राक्कलन सर्वेक्षण  
के  
समेकित परिणाम

Consolidated Results  
of  
Crop Estimation Survey  
on  
Principal Crops

2019-20



डॉ. बिभास चौधरी

महानिदेशक

DR. BIVAS CHAUDHURI

Director General



सत्यमेव जयते



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## संदेश



कृषि और इसके सहयोगी क्षेत्र भारत में, मुख्य रूप से वृहत ग्रामीण क्षेत्रों में, गण्य आजीविका प्रदाता हैं। देश की खाद्य सुरक्षा के लिए डेटा आधारित नीति चक्र में कृषि सांख्यिकी का योगदान महत्वपूर्ण है।

2. देश में मुख्य फसलों की उपज दर मुख्यतः वैज्ञानिक रूप से डिज़ाइन किए गये फसल प्राक्कलन सर्वेक्षण के अंतर्गत संपन्न फसल कटाई प्रयोगों के विश्लेषण द्वारा प्राप्त किए जाते हैं। सामान्य फसल प्राक्कलन सर्वेक्षण (GCES) के अंतर्गत औसत उपज आंकलित करने हेतु उत्तम प्रकार से अभिकल्पित आंकलन सर्वेक्षणों के अंतर्गत फसल कटाई प्रयोग संचालित किए जाते हैं। दो मुख्य घटकों, 'कृषि क्षेत्र आच्छादन' एवं 'औसत उपज', के आंकड़ों के संग्रहण की प्राथमिक ज़िम्मेदारी राज्य/संघ शासित प्रदेशों की होती है। वर्तमान में, 78 फसलों (61 खाद्य एवं 17 गैर- खाद्य) के प्रति हेक्टेयर उपज का अनुमान वैज्ञानिक रूप से योजनाबद्ध फसल कटाई प्रयोगों द्वारा लिया जाता है। इस प्रकार प्राप्त उपज दर अनुमानों का उपयोग एवं किसान कल्याण मंत्रालय द्वारा उत्पादन के आधिकारिक अनुमान निर्धारण के लिए किया जाता है।

3. सामान्य फसल प्राक्कलन सर्वेक्षण 20 भू-अभिलेख राज्यों, 3 ईरास (EARAS) राज्यों एवं 6 अन्य राज्यों/संघ शासित प्रदेशों में नियमित रूप से आयोजित किए जाते हैं। जी.सी.ई.एस. की अभिकल्पना स्तरीकृत बहुस्तरीय यादृच्छित प्रतिदर्श पर आधारित है तथा क्षेत्र कार्य आमतौर पर राज्य सरकार के अधिकारियों को सौंपा जाता है। राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (रांप्रंसका) की समग्र ज़िम्मेदारी राज्यों को तकनीकी दिशा-निर्देश प्रदान कर सहायता करने की है। रांप्रंसका का क्षेत्र संकार्य प्रभाग विभिन्न राज्य सरकार/ संघ शासित प्रदेशों से प्राप्त जानकारी के आधार पर प्रति वर्ष फसल प्राक्कलन सर्वेक्षण के तहत फसल कटाई प्रयोगों के निष्कर्षों को समेकित करता है। इन निष्कर्षों का विश्लेषण, वार्षिक प्रकाशन "मुख्य फसलों पर फसल अनुमान सर्वेक्षण के समेकित परिणाम" के रूप में प्रकाशित किया जाता है। यह प्रतिवेदन मुख्य खाद्य एवं गैर खाद्य फसलों के समेकित परिणाम प्राप्त करने की दिशा में एक प्रयास है। वर्तमान प्रतिवेदन श्रृंखला का 72वां अंक है तथा यह कृषि वर्ष 2019-20 से संबंधित है। मैं इस रिपोर्ट को तैयार करने में श्रीमती नितिका गुप्ता, उप महानिदेशक, रांप्रंसका (क्षेसंप्र), कृषि सांख्यिकी मुख्यालय, फरीदाबाद व उनकी टीम के अधिकारियों के प्रयासों की सराहना करता हूँ जिनके प्रयासों से उपयोगी रिपोर्ट जारी की गयी है।

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

सितम्बर, 2023

नई दिल्ली

(डॉ. बिभास चौधरी)

डॉ. बिभास चौधुरी

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## Message



Agriculture with its allied activities is the substantial livelihood provider in India, especially in the rural areas. The contribution of agricultural statistics to a data- driven policy cycle is seminal for the nation's food security.

2. The primary responsibility for the collection of agriculture statistics on Area Sown and Average Yield rests with State/UT Governments. The yield rates of major crops are obtained in the country based on the Crop Cutting Experiments conducted under scientifically designed General Crop Estimation Surveys (GCES). At present, estimates of the average yield (per hectare) of 78 crops (61 food and 17 non-food) are derived from scientifically planned Crop Cutting Experiments. The estimates of yield rates thus arrived are used for determining official estimates of crop production by the Ministry of Agriculture & Farmers Welfare.

3. GCES is conducted on a regular basis in 20 land record States/ UTs, 3 EARAS States, and 6 other States/UTs. The sampling design of GCES is stratified multistage random sampling and the fieldwork is entrusted to the State Government Officials. National Sample Survey Office (NSSO) has the overall responsibility of providing technical direction and overall coordination of crop surveys in different States. The Field Operations Division (FOD) of the NSSO continues to consolidate the results of crop-cutting experiments under the Crop Estimation Survey every year on the basis of information received from various State Government/UTs. The results of Crop Estimation Surveys are analyzed & an annual publication entitled "**Consolidated Results of Crop Estimation Surveys on Principal Crops**" is brought out. The report attempts to bring out the consolidated results on principal food and non-food crops. The present report is the 72nd in the existing series and relates to the Agriculture year 2019-20. I take this opportunity to convey my appreciation to Smt. Nitika Gupta, Deputy Director General, and her team of officers of Agricultural Statistics Headquarters of NSSO (FOD), whose efforts have led to the compilation of this publication.

4. I am sure that this publication will be of immense use to policymakers, agriculturalists, researchers, statisticians, and planners for the overall development of agriculture in the country.

September, 2023  
New Delhi

(Dr. Bivas Chaudhuri)

सुबाष चन्द्र मलिक  
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09 OCT 2023

## प्रस्तावना



भारत में प्रमुख खाद्यान्न तथा गैर खाद्यान्न फसलों पर उपज दरों का आंकलन "फसल प्राक्कलन सर्वेक्षण" (फ.प्र.स.) नामक राष्ट्रीय कार्यक्रम के अन्तर्गत 29 राज्यों/संघ राज्यों में फसल कटाई प्रयोगों के संचालन के आधार पर किया जाता है। फसल कटाई प्रयोग (सी.सी.ई.) अपने लंबे समय से स्थापित वैज्ञानिक वैधता, निष्पक्षता, यादृच्छिकता, अनुभववाद और विविध कृषि जलवायु क्षेत्रों और कृषि प्रथाओं में निर्बाध प्रयोज्यता के कारण फसल उपज अनुमान का स्वर्ण मानक बने हुए हैं।

- राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (रा.प्र.स.का.) का क्षेत्र संकार्य प्रभाग (क्षे.सं.प्र.) प्रमुख फसलों की उपज दरों के आंकलन हेतु फसल प्राक्कलन सर्वेक्षणों 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 करता 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। फसल कटाई प्रयोगों पर प्रतिदर्श जांच के कार्यक्रम का कार्यान्वयन करते समय, प्रतिदर्श ग्रामों के चयन से लेकर क्षेत्र कर्मचारियों के प्रशिक्षण तथा क्षेत्र कार्य के पर्यवेक्षण जैसे फसल कटाई प्रयोगों के पहलुओं को विधिवत ध्यान में रखा जाता है। इस प्रक्रिया में फसल उपज आंकलन हेतु फसल कटाई प्रयोग के संचालन सम्बन्धी कुछ महत्वपूर्ण सूक्ष्म स्तरीय जानकारी भी एकत्र होती है।
- फसल प्राक्कलन सर्वेक्षण के विश्लेषित निष्कर्षों को समेकीकृत कर 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 श्रृंखला का 72 वां अंक है। प्रतिवेदन का उद्देश्य विभिन्न राज्यों / संघ-राज्यों में सर्वेक्षण के बहुमुखी पहलुओं जैसे कार्य-क्षेत्र, विस्तारण, सर्वेक्षण-अभिकल्प तथा प्रतिदर्श आकार इत्यादि की संक्षिप्त समीक्षा करना तथा वर्ष 2019-20 के दौरान मानक त्रुटि के साथ फसल उपज दर आंकलित कर सर्वेक्षण के परिणामों पर ध्यान केन्द्रित करना है।
- वर्ष 2019-20 के दौरान फ.प्र.स. के अंतर्गत विभिन्न राज्यों तथा संघ-राज्यों में 61 खाद्यान्न तथा 17 गैर-खाद्यान्न फसलों को शामिल करते हुए 17,49,586 फसल कटाई प्रयोगों को नियोजित किया गया। 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। 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।
- प्रतिवेदन की विषय वस्तु एवं प्रस्तुतीकरण में सुधार हेतु सुझावों का स्वागत है।

सितंबर, 2023

दिल्ली

एस. सी. मलिक

(एस. सी. मलिक)

अपर महानिदेशक

सुबाष चन्द्र मलिक  
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National Sample Survey Office

09 OCT 2023

## PREFACE



In India, estimates of yield rates of principal food and non-food crops are obtained on the basis of crop cutting experiments (CCEs) conducted in 29 States/UTs under the National Programme of Crop Estimation Surveys (CES). The CCEs continue to be the gold standard of crop yield estimation due to their long-established scientific validity, objectivity, randomness, empiricism, and seamless applicability in the diverse agro-climatic regions and agrarian practices.

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 72<sup>nd</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 2019-20.

4. **17,49,586** crop cutting experiments covering **61** food and **17** non-food crops were planned in different States/UTs during **2019-20** 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. 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.

(S.C. Malik)

Adl. Director General

September, 2023

Delhi





## प्रकाशन से जुड़े अधिकारीगण

1.	श्रीमती नितिका गुप्ता	उप महानिदेशक
2.	श्री सुधीर कुमार	संयुक्त निदेशक
3.	श्री रणविजय उपाध्याय	वरिष्ठ सांख्यिकीय अधिकारी
4.	श्री पंकज चोटिया	कनिष्ठ सांख्यिकीय अधिकारी
5.	श्री रजनीश कुमार सिंह	कनिष्ठ सांख्यिकीय 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 20 states and 2 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 2019-20 is July 2019 to June 2020.

## 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**

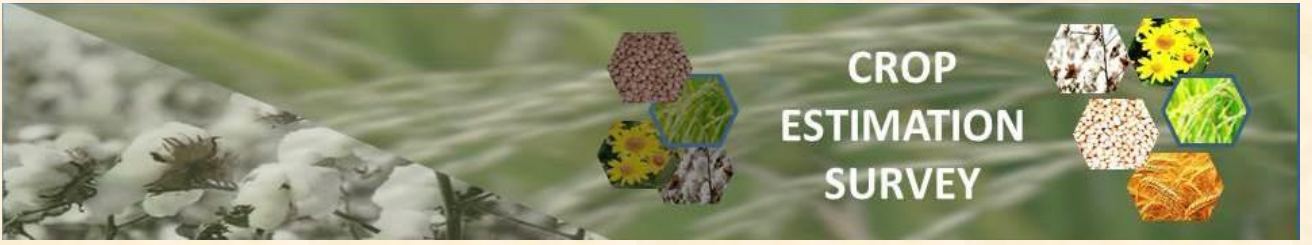
Converting the yield from Grams per plot to Kg. per hectare

$$\frac{\text{Weight of produce in Gms.}}{\text{Plot size in Sqr. Mtrs.}} \times 10$$

### **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 खाद्यान्न तथा गैर-खाद्यान्न फसल का प्रति हैक्टेयर औसत उपज आंकलन जो कि फसल उत्पादन आंकलन की दृष्टि से बहुत महत्वपूर्ण है, फसल आंकलन सर्वेक्षण कार्यक्रम के अन्तर्गत वैज्ञानिक रूप से नियोजित फसल कटाई प्रयोगों से प्राप्त किया जाता है। वर्ष 2019-20 के लिए फसल प्राक्कलन सर्वेक्षण की मुख्य विशेषताएँ निम्न हैं:

- वर्ष 2019-20 के दौरान फसल प्राक्कलन सर्वेक्षण कार्यक्रम के अन्तर्गत 61 खाद्यान्न तथा 17 गैर-खाद्यान्न फसलों को शामिल किया गया। 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, झारखंड, 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 गेहूँ के लिए तीन परतीय वर्गीकरण को अपनाया गया। (पैरा-4.6 और सारणी-3)
- गत वर्ष के कुल प्रयोगों 17,26,577 की तुलना में वर्ष 2019-20 के लिए विभिन्न फसलों के कुल प्रयोग 17,49,586 नियोजित किये गए। प्रतिदर्श परिमाण में 23,009 प्रयोगों की कुल वृद्धि खाद्यान्न फसलों में 11,189 प्रयोगों की वृद्धि तथा गैर-खाद्यान्न फसलों में 11,820 प्रयोगों की वृद्धि के कारण हुई। (पैरा-7.1)
- खाद्यान्न फसलों के लिए 14,81,837 प्रयोगों में से केवल 63821 (4%) प्रयोग 20 फल तथा सब्जी की फसलों पर 13 राज्यों में नियोजित किये गये। यह विरोधाभासी है क्योंकि भारत बागवानी फसलों और फलों का दूसरा सबसे बड़ा उत्पादक है। राज्य कृषि सांख्यिकी प्राधिकरण बागवानी फसलों और फलों के बढ़ते महत्व और जीसीईएस के तहत इन फसलों के कमतर प्रतिनिधित्व के बीच की अंतर पर ध्यान दे सकते हैं। (पैरा-7.5 और परिशिष्ट-II)
- फसल कटाई प्रयोगों के संचालन में लगे प्राथमिक कर्मियों के लिए नियमित प्रशिक्षण कार्यक्रमों को वर्ष 2019-20 के दौरान सभी राज्यों/संघ राज्यों में आयोजित किया गया। असम, गोवा, ओडिशा, राजस्थान, पश्चिम बंगाल, 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 उत्तराखंड 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 1895 प्रशिक्षण केन्द्रों में से 735 (39 %) प्रशिक्षण केन्द्रों में रा.प्र.स.का. के अधिकारियों ने पर्यवेक्षक के रूप में भाग लिया और 131 (7 %) केन्द्रों में प्रशिक्षण अधिकारी के रूप में भाग लिया। (पैरा-8.3)
- फसल प्राक्कलन सर्वेक्षण 2019-20 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 है। आन्ध्र प्रदेश, बिहार, छत्तीसगढ़, गोवा, हरियाणा, हिमाचल प्रदेश, जम्मू एवं कश्मीर, झारखंड,



कर्नाटक, मध्य प्रदेश, मेघालय, ओडिशा, पंजाब, राजस्थान, उत्तराखंड 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 अखिल भारतीय औसत का आंकड़ा यह दर्शाता है की 67 % फसल कटाई प्रयोग निर्धारित सा.फ.प्रा.स. कार्यप्रणाली और सांख्यिकीय प्रक्रियाओं के अनुसार सम्पन्न किए गए। यह गत वर्ष की तुलना में 1 % की वृद्धि 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 जोर दिया गया है।

(पैरा-9.6)

9. राज्यों यथा: ओडिशा, तेलंगाना, उत्तराखंड 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 2019-20 के दौरान फसल प्राक्कलन सर्वेक्षण के अंतर्गत कुल प्रत्युत्तर 90 प्रतिशत था। असम, बिहार, छत्तीसगढ़, गोवा, हरियाणा, जम्मू एवं कश्मीर, हिमाचल प्रदेश, झारखण्ड, कर्नाटक, महाराष्ट्र 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 अप्रत्युत्तर तथा सारणीयन स्तर पर प्रयोगों को रद्द करने के कारणों का विश्लेषण किया जाए।

(पैरा-10.6)

11. फसल प्राक्कलन सर्वेक्षण 2019-20 के परिणामों से स्पष्ट होता है कि चावल, गेहूँ, रागी, जौ, ज्वार (खरीफ), बाजरा, मक्का, चना, कपास, अलसी एवं मूँगफली (रबी और ग्रीष्म) ज्यादातर महत्वपूर्ण फसलों में पिछले वर्ष की तुलना में अखिल भारतीय स्तर पर उपज दर अनुमानों में वृद्धि दर्ज की गई है।

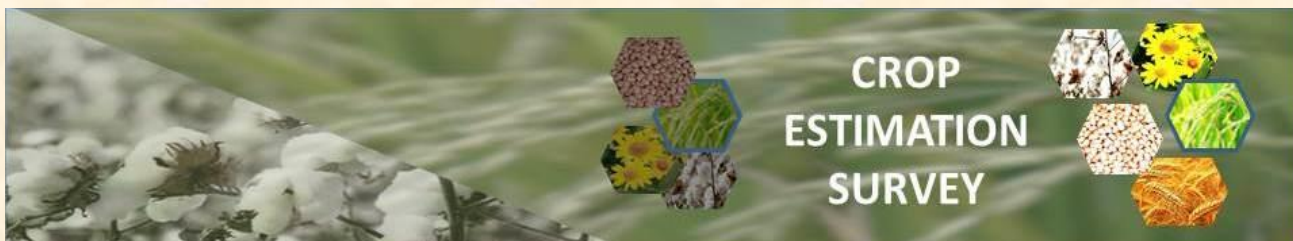
(पैरा-11.3)

12. असम, हिमाचल प्रदेश, कर्नाटक, केरल, मेघालय, राजस्थान एवं उत्तराखंड में सभी फसलों के उपज दरों के अनुमानों का 5% मानक त्रुटि प्रतिशत की स्वीकृत सीमा के अंदर था। जबकि, आंध्र प्रदेश में कुल्थी (खरीफ); छत्तीसगढ़ में ज्वार (खरीफ), सोयाबीन (खरीफ), जौ, तिल, कोडन कुटकी, हरियाणा में मक्का, कर्नाटक में मक्का (ग्रीष्म उच्च उपज), ; उरद (रबी); सेव, मिर्च (खरीफ), अलसी, मूँगफली (रबी); लोबिया (खरीफ/ग्रीष्म), फूलगोभी, सूरजमुखी (ग्रीष्म, सिंचित); मध्य प्रदेश में चावल (खरीफ उच्च उपज सिंचित); मिर्च (रबी), तेलंगाना में बाजरा (खरीफ), तिल (खरीफ), कोरा; तमिलनाडु समई; दादर एवं नगर हवेली में चावल और रागी; फसलों के उपज दरों के अनुमानों का मानक त्रुटि प्रतिशत (10 प्रतिशत से अधिक) पाया गया। राज्य कृषि सांख्यिकी प्राधिकरणों अपने प्रतिदर्श आकार एवं रूपरेखा पर दोबारा गौर करके गैर-सुखवन और सुखवन फसलों के लिए क्रमशः 5% और 10% से कम रखने का प्रयास करना चाहिए। 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 2019-20 are highlighted below: -

1. **61** food and **17** non-food crops were covered under the programme of Crop Estimation Surveys (CES) during the year 2019-20. 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)**
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 **17,49,586** crop cutting experiments were planned on different crops during 2019-20 as compared to **17,26,577** experiments in the previous year. The net increase of 23,009 experiments in the sample size is due to increase of **11,189** experiments under food crops and increase of **11,820** experiments under non-food crops. **(Para-7.1)**
4. Out of **14,81,837** experiments for food crops, only **63,821 (4 %)** experiments were planned on 20 Fruits and Vegetable crops covered in 13 States. This is paradoxical as India is the second largest producer of horticulture crops & fruits. SASAs may take note of the chasm between increasing importance of horticulture crops and fruits and poor representation of these crops under GCES. **(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 2019-20. It is encouraging to note that States: Assam, Goa, Odisha, Rajasthan, West Bengal, 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 **1895** training centers, NSSO officials participated in **735 (39%)** centers as observers and imparted training in **131 (7%)** centers. **(Para-8.3)**
7. **20%** of the experiments planned under CES during 2019-20 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 figure of all India average shows that **67%** sample experiments were conducted as per the prescribed GCES manual & Statistical procedures of the respective States/ UTs. This is an increase of **1%** vis-à-vis previous year. 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 Odisha, Telangana, Dadar & Nagar Haveli, Daman & Diu and Puducherry. However, in 2019-20, the overall response under CES was 90 percent. In Assam, Bihar, Chhattisgarh, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Maharashtra 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 2019-20 reveal that the yield rate estimates at All-India level increased as compared to the previous year for majority of important crops viz., Paddy(Kh.), Wheat, Ragi , Barley, Groundnut (Rabi & Summer), Linseed , Jowar (Kh.), Bajra, Maize, Gram and Cotton. **(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 Horsegram (Kharif); Chhattisgarh for Soyabean (Kharif), Barley, Sesamum and Kodan-Kutki; Haryana for Maize; Karnataka for Maize Sum. Hyv., Blackgram (Rabi), Save, Chilies (Kharif), Groundnut (Rabi), Linseed, Cowpea, Cabbage, Sunflower Sum. Irr., Madhya Pradesh for Rice (Kh. Hyv Ir.), Chilies (Rabi); Telangana for Bajra (Kharif), Korra; Tamilnadu for Samai; and Dadar Nagar & Haveli for Rice & Ragi;. **State SASAs must endeavor to keep it below 5% and 10 % for non-dried & dried crops respectively through revisiting sample size or design.** 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 National Sample Survey (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 NSS 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 2019-20.



# 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 2019-20, 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 2019-20**

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	4. Mizoram
2. Chandigarh	5. Nagaland
3. Lakshadweep	6. Sikkim



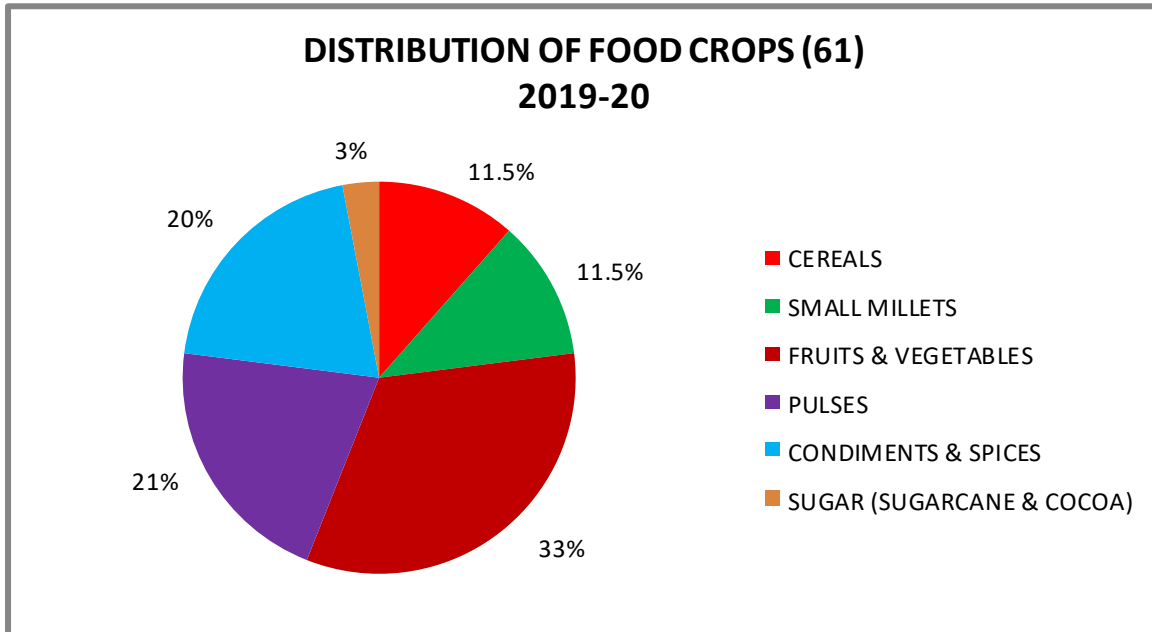
- 3.2 Details of crops for which crop cutting experiments under CES were planned in States/UTs together with the year of initiation of the survey and adoption of CES results for estimates of production are given in **Appendix-I**. It also gives information about the stratum, pre-stratification, if any, 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 2019-20, 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 2019-20**

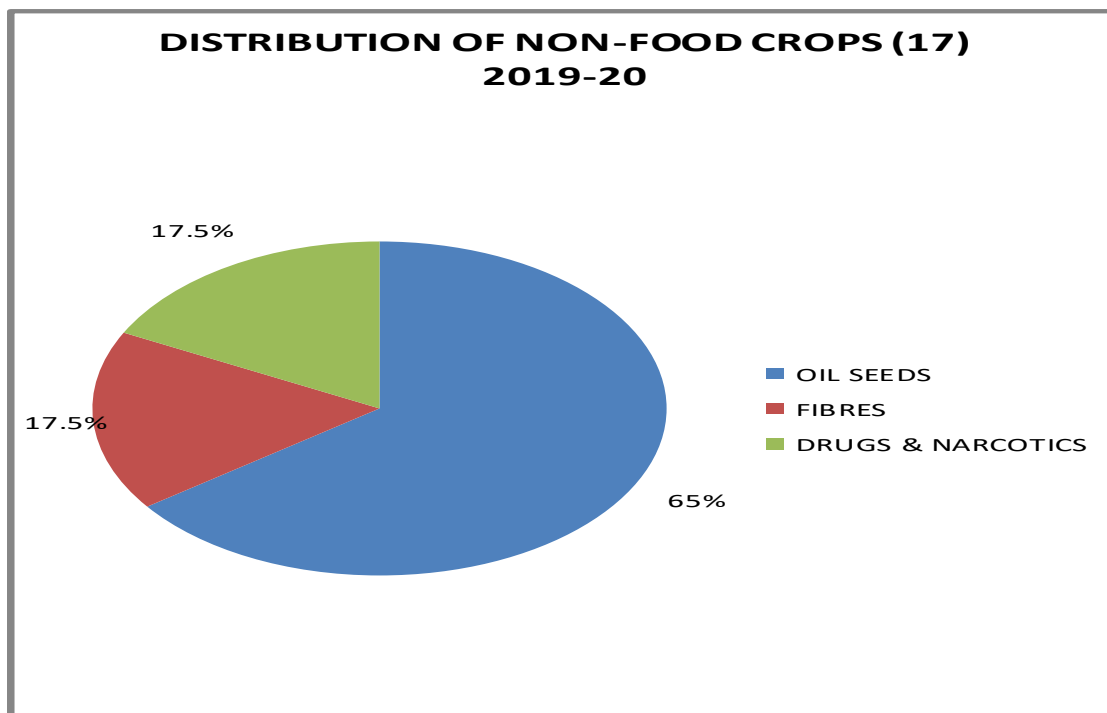
S. No.	Particulars	No. of crops (%)
<b>A. Food Crops</b>		
1	Cereals ( Paddy, Jowar, Bajra, Maize, Ragi (Mandua), Wheat, Barley )	7 (11.5%)
2	Pulses & Beans ( Gram (Bengalgram), Redgram (Tur/Arhar), Greengram (Moong), Blackgram (Urd), Lakh (Khesari), Masur, Horsegram (Kulthi), Peas, Moth, Cowpea (Lobia), 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, Arecanut, 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.



# SAMPLING DESIGN

# 4

- 4.1 The sampling design generally adopted for the CES during 2019-20 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, Arecanut, 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 2019-20**

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 <sup>@</sup> (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 2019-20 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, 7.4 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 2019-20. 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, Meghalaya, Odisha, Telangana, West Bengal and Puducherry.



**Table - 4: Details of the high workload of primary workers during 2019-20**

State	Agency for field work	Total strength	No. of primary workers conducted more than		
			12 Experiments		20 Expts.
			Kharif	Rabi	Annually
Andhra Pradesh	Statistical/Agriculture	1870	445	254	371
Assam	Statistical	243	78	78	78
Goa	Agriculture Kh.	24	16	-	19
	Agriculture Rabi	23	-	16	
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	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 2019-20 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 2019-20, a total of 17,49,586 experiments were planned under CES at All India level. The corresponding figure during 2018-19 was 17,26,577 experiments. This shows an increase of 23,009 experiments during 2019-20. The net increase in sample size is due to increase of 11,189 experiments under food crops and increase of 11,820 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 2019-20. **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.** In a welcome from the agricultural year 2023-24, Union M/o Agriculture & Farmers' Welfare has all States/UTs to keep production series (GCES) distinct from the CCEs of other schemes viz., insurance, smart sampling etc.
- 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 Maharashtra & Odisha and a decline of 24,286 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
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
2019-20 @	805943	147901	953844	675894	119848	795742	1481837	267749	1749586

\* 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.

@ 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

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
2019-20 \$	1749586	46	8	39	7

\* It does not include figures for West Bengal and Meghalaya as information was not received.

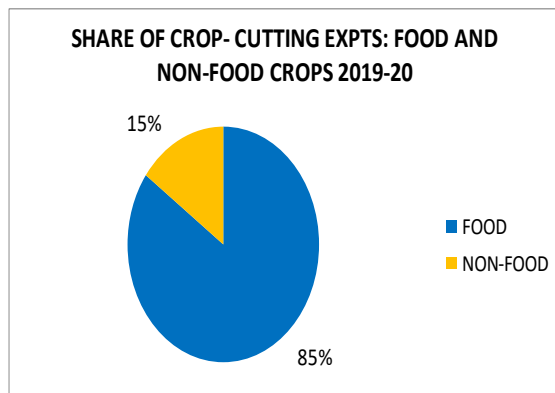
@ It includes figures for the year 1998-99 for Jammu & Kashmir as no data for the year 1999-2000 was received from SASA.



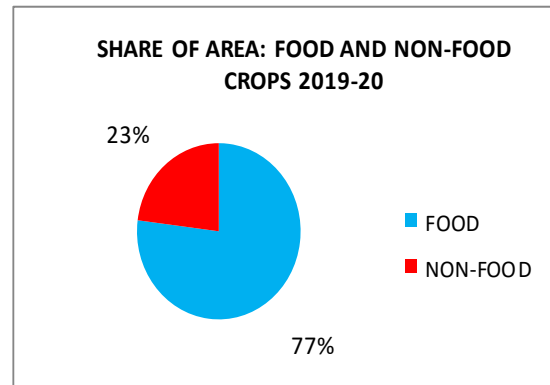
## It includes figures repeated for the year 2010-11 in the State of Maharashtra and 2013-14 in the State of Karnataka  
 \$ It includes figures repeated for the year 2016-17 in the States of Haryana, Jharkhand, and Madhya Pradesh

7.5 Details of number of experiments planned under CES during 2019-20 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 17,49,586 experiments planned, 14,81,837 (85%) were on food crops and 2,67,749 (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 9,53,844 (55%) experiments and Rabi crops for 7,95,742 (45%) experiments.

**Chart – III**



**Chart – IV**



7.6 Fruits and Vegetables form an essential component of human diet. Twenty 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 14,81,837 (85%) experiments for food crops, only 63,821 (4%) experiments were covered under 20 Fruits and Vegetable crops. This is paradoxical as India is the second largest producer of horticulture crops & fruits. SASAs may take note of the chasm between increasing importance of horticulture crops and fruits and poor representation of these crops under GCES. Also, 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, 15% of the experiments were accounted for fruits and 85% for vegetable crops.

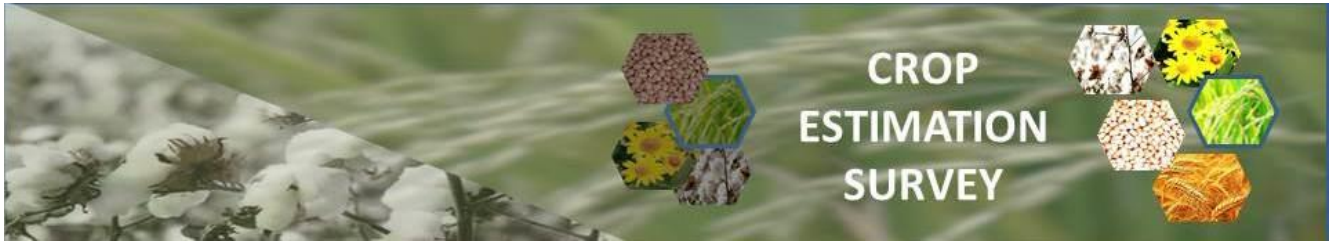


**Table –7: Fruits and Vegetables covered under CES during 2019-20**

<u>Sl. No.</u>	<u>Fruits</u>	<u>No. of Experiments Planned</u>
1	Lichi	300
2	Banana	2968
3	Mango	600
4	Guava	280
5	Jackfruit	2038
6	Pineapple	1554
7	Papaya	32
	<b>Total</b>	<b>7772</b>

<u>Sl. No.</u>	<u>Vegetables</u>	<u>No. of Experiments Planned</u>
1	Cashewnut	1514
2	Tapioca	1469
3	Potato	37611
4	Onion	6016
5	Brinjal	1550
6	Tomato	3540
7	Cauliflower	340
8	Plaintain	1622
9	Avare	660
10	Cabbage	100
11	Bitter Gourd	1627
	<b>Total</b>	<b>56049</b>

The Centrally Sponsored Scheme “Crop Estimation Survey on Fruits and Vegetables” which started in the year 1982-83 is no longer in operation largely after 2013-14. However, some States/UTs continue to conduct CCEs on the horticulture crops & fruits considering in the rising importance for nutritional sufficiency of population and income security of the farmers.



To supplement State/UT Govt. efforts, 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. SASAs need to strengthen CES on Horticulture crops & Fruits for reliable data driven policy for the sector & farmers' welfare

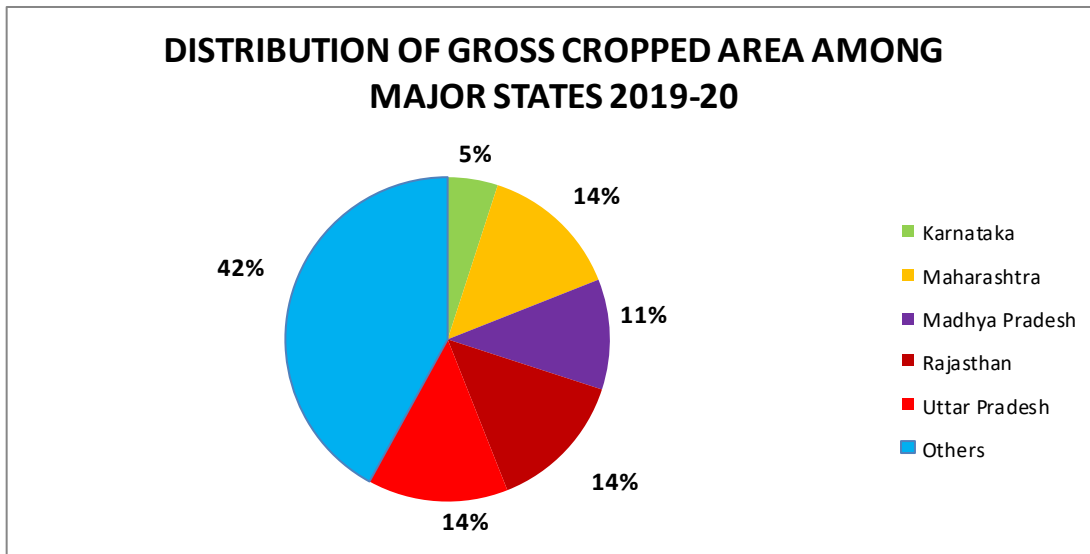
7.7 The States of Rajasthan (14%), Uttar Pradesh (14%), Madhya Pradesh (11%), Maharashtra (14%), and Karnataka (5%) have accounted for more than 58 percent of the gross cropped area (Chart-V). However, the distribution of experiments over States/UTs reveals that nearly 77 percent of the experiments were planned in Uttar Pradesh (37%), Rajasthan (14%), Bihar (10%), Karnataka (8%) and Maharashtra (8%) (Chart-VI).

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

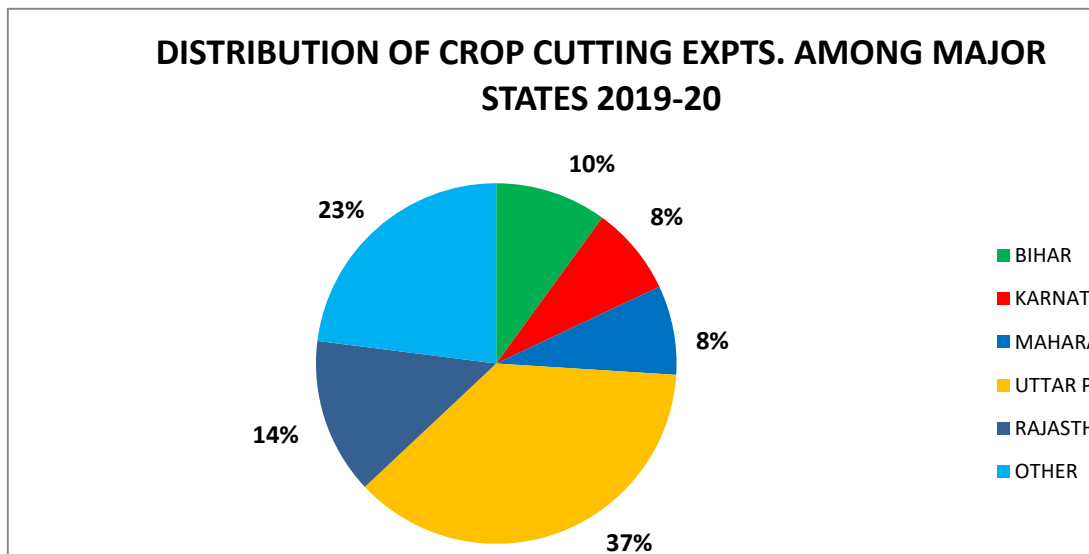




**Chart – V**



**Chart – VI**



7.8 **Table-8** shows increase of 55,300 experiments during 2019-20 due to increase in number of experiments planned for a number of crops in the States of Andhra Pradesh, Assam, Chhattisgarh, Dadar & Nagar Haveli, Maharashtra, Odisha, and Punjab. The total number of



experiments planned decreased by 32,291 due to decrease in experiments planned in the States of Bihar, Goa, Gujarat, Jammu & Kashmir, Kerala, Meghalaya, Puducherry, Rajasthan, Telangana, Uttar Pradesh, Uttarakhand and West Bengal. This shows net increase of experiments in the States is 23,009 during 2019-20 over 2018-19. There was no change in planning in the States of Himachal Pradesh, Tamil Nadu and Daman & Diu whereas for the States of Haryana, Jharkhand and Madhya Pradesh information was not received.

**Table-8: Comparison of number of experiments planned during 2019-20 and 2018-19**

States showing increase in experiments planned	No. of experiments planned			States showing decrease in experiments planned	No. of experiments planned		
	2018-19	2019-20	Net increase over previous year		2018-19	2019-20	Net decrease over previous year
Andhra Pradesh	23074	23896	822	Bihar	178364	178264	-100
Assam	11250	11254	4	Goa	1004	940	-64
Chhattisgarh	7324	8754	1430	Gujarat	79336	55050	-24286
Dadra & Nagar Haveli	92	100	8	Jammu & Kashmir \$	5496	5386	-110
Karnataka @	139008	139848	840	Kerala	32743	32411	-332
Maharashtra	92844	138966	46122	Meghalaya	2357	2246	-111
Odisha	57327	63397	6070	Puducherry	304	298	-6
Punjab	6950	6954	4	Rajasthan	238378	237086	-1292
				Telangana	18560	18186	-374
				Uttar Pradesh	644300	639876	-4424
				Uttarakhand	7978	7722	-256
				West Bengal	48950	48014	-936
	<b>Total</b>	<b>55300</b>		<b>Total</b>			<b>-32291</b>

#: - The data pertaining to Karnataka for 2019-20 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, 2019-20 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 Paddy, Gram, Jowar, Redgram, Blackgram and Sesamum the representation of remaining 7 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 2019-20**

S. No.	Particulars	No. of Expts.	Percentage
<b>A.</b>	<b>FOOD CROPS</b>	<b>1481837</b>	<b>85</b>
1	Cereals	1099185	62.83
2	Pulses & beans	268406	15.34
3	Small Millets	3526	0.2
4	Sugar & Cocoa	23196	1.33
5	Condiments & Spices	23703	1.35
6	Fruits & Vegetables	63821	3.65
<b>B.</b>	<b>NON-FOOD CROPS</b>	<b>267749</b>	<b>15</b>
1	Oil Seeds	217864	12.45
2	Fiber Crops	42889	2.45
3	Drugs & Narcotics	6996	0.40
	<b>TOTAL</b>	<b>1749586</b>	<b>100</b>

**Table- 10: Distribution of experiments planned for Main Crops during 2019-20**

Sl. No.	Crop	No. of Expts.	% to Total Expts.	Prev. year % to Total Expts.
1.	Paddy	398023	22.75	22.54
2.	Wheat	366190	20.93	21.96
3.	Maize	168785	9.65	9.84
4.	R & M	78884	4.51	4.71
5.	Bajra	76108	4.35	4.81
6.	Gram	75756	4.33	3.90
7.	Jowar	64172	3.67	2.94
8.	Redgram	39299	2.25	1.99
9.	Groundnut	51656	2.95	3.11
10.	Blackgram	40673	2.32	2.23
11.	Sugarcane	22399	1.28	1.70
12.	Sesamum	32512	1.86	1.82

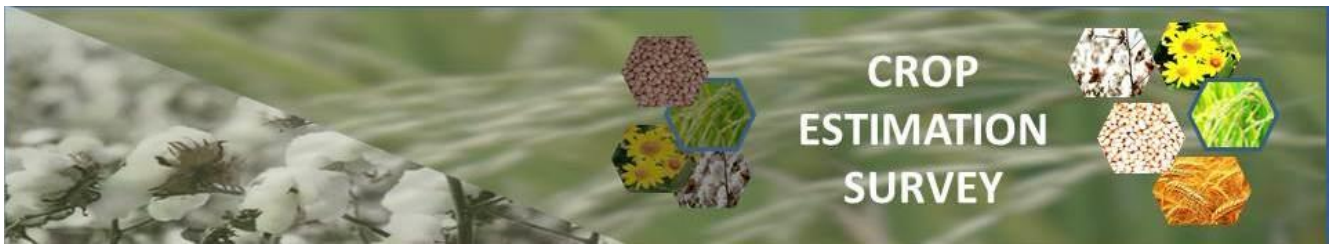
7.10 **Annexure-V** also provide information on the percentage of area covered under CES to the total area in the CES States. Crop-wise summary for main crops is presented in **Table-11**, which indicates that the area covered under CES for food and non-food crops was substantial. However, there exists a need for extending CES in different States to cover important pulses, oil seeds fruits & vegetables along with 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 SASAs of the States/UTs. Distribution of area and experiments by category of crops



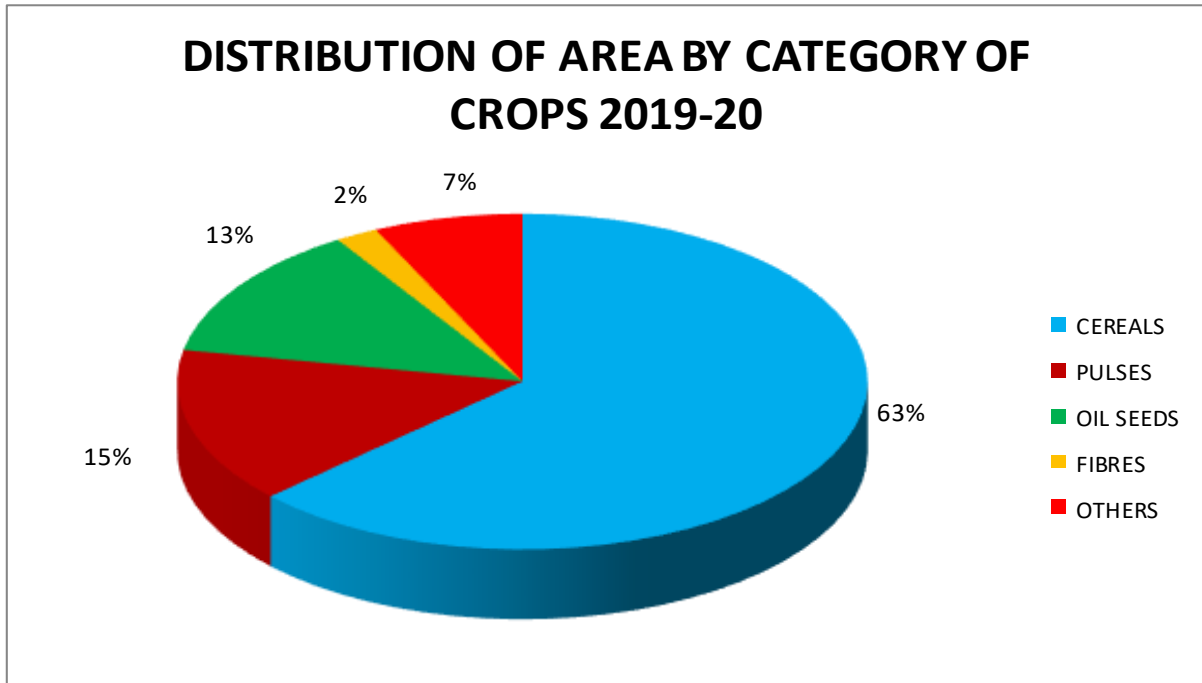
which are not covered at present needs attention of the concerned States/UTs. are presented in **Chart-VII** and **Chart-VIII** respectively

**Table – 11: Percentage of area covered under CES during 2019-20**

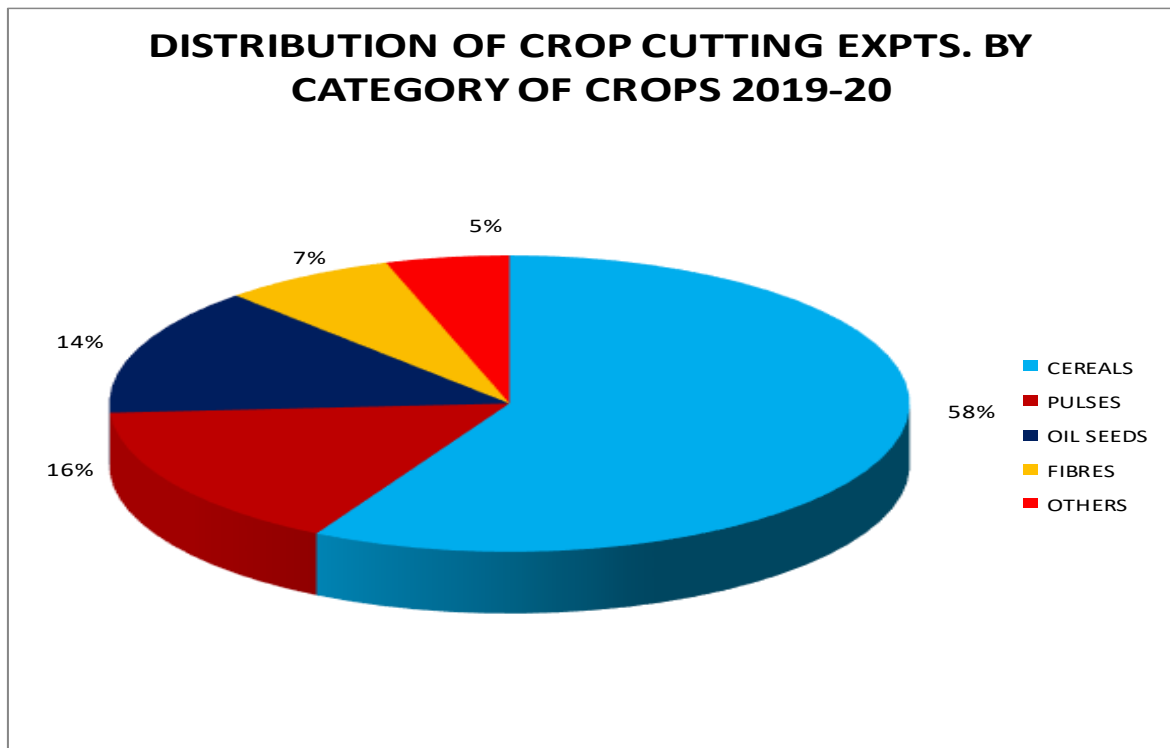
Sl. No.	Crop	%age of area covered by CES to total area under the crop in the States covered
1	Paddy (Kharif)	92
	Paddy (Rabi / Sum.)	94
2	Jowar (Kharif)	82
	Jowar (Rabi / Sum.)	79
3	Bajra (Kharif & Rabi / Sum.)	97
4	Maize (Kharif )	87
	Maize (Rabi / Sum.)	75
5	Ragi (Kharif & Rabi / Sum.)	94
6	Wheat	99
7	Barley	84
8	Gram	98
9	Redgram/Tur (Kharif&Rabi)	95
10	Sugarcane	98
11	Sunflower (Kharif)	100
	Sunflower (Rabi / Sum.)	91
12	Groundnut (Kharif)	98
	Groundnut (Rabi / Sum.)	88
13	Sesamum(Kharif& Rabi/Sum.)	93
14	Castor	98
15	Rape & Mustard	94
16	Linseed	82
17	Safflower	100
18,	Coconut	30
19	Niger	68
20	Cotton	95
21	Jute	99
22	Mesta	100
23	Tobacco	96



**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 2019-20. 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 2019-20. During the year, training was organised in 1895 centres. It is pleasing to note that States: Assam, Goa, Odisha, Rajasthan, Dadar & Nagar Haveli, Daman & Diu and Puducherry recorded cent percent attendance of their primary staff. However, at All India level, 90263 out of 91387 primary workers were called for training and 76638 attended the training camps resulting in 85% 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 (Statistical), Himachal Pradesh (Agriculture in Kharif & Rabi and Revenue 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 2019-20, 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, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Odisha, Punjab, Telangana, Uttar Pradesh, Uttarakhand, West Bengal, Dadra & Nagar Haveli and Daman & Diu. In all, out of the 1895 training centers, NSSO officials participated in 735 (39%) centers as observers and imparted training in 131 (7%) 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, 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 2019-20, 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**.

9.4

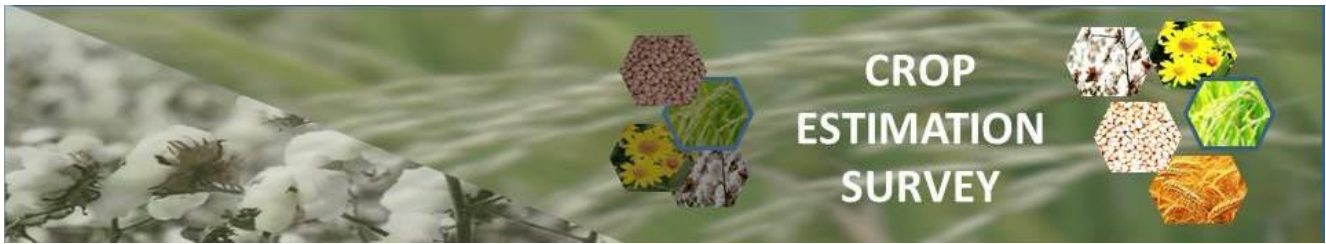
**Table –12: Supervision of crop cutting experiments during 2019-20**

Item	No. of expts. Planned	No. of Experiments Supervised by					
		State Statistical Department		Other State Departments		NSSO	
		Total	At Harvest	Total	At Harvest	Total	At Harvest
		(%)	(%)	(%)	(%)	(%)	(%)
1	2	3	4	5	6	7	8
<b>Kharif</b>							
Food Crops	805943	31724	22982	126737	98504	6584	6122
%		4	3	16	12	1	1
Non-Food Crops	147901	11926	9521	36390	27901	3019	2742
%		8	6	25	19	2	2
Combined	953844	43650	32503	163127	126405	9603	8864
%		5	3	17	13	1	1
<b>Rabi</b>							
Food Crops	675894	16981	16449	69187	68607	1782	1072
%		3	2	10	10	0.3	0.2
Non-Food Crops	119848	4452	3581	23435	23385	508	408
%		4	3	20	20	0.4	0.3
Combined	795742	21433	20030	92622	91992	2290	1480
%		3	3	12	12	0.3	0.2
<b>TOTAL</b>	1749586	65083	52533	255749	218397	11893	10344
<b>(Percentage)</b>		7	5	15	12	1	1

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

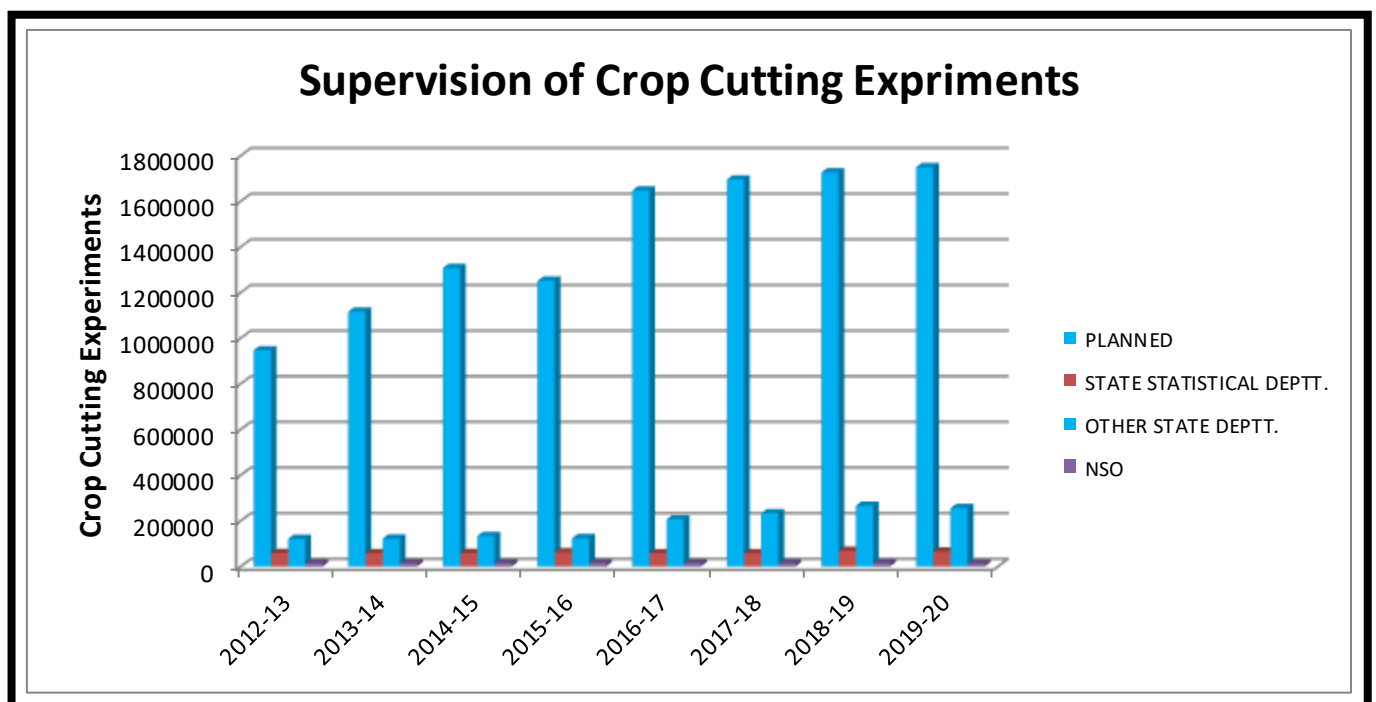
During 2019-20, about 20% of the total experiments planned were supervised, out of which 20 percent were supervised by the State Statistical Department, 77 percent by other State Departments and 4 percent by NSSO. However, the supervision was conducted at harvest stage in approximately 82% cases. It 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 Gujarat, 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 Chhattisgarh, Gujarat, Rajasthan, Dadar & Nagar Haveli and Daman & Diu. The same was below 10 percent in the States of Himachal Pradesh, Karnataka, Meghalaya, Tamil Nadu and West Bengal. Adequate supervision is essential for quality of Yield Statistics. Total supervision by NSSO officers in individual States varied from 0.2 percent in Jharkhand to 7 percent in Haryana, Tamil Nadu and Puducherry. 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 and Uttar Pradesh 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 10 and 43 percent for important crops like Paddy, Jowar, Bajra, Maize, Ragi, Wheat, Barley, Groundnut, Sesamum, Cotton and Jute, and in the range of 12 to 41 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 4 to 36 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 cumulative of all departments supervision is less than 10%.** 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 2019-20**

Crop	Percentage of Experiments supervised by							
	State		Other State		NSSO		All Deptts	
	Statistical Total	Deptt At Harvest stage	Departments Total	At Harvest stage	Total	At Harvest stage	Total	At Harvest stage
1	2	3	4	5	6	7	8	9
Paddy	4	3	6	5	1	1	10	9
Jowar	3	3	18	14	1	1	22	18
Bajra	2	2	32	24	1	1	36	27
Maize	3	2	9	7	0	0	12	9
Wheat	1	1	9	9	0	0	11	11
Barley	3	3	39	39	0	0	43	43
Gram	1	1	15	15	0	0	17	17
Other Pluses & Beans	3	3	26	18	1	1	29	38
Small Millets	7	7	7	7	2	2	16	16
Sugars	5	3	3	2	2	2	10	7
Condiments & Spices	17	2	23	23	0	0	41	26
Fruits & Veg.	5	2	3	3	0	0	8	5
Ragi	7	7	8	8	1	1	16	16
Groundnut	6	6	16	14	1	1	24	21
Sesamum	3	3	17	13	1	1	20	16
Castor	12	10	17	15	2	2	32	27
Rape & Mustard	2	2	25	25	1	1	27	27
Linseed	0	0	10	10	1	1	12	11
Other Oil Seeds	6	2	23	16	1	1	30	18
Cotton	9	9	26	20	2	2	37	31
Jute	10	10	0	0	3	3	13	13
Mesta	4	4	0	0	0	0	4	4
Drugs & Narcotics	14	2	23	23	0	0	36	25

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



22111 (1.5%) experiments out of the 14,95,397 experiments planned (for the crops covered under ICS) were spot checked at harvest stage either by Central or State agencies during 2019-20 as against 21616 (1.5%) experiments out of 14,77,346 experiments planned during 2018-19. 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 2019-20**

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	Total		
			Central Staff	State Staff		
1	2	3	4	5	6	7
1.	Andhra Pradesh	15782	607	573	1180	7.48
2.	Assam	11254	335	301	636	5.65
3.	Bihar	128263	545	483	1028	0.80
4	Chhattisgarh	7164	304	236	540	7.54
5.	Gujarat	38580	813	668	1481	3.84
6.	Haryana	8994	599	503	1102	12.25
7.	Himachal Pradesh	8306	195	186	381	4.59
8.	Jammu & Kashmir	4750	210	81	291	6.13
9.	Jharkhand	59790	220	162	382	0.64
10.	Karnataka	103856	543	752	1295	1.25
11.	Kerala	14039	507	518	1025	7.30
12.	Madhya Pradesh	28310	1126	470	1596	5.64
13.	Maharashtra	123460	847	831	1678	1.36
14.	Odisha	51797	554	793	1347	2.60
15.	Punjab	6954	633	491	1124	16.16
16.	Rajasthan	197638	791	699	1490	0.75
17.	Tamil Nadu	5284	640	663	1303	24.66
18.	Telangana	9890	413	419	832	8.41
19.	Uttarakhand	6456	2250	128	2378	36.83
20.	Uttar Pradesh	624972	180	142	322	0.05
21.	West Bengal	39560	632	8	640	1.62
22.	Puducherry	298	30	30	60	20.13
	<b>All States</b>	<b>1495397</b>	<b>12974</b>	<b>9137</b>	<b>22111</b>	<b>1.48</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 figure of all India reveal that during 2019-20, 67 percent experiments were conducted as per the prescribed procedures.** This shows an increase of 1% vis-à-vis previous year. 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 2019-20. 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 Odisha, Telangana, Uttarakhand, Dadar & Nagar Haveli, Daman Diu & Puducherry. However, in 2019-20, the overall response under CES was 90 percent. Percentage response for food crops during Kharif and Rabi, 2019-20 was 91% & 90% respectively and for non-food crops, it was 89 % & 84 % respectively. Response was below 90 percent in Assam (69%), Bihar (72%), Chhattisgarh (82%), Goa (36%), Haryana (89%), Himachal Pradesh (69%), Jammu & Kashmir (56%), Jharkhand (71%), Karnataka (77%), Maharashtra (81%) 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 percent of the total number of experiments planned were analysed, 9.2 percent were reported to be lost in the field, 0.7 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 9.2 percent experiments lost in the field, no specific reasons had been reported in respect of 8.6 percent experiments while 0.52 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 (31 %), Bihar (27%), Chhattisgarh (18%), Goa (64%), Haryana (11%), Himachal Pradesh (31%), Jammu & Kashmir (45%), Jharkhand (29%), Karnataka (23%), Maharashtra (19%) 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 2019-20 are given in **Annex -V. Table-15** shows the crop-wise percentage response at All India level for important crops during 2019-20.

**Table-15: Crop - wise percentage response at All India level for important crops under CES 2019-20**

Sl.No.	Crop	Response (%)
1	Paddy (Kharif)	96
	Paddy (Rabi / Sum.)	88
2	Jowar (Kharif)	78
	Jowar (Rabi)	84
3	Bajra (Kharif)	95
	Bajra (Sum.)	99
4	Maize (Kharif)	71
	Maize (Rabi / Sum.)	63
5	Ragi (Kharif)	92
	Ragi (Rabi / Sum.)	76
6	Wheat	96
7	Barley	91
8	Gram	89
9	Redgram/Tur	91
10	Sugarcane	84
11	Groundnut (Kharif)	84
	Groundnut (Rabi / Sum.)	78
12	Sesamum (Kharif)	88
	Sesamum (Rabi)	86
13	Castor	99
14	Rape & Mustard	93
15	Linseed	60
16	Cotton	94
17	Jute	91



# 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 2019-20 are presented in **Charts-X to XII** respectively.
- 11.2 The results of CES for 2019-20 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 Taramera (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 2019-20 and for the previous year for some important crops are given in **Table-16**. These results show that the average yield per hectare during 2019-20 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), Sesamum, Castor, Cotton and Jute the average yield has shown decline as compared to the previous year 2018-19.





**Table -16: Comparison of CES Yield Rates during 2019-20 and 2018-19**

Sl. No.	Crop	Yield rate in (kg/ha.)		Percentage difference
		2019-20	2018-19	
1.	Rice (Kharif)	3032	2660	13.98
2.	Rice (Rabi/Sum.)	4143	4031	2.78
3.	Jowar (Kharif)	1023	994	2.92
4.	Jowar (Rabi/ Sum.)	980	635	54.33
5.	Bajra (Comb.)	1399	1176	18.96
6.	Maize (Comb.)	3066	2700	13.56
7.	Ragi (Comb.)	1961	1360	44.19
8.	Wheat	3555	3663	-2.95
9.	Barley	3048	2902	5.03
10.	Gram	1084	962	12.68
11.	Redgram/Tur	803	675	18.96
12.	Sugarcane	82946	83670	-0.87
13.	Groundnut (Kharif)	1996	1259	58.54
14.	Groundnut (Rabi / Sum.)	2342	2313	1.25
15.	Sesamum (Comb.)	383	442	-13.35
16.	Castor	1865	1690	10.36
17.	Rape & Mustard	1383	1481	-6.62
18.	Linseed	552	518	6.56
19.	Cotton (Lint)	1047	765	36.86
20.	Jute	1690	2602	-35.05

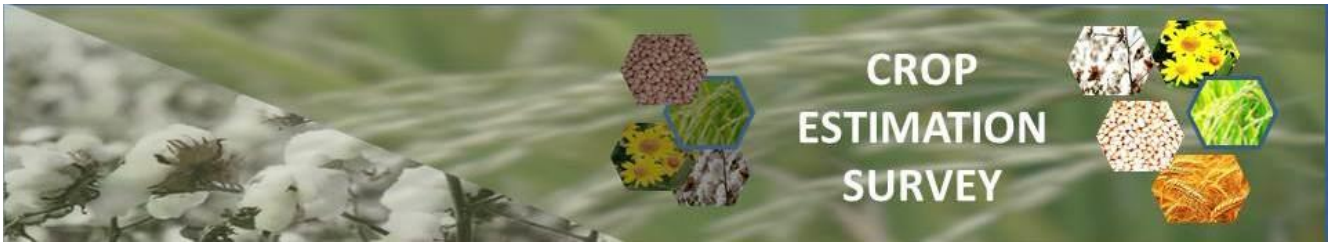
11.4 The dimension of the standard error provides an idea about the precision of the estimate. In an attempt to standardise the measure, generally it is expressed in percentage terms. The percentage standard errors of the estimates of average yield are furnished along with the estimates in **Annex-V**. 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.



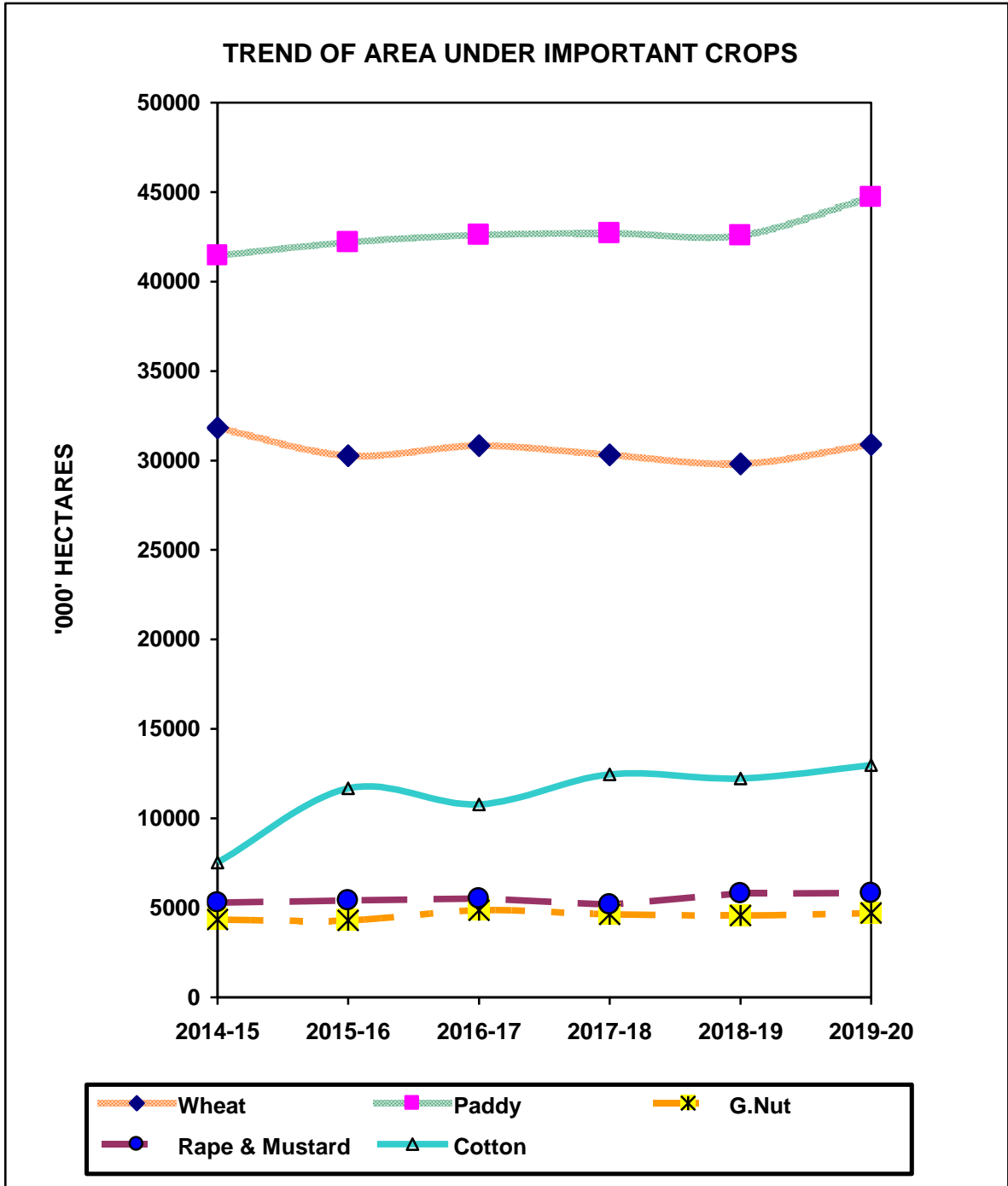
11.5 Technically, standard errors are associated with efficiency of the estimates and the degree of precision reduces with increase in the standard error. The desirable range of standard error of a good estimate of crop yield at State level is between 0 to 5 percent. It is observed that in a good number 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. **State SASAs must endeavor to keep it below 5% and 10 % for non-dried & dried crops respectively through revisiting sample size or design.**

**Table-17: State-wise crops with high standard error during 2019-20**

Sl. No	State	Crop with percentage S.E.
1	Andhra Pradesh	Horsegram Kh. (37.9), Sunflower Kh. (9.0), Castor (5.7), Tobacco (6.7)
2	Bihar	Brinjal Rabi (7.82)
3	Chhattisgarh	Soyabean (10.2), Barley (14.99), Sesamum (10.8), Lakh(5.9), Kodan Kutki (19.9), Rape & Mustard (5.6) and Linseed (7.6)
4	Gujarat	N.A.
5	Haryana	Maize (12.6)
6	Karnataka	Maize Sum. Hyv. (11.5); Ragi Sum. Hyv Ir (8.5), Blackgram Rabi (13.2), Navane (5); Save (10); Chillies Kh. (12), Linseed (25), Onion Rabi (9.6), & Summer (11.6), Groundnut Rabi (13.4), Cotton Rabi (13), Potato Kh (6.3), Rabi (7), Tomato Rabi (8.19), Summer (16.45), Cowpea Kharif (6.0), Rabi (18), Summer (24); Cabbage (29.0), Sunflower Rabi (6.7), Sum. Irr. (16.9), Tobacco Kharif (7) and Jowar Kh. (5.7), Horse gram (5.2)
8	Madhya Pradesh	Rice Kh. Hyv Ir. (20.6); Kh. LV Ir. (8.2) and Chillies (29.6)
9	Maharashtra	N.A.
10	Odisha	Ragi Sum. (5.7), Groundnut Sum. (5.7)
11..	Telangana	Bajra Kh. (13.6), Sesamum Kh (15.9), Horse gram Rabi (5.6), and Castor (8.2) Blackgram Rabi (5.6), Korra (15.6), Tobacco (8.9)
12	Tamil Nadu	Cowpea Rabi (7.0), Samai (12)
13	West Bengal	Lakh (6.7), Sugarcane (8.9) and Linseed (8)
14	Dadar & Nagar Haveli	Rice (13.2) , Ragi (55.4)
15	Daman & Diu	Bajra Kharif (8.08)

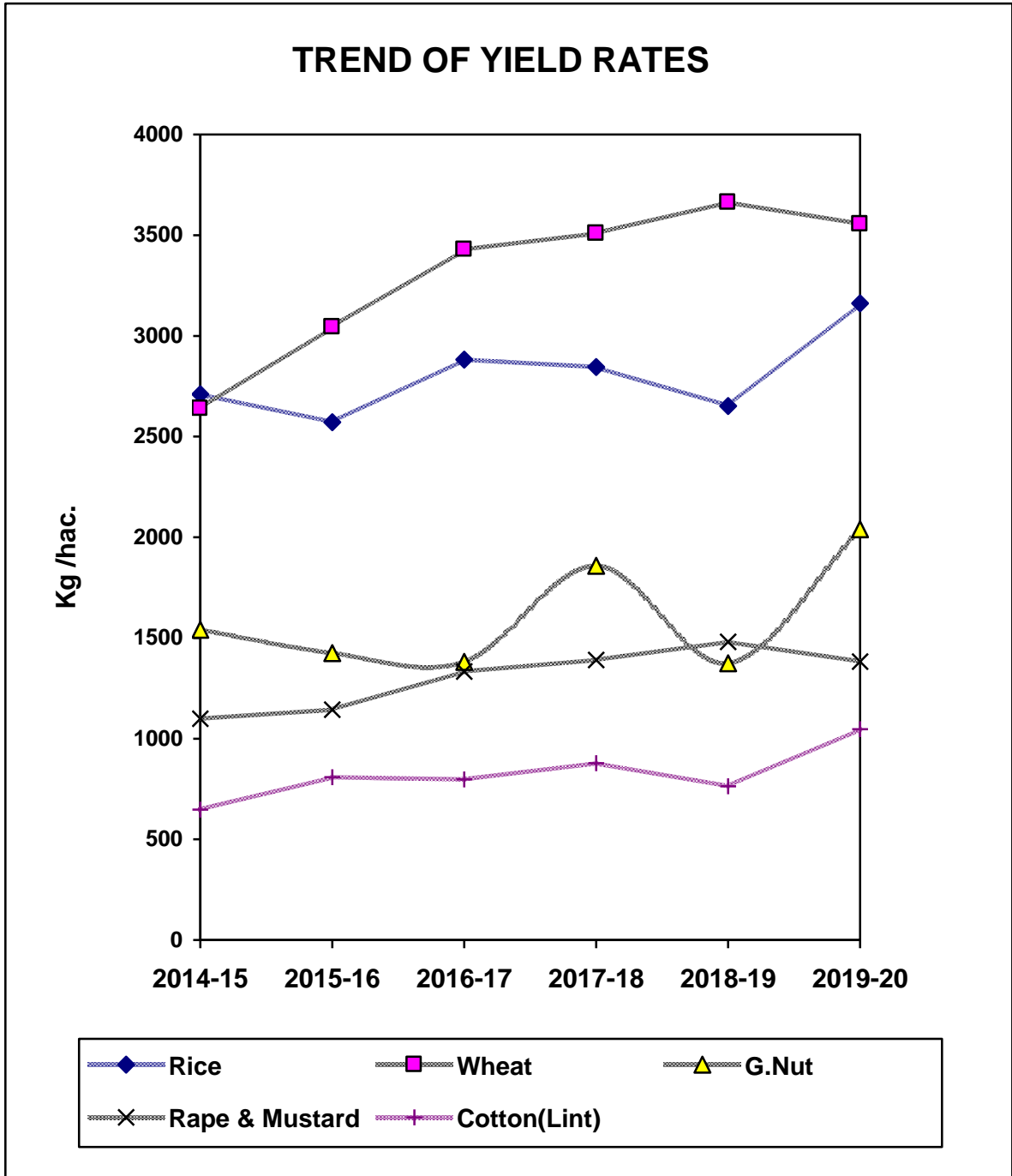


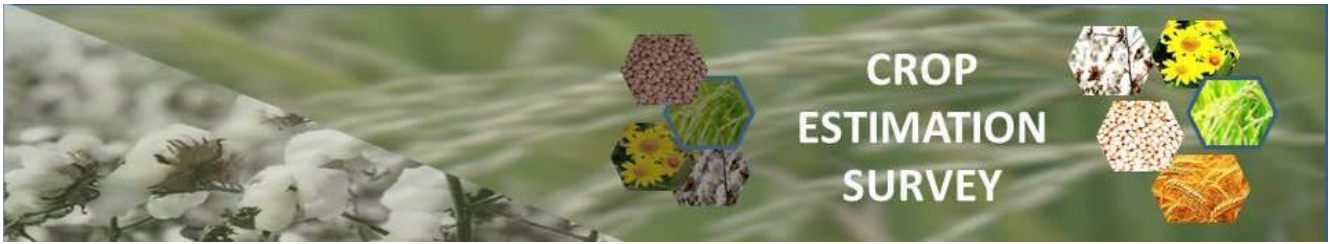
**Chart - X**



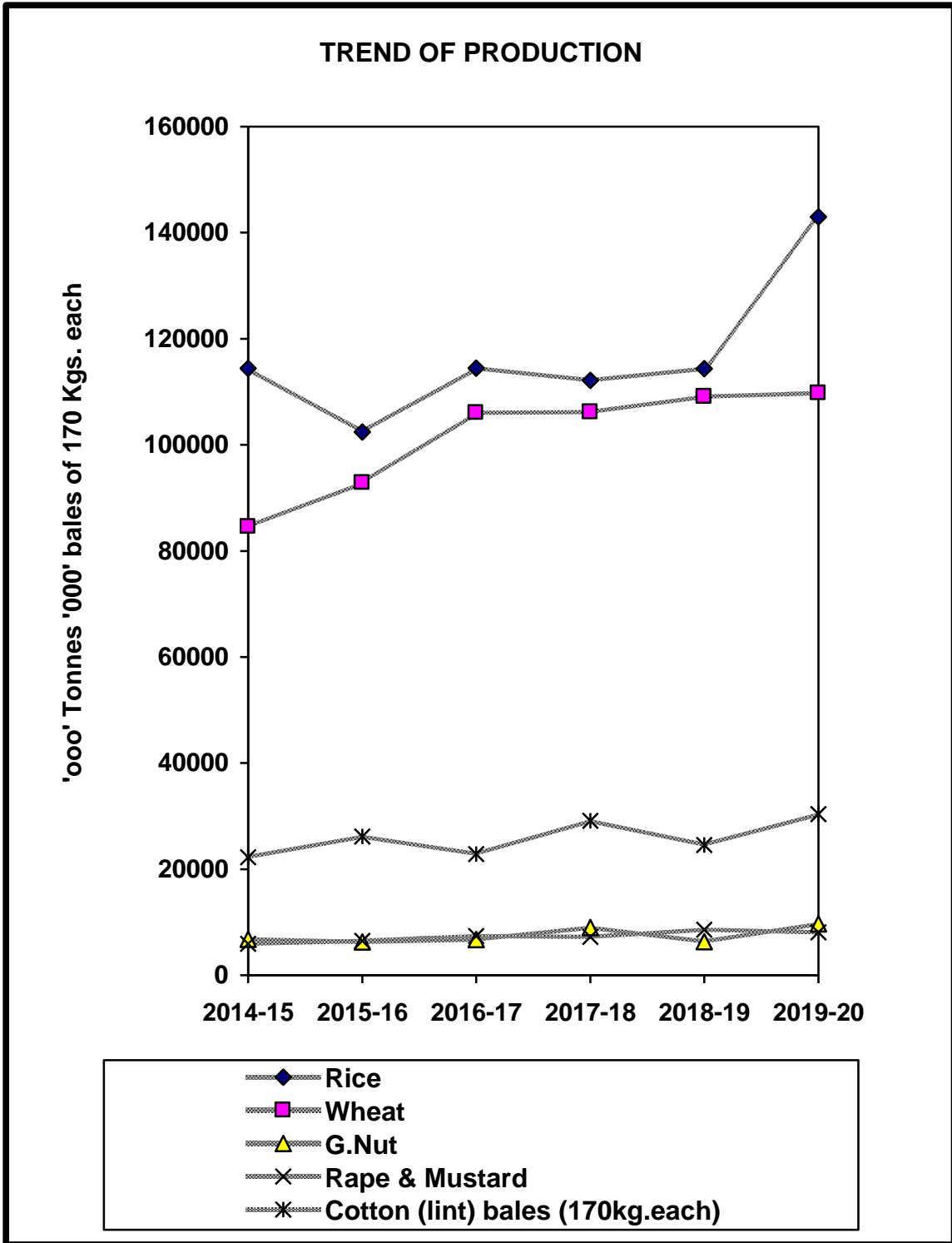


**Chart – XI**





**Chart - XII**





11.6 Comparison of estimates of crop production for 2019-20 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 2019-20**

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 2019-20**

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 2019-20**

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 2019-20 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 2019-20 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 2019-20. 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 2019-20**

Sl. No.	STATE	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.	Andhra Pradesh	9672	4558	14230	7506	2160	9666	17178	6718	23896
2.	Assam	5200	600	5800	4204	1250	5454	9404	1850	11254
3.	Bihar	85474	512	85986	91270	1008	92278	176744	1520	178264
4.	Chhattisgarh	5052	624	5676	2442	636	3078	7494	1260	8754
5.	Goa	470	30	500	380	60	440	850	90	940
6.	Gujarat	18844	16990	35834	16449	2767	19216	35293	19757	55050
7.	Haryana *	4096	940	5036	3278	1270	4548	7374	2210	9584
8.	Himachal Pradesh	4254	0	4254	4052	0	4052	8306	0	8306
9.	Jammu & Kashmir	3054	0	3054	2090	242	2332	5144	242	5386
10.	Jharkhand &	28770	0	28770	36210	7830	44040	64980	7830	72810
11.	Karnataka	66430	20536	86966	40010	12872	52882	106440	33408	139848
12.	Kerala	27559	2524	30083	1608	720	2328	29167	3244	32411
13.	Madhya Pradesh #	9268	6166	15434	13240	2036	15276	22508	8202	30710
14.	Maharashtra	51194	35276	86470	46242	6254	52496	97436	41530	138966
15.	Meghalaya	1948	64	2012	234	0	234	2182	64	2246
16.	Odisha	47657	2021	49678	9627	4092	13719	57284	6113	63397
17.	Punjab	3042	668	3710	2676	568	3244	5718	1236	6954
18.	Rajasthan	101930	27772	129702	72292	35092	107384	174222	62864	237086
19.	Tamil Nadu	4168	1584	5752	2572	1176	3748	6740	2760	9500
20.	Telangana	9204	2458	11662	5158	1366	6524	14362	3824	18186
21.	Uttarakhand	4378	0	4378	3344	0	3344	7722	0	7722
22.	Uttar Pradesh	297602	21512	319114	291986	28776	320762	589588	50288	639876
23.	West Bengal	16461	3066	19527	18814	9673	28487	35275	12739	48014
24.	Dadra & Nagar Haveli	100	0	100	0	0	0	100	0	100
25.	Daman & Diu	28	0	28	0	0	0	28	0	28
26.	Puducherry	88	0	88	210	0	210	298	0	298
<b>GRAND TOTAL</b>		<b>805943</b>	<b>147901</b>	<b>953844</b>	<b>675894</b>	<b>119848</b>	<b>795742</b>	<b>1481837</b>	<b>267749</b>	<b>1749586</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 2015-16
3. & : Data repeated from the year 2016-17.

## ANNEX - I (b): SAMPLE SIZE - KHARIF FOOD CROPS UNDER CES DURING 2019-20

Sl. No.	STATE	Number of Experiments Planned under the crops											
		Paddy	Jowar	Bajra	Maize	Ragi	Red-gram	Green-gram	Black-gram	Sugarca	Others	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	
1.	Andhra Pradesh	Ir.	3572	0	0	0	0	0	0	0	0	0	9672
			0	0	0	0	0	0	0	0	0	0	
		UI	232	0	0	0	0	0	0	0	0	0	
		Total	3804	310	498	426	270	1148	374	444	1622	776	
2.	Assam	Aut.	1500	0	0	0	0	0	0	0	700	0	5200
		Wint.	3000	0	0	0	0	0	0	0	0	0	
		Total	4500	0	0	0	0	0	0	0	700	0	
3.	Bihar	Bha.Hyv.	0	0	0	41245	0	0	0	0	0	0	85474
		Bha.Lv.	0	0	0		0	0	0	0	0	0	
		Bha.Ir.	0	0	0		0	0	0	0	0	0	
		Bha.UI.	0	0	0		0	0	0	0	0	0	
		Bha.	952	0	0		200	0	240	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	240	0	772	820			
4.	Chhattisgarh	Ir. Hyv.	1196	0	0	0	0	0	0	0	0	0	5052
		Ir.Lv.	642	0	0	0	0	0	0	0	0	0	
		UI.	1858	0	0	0	0	0	0	0	0	0	
		Total	3696	42	0	556	0	498	0	0	0	260	
5.	Goa	Kharif	190	0	0	0	0	0	0	0	110	170	470
6.	Gujarat	Ir.	2840	0	0	0	0	0	0	0	0	0	18844
		UI.	1958	0	0	0	0	0	0	0	0	0	
		Total	4798	842	2232	2040	218	2910	1368	2764	0	1672	
7.	Haryana *	REG.	990	0	1532	144	0	360	0	0	1070	0	4096
		Total	990	0	1532	144	0	360	0	0	1070	0	
8.	Himachal Pradesh		1626	0	0	2628	0	0	0	0	0	0	4254
9.	Jammu & Kashmir		1284	0	0	1314	0	0	0	0	0	456	3054
10.	Jharkhand &	Bha.	600	0	0	7830	0	0	0	0	0	0	28770
		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	
11.	Karnataka	Hyv.Ir.											66430
		Hyv.UI.											
		Tra.Ir.											
		Tra.UI.											
		Total	13010	3540	3896	12920	8202	7406	4016	1290	1130	11020	
12.	Kerala	Aut.	2268	0	0	0	0	0	0	0	0	0	27559
		Wint.	3144	0	0	0	0	0	0	0	0	0	
		Total	5412	0	0	0	0	0	0	0	45	22102	



Sl. No.	STATE	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	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	9712	5604	5534	2834	1208	8950	6922	5590	4840	0	51194
15.	<b>Meghalaya</b>	Aut.	316	0	0	0	0	0	0	0	0	0	
		Wint.	876	0	0	0	0	0	0	0	0	0	
		Total	1192	0	0	0	0	0	0	0	0	756	1948
16.	<b>Odisha</b>	Aut.	5837	0	0	2933	682	0	636	757	0	0	
		Wint.	28003	0	0	48	660	0	1181	1992	273	0	
		Total	33840	0	0	2981	1342	0	1817	2749	273	4655	47657
17.	<b>Punjab</b>		1982	0	0	362	0	0	0	0	698	0	3042
18.	<b>Rajasthan</b>		3944	10564	25736	11172	0	0	16244	7616	450	26204	101930
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	4168		
20.	<b>Telangana</b>	Ir.	2380										
		UI.	40										
		Total	2420	514	30	2054	30	2332	836	328	220	440	9204
21.	<b>Uttarakhand</b>		2674	0	0		1114		0		0	590	4378
22.	<b>Uttar Pradesh</b>		189064	6656	33800	28348	0	12252	2644	15248	9336	254	297602
23.	<b>West Bengal</b>	Aus.	2073	0	0	0	0	0	0	0	0	0	
		Aman.	12988	0	0	0	0	0	0	0	0	0	
		Total	15061	0	0	540	0	0	0	860	0	0	16461
24.	<b>Dadra &amp; N.Haveli</b>		78	0	0	0	22	0	0	0	0	0	100
25.	<b>Daman &amp; Diu</b>		20	0	8	0	0	0	0	0	0	0	28
26.	<b>Puducherry</b>		88	0	0	0	0	0	0	0	0	0	88
<b>Grand Total</b>			<b>364150</b>	<b>30258</b>	<b>73826</b>	<b>119578</b>	<b>13216</b>	<b>37842</b>	<b>34593</b>	<b>37511</b>	<b>21974</b>	<b>72995</b>	<b>805943</b>
% of area under CES to total area under the crop in the CES States (Ref.-Annex-V, Col.-4)			92	82	97	87	97	95	98	96	98	-	-

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

<b>Andhra Pradesh:-</b>	<b>Korra (204) , Horsegram (120) and Chillies (452) 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 (260).</b>
<b>Goa :-</b>	<b>Cowpea(170)</b>
<b>Gujarat:-</b>	<b>Moth (272) and Gwar (1400)</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 (2640),Navane (750),Save (340),Potato (570),Onion (2270),Chillies (790), Avare (560),Cowpea(1030),Tomato(1580),Turmeric(390) and Cabbage(100).</b>
<b>Kerala :-</b>	<b>Areanut (1620), Tapioca (1469), Cashewnut (1514), Pepper (1600), Cocoa (797), Banana (2330), Jackfruit (1618 ),Plantain (1622), Turmeric (1548), Pineapple (1554), Ginger (1411), Bitter guard(1627), Cowpea(1990) and Nutmeg(1402).</b>
<b>Madhya Pradesh:-</b>	<b>Kodon-Kutki (864).</b>
<b>Meghalaya:-</b>	<b>Ginger (756).</b>
<b>Odisha:-</b>	<b>Horsegram-Wint. (2455) and Potato-Wint. (2200).</b>
<b>Rajasthan :-</b>	<b>Chowla (1956), Moth (5964) and Gwar (18284)</b>
<b>Tamil Nadu:-</b>	<b>Horsegram (0) ,Varagu (124), Samai (100),Cowpea(112)</b>
<b>Telangana :-</b>	<b>Horsegram (0) , Korra (20), Chillies (420)</b>
<b>Uttarakhand:-</b>	<b>Sawan (590).</b>
<b>Uttar Pradesh:-</b>	<b>Sawan (176) and Kodan (78).</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.

## ANNEX- I (c) : SAMPLE SIZE - RABI FOOD CROPS UNDER CES 2019-20

Sl. No.	STATE		Number of experiments planned under crops									Total
			Paddy	Jowar	Wheat	Maize	Barley	Gram	Green gram	Black gram	Others	
1	2		3	4	5	6	7	8	9	10	11	12
1.	Andhra Pradesh	Ir	2976		0	0	0	0	0	0	0	
			0	572		554	0	1354	466	662	922	7506
		Total	2976	572	0	554	0	1354	466	662	922	7506
2.	Assam	Sum	2000	0	700	0	0	0	0	500	1004	4204
3.	Bihar	Rabi	0	0	0	41265	272	720	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	0
Total	440	0	41265	41805	272	720	504	0	6264	91270		
4.	Chhattisgarh	Hyv.Ir	0	0	582	0	0	0	0	0		
		Lv.Ir	0	0	166	0	0	0	0	0		
		Lv.UI	0	0	176	0	0	0	0	0		
		Total	0	0	924	0	22	594	0	0	902	2442
5.	Goa		190	0	0	0	0	0	0	0	190	380
6.	Gujarat	Ir	0	0	6089	0	0	0	0	0	0	
		UI	0	0	216	0	0	0		0	0	
		Total	380	260	6305	0	0	2385	200	80	6839	16449
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	1922	0	0	0	0	0	168	2090
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										
		Rabi Hyv.UI										
		Rabi Tra.Ir										
		Rabi Tra.UI										
		Rabi.Hyv.										
		Rabi.HYV-UI										
		Sum.Hyv. Ir										
		Sum. Tra. Ir.										
		Rabi comb	1478	10286	3854	3316	0	0	0	0	0	
		Summer Comb	3540	0	0	170	0	0	0	0	0	
Total	5018	10286	3854	3486	0	9410	110	130	7716	40010		
12.	Kerala	Rabi	0	0	0	0	0	0	0	0	0	
		Sum.	1608	0	0	0	0	0	0	0	0	
		Total	1608	0	0	0	0	0	0	0	0	1608
13.	Madhya Pradesh #	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	
		Total	0	0	5830	0	536	5330	0	0	1544	13240
14.	Maharashtra	Ir	0	0	0	0	0	0	0	0	0	
		UI	0	0	0	0	0	0	0	0	0	
		Sum.	772	0	0	0	0	0	0	0	0	
		Total	772	21802	8854	1158	0	13656	0	0	0	46242
15.	Meghalaya		0	0	0	0	0	0	0	0	234	234
16.	Odisha	Win.	0	0	0	0	0	0	0	0	0	
		Sum.	6188	0	60	340	0	0	2189	746	0	
		Total	6188	0	60	340	0	0	2189	746	104	9627
17.	Punjab		0	0	2332	0	252	92	0	0	0	2676
18.	Rajasthan	Ir	0	0	0	0	0	0	0	0	0	
		UI	0	0	0	0	0	0	0	0	0	
		Comb.	0	0	0	0	0	0	0	0	0	
		Total	0	0	38580	0	4952	18736	0	0	10024	72292

Sl. No.	STATE	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
19.	Tamil Nadu	300	640	0	176	0	0	308	312	836	2572
20.	Telangana	Reg.Ir	2180								
		Reg.									
		Total	2180	354	0	1608	0	696	130	52	138
21.	Uttarakhand	0	0	2668	0	676	0	0	0	0	3344
22.	Uttar Pradesh	Zaid	0	0	0	0	0	0	600	680	1280
		Total	0	0	229176	80	1986	13278	600	680	46186
23.	West Bengal	Sum.	11611	0	0	0	0	0	0	0	0
		Total	11611	0	1206	0	0	1113	706	0	4178
24.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
25.	Daman & Diu	0	0	0	0	0	0	0	0	0	0
26.	Puducherry	I.	140	0	0	0	0	0	0	0	0
		II.	70	0	0	0	0	0	0	0	0
		Total	210	0	0	0	0	0	0	0	0
Grand Total		33873	33914	366190	49207	10470	75756	5213	3162	98109	675894
% of area under CES to total area under the crop in the CES States. (Ref. Annex-v, col.-4)		94	79	99	75	84	98	83	44	-	-

Note :-

1. Crops included under "Others" are :-

Andhra Pradesh :-	Ragi (170), Horsegram (296), Chillies (402) and Rajma Beans (54) under regular Scheme.
Assam :-	Potato (1004)
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 (662), Potato (174), Chillies (12) and Onion (54) .
Goa:-	Cowpea(190)
Gujarat:-	Bajra-Sum.(2078), Cumin (2040), Fennel (688), Onion (Rabi:646, Sum:80), Banana (0), Garlic (342) and Potato (965)
Jammu & Kashmir :-	Potato (168).
Jharkhand:-	Redgram (660),Brinjal (480), Potato (7830),Tomato (540) , Onion (630) and Masur (720) .
Karnataka:-	Ragi-Rab.Hyv.i (1452),Sum.Hyv.(300), Horsegram (4584), Potato (250), Cowpea rabi(70). Summer(40) Onion- Rabi( 410), Summer (170) and Chillies-Rabi (0), Summer (0),Avare Rabi (100), Summer(0),Tomato Rabi(280)Summer(60)
Madhya Pradesh:-	Lakh (220), Chillies(80), Banana (138), Potato (432), Onion(642) and Papaya (32).
Meghalaya :-	Potato-Sum.(234).
Odisha:-	Ragi-Sum.(99) and Horsegram Sum. (5).
Tamil Nadu:-	Cumbu(204), Ragi(200), Horsegram(320) and Cowpea(112)
Rajasthan :-	Cumin (5812), Methi (1284), Masur (856) and Coriander (2072).
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 2019-20**

Sl. No.	S T A T E	Number of experiments planned under crops											Total	
		Groundnut	Sesamum	Castor	Cocunut	Niger	Cotton	Jute	Mesta	Sunflower	Soya-bean	Tobacco		
1	2	3	4	5	6	7	8	9	10	11	12		13	
1.	Andhra Pradesh	2604	270	232	0	0	952	0	200	196	104		4558	
2.	Assam	0	0	0	0	0	0	600	0	0	0		600	
3.	Bihar	0	0	0	0	0	0	200	200	0	112		512	
4.	Chhattisgarh	264	150	0	0	0	0	0	0	0	210		624	
5.	Goa	30	0	0	0	0	0	0	0	0	0		30	
6.	Gujarat	Ir	0	0	0	0	5451	0	0	0	0		0	
		UI	0	0	0	0	2584	0	0	0	0		0	
		Total	3498	1602	3569	0	0	8035	0	0	0	0	286	16990
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												
		UI												
		Total	8308	1880	150	0	0	3620	0	0	4614	1964	0	20536
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	0		
		UI	0	0	0	0	0	0	0	0	0	0		
		Comp.	0	0	0	0	0	0	0	0	0	0		
		Total	4276	2166	0	0	778	13620	0	0	1044	13392		35276
15.	Meghalaya	0	0	0	0	0	0	64	0	0	0		64	
16.	Odisha	Aut.	1068	130	0	0	0	0	38	0	0	0		
		Wint.	172	613	0	0	0	0	0	0	0	0		
		Total.	1240	743	0	0	0	0	38	0	0	0		2021
17.	Punjab	0	0	0	0	0	668	0	0	0	0		668	
18.	Rajasthan	7620	5568	0	0	0	7264	0	0	0	7320		27772	
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	198	40	150	0	0	1420	0	0	0	650		2458	
21.	Uttarakhand	0	0	0	0	0	0	0	0	0	0		0	
22.	Uttar Pradesh	7432	13468	0	0	0	80	0	0	0	532		21512	
23.	West Bengal	0	0	0	0	0	0	2898	168	0	0		3066	

Sl. No.	S T A T E	Number of experiments planned under crops											Total
		Groundnut	Sesamum	Castor	Cocunut	Niger	Cotton	Jute	Mesta	Sunflower	Soya-bean		
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		37124	27681	4101	2430	778	38125	3800	568	5950	27058	286	147901
% of area under CES to total area under the crop in the CES States. (Ref. Annex-v, Col.-4)		98	94	98	30	68	95	99	100	100	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 2019-20**

Sl. No.	S T A T E	Number Of Experiments Planned under the Crops												
		Groun Nut.	Sesa- mum	Rape & Mustar	Lin- seed	Saffl- ower	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	824	330	0	0	0	322	0	(N) 314	0	0	0	1790	
									(V) 370	0	0	0	370	
	Total	824	330	0	0	0	322	0	684	0	0	0	2160	
2.	Assam	0	0	1250	0	0	0	0	0	0	0	0	1250	
3.	Bihar	0	0	1008	0	0	0	0	0	0	0	0	1008	
4.	Chhatisgarh	0	0	384	252	0	0	0	0	0	0	0	636	
5.	Goa	60	0	0	0	0	0	0	0	0	0	0	60	
6.	Gujarat	1229	0	1206	0	0	0	0	0	332	0	0	2767	
7.	Haryana *	0	0	1040	0	0	230	0	0	0	0	0	1270	
8.	Himachal Pradesh	0	0	0	0	0	0	0	0	0	0	0	0	
9	Jammu & Kashmir	0	0	230	12	0	0	0	0	0	0	0	242	
10.	Jharkhand &	0	0	7830	0	0	0	0	0	0	0	0	7830	
11.	Karnataka	Rabi-Ir											0	
		Rabi UI											0	
		Sum.Ir											0	
		Rabi	130					4188						4318
		Sum	4864					1240						6104
		Total	4994	0	0	260	1770	5428	0	280	0	0	140	12872
12.	Kerala	0	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	336	0	16	0	0	0	1330
		Sum.	1516	0	0	0	0	774	0	0	0	0	0	2290
		Total	3416	316	0	616	708	1110	0	88	0	0	0	6254
15.	Meghalaya	0	0	0	0	0	0	0	0	0	0	0	0	
16.	Odisha	Wint.	0	0	2093	0	0	0	0	0	0	0	0	2093
		Sum.	1683	316	0	0	0	0	0	0	0	0	0	1999
		Total	1683	316	2093	0	0	0	0	0	0	0	0	4092
17.	Punjab	0	0	568	0	0	0	0	0	0	0	0	568	
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
		Total	0	0	28996	0	0	0	1640	0	4456	0	0	35092
19.	Tamil Nadu	460	256	0	0	0	204	0	0	0	0	256	1176	
20.	Telangana	1102	198	0	0	0	36	0	30	0	0	0	1366	
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
		Total	0	0	27794	692	0	170	0	120		0	0	28776
23.	West Bengal	764	3415	5369	125	0	0	0	0	0	0	0	9673	
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	

Sl. No.	S T A T E	Number Of Experiments Planned under the Crops											Total
		Ground Nut.	Sesamum	Rape & Mustard	Linseed	Safflower	Sunflower	Taramira	Tobacco	Isabgol	Castor leaf	Cotton	
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	14532	4831	78884	2877	2478	7500	1640	1202	4788	720	396	119848
	% of area under CES to total area under the crop in the CES States. (Ref. Annex-v, Col.4)	88	92	94	82	100	91	68	92	99	0.01	78	-

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 2019-20**

Sl. No.	STATE	AGENCY	Number of Centres			Attendance of Primary Staff.				
			Total	Covered by		Total Strength	Total Called	Total Attended		Trained by NSSO officer
				NSSO				In Numbers	In Percentage (%)	
				As training officers	As observers					
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	-	-	243	243	243	100	-
3.	Bihar	Revenue	38	-	-	9859	9859	6706	68	-
		Statistical		-	-					
		Agriculture		-	-					
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	-	-	23	20	20	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	-	-	2487	2142	2021	94	-
		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	-	-	-	-	-	-	-	-
16.	Odisha	Statistical	30	-	30	544	544	544	100	-

Sl. No.	STATE	AGENCY	Number of Centres			Attendance of Primary Staff.				
			Total	Covered by		Total Strength	Total Called	Total Attended		Trained by NSSO officer
				NSSO				In Numbers	In Percentage (%)	
				As training officers	As observers					
1	2	3	4	5	6	7	8	9	10	11
17.	Punjab	Agriculture (Kharif)	77	0	77	761	761	705	93	-
		Agriculture (Rabi)	77	0	77	691	690	499	72	-
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	831	831	788	95	-
20.	Telangana	Statistical	80	-	-	2664	2271	2173	96	-
		Agriculture								
21.	Uttarakhand	Revenue (Kharif)	65	-	-	1804	1804	1190	66	0
		Revenue (Plain)	49	-	-	1342	1342	979	73	N.A.
		Revenue (Hills)	16	-	-	462	462	191	41	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	-	-	239	239	239	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	1	-	-	5	5	5	100	-
		Revenue Department	1	-	-	6	6	6	100	-
		Statistical Department		-	-	-	-	-	-	-
26.	Puducherry	Statistical (Kharif)	2	-	2	22	10	10	100	-
		(Rabi-I)				22	11	11	100	
		(Rabi-II)				14	8	8	100	
Total			1895	131	735	91387	91421	76638	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.

(iv) @ : Figure repeated from the year 2018-19.

**ANNEX III(a):SUPERVISION OF FIELD WORK-ALL CROPS (SEASON-WISE) UNDER CES 2019-20**

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experiments 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	9672	310	3	201	2	Not Applicable				293	3	286	3		
			Non-Food	4558	150	3	136	3					149	3	143	3		
			Comb.	14230	460	3	337	2					442	3	429	3		
		Rabi	Food	7506	226	199	226	3					171	2	83	1		
			Non-Food	2160	229	11	199	9					40	2	26	1		
			Comb.	9666	455	5	425	4					211	2	109	1		
		Total	23896	915	4	762	3	653					3	538	2			
2.	Assam	Kharif	Food	5200	684	13	680	13	Not Applicable				156	3	156	3		
			Non-Food	600	96	16	92	15					24	4	24	4		
			Comb.	5800	780	13	772	13					180	3	180	3		
		Rabi	Food	4204	416	10	412	10					78	2	78	2		
			Non-Food	1250	170	14	156	12					50	4	50	4		
			Comb.	5454	586	11	568	10					128	2	128	2		
		Total	11254	1366	12	1340	12	308					3	308	3			
3.	Bihar	Kharif	Food	85474	336	0	336	0	0	0	0	0	252	0	245	0		
			Non-Food	512	Not Available													
			Comb.	85986	336	0	336	0	0	0	0	0	252	0	245	0		
		Rabi	Food	91270	330	0.4	330	0.4	0	0	0	0	44	0	44	0		
			Non-Food	1008	40	4	40	4	Not Available				40	4	40	4		
			Comb.	92278	370	0.4	370	0.4	0	0	0	0	84	0	84	0		
		Total	178264	706	0.4	706	0	0	0	0	0	336	0.2	329	0.2			
4.	Chhattisgarh	Kharif	Food	5052	132	3	132	3	1770	35	1718	34	176	3	176	3		
			Non-Food	624	0	0	0	0	152	24	150	24	Not Planned					
			Comb.	5676	132	2	132	2	1922	34	1868	33	176	3	176	3		
		Rabi	Food	2442	0	0	0	0	868	36	808	33	2	0	2	0		
			Non-Food	636	0	0	0	0	176	28	160	25	24	4	24	4		
			Comb.	3078	0	0	0	0	1044	34	968	31	26	1	26	1		
		Total	8754	132	2	132	2	2966	34	2836	32	202	2	202	2			
5.	Goa @	Kharif	Food	470	79	17	10	2	Not Applicable									
			Non-Food	30	0	0	0	0										
			Comb.	500	79	7	10	2										
		Rabi	Food	380	0	0	0	0										
			Non-Food	60	0	0	0	0										
			Comb.	440	0	0	0	0										
Total	940	79	8	10	1													
6.	Gujarat^	Kharif	Food	18844	5238	28	4974	26	13286	71	12974	69	223	1	202	1		
			Non-Food	16990	6065	36	5891	35	8707	51	7918	47	378	2	350	2		
			Comb.	35834	11303	32	10865	30	21993	61	20892	58	601	2	552	2		
		Rabi	Food	16449	7331	45	6951	42	14291	87	13819	84	57	0.35	55	0.33		
			Non-Food	2767	519	19	420	15	780	28	780	28	25	1	25	1		
			Comb.	19216	7850	41	7371	38	15071	78	14599	76	82	0.43	80	0.42		
		Total	55050	19153	35	18236	33	37064	67	35491	64	683	1	632	1			

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experiments 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
7.	Haryana *	Kharif	Food	4096	116	3	108	3	512	13	498	12	258	6	242	6
			Non-Food	940	16	2	14	1	124	13	122	13	54	6	54	6
			Comb.	5036	132	3	122	2	636	13	620	12	312	6	296	6
		Rabi	Food	3278	56	2	54	2	416	13	402	12	248	8	1	0
			Non-Food	1270	32	3	24	2	202	16	174	14	64	5	2	0
			Comb.	4548	88	2	78	2	618	14	576	13	312	7	3	0
		Total		9584	220	2	200	2	1254	13	1196	12	624	7	299	3
8.	Himachal Pradesh **	Kharif	Food	4254	196	5	196	5	122	3	122	3	126	3	126	3
			Non-Food	Not Planned												
			Comb.	4254	196	5	196	5	122	3	122	3	126	3	126	3
		Rabi	Food	4052	218	5	218	5	78	2	78	2	0	0	0	0
			Non-Food	Not Planned												
			Comb.	4052	218	5	218	5	78	2	78	2	0	0	0	0
		Total		8306	414	5	414	5	200	2	200	2	126	2	126	2
9.	Jammu & Kashmir	Kharif	Food	3054	200	7	158	5	Not Available				96	3	96	3
			Non-Food	Not Available												
			Comb.	3054	200	7	158	5	Not Available				96	3	96	3
		Rabi	Food	2090	168	8	126	6	Not Available				0	0	0	0
			Non-Food	242	Not Available				Not Available				Not Planned			
			Comb.	2332	168	7	126	5	Not Available				0	0	0	0
		Total		5386	368	7	284	5	Not Available				96	2	96	2
10.	Jharkhand \$	Kharif	Food	28770	92	0.32	92	0.32	Not Available				120	0.42	120	0.42
			Non-Food	0	Not Available				Not Available				Not Planned			
			Comb.	28770	92	0.32	92	0.32	Not Available				120	0.42	120	0.42
		Rabi	Food	36210	86	0.24	86	0.24	Not Available				4	0.01	4	0.01
			Non-Food	7830	Not Available				Not Available				14	0.18	14	0.18
			Comb.	44040	86	0.20	86	0.20	Not Available				18	0.04	18	0.04
		Total		72810	178	0.24	178	0.24	Not Available				138	0.19	138	0.19
11.	Karnataka ^	Kharif	Food	66430	3440	5	3440	5	5942	9	5942	9	300	0.5	235	0
			Non-Food	20536	755	4	755	4	1396	7	1396	7	109	1	84	0
			Comb.	86966	4195	5	4195	5	7338	8	7338	8	409	0	319	0
		Rabi	Food	40010	1650	4	1650	4	3430	9	3430	9	171	0.4	124	0.3
			Non-Food	12872	227	2	227	2	433	3	433	3	31	0	15	0
			Comb.	52882	1877	4	1877	4	3863	7	3863	7	202	0	139	0.3
		Total		139848	6072	4	6072	4	11201	8	11201	8	611	0	458	0
12.	Kerala	Kharif	Food	27559	9442	34	1742	6	Not Applicable				347	1	338	1
			Non-Food	2524	2141	85	0	0	Not Applicable				46	2	46	2
			Comb.	30083	11583	39	1742	6	Not Applicable				393	1	384	1
		Rabi	Food	1608	762	47	666	41	Not Applicable				49	3	31	2
			Non-Food	720	720	100	0	0	Not Applicable				Not Planned			
			Comb.	2328	1482	64	666	29	Not Applicable				49	2	31	1
		Total		32411	13065	40	2408	7	Not Applicable				442	1	415	1

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experiments 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	362	4	356	4
			Non-Food	6166	88	1.4	88	1.4	1883	31	1883	31	224	4	222	4
			Comb.	15434	133	0.9	133	0.9	3737	24	3737	24	586	4	578	4
		Rabi	Food	13240	169	1.3	169	1.3	5262	40	5262	40	75	1	75	1
			Non-Food	2036	25	1	25	1	804	39	804	39	56	3	56	3
			Comb.	15276	194	1.3	194	1.3	6066	40	6066	40	131	1	131	1
		Total				30710	327	1.1	327	1.1	9803	32	9803	32	717	2
14.	Maharashtra	Kharif	Food	51194	Not Available								461	1	196	0
			Non-Food	35276									259	1	172	0
			Comb.	86470									720	1	368	0
		Rabi	Food	46242									165	0	147	0
			Non-Food	6254									0	0	0	0
			Comb.	52496									165	0	147	0
		Total											138966	885	1	515
15.	Meghalaya @@	Kharif	Food	1948	104	5	78	4	6	0	6	0	Not Applicable			
			Non-Food	64	Not Available											
			Comb.	2012	104	5	78	4	6	0	6	0				
		Rabi	Food	234	Not Available											
			Non-Food	No Crop Reported												
			Comb.	234	0	0	0	0	0	0	0	0				
Total				2246	104	5	78	3	6	0	6	0				
16.	Odisha	Kharif	Food	47657	3432	7	3432	7	8797	18	8797	18	616	1	616	1
			Non-Food	2021	207	10	207	10	77	4	77	4	0	0	0	0
			Comb.	49678	3639	7	3639	7	8874	18	8874	18	616	1	616	1
		Rabi	Food	9627	717	7	717	7	1427	15	1427	15	15	0	15	0
			Non-Food	4092	372	9	372	9	149	4	149	4	Not Planned			
			Comb.	13719	1089	8	1089	8	1576	11	1576	11	15	0	15	0
		Total				63397	4728	7	4728	7	10450	16	10450	16	631	1
17.	Punjab	Kharif	Food	3042	154	5	154	5	470	15	436	14	275	9	273	9
			Non-Food	668	48	7	48	7	126	19	106	16	72	11	72	11
			Comb.	3710	202	5	202	5	596	16	542	15	347	9	345	9
		Rabi	Food	2676	120	4	112	4	380	14	346	13	72	3	4	0
			Non-Food	568	18	3	18	3	70	12	64	11	15	3	3	1
			Comb.	3244	138	4	130	4	450	14	410	13	87	3	7	0
Total				6954	340	5	332	5	1046	15	952	14	434	6	352	5
18.	Rajasthan ***	Kharif	Food	101930	1856	2	1336	1	93139	91	65318	64	322	0.32	306	0.30
			Non-Food	27772	426	2	356	1	23843	86	16167	58	151	0.54	151	0.54
			Comb.	129702	2282	2	1692	1	116982	90	81485	63	473	0.36	457	0.35
		Rabi	Food	72292	1169	2	1169	2	42324	59	42324	59	125	0.17	62	0.09
			Non-Food	35092	531	2	531	2	20762	59	20762	59	29	0.08	25	0.07
			Comb.	107384	1700	2	1700	2	63086	59	63086	59	154	0.14	87	0.08
Total				237086	3982	2	3392	1	180068	76	144571	61	627	0.26	544	0.23

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experiments planned	Number & percentage of experiments Supervised by																			
					State Statistical Department				Other State Department				NSSO											
					Total	%	At Harvest	%	Total	%	At Harvest	%	Total	%	At Harvest	%								
					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	145	6	128	5								
			Non-Food	1176	1024	87	1024	87	59	5	59	5	91	8	73	6								
			Comb.	3748	3261	87	3261	87	188	5	188	5	236	6	219	6								
		Total		9500	8215	86	8215	86	531	6	531	6	655	7	618	7								
20.	Telangana	Kharif	Food	9204	928	10	928	10	Not Available				236	3	219	2								
			Non-Food	2458	249	10	249	10					160	7	153	6								
			Comb.	11662	1177	10	1177	10					396	3	372	3								
		Rabi	Food	5158	553	11	553	11					Not Planned				114	2	26	1				
			Non-Food	1366	136	10	136	10									Not Planned							
			Comb.	6524	689	11	689	11													114	2	26	0
		Total		18186	1866	10	1866	10	510	3	398	2												
21.	Uttarakhand	Kharif	Food	4378	328	7	328	7	441	10	441	10	87	2	86	2								
			Non-Food	Not Available																				
			Comb.	4378	328	7	328	7	441	10	441	10	87	2	86	2								
		Rabi	Food	3344	262	8	262	8	546	16	546	16.3	0	0	0	0								
			Non-Food	Not Available																				
			Comb.	3344	262	8	262	8	546	16	546	16	0	0	0	0								
		Total		7722	590	8	590	8	987	13	987	13	87	1	86	1								
22.	Uttar Pradesh	Kharif	Food	297602	Not Available								1290	0.4	1270	0.4								
			Non-Food	21512									39	0.18	36	0.17								
			Comb.	319114									1329	0.42	1306	0.41								
		Rabi	Food	291986									227	0.08	173	0.06								
			Non-Food	28776									59	0.21	55	0.19								
			Comb.	320762									286	0.09	228	0.07								
		Total		639876	1615	0.25	1534	0.24																
23.	West Bengal	Kharif	Food	16461	896	5	896	5	66	0.4	66	0.4	257	2	257	2								
			Non-Food	3066	307	10	307	10	3	0.1	3	0.1	1256	41	1147	37								
			Comb.	19527	1203	6	1203	6	69	0.4	69	0.4	1513	8	1404	7								
		Rabi	Food	18814	301	2	301	2	36	0.2	36	0.2	10	0	10	0								
			Non-Food	9673	409	4	409	4	0	0.0	0	0.0	0	0	0	0								
			Comb.	28487	710	2	710	2	36	0.1	36	0.1	10	0	10	0								
		Total		48014	1913	4	1913	4	105	0.2	105	0.2	1523	3	1414	3								
24.	Dadra & Nagar Haveli @	Kharif	Food	100	44	44	44	44	48	48	48	48	Not Applicable											
			Non-Food	No Planning								No Planning												
			Comb.	100	44	44	44	44	48	48	48	48												
		Rabi	Food	No Planning								No Planning												
			Non-Food	No Planning								No Planning												
			Comb.	No Planning								No Planning												
		Total		100	44	44	44	44	48	48	48	48												

Sl. No.	S T A T E	Season	Food / Non Food Crops	Number of experiments 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 Applicable											
			Non-Food	No Planning																				
			Comb.	28	8	29	8	29	20	71	20	71												
		Rabi	Food	No Planning																				
			Non-Food	No Planning																				
			Comb.	No Planning																				
Total				28	8	29	8	29	20	71	20	71												
26.	Puducherry	Kharif	Food	88	88	100	88	100	Not Applicable															
			Non-Food	Not Available																				
			Comb.	88	88	100	88	100										10	11	10	11			
		Rabi	Food	210	210	100	210	100										10	5	10	5			
			Non-Food	Not Available																				
			Comb.	210	210	100	210	100										10	5	10	5			
		Total				298	298	100										298	100	20	7	20	7	
		TOTAL %		Kharif	Food	805943	31724	7										22982	5	126737	34	98504	26	6584
Non-Food	147901				11926	13	9521	11	36390	46	27901	35	3019	2	2742	2								
Comb.	953844				43650	8	32503	6	163127	36	126405	28	9603	1	8864	1								
Rabi	Food			675894	16981	5	16449	5	69187	25	68607	25	1782	0	1072	0								
	Non-Food			119848	4452	6	3581	5	23435	34	23385	34	538	0	408	0								
	Comb.			795742	21433	5	20030	5	92622	27	91992	27	2320	0	1480	0								
Grand Total				1749586	65083	7	52533	5	255749	32	218397	27	11923	0.7	10344	0.6								

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.
- (x) ^ : Data repeated from the year 2018-19

## ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2019-20

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>I. Paddy</b>															
1.	Andhra Pradesh	Kharif	3804	160	4	120	3	Not Available				153	4	149	4
		Rabi	2976	120	4	97	3					111	4	26	1
2.	Assam	Aut.	1500	144	10	144	10	Not Available				34	2	34	2
		Wint.	3000	442	15	438	15					118	4	118	4
		Sum.	2000	172	9	172	9					18	1	18	1
3.	Bihar	Bha.	952	52	5	52	5	Not Available				30	3	30	3
		Agh.	41245	244	1	244	1	0	0	0	0	172	0.4	165	0.4
		Gar.	440	24	5	24	5	Not Available				0	0	0	0
4.	Chhattisgarh		3696	82	2	82	2	1382	37	1346	36	80	2	80	2
5.	Goa @	Kharif	190	58	31	8	4	Not Available				Not covered in I.C.S.			
		Rabi	190	0	0	0	0								
6.	Gujarat ^	Kharif	4798	1267	26	1267	26	4085	85	4085	85	60	1.3	60	1.3
		Sum.	380	Not Available											
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	51	3	51	3
9.	Jammu & Kashmir		1284	102	8	78	6	Not Available				30	2	30	2
10.	Jharkhand \$\$	Bha.	600	20	3	20	3	Not Available				20	3	20	3
		Agh.	17520	52	0.3	52	0.30					80	0.5	80	0.5
11.	Karnataka	Kharif	13010	759	6	759	6	1207	9	1207	9	105	1	94	1
		Rabi	1478	72	5	72	5	85	6	85	6	Not covered in I.C.S.			
		Sum.	3540	173	5	173	5	254	7	254	7	38	1	7	0.2
12.	Kerala	Aut.	2268	1128	50	893	39	Not Available				98	4	98	4
		Wint.	3144	1564	50	1308	42					90	3	90	3
		Sum.	1608	762	47	666	41					49	3	31	2
13.	Madhya Pradesh #		2760	14	0.5	14	0.5	722	26	722	26	100	4	100	4
14.	Maharashtra	Kharif	9712	Not Available								70	1	51	1
		Sum.	772									Not covered in I.C.S.			
15.	Meghalaya @	Aut.	316	17	5	13	4		0		0				
		Wint.	876	48	5	36	4	4	0	4	0				
16.	Odisha	Aut.	5837	618	11	618	11	1530	26	1530	26	217	4	217	4
		Wint.	28003	1656	6	1656	6	6878	25	6878	25	260	1	260	1
		Sum.	6188	534	9	534	9	1341	22	1341	22	12	0	12	0
17.	Punjab		1982	122	6	112	6	378	19	346	17	187	9	187	9
18.	Rajasthan ***	Kharif	3944	87	2	54	1	2902	74	1796	46	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	24	8	17	6
20.	Telangana	Kharif	2420	241	10	241	10	0	0	0	0	70	3	65	3
		Rabi	2180	237	11	237	11	0	0	0	0	76	3	6	0
21.	Uttarakhand		2674	214	8	214	8	625	23	625	23	48	2	47	2
22.	Uttar Pradesh		189064	Not Available								660	0.3	658	0.3
23.	West Bengal	Aus.	2073	234	11	234	11	0	0.0	0	0.0	97	5	97	5
		Aman	12988	589	5	589	5	66	0.5	66	0.5	160	1	160	1
		Sum.	11611	100	1	100	1	36	0.31	36	0.31	10	0	10	0
24.	Dadra and Nagar Haveli ***	Kharif	78	34	44	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	88	88	100	88	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			398023	14276	4	13487	3	21902	6	20722	5	3539	0.9	3279	0.824



**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2019-20**

Sl. No	S T A T E	Season	Number of Expts Planned	No. of Experiments Supervised by											
				State Statistical Department				Other State Department				N.S.S.O.			
				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	310	Not Available											
		Rabi	572	Not Available											
2.	Chhattisgarh		42	0	0	0	0	42	100	42	100	Not covered in I.C.S.			
3.	Gujarat	Kharif	842	55	7	29	3	237	28	237	28	Not covered in I.C.S.			
		Rabi	260	Not Available											
4.	Karnataka	Kharif	3540	71	2	71	2	136	4	136	4	26	1	14	0.40
		Rabi	10286	406	4	406	4	816	8	816	8	60	1	54	0.52
		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	96	5	92	5
6.	Maharashtra	Kharif	5604	Not Available											
		Rabi	21802	Not Available											
7.	Rajasthan ***	Kharif	10564	199	2	174	2	9886	94	7517	71	57	0.54	55	0.52
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	40	6	36	6
9.	Telangana	Kharif	514	53	10	53	10	0	0	0	0	40	8	38	7
		Rabi	354	39	11	39	11	0	0	0	0	38	11	20	6
10.	Uttar Pradesh		6656	Not Available											
<b>Total</b>			<b>64172</b>	<b>1775</b>	<b>3</b>	<b>1724</b>	<b>3</b>	<b>11613</b>	<b>18</b>	<b>9244</b>	<b>14</b>	<b>562</b>	<b>1</b>	<b>479</b>	<b>1</b>
<b>3. BAJRA.</b>															
1.	Andhra Pradesh.	Kharif	498	Not Planned											
2.	Gujarat	Kharif	2232	297	13	288	13	505	23	505	23	100	4	91	4
		Sum.	2078	486	23	486	23	769	37	769	37	Not Available			
			1532	44	3	40	3	186	12	182	12	102	7	102	7
4.	Karnataka	Kharif	3896	207	5	207	5	326	8	326	8	31	1	21	1
5.	Madhya Pradesh #		320	1	0.3	1	0.3	70	22	70	22	Not covered in I.C.S.			
6.	Maharashtra	Kharif	5534	Not Available											
7.	Rajasthan ***		25736	408	2	304	1	22770	88	16428	64	58	0.2	57	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		30	3	10	3	10	0	0	0	0	0	0	0	0
10.	Uttar Pradesh		33800	Not Available											
11.	Daman & Diu @		8	8	100	8	100	0	0	0	0	Not covered in I.C.S.			
<b>Total</b>			<b>76108</b>	<b>1841</b>	<b>2</b>	<b>1724</b>	<b>2</b>	<b>24648</b>	<b>32</b>	<b>18302</b>	<b>24</b>	<b>569</b>	<b>0.7</b>	<b>505</b>	<b>0.7</b>
<b>4. MAIZE.</b>															
1.	Andhra Pradesh	Kharif	426	7	3	6	3	Not Available				Not covered in I.C.S.			
		Rabi	554	10	1	8	1	Not Available				Not covered in I.C.S.			
2.	Bihar	Bha.	41245	40	0	40	0	Not Available				17	0.0	17	0.04
		Rabi	41265	Not Available				Not Available				Not covered in I.C.S.			
		Gar.	540	Not Available											
3.	Chhattisgarh		556	38	7	38	7	160	29	154	28	40	7	40	7
4.	Gujarat		2040	1818	89	1589	77.89	1445	71	1445	71	38	2	26	1.3
5.	Haryana *		144	Not Available				8	6	8	6	16	11	16	11
6.	Himachal Pradesh **		2628	122	5	122	5	86	3	86	3	75	3	75	3
7.	Jammu & Kashmir		1314	98	7	80	6	Not Available				66	5	66	5
8.	Jharkhand \$\$	Bha.	7830	20	0.26	20	0.26	Not Available				20	0.3	20	0.3
9.	Karnataka	Kharif	12920	676	5	676	5	891	7	891	7	30	0.2	22	0.2
		Rabi	3316	100	3	100	3	146	4	146	4	Not covered in I.C.S.			
		Sum.	170	17	10	17	10	10	6	10	6	Not covered in I.C.S.			
10.	Madhya Pradesh #		1928	10	0.5	10	0.5	394	20	394	20	80	4	80	4
11.	Maharashtra	Kharif	2834	Not Available											
		Rabi	1158	Not Available											

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Sl. No	STATE	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.	2933	306	10	306	10	151	5	151	5	40	1	40	1
Wint.		48	7	15	7	15	4	8	4	8	Not covered in I.C.S.				
Sum.		340	28	8	28	8	1	0	1	0					
13.	Punjab		362	30	8	30	8	66	53	66	18	34	9	34	9
14.	Rajasthan ***	Kharif	11172	188	2	156	1	11705	105	7841	70	49	0.4	47	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	2054	207	10	207	10	0	0	0	0	50	2	50	2
		Rabi	1608	165	10	165	10	0	0	0	0	0	0	0	0
17.	Uttar Pradesh	Kharif	28348	Not Available								168	1	160	1
		Rabi	80									Not covered in I.C.S.			
18.	West Bengal		540	41	8	41	8	Not Available							
	Total		168785	4304	3	4022	2	15089	9	11219	7	760	0.5	730	0.4
<b>5. RAGI.</b>															
1.	Andhra Pradesh	Kharif	270	2	1	2	1	Not Available				Not covered in I.C.S.			
		Rabi	170	5	2	5	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		218	20	9	20	9	80	37	80	37	Not covered in I.C.S.			
5.	Jharkhand \$\$		450	Not Available								Not covered in I.C.S.			
6.	Karnataka	Kharif	8202	544	7	544	7	840	10	840	10	24	0.3	24	0.3
		Rabi	1452	56	4	56	4	69	5	69	5	Not covered in I.C.S.			
		Sum.	300	14	5	14	5	20	7	20	7				
7.	Maharashtra		1208	Not Available											
8.	Odisha	Aut.	682	58	9	58	9	1	0	1	0	Not covered in I.C.S.			
		Wint.	660	14	2	14	2	0	0	0	0				
		Sum.	99	9	9	9	9	1	1	1	1				
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	3	10	3	10	0	0	0	0	Not covered in I.C.S.			
11.	Uttarakhand		1114	106	10	106	10	128	11	128	11	39	4	39	4
12.	Dadra and Nagar Haveli ***		22	10	45	10	45	4	55	4	55	Not covered in I.C.S.			
	Total		15437	1154	7	1154	7	1161	8	1161	8	103	1	103	1
<b>6. WHEAT.</b>															
1.	Assam		700	16	2	16	2	Not Available				0	0	0	0
2.	Bihar		41265	226	1	226	1	0	0	0	0	4	0	4	0
3.	Chhattisgarh		924	0	0	0	0	168	18	152	16	0	0	0	0
4.	Gujarat		6305	3039	48	2904	46	4800	76	4800	76	42	0.67	40	0.63
5.	Haryana *		2200	52	2	50	2	310	14	298	14	160	7	1	0
6.	Himachal Pradesh **		2794	166	6	166	6	60	2	60	2	0	0	0	0
7.	Jammu & Kashmir		1922	168	9	126	7	Not Available				0	0	0	0
8.	Jharkhand \$\$		17520	32	0.2	32	0.2	Not Available				2	0.01	2	0.01
9.	Karnataka		3854	175	5	175	5	249	6	249	6	40	1	34	0.88
10.	Madhya Pradesh #		5830	81	1.4	81	1.4	2826	48	2826	48	37	1	37	1
11.	Maharashtra		8854	Not Available								39	0	39	0
12.	Odisha	Sum.	60	8	13	8	13	1	0	1	0				
13.	Punjab		2332	106	5	98	4	366	16	338	14	72	3	4	0
14.	Rajasthan ***		38580	621	1.6	621	1.6	25202	65	25202	65	51	0.1	7	0.0
15.	Uttarakhand		2668	262	10	262	10	506	19	506	19	0	0	0	0
16.	Uttar Pradesh		229176	Not Available								60	0.03	32	0.01
17.	West Bengal		1206	2	0	2	0	0	0.0	0	0.0	0	0	0	0
	Total		366190	4954	1	4767	1	34488	9	34432	9	507	0.14	200	0.055
<b>7. BARLEY</b>															
1.	Bihar		272	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		22	Not Available								Not covered in I.C.S.							
3.	Haryana *		516	4	1	4	1	40	8	40	8	22	4	0	0				
4.	Himachal Pradesh **		1258	52	4	52	4	18	1	18	1	0	0	0	0				
5.	Jharkhand \$\$		Not Available																
6.	Madhya Pradesh #		536	13	2	13	2	147	27	147	27	Not covered in I.C.S.							
7.	Punjab		252	6	2	6	2	12	5	8	3	0	0	0	0				
8.	Rajasthan ***		4952	254	5	254	5	3876	78	3876	78	22	0	11	0				
9.	Uttarakhand		676	0	0	0	0	40	6	40	6	Not covered in I.C.S.							
10.	Uttar Pradesh		1986	Not Available															
11.	West Bengal		Not Available																
Total			10470	329	3	329	3	4133	39	4129	39	44	0	11	0				
8.GRAM ( BENGALGRAM)																			
1.	Andhra Pradesh	Rabi	1354	60	4	60	4	Not Available				60	4	57	4				
2.	Bihar		720	40	6	40	6	0	0	0	0	2	0	2	0				
3.	Chhattisgarh		594	0	0	0	0	218	37	212	36	2	0	2	0				
4.	Gujarat		2385	288	12	288	12	412	17	412	17	15	1	15	1				
5.	Haryana *		562	Not Available				66	12	64	11	66	12	0	0				
6.	Jharkhand \$\$		7830	16	0.20	16	0.20	Not Available				2	0.03	2	0.03				
7.	Karnataka		9410	319	3	319	3	780	8	780	8	33	0.35	29	0.31				
8.	Madhya Pradesh #		5330	67	1	67	1	2223	42	2223	42	38	1	38	1				
9.	Maharashtra		13656	Not Available								53	0	46	0				
10.	Punjab		92	8	9	8	9	2	2	0	0	0	0	0	0				
11.	Rajasthan ***		18736	88	0	88	0	7724	41	7724	41	37	0.20	29	0.15				
12.	Telangana	Rabi	696	69	10	69	10	0	0	0	0	0	0	0	0				
13.	Uttar Pradesh		13278	Not Available								20	0.2	2	0.0				
14.	West Bengal		1113	4	0	4	0	Not Available				Not covered in I.C.S.							
Total			75756	959	1	959	1	11425	15	11415	15	328	0	222	0.293				
9.REDGRAM (TUR/ARHAR)																			
1.	Andhra Pradesh	Kharif	1148	50	4	38	3					46	4	46	4				
2.	Bihar	Rabi	616	40	6	40	6	Not Available				38	6	38	6				
3.	Chhattisgarh		498	12	6	12	6	140	28	136	27	16	3	16	3				
4.	Gujarat		2910	514	18	514	18	589	20	589	20	25	1	25	1				
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				0	0	0	0				
7.	Karnataka		7406	498	7	498	7	860	12	860	12	30	0	22	0				
8.	Madhya Pradesh #		1650	8	0.5	8	0.5	180	11	180	11	46	3	46	3				
9.	Maharashtra		8950	Not Available								80	1	67	1				
10.	Tamil Nadu		336	292	87	292	87	17	5	17	5	Not covered in I.C.S.							
11.	Telangana		2332	237	10	237	10	0	0	0	0	38	3	33	3				
12.	Uttar Pradesh		12252	Not Available								15	0.12	7	0.06				
13.	West Bengal	Rabi	181	0	0	0	0	Not Available											
Total			39299	1677	4	1665	4	1826	5	1820	5	334	1	300	1				
10. GREENGRAM (MOONG)																			
1.	Andhra Pradesh	Kharif	374	6	1	6	1	Not Available				Not covered in I.C.S.							
		Rabi	466	9	1	8	1												
2.	Bihar	Kharif	240	Not Available												Not covered in I.C.S.			
		Rabi	504																
3.	Gujarat	Kharif	1368	Not Available								Not covered in I.C.S.							
		Sum.	200																
4.	Karnataka	Kharif	4016	182	5	182	5	277	7	277	7					26	0.6	19	0.5
		Rabi	110	8	7	8	7	13	12	13	12					Not covered in I.C.S.			

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Sl. No	STATE	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	6922	Not Available								91	1	3	0.0
6.	Odisha	Aut.	636	78	12	78	12	7	1	7	1	Not covered in I.C.S.			
		Wint.	1181	143	12	143	12	60	5	60	5				
		Sum.	2189	118	5	118	5	52	2	52	2	3	0	3	0
7.	Rajasthan ***	Kharif	16244	248	2	190	1	13434	83	9312	57	44	32	42	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	16	5	12	4
9.	Telangana	Kharif	836	87	10	87	10	0	0	0	0	38	5	33	4
		Rabi	130	18	14	18	14	0	0	0	0	0	0	0	0
10.	Uttar Pradesh	Kharif	2644	Not Available								Not covered in I.C.S.			
		Zaid	600									40	7	34	6
11.	West Bengal	Sum.	706	0	0	0	0	Not Available				Not covered in I.C.S.			
Total			39806	1279	3	1220	3	13865	35	9743	24	274	0.69	162	0.407
11. BLACKGRAM (URD/MATHIKALAI)															
1.	Andhra Pradesh	Kharif	444	9	2	7	2	Not Available				Not covered in I.C.S.			
		Rabi	662	8	1	6	1								
2.	Assam	Rabi	500	86	17	82	16	Not Available				24	5	24	5
3.	Gujarat	Kharif	2764	Not Available								Not covered in I.C.S.			
		Sum.	80												
4.	Jharkhand \$\$		510	Not Available								Not covered in I.C.S.			
5.	Karnataka	Kharif	1290	89	7	89	7	159	12	159	12	Not covered in I.C.S.			
		Rabi	130	14	11	14	11	6	5	6	5				
6.	Maharashtra	Kharif	5590	Not Available								68	1	4	0
7.	Odisha	Aut.	757	54	7	54	7	7	1	7	1	Not covered in I.C.S.			
		Wint.	1992	163	8	163	8	49	2	49	2	31	2	31	2
		Sum.	746	20	3	20	3	31	4	31	4	Not covered in I.C.S.			
8.	Rajasthan ***	Kharif	7616	121	2	94	1	4837	64	3597	47	40	0.5	37	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	27	9	25	8
10.	Telangana	Kharif	328	34	10	34	10	0	0	0	0	0	0	0	0
		Rabi	52	12	23	12	23	0	0	0	0	0	0	0	0
11.	Uttar Pradesh	Kharif	15248	Not Available								60	0.4	58	0.4
		Zaid	680									40	6	38	6
12.	West Bengal		860	32	4	32	4	Not Available							
Total			40673	1010	2	975	2	5111	13	3871	10	326	0.8	247	0.607
12. LAKH (KHESARI)															
1.	Bihar		420	Not Available								Not covered in I.C.S.			
2.	Chhattisgarh		662	0	0	0	0	254	38	234	35	Not covered in I.C.S.			
3.	Madhya Pradesh #		220	8	4	8	4	66	30	66	30	Not covered in I.C.S.			
4.	West Bengal		408	9	2	9	2	Not Available							
Total			1710	17	1	17	1	320	19	300	18	Not covered in I.C.S.			
13. MASUR															
1.	Bihar		980	Not Available								Not covered in I.C.S.			
2.	Jharkhand \$\$		720	Not Available								Not covered in I.C.S.			
3.	Rajasthan ***		856	21	2	21	2	298	35	298	35	15	0.1	15	0.1
4.	Uttar Pradesh	Rabi	15732	Not Available								15	0.1	15	0.1
5.	West Bengal		2878	163	6	163	6	0	0.0	0	0.0	Not covered in I.C.S.			
Total			21166	184	1	184	1	298	1	298	1	30	0.1	30	0.1
14. HORSEGRAM (KULTHI)															
1.	Andhra Pradesh	Kharif	120	4	3	4	4	Not Available				Not covered in I.C.S.			
		Rabi	296	6	2	6	2								

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Sl. No	STATE	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	2640	118	4	118	4	150	6	150	6	Not covered in I.C.S.							
Rabi		4584	264	6	264	6	262	6	262	6									
3.	Odisha	Wint.	2455	149	6	149	6	18	1	18	1	32	1	32	1				
Sum.		5	0	0	0	0	0	0	0	0	0	Not covered in I.C.S.							
4.	Tamil Nadu		320	278	87	278	87	16	5	16	5	38	12	38	12				
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	0				
Total			10430	819	8	819	8	446	4	446	4	70	1	70	1				
15. PEAS																			
1	Jharkhand \$\$		Not Available																
2	Uttar Pradesh	Rabi	7636	Not Available												Not covered in I.C.S.			
3	West Bengal		286	7	2	7	2	Not Available											
Total			7922	7	0	7	0												
16. MOTH																			
1.	Gujarat	Kharif	272	Not Available															
2.	Rajasthan ***	Kharif	5964	263	4	104	2	5863	98	3910	66	43	1	43	1				
Total			6236	263	4	104	2	5863	94	3910	63	43	1	43	1				
17. CHOWLA																			
1.	Rajasthan ***	Kharif	1956	64	3	36	2	2098	107	1308	67	Not covered in I.C.S.							
18. GWAR																			
1.	Gujarat	Kharif	1400	Not Available												Not covered in I.C.S.			
2	Rajasthan ***		18284	258	1	208	1	19343	106	13361	73								
Total			19684	258	1	208	1	19343	98	13361	67.88								
19. SAWAN (JHANGORA)																			
1.	Uttarakhand		590	8	1.4	8	1.4	88	15	88	15	Not covered in I.C.S.							
2	Uttar Pradesh	Kharif	176	Not Available															
Zaid		20																	
Total			786	8	1.0	8	1.0	88	11	88	11								
20. KORRA																			
1.	Andhra Pradesh	Kharif	204	2	1	2	1	Not Available				Not covered in I.C.S.							
2	Telangana		20	2	10	2	10	0	0	0	0	Not covered in I.C.S.							
Total			224	4	2	4	2	0	0	0	0	Not covered in I.C.S.							
21. KODON-KUTKI (KODRA)																			
1.	Chhattisgarh		260	0	0	0	0	36	14	30	12	40	15	40	15				
2.	Madhya Pradesh #		864	Not Available				46	5	46	5	40	5	38	4				
3.	Uttar Pradesh (Kodon)		78	Not Available															
Total			1202	0	0	0	0	82	7	76	6	80	7	78	6				
22. NAVANE																			
1.	Karnataka		750	12	2	12	2	49	7	49	3	Not covered in I.C.S.							
23. SAVE																			
1.	Karnataka		340	3	1	3	1	22	6	22	6	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	Kharif	1622	60	4	8	0	Not Available				60	4	57	4				
2.	Assam		700	98	14	98	14					4	1	4	1				
3.	Bihar		772	0	0	0	0					33	4	33	4				
4	Goa @		110	21	19	2	2	Not Planned				Not covered in I.C.S.							
5	Haryana *		1070	32	3	30	3	70	7	68	6	50	5	34	3				

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2019-20**

Sl. No	S T A T E	Season	Number of Expts Planned	No. of Experiments Supervised by											
				State Statistical Department				Other State Department				N.S.S.O.			
				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		1130	32	3	32	3	104	9	104	9	28	2	19	2
8.	Kerala		45	22	49	Not Available						Not covered in I.C.S.			
9.	Maharashtra		4840	Not Available								36	1	19	0
10.	Odisha	Wint.	273	20	7	20	7	22	8	22	8	Not covered in I.C.S.			
11.	Punjab		698	2	0.3	2	0.3	26	4	24	3	54	8	52	7
12.	Rajasthan ***		450	20	4	16	4	301	67	248	55	31	7	25	6
13.	Tamil Nadu		468	340	73	340	73	78	17	78	17	31	7	31	7
14.	Telangana		220	22	10	22	10	0	0	0	0	0	0	0	0
15.	Uttar Pradesh		9336	Not Available								197	2	197	2
16.	West Bengal	Rabi	425	23	5	23	5	Not Available							
Total			22399	692	3	593	3	601	3	544	2	524	2	471	2
<b>27. COCOA</b>															
1.	Kerala		797	474	59	Not Available						Not covered in I.C.S.			
<b>28. CHILLIES.</b>															
1.	Andhra Pradesh	Kharif	452	10	2	8	2	Not Available							
		Rabi	402	7	2	7	2								
2.	Bihar		340	Not Available											
3.	Chhattisgarh		12	0	0	0	0	0	0	0	0	0	0	0	0
4.	Karnataka	Kharif	790	20	3	20	3	46	6	46	6	Not covered in I.C.S.			
		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	420	42	10	42	10	0	0	0	0	Not covered in I.C.S.			
		Rabi	128	13	10	13	10	0	0	0	0				
Total			2624	92	4	90	3	46	2	46	2				
<b>29. CUMIN</b>															
1.	Gujarat	Rabi	2040	266	13	156	8	663	33	663	33	Not covered in I.C.S.			
2.	Rajasthan ***		5812	20	0.34	20	0.34	2392	41	2392	41				
Total			7852	286	4	176	2	3055	39	3055	39				
<b>30. FENNEL</b>															
1.	Gujarat*	Rabi	688	47	7	47	7	242	35	242	35	Not covered in I.C.S.			
<b>31. ARECANUT</b>															
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
<b>32. PEPPER</b>															
1.	Kerala		1600	380	24	Not Available						36	2	35	2
<b>33. SAFFRON</b>															
1.	Jammu & Kashmir		114	Not Available				Not Available				Not covered in I.C.S.			
<b>34. TURMERIC</b>															
1	Karnataka		390	19	5	19	5	32	8	32	8	Not covered in I.C.S.			
2	Kerala		1548	263	17	Not Available									
Total			1938	282	15	19	1	32	2	32	2				
<b>35. GINGER</b>															
1.	Kerala		1411	243	17	Not Available						Not covered in I.C.S.			
2.	Meghalaya @		756	39	5	29	4	2	0	2	0				
Total			2167	282	13	29	1	2	0.1	2	0.1				

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Sl. No	STATE	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	342	Not Available								Not covered in I.C.S.							
<b>37. CORIANDER</b>																			
1.	Rajasthan ***		2072	138	7	138	7	1887	91	1887	91	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			Not Available								Not covered in I.C.S.							
3.	Kerala		2330	469	20	Not Available						46	2	41	2				
4.	Madhya Pradesh #		138	Not Available															
Total			2968	469	16	0	0	0	0	0	0	46	2	41	1				
<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								
<b>44. TAPIOCA</b>																			
1.	Kerala		1469	452	31	434	31	Not Available				37	3	34	2				
<b>45. PINE APPLE</b>																			
1.	Kerala		1554	161	10	Not Available						Not covered in I.C.S.							
<b>46. POTATO</b>																			
1.	Assam		1004	142	14	142	14	Not Available				36	4	36	4				
2.	Bihar	Agh.	340	Not Available															
		Rabi	424																
3.	Chhattisgarh		174	0	0	0	0	0	0	0	0	Not Available							
4.	Gujarat	Rabi	965	166	17	166	17	340	35	340	35								
5.	Jammu & Kashmir	Kh.	342	Not Available				Not Available											
		Rabi	168																
6.	Jharkhand \$\$	Agh.	570	Not Available															
		Rabi	7830	20	0.26	20	0.26	Not Available											
7.	Karnataka	Kh.	570	23	4	23	4	17	3	17	3								
		Rabi	250	21	8	21	8	17	7	17	7								
8.	Madhya Pradesh #	Rabi	432	Not Available															
9.	Meghalaya @	Sum.	234		0		0		0		0								
10.	Odisha	Wint.	2200	166	8	166	8	70	3	70	3					36	2	36	2
11.	Uttar Pradesh	Rabi	22108	Not Available								52	0.2	52	0.2				
Total			37611	538	1	538	1	444	1	444	1	124	0.3	124	0.3				

## ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2019-20

Sl. No	STATE	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		54	0	0	0	0	0	0	0	0	0	0	0	0		
3.	Gujarat	Rabi	646														
		Sum.	80														
4.	Jharkhand \$\$		630	Not Available													
5.	Karnataka	Kh.	2270	61	3	61	3	189	8	189	8						
		Rabi	410	19	5	19	5	16	4	16	4						
		Sum.	170	3	2	3	2	7	4	7	4						
6.	Madhya Pradesh #		642	Not Available				Not Available									
7.	Uttar Pradesh	Rabi	70														
		Zaid	620														
Total			6016	83	1	83	1	212	4	212	4						
<b>48. BRINJAL</b>																	
1.	Bihar	Agh.	340													Not covered in I.C.S.	
		Rabi	340														
2.	Jharkhand \$\$	Agh.	390														
		Rabi	480														
3.	Karnataka	Kharif	Not Planned														
Total			1550	Not Available													
<b>49. TOMATO</b>																	
1.	Bihar	Agh.	140														Not covered in I.C.S.
		Rabi	280														
2.	Jharkhand \$\$	Agh.	660														Not covered in I.C.S.
		Rabi	540														
3.	Karnataka	Kharif	1580	77	5	77	5	114	7	114	7						
		Rabi	280	5	2	5	2	17	6	17	6						
		Summer	60	1	2	1	2	0	0	0	0						
Total			3540	83	2	83	2	131	4	131	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 ***		1284	27	2.1	27	2.1	945	74	945	74	Not covered in I.C.S.					
<b>54. GROUNDNUT</b>																	
1.	Andhra Pradesh	Kharif	2604	110	4	108	4	Not Available				110	4	104	4		
		Rabi	824		0		0					40	5	26	3		
2.	Chhattisgarh		264	0	0	0	0	54	20	52	20	Not Available					
3.	Goa @	Kharif	30	Not Planned				Not Planned				Not covered in I.C.S.					
		Rabi	60														
4.	Gujarat	Kharif	3498	936	27	936	27	2464	70	2324	66	144	4	126	4		
		Sum.	1229	88	7	88	7	603	49	603	49	Not Available					



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Sl. No	STATE	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	8308	295	4	295	4	511	6	511	6	44	1	34	0.4
Rabi		130	14	11	14	11	16	12	16	12					
Sum.		4864	114	2	114	2	161	3	161	3	17	0.3	13	0.27	
6.	Madhya Pradesh #	Kharif	954	12	1	12	1	369	39	369	39	40	4	40	4
7.	Maharashtra	Kharif	4276	Not Available								58	1	17	0
Sum.		3416	Not Available								Not Available				
8.	Odisha	Aut.	1068	159	15	159	15	65	6	65	6	Not Available			
Wint.		172	5	3	5	3	0	0	0	0					
Sum.		1683	201	12	201	12	43	3	43	3					
9.	Rajasthan ***		7620	86	1	72	1	4160	55	2952	39	32	0.4	32	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	30	7	18	4	
11.	Telangana	Kharif	198	21	11	21	11	0	0	0	0	40	20	38	19
Rabi		1102	113	10	113	10	0	0	0	0	0	0	0	0	0
12.	Uttar Pradesh		7432	Not Available								Not Available			
13.	West Bengal		764	2	0	2	0	Not Available				Not Available			
Total			51656	3165	6	3149	6	8504	16	7154	14	587	1	478	1
55. SESAMUM (GINGELLY)															
1.	Andhra Pradesh	Kharif	270	Not Available											
Rabi		330	Not Available												
2.	Chhattisgarh		150	0	0	0	0	42	28	42	28	Not Available			
3.	Gujarat		1602	120	7	118	7	386	24	386	24	50	3	45	3
4.	Karnataka		1880	44	2	44	2	138	7	138	7	Not Available			
5.	Kerala		94	28	30	Not Available									
6.	Madhya Pradesh #	Kharif	1476	Not Available				218	15	218	15	40	3	40	3
7.	Maharashtra	Kharif	2166	Not Available								Not Available			
Rabi		316													
8.	Odisha	Aut.	130	1	1	1	1	6	5	6	5	Not Available			
Wint.		613	29	5	29	5	5	1	5	1					
Sum.		316	51	16	51	16	0	0	0	0					
9.	Rajasthan ***		5568	118	2	106	2	4626	83	3372	61	71	1	71	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	26	10	20	8	
11.	Telangana	Kharif	40	4	10	4	10	0	0	0	0	0	0	0	0
Rabi		198	19	10	19	10	0	0	0	0	0	0	0	0	0
12.	Uttar Pradesh		13468	Not Available								39	0.29	36	0.27
13.	West Bengal		3415	25	1	25	1	Not Available				6	0	6	0
Total			32512	857	3	815	3	5445	17	4191	13	262	0.81	240	0.738
56. CASTOR															
1.	Andhra Pradesh	Kharif	232	Not Available											
2.	Gujarat		3569	471	13	389	11	703	20	606	17	30	1	28	1
3.	Karnataka		150	14	9	14	9	13	9	13	9	Not Available			
4.	Telangana		150	15	10	15	10	0	0	0	0	50	33	50	33
Total			4101	500	12	418	10	716	17	619	15.09	80	2	78	2
57. RAPE & MUSTARD															
1.	Assam		1250	170	14	156	12	Not Available				50	4	50	4
2.	Bihar		1008	40	4	40	4	Not Available				40	4	40	4
3.	Chhattisgarh	Rabi	384	0	0	0	0	134	35	126	33	14	4	14	4
4.	Gujarat		1206	415	34	316	26	151	13	151	13	25	2	25	2

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Sl. No	STATE	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	64	6	2	0
6.	Jammu & Kashmir		230	Not Available											
7.	Jharkhand \$\$		7830	Not Available											
8.	Madhya Pradesh #		1116	12	1	12	1	547	49	547	49	46	4	46	4
9.	Odisha	Wint.	2093	120	6	120	6	106	5	106	5	Not Available			
10.	Punjab		568	18	3	18	3	70	12	64	11	15	3	3	1
11.	Rajasthan ***		28996	426	1	426	1	18353	63	18353	63	29	0.10	25	0.09
12.	Uttar Pradesh		27794	Not Available											
13.	West Bengal		5369	382	7	382	7	0	0.0	0	0.0	110	2	110	2
Total			78884	1615	2	1494	2	19563	25	19521	25	466	0.59	384	0.487
58. LINSEED															
1.	Chhattisgarh	Rabi	252	0	0	0	0	42	17	34	13	10	4	10	4
2.	Jammu & Kashmir		12	Not Available											
3.	Karnataka		260	0	0	0	0	0	0	0	0	Not Available			
4.	Madhya Pradesh #	Rabi	920	13	1	13	1	257	28	257	28	10	1	10	1
5.	Maharashtra	Rabi	616	Not Available											
6.	Uttar Pradesh		692	Not Available											
7.	West Bengal		125	Not Available											
Total			2877	13	0	13	0	299	10	291	10	20	1	20	1
59. SAFFLOWER															
1.	Karnataka	Rabi	1770	54	3	54	3	72	4	72	4	Not Available			
		Sum.	0	0	0	0	0	0	0	0	0				
2.	Maharashtra	Rabi	708	Not Available											
Total			2478	54	2	54	2	72	3	72	3	0	0	0	0
60. SUNFLOWER															
1.	Andhra Pradesh	Kharif	196	Not Available											
		Rabi	322												
2.	Haryana *	Rabi	230	Not Available											
3.	Karnataka	Kharif	4614	117	3	117	3	227	5	227	5	24	0.52	13	0.28
		Rabi	4188	33	0.8	33	0.8	73	2	73	2	14	0.33	2	0.05
		Sum.	1240	22	2	22	2	17	1	17	1	0	0	0	0
4.	Maharashtra	Kharif	1044	Not Available											
		Rabi	336												
		Sum.	774												
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	4	11	4	11	0	0	0	0	0	0	0	0
7.	Uttar Pradesh	Zaid	170	Not Available											
Total			13450	437	3	437	3	332	2	332	2	38	0	15	0.1
61. SOYABEAN															
1.	Andhra Pradesh	Kharif	104	Not Available											
2.	Bihar	Kharif	112	0	0	0	0	0	0	0	0	Not Available			
3.	Chhattisgarh	Kharif	210	0	0	0	0	56	27	56	27	Not Available			
4.	Karnataka		1964	71	4	71	4	166	8	166	8	Not Available			
5.	Madhya Pradesh #		2774	58	2	58	2	978	35	978	35	100	4	98	4
6.	Maharashtra	Kharif	13392	Not Available											
7.	Rajasthan ***		7320	74	1	48	1	8431	115	5285	72	8	0.11	8	0.11
8.	Telangana		650	67	10	67	10	0	0	0	0	0	0	0	0
9.	Uttar Pradesh		532	Not Available											
Total			27058	270	1	244	1	9631	36	6485	24	174	1	132	0

## ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2019-20

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 ***		1640	32	2	32	2	978	60	978	60	Not covered in I.C.S.							
<b>63.COCONUT</b>																			
1.	Kerala		2430	2113	87	Not Available						46	2	46	2				
2.	Maharashtra		0	Not Available															
Total			2430	2113	87	Not Available						46	2	46	2				
<b>64. NIGER</b>																			
1.	Maharashtra	Kharif	778	Not Available															
<b>65. COTTON</b>																			
1.	Andhra Pradesh	Kharif	952	40	4	28	3	Not Available				39	4	39	4				
2.	Gujarat		8035	2245	28	2200	27	2521	31	2245	28	154	2	151	2				
3.	Haryana *		940	16	2	14	1	124	13	122	13	54	6	54	6				
4.	Karnataka	Kharif	3620	123	3	123	3	242	7	242	7	41	1	37	1				
		Rabi	140	2	1	2	1	0	0	0	0	Not covered in I.C.S.							
5.	Madhya Pradesh #		962	18	2	18	2	318	33	318	33	44	5	44	5				
6.	Maharashtra		13620	Not Available								135	1	129	1				
7.	Punjab		668	48	7	48	7	126	19	106	16	72	11	72	11				
8.	Rajasthan ***		7264	148	2	130	2	6626	91	4558	63	40	0.55	40	0.55				
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	35	14	35	14				
10	Telangana		1420	142	10	142	10	0	0	0	0	70	5	65	5				
11	Uttar Pradesh		80	Not Available															
Total			38521	3496	9	3419	9	9998	26	7632	20	720	2	702	2				
<b>66. JUTE</b>																			
1.	Assam		600	96	16	92	15	Not Available				24	4	24	4				
2.	Bihar		200	Not Available															
3.	Meghalaya @		64	Not Available								Not Available							
4.	Odisha	Aut.	38	13	34	13	34	1	3	1	3	Not Available							
5.	West Bengal		2898	286	10	286	10	3	0.1	3	0.1	75	3	75	3				
Total			3800	395	10	391	10	4	0	4	0.1	99	3	99	3				
<b>67.MESTA</b>																			
1.	Andhra Pradesh	Kharif	200	Not Available															
2.	Bihar		200	Not Available															
3.	West Bengal		168	21	13	21	13	Not Available											
Total			568	21	4	21	4	0	0	0	0	0	0	0	0				
<b>68.TOBACCO</b>																			
1.	Andhra Pradesh	Rabi	684	Not Available															
2.	Gujarat	Kharif	286	48	17	48	17	112	39	112	39	Not covered in I.C.S.							
3.	Karnataka		280	2	1	2	1	10	4	10	4								
4.	Maharashtra		88	Not Available															
5	Telangana		30	0	0	0	0	0	0	0	0								
6	Uttar Pradesh	Rabi	100	Not Available															
		Zaid	20	Not Available															
Total			1488	50	3	50	3	122	22	122	8								
<b>69. ISABGOL</b>																			
1.	Gujarat		332	16	5	16	5	26	8	26	8	Not covered in I.C.S.							
2.	Rajasthan ***		4456	73	2	73	2	1431	32	1431	32								
Total			4788	89	2	89	2	1457	30	1457	30								

**ANNEX III(b) SUPERVISION OF FIELD WORK - CROP-WISE UNDER CES 2019-20**

Sl. No	S T A T E	Season	Number of Expts Planned	No. of Experiments Supervised by											
				State Statistical Department				Other State Department				N.S.S.O.			
				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	560	27	5	27	5	49	9	49	9	Not covered in I.C.S.			
		Rabi	100	2	2	2	2	4	4	4	4				
		Summer													
	Total		660	29	4	29	4	53	8	53	8				
<b>71. COWPEA (LOBIA)</b>															
1.	Goa	Kharif	170	Not Available								Not covered in I.C.S.			
		Rabi	190												
2	Karnataka	Kharif	1030	29	3	29	3	48	5	48	5	Not covered in I.C.S.			
		Rabi	70	0	0	0	0	2	3	2	3				
		Summer	40	0	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				
	Total		3714	809	22	223	6	62	2	62	2				
<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	10	10	10	10	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	Rabi	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.

**Annex-III ( C) INCIDENCE OF ERRORS, USE OF EQUIPMENT AND DELEGATION OF WORK OF CROP CUTTING EXPERIMENTS DURING 2019-20**

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	57	4	53	7	4	8	8	3	2
		Rabi	69	2	35	5	0	6	6	8	18
2	Assam	Early Kharif	76	0	25	4	4	7	11	1	0
		Late Kharif	82	1	19	14	4	17	14	0	0
		Rabi	85	0	16	1	0	7	3	0	1
		Summer	100	0	0	8	4	8	13	0	0
3	Bihar	Autumn (Bha.)	43	1	58	17	5	17	15	3	28
		Winter (Agh.)	54	1	50	24	9	21	19	1	29
		Rabi	15	0	93	39	19	39	38	1	1
		Summer	94	0	12	0	0	0	0	0	44
4	Chhattisgrah	Kharif	93	3	11	8	1	7	4	2	2
		Rabi	74	13	39	13	0	0	0	4	0
5	Gujarat	Kharif	64	1	39	22	6	23	16	2	1
		Rabi	79	1.0	21	17	6	20	9	4	1
6	Haryana	Kharif	82	2	21	10	8	9	7	3	0
		Rabi	90	0	10	13	9	10	6	3	0
7	Himachal Pradesh	Kharif	74	12	45	27	16	42	33	1	3
		Rabi	66	0	47	91	59	84	38	0	0
8	Jammu & Kashmir	Kharif	52	9	70	19	0	11	10	3	3
		Rabi	61	5	52	0	0	0	0	0	0
9	Jharkhand	Early Kharif	76	0	24	11	6	6	6	3	26
		Late Kharif	78	1	22	18	4	4	8	7	43
		Rabi	90	1	11	38	0	0	1	0	6
10	Karnataka	Kharif	62	4	48	22	9	22	15	1	1
		Rabi	64	2	48	36	21	33	19	1	1
		Summer	56	1	45	39	23	41	25	3	2
11	Kerala	Autumn	82	1	19	3	10	6	0	4	1
		Winter	89	1	13	2	3	2	1	2	1
		Summer	77	0	23	0	1	2	1	1	0
12	Madhya Pradesh	Kharif	85	1	16	16	6	15	11	0	2
		Rabi	82	1	19	19	33	29	25	0	16
13	Maharashtra	Kharif	43	16	81	23	13	22	18	8	2
		Rabi	42	13	71	23	18	23	22	5	1
14	Odisha	Autumn	76	1	29	0	1	2	0	1	1
		Winter	84	0	15	1	2	2	1	1	0
		Summer	62	0	39	0	5	0	0	0	0
15	Punjab	Kharif	76	3	31	3	2	2	2	2	0
		Rabi	83	3	23	1	0	2	0	0	0
16	Rajasthan	Kharif	58	4	58	19	22	22	20	3	0
		Rabi	49	1	56	32	20	34	38	1	0
17	TamilNadu	Kharif	79	3	30	7	13	9	7	4	1
		Rabi	85	3	23	12	17	12	12	2	1
18	Telangana	Kharif	66	2	40	6	5	7	7	1	0
		Rabi	80	4	27	14	1	13	13	1	2
19	Uttar Pradesh	Kharif	51	12	74	14	4	17	12	11	50
		Rabi	66	5	43	32	12	24	19	4	56
		Zaid Rabi	64	15	80	21	4	9	4	0	53
20	Uttarakhand	Kharif	62	1	42	6	6	7	4	3	0
		Rabi	87	4	17	4	9	7	9	0	0
21	West Bengal	Aus.	80	1	21	0	0	2	0	0	5
		Aman	82	1	20	0	0	0	0	1	6
		Rabi	55	1	49	0	0	0	0	0	11
		Summer	100	0	0	0	0	0	0	0	17

**Annex-III ( C) INCIDENCE OF ERRORS, USE OF EQUIPMENT AND DELEGATION OF WORK OF CROP CUTTING EXPERIMENTS DURING 2019-20**

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	85	0	15	0	0	0	0	0	0
		Rabi I	75	15	50	0	0	0	0	0	0
		Rabi II	100	0	0	0	0	5	0	10	0
<b>For States Covered</b>		<b>All Seasons</b>	67	4	42	14	9	15	12	3	8

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 weighing of produce.
6. e<sub>6</sub> = Error in reporting ancillary information.
7. e<sub>7</sub> = Inadequate arrangements for storing of produce for drying 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 2019-20

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		
		Planned	Analyse d	Resp onse %	Planne d	Analys ed	Resp onse %	Planned	Analyse d	Respo nse %	Planned	Analyse d	Respo nse %	Planned	Analysed	Response %
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	Andhra Pradesh	9672	9128	94	4558	4198	92	7506	7338	98	2160	1980	92	23896	22644	95
2.	Assam	5200	3818	73	600	494	82	4204	2442	58	1250	1042	83	11254	7796	69
3.	Bihar	85474	54623	64	512	456	89	91270	72862	80	1008	1002	99	178264	128943	72
4.	Chhattisgarh	5052	4426	88	624	526	84	2442	1830	75	636	388	61	8754	7170	82
5.	Goa	470	159	34	30	55	183	380	125	33	60	4	7	940	343	36
6.	Gujarat	18844	16841	89	16990	16056	95	16449	15974	97	2767	2620	95	55050	51491	94
7.	Haryana *	4096	3470	85	940	908	97	3278	3049	93	1270	1056	83	9584	8483	89
8.	Himachal Pradesh	4254	3296	77	0	0	NA	4052	2434	60	0	0	NA	8306	5730	69
9.	Jammu & Kashmir	3054	1761	58	0	0	NA	2090	1066	51	242	164	68	5386	2991	56
10.	Jharkhand &	28770	23457	82	0	0	NA	36210	23612	65	7830	4860	62	72810	51929	71
11.	Karnataka	66430	55528	84	20536	14647	71	40010	32016	80	12872	5841	45	139848	108032	77
12.	Kerala	27559	27551	100	2524	2524	100	1608	799	50	720	720	100	32411	31594	97
13.	Madhya Pradesh #	9268	7828	84	6166	5385	87	13240	11118	84	2036	1798	88	30710	26129	85
14.	Maharashtra	51194	40415	79	35276	29376	83	46242	39751	86	6254	2636	42	138966	112178	81
15.	Meghalaya	1948	1866	96	64	56	88	234	94	40	0	0	NA	2246	2016	90
16.	Odisha	47657	47657	100	2021	2021	100	9627	9627	100	4092	4092	100	63397	63397	100
17.	Punjab	3042	3020	99	668	2648	396	2676	664	25	568	556	98	6954	6888	99
18.	Rajasthan	101930	97616	96	27772	25066	90	72292	69211	96	35092	32997	94	237086	224890	95
19.	Tamil Nadu	4168	4164	100	1584	1448	91	2572	2552	99	1176	1144	97	9500	9308	98
20.	Telangana	9204	9182	100	2458	2440	99	5158	5140	100	1366	1366	100	18186	18128	100
21.	Uttarakhand	4378	4371	100	0	0	NA	3344	3333	100	0	0	NA	7722	7704	100
22.	Uttar Pradesh	297602	293214	99	21512	21120	98	291986	289781	99	28776	28200	98	639876	632315	99
23.	West Bengal	16461	15982	97	3066	2822	92	18814	16349	87	9673	8701	90	48014	43854	91
24.	Dadra & Nagar Haveli	100	100	100	0	0	NA	0	0	NA	0	0	NA	100	100	100
25.	Daman & Diu	28	28	100	0	0	NA	0	0	NA	0	0	NA	28	28	100
26.	Puducherry	88	88	100	0	0	NA	210	210	100	0	0	NA	298	298	100
	Total	805943	729589	91	147901	132246	89	675894	611377	90	119848	101167	84	1749586	1574379	90

Note :-

1. # : Figure repeated from the year 2013-14 in respect for crop 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 2019-20**

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. (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	17178	16466	0	0	0	0	0	0	712	712	0	0	0	0	0	0	0	712				
			% age	95.9									4								0	4		
		Non Food	6718	6178	0	0	0	0	0	0	0	540	540	0	0	0	0	0	0	0	0	540		
			% age	92.0									8									0	8	
		Total	23896	22644	0	0	0	0	0	0	0	1252	1252	0	0	0	0	0	0	0	0	1252		
% age	94.8										5									0	5			
2.	Assam	Food	9404	6260	0	0	0	1286	0	0	1334	2620	0	0	0	0	524	524	0	0	3144			
			% age	66.6									28						6				33	
		Non Food	1850	1536	0	0	0	168	0	0	0	118	286	0	0	0	0	28	28	0	0	314		
			% age	83.0									15							2				17
		Total	11254	7796	0	0	0	1454	0	0	0	1452	2906	0	0	0	0	552	552	0	0	3458		
% age	69.3										26							5	0			31		
3.	Bihar	Food	176744	127485	0	0	0	0	0	0	49259	49259	0	0	0	0	0	0	0	0	49259			
			% age	72									28										0	28
		Non Food	1520	1458	0	0	0	0	0	0	0	62	62	0	0	0	0	0	0	0	0	0	62	
			% age	95.9									4											4
		Total	178264	128943	0	0	0	0	0	0	0	49321	49321	0	0	0	0	0	0	0	0	0	49321	
% age	72										28											28		
4.	Chhattisgarh	Food	7494	6256	0	0	0	0	0	0	1238	1238	0	0	0	0	0	0	0	0	1238			
			% age	83									17											17
		Non Food	1260	914	0	0	0	0	0	0	0	346	346	0	0	0	0	0	0	0	0	0	346	
			% age	73									27											
		Total	8754	7170	0	0	0	0	0	0	0	1584	1584	0	0	0	0	0	0	0	0	0	1584	
% age	82										18											18		
5.	Goa	Food	740	284	0	0	0	0	0	239	217	456	0	0	0	0	0	0	0	0	456			
			% age	38									62											62
		Non Food	200	59	0	0	0	0	0	85	56	141	0	0	0	0	0	0	0	0	0	0	0	
			% age	30									71											
		Total	940	343	0	0	0	0	0	324	273	597	0	0	0	0	0	0	0	0	0	0	456	
% age	36										64											49		
6.	Gujarat	Food	35293	32815	0	0	0	0	0	0	2478	2478	0	0	0	0	0	0	0	0	2478			
			% age	93									7											7
		Non Food	19757	18676	0	0	0	0	0	0	0	1081	1081	0	0	0	0	0	0	0	0	0	1081	
			% age	95									5											
		Total	55050	51491	0	0	0	0	0	0	0	3559	3559	0	0	0	0	0	0	0	0	0	3559	
% age	94										6											6		
7.	Haryana *	Food	7374	6519	0	0	0	0	0	0	108	108	0	0	0	0	0	0	0	0	747	855		
			% age	88									1										10	12
		Non Food	2210	1964	0	0	0	0	0	0	0	16	16	0	0	0	0	0	0	0	0	230	246	
			% age	89									1										10	11
		Total	9584	8483	0	0	0	0	0	0	0	124	124	0	0	0	0	0	0	0	0	977	1101	
% age	89										1										10	11		
8.	Himachal	Food	8306	5730	0	0	0	0	0	0	2576	2576	0	0	0	0	0	0	0	0	2576			
			% age	69.0									31											31
		Non Food	Not Available																					
			% age																					
		Total	8306	5730	0	0	0	0	0	0	0	2576	2576	0	0	0	0	0	0	0	0	2576		
% age	69.0										31											31		
9.	Jammu & Kashmir	Food	5144	2827	0	0	0	372	0	0	1945	2317	0	0	0	0	0	0	0	0	2317			
			% age	55.0									45											45
		Non Food	242	164	0	0	0	14	0	0	0	64	78	0	0	0	0	0	0	0	0	0	78	
			% age	67.8									32											
		Total	5386	2991	0	0	0	386	0	0	0	2009	2395	0	0	0	0	0	0	0	0	0	2395	
% age	55.5										44											44		
10.	Jharkhand <sup>§</sup>	Food	64980	47069	0	0	0	0	0	0	17911	17911	0	0	0	0	0	0	0	0	17911			
			% age	72.4									28											28
		Non Food	7830	4860	0	0	0	0	0	0	0	2970	2970	0	0	0	0	0	0	0	0	0	2970	
			% age	62.1									38											
		Total	72810	51929	0	0	0	0	0	0	0	20881	20881	0	0	0	0	0	0	0	0	0	20881	
% age	71.3										29											29		
11.	Karnataka	Food	106440	87544	0	0	0	3930	0	0	14945	18875	0	0	0	0	21	21	0	0	18896			
			% age	82									18											18
		Non Food	33408	20488	0	0	0	1333	0	0	0	11587	12920	0	0	0	0	0	0	0	0	12920		
			% age	61									39											
		Total	139848	108032	0	0	0	5263	0	0	0	26532	31795	0	0	0	0	21	21	0	0	31816		
% age	77										23											23		
12.	Kerala	Food	29167	28350	0	0	0	0	0	0	817	817	0	0	0	0	0	0	0	0	817			
			% age	97									3											3
		Non Food	3244	3244	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			% age	100									0											0
		Total	32411	31594	0	0	0	0	0	0	0	817	817	0	0	0	0	0	0	0	0	0	817	
% age	97										3											3		



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. (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	
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	
14.	Maharashtra	Total	30710	26129	0	0	300	0	0	3677	3977	0	0	0	0	0	604	4581		
		% age	85								13						0	2	15	
		Food	97436	80166	0	488	0	0	0	13979	14467	322	0	0	0	2481	2803	0	17270	
		% age	82								15						3		18	
15.	Meghalaya	Non Food	41530	32012	0	70	0	0	0	58	128	79	0	0	0	9311	9390	0	9518	
		% age	77								0	0				22	23		23	
		Total	138966	112178	0	558	0	0	0	14037	14595	401	0	0	0	11792	12193	0	26788	
		% age	81								11						9	0	19	
16.	Odisha	Food	2182	1960	0	0	0	0	0	222	222	0	0	0	0	0	0	0	222	
		% age	90								10							0	10	
		Non Food	64	56	0	0	0	0	0	8	8	0	0	0	0	0	0	0	8	
		% age	88								13							0	13	
17.	Punjab	Total	2246	2016	0	0	0	0	0	230	230	0	0	0	0	0	0	0	230	
		% age	90								10							0	10	
		Food	57284	57284	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		% age	100								0							0	0	
18.	Rajasthan	Non Food	6113	6113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		% age	100								0							0	0	
		Total	63397	63397	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		% age	100								0							0	0	
19.	Tamil Nadu	Food	5718	5668	0	0	0	13	0	32	45	0	0	0	0	5	5	0	50	
		% age	99								1							0	0.9	
		Non Food	1236	1220	0	0	0	0	0	12	12	0	0	0	0	4	4	0	16	
		% age	99								1							0	1.3	
20.	Telangana	Total	6954	6888	0	0	0	13	0	44	57	0	0	0	0	9	9	0	66	
		% age	99								1							0	0.9	
		Food	174222	166827	0	0	0	0	0	7395	7395	0	0	0	0	0	0	0	7395	
		% age	96								4							0	4	
21.	Uttarakhand	Non Food	62864	58063	0	0	0	0	0	4801	4801	0	0	0	0	0	0	0	4801	
		% age	92								8							0	8	
		Total	237086	224890	0	0	0	0	0	12196	12196	0	0	0	0	0	0	0	12196	
		% age	95								5							0	5	
22.	Uttar Pradesh	Food	6740	6716	24	0	0	0	0	0	24	0	0	0	0	0	0	0	24	
		% age	100								0							0	0.4	
		Non Food	2760	2592	168	0	0	0	0	0	168	0	0	0	0	0	0	0	168	
		% age	94								6							0	6.1	
23.	West Bengal	Total	9500	9308	192	0	0	0	0	0	192	0	0	0	0	0	0	0	192	
		% age	98								2							0	2	
		Food	14362	14322	0	0	0	0	0	20	20	0	0	0	0	20	20	0	40	
		% age	100								0							0	0.3	
24.	Dadra & Nagar Haveli	Non Food	3824	3806	0	0	0	0	0	18	18	0	0	0	0	0	0	0	18	
		% age	100								0							0	0.5	
		Total	18186	18128	0	0	0	0	0	38	38	0	0	0	0	20	20	0	58	
		% age	100								0							0	0.3	
25.	Uttarakhand	Food	7722	7704	0	0	0	0	0	14	14	0	0	4	0	0	4	0	18	
		% age	100								0						0.1		0.2	
		Non Food	Not Available																	
		% age	Not Available																	
26.	Uttar Pradesh	Total	7722	7704	0	0	0	0	0	14	14	0	0	4	0	0	4	0	18	
		% age	100								0						0.1		0.2	
		Food	589588	582995	0	0	0	0	0	6593	6593	0	0	0	0	0	0	0	0	6593
		% age	99								1							0	1	
27.	Uttar Pradesh	Non Food	50288	49320	0	0	0	0	0	968	968	0	0	0	0	0	0	0	968	
		% age	98								2							0	2	
		Total	639876	632315	0	0	0	0	0	7561	7561	0	0	0	0	0	0	0	7561	
		% age	99								1							0	1	
28.	West Bengal	Food	35275	32331	0	0	0	784	0	2160	2944	0	0	0	0	0	0	0	2944	
		% age	92								8						0.0	0	8	
		Non Food	12739	11523	0	0	0	1216	0	0	1216	0	0	0	0	0	0	0	1216	
		% age	90								10							0	10	
29.	West Bengal	Total	48014	43854	0	0	0	2000	0	2160	4160	0	0	0	0	0	0	0	4160	
		% age	91								9							0	9	
		Food	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		% age	100								0							0	0	
30.	Dadra & Nagar Haveli	Non Food	No Planning																	
		% age	No Planning																	
		Total	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		% age	100								0							0	0	

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. (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		
25.	Daman & Diu	Food	28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			% age	100									0								
		Non Food	No Planning																		
			% age																		
Total	28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	% age	100									0									0	
26.	Puducherry	Food	298	298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			% age	100									0								
		Non Food	Not Available																		
			% age																		
Total	298	298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	% age	100									0									0.0	
Grand Total %	Food	1481727	1342950	24	488	226	6385	239	126885	134247	322	0	4	0	3051	3377	1153	138777			
		% age	91							9										0.2	
		Non Food	267859	231429	168	70	74	2731	85	23452	26580	79	0	0	0	9343	9422	428	36430		
			% age	86							10										3.5
Total	1749586	1574379	192	558	300	9116	324	150337	160827	401	0	4	0	12394	12799	1581	175207				
	% age	90	0.01	0.03	0.02	0.5	0.02	9	9	0.02	0	0	0	0.7	0.7	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 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d					
1	2	3	4	5	6	7	8	9	10	
<b>1. RICE</b>										
1.	Andhra Pradesh	(KharifIr.)	1462	88	3572	3569	100	5337	0.4	7803
		(KharifUI.)	64	50	232	226	97	3275	2.0	210
		Comb.	1526	86	3804	3795	100	5250	0.4	8013
		(Rabi.Ir.)	829	89	2976	2948	99	6868	0.5	5697
2.	Assam	(Aut.)	127	100	1500	698	47	1543	1.3	193
		(Wint.)	1878	100	3000	2784	93	2160	0.6	3996
		Comb.	2005	100	4500	3482	77	2121	0.5	4189
		Sum	396	99	2000	1066	53	2593	1.4	1026
3.	Bihar @	(Bha.Ir)								
		(Bha.UI.)								
		Comb.	444	75	952	720	76	1639	N.A.	728
		(Agh.Hyv.Ir.)								
		(Agh.Hyv.UI.)								
		(Agh.Lv.Ir.)								
		(Agh.Lv.UI.)								
		Comb.	2593	100	41245	38955	94	3526	N.A.	9144
		Kh.Comb.	3037	96	42197	39675	94	3250	N.A.	9872
		(Gar.Hyv.)								
		(Gar.Lv.)								
		Comb.	60	95	440	389	88	2133	N.A.	129
4.	Chhattisgarh	Kh.(Ir.)	1588	95	1838	1720	94	2515	1.0	5128
		Kh. (UI.)	2408	94	1858	1676	90	1717	1.0	4483
		Comb.	3996	94	3696	3396	92	2034	0.7	9611
5.	Goa	Kharif	24	100	190	158	83	2481	N.A.	61
		Rabi	10	100	190	110	58	2899	N.A.	30
6.	Gujarat %	(Ir.)	686	99	2840	2742	97	3406	N.A.	2335
		(UI.)	164	98	1958	1686	86	2420	N.A.	397
		Comb.	850	99	4798	4428	92	3215	N.A.	2732
		Sum	55	N.A.	380	373	98	4425	N.A.	242
7.	Haryana ###	Kharif	1206	76	990	864	87	3268	1.6	3941

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analysed					
8.	Himachal Pradesh \$\$\$	70	73	1626	1042	64	2250	1.8	141	
9.	Jammu & Kashmir	(Plain)	N.A.							
		(Hills)	N.A.							
		Comb.	281	39	1284	792	62	3430	5	88
10.	Jharkhand	(Bha.)	138	N.A.	600	452	75	1675	N.A.	231
		(Agh.Hyv.Ir.)	N.A.							
		(Agh.Hyv.UI.)	1204	N.A.	17520	14869	85	3265	N.A.	3932
		(Agh.Lv.Ir.)	N.A.							
		(Agh.Lv.UI.)	N.A.							
		Comb.	1342	N.A.	18120	15321	85	2108	N.A.	4163
		11.	Karnataka % % ^	(KharifHyv.Ir.)	N.A.					
KharifHyv.UI.	N.A.									
(KharifTra.Ir.)	N.A.									
(KharifTra.UI.)	N.A.									
Comb.	897			86	13010	11199	86	5249	1.5	4471
(Rabi Hyv.Ir.)	N.A.									
(Rabi Tra. Ir.)	N.A.									
Rabi Comb.	8			100	1478	991	67	4145	4.5	34
12.	Kerala	(Aut.)	55	2	2268	2264	100	2614	3.0	143
		(Wint.)	80	3	3144	3140	100	3058	1.3	245
13.	Madhya Pradesh ***	Comb.	135	3	5412	5404	100	2878	1.4	388
		Sum	56	2	1608	799	50	3548	2.3	199
		(Hyv. Ir.)	507	93	790	682	86	2063	20.6	1046
		(Lv. Ir.)	190	96	560	396	71	2008	8.2	321
		Comb.	697	94	1350	1078	80	2048	15.3	1367
14.	Maharashtra * ^	(Ir.)	N.A.							
		(UL)	N.A.							
		(Comp.)	N.A.							
		Comb.	1478	100	9712	7806	80	1943	-	2872
15.	Meghalaya	Sum	75	100	772	540	70	2622	-	196
		(Aut.)	33	74	316	238	75	1428	0.01	77
		(Wint.)	64	100	876	872	100	1906	0.01	162
		Comb.	97	91	1192	1110	93	1743	0.01	239

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d					
1	2		3	4	5	6	7	8	9	10
16.	Odisha	(Aut.)	426	100	5837	5837	100	1806	1.0	769
		(Wint.)	3222	100	28003	28003	100	2499	0.3	8052
		Sum	293	100	6188	6188	100	3188	1	933
17.	Punjab	Kharif	3142	100	1982	1976	100	5610	N.A.	17626
18.	Rajasthan ^	Kharif	220	99	3944	3303	84	3284	-	721
19.	Tamil Nadu^	(K/K/S)	207	97	428	428	100	4104	1.3	848
		(S/T/P)	1361	100	1260	1260	100	3641	0.8	4954
		Comb.	1567	100	1688	1688	100	3702	0.7	5802
		(N/K)	340	89	300	300	100	4303	0.9	1463
		Comb.	1907	98	1988	1988	100	3809	0.6	7265
20.	Telangana	(KharifIr.)	1612	91	2380	2380	100	3681	0.5	5934
		(KharifUI.)	19	66	40	40	100	2703	3.3	51
		Comb.	1631	91	2420	2420	100	3670	0.5	5985
		(Rabi.Ir.)	1585	92	2180	2180	100	3723	0.5	5901
20.	Uttarakhand	Kharif	230	100	2674	2672	100	2339	0.89	598
21.	Uttar Pradesh	Kharif	5899	100	189064	188448	100	2873	N.A.	16947
22.	West Bengal	(Aus.)	215	100	2073	1877	91	2518	1.7	542
		(Aman)	4004	100	12988	12793	98	2833	0.4	11345
		Comb.	4219	100	15061	14670	97	2817	0.4	11886
		Sum	1272	100	11611	11098	96	3630	0.6	4617
23.	Dadra & Nagar Haveli ^	Kharif	41	30	78	78	100	1996	13.2	82
24.	Daman & Diu	Kharif	1.4	89	20	20	100	1273	8.8	0.18
25.	Puducherry	(I)	4	100	88	88	100	3280	2.3	13
		(II)	9.2	100	140	140	100	2732	3.2	25
		(III)	4.5	100	70	70	100	3328	2.3	15
		Comb. II & III	14	100	210	210	100	2928	2.2	40
TOTAL		Kharif	39481	92	364150	349991	96	3032	0.4	121382
		Rabi/Sum.	5224	94	33873	29939	88	4143	0.4	21586
		Comb.	44705	93	398023	379930	95	3161	0.3	142968

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)									
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d													
<b>2. JOWAR</b>																		
1.	Andhra Pradesh	Kharif	37	85	310	236	76	1051	4.60	39								
		Rabi	118	89	572	546	95	2968	2	350								
2.	Chhattisgarh	Kharif	1	33	42	14	33	1403	9	4072								
3.	Gujarat %	Kharif	29	76	842	612	73	1520	N.A.	44								
		Rabi	20	N.A.	260	236	1165	1165	N.A.	24								
4.	Karnataka % %	KharifHyv.Ir.)	N.A.															
		(Kharif Hyv.) Ir. & Ul.																
		KharifTra.Ul.)																
		Comb.	88	27	3540	1817	51	1569	5.7	131								
		(Rabi Hyv.Ir.)	N.A.															
		(Rabi Hyv.Ir. & Ul.)																
		(Rabi Tra.Ir.)																
		(Rabi.Tra. Ir. & Ul.)	N.A.															
		Comb.									634	73	10286	8954	87	1106	-	701
		(Sum.Hyv.Ir.)																
5.	Madhya Pradesh ***	Kharif	190	90	1746	1378	79	1491	2.2	283								
6.	Maharashtra *	Kharif	390	100	5604	3212	57	717	-	280								
		(Rabi Ir.)	N.A.															
		(Rabi Ul.)																
		Comb.Rabi									1971	N.A.	21802	17878	82	785	-	1549
7.	Rajasthan	Kharif	643	99	10564	9826	93	709	-	465								
8.	Tamil Nadu	Kharif	232	99	440	440	100	1193	2.9	277								
		Rabi	218	99	640	640	100	1115	3.3	243								
		Comb.	450	99	1080	1080	100	1155	2.2	520								
9.	Telangana	Kharif	57	91	514	512	100	1184	3.5	68								
		Rabi	31	70	354	354	100	2127	3.8	66								
10.	Uttar Pradesh	Kharif	168	86	6656	5697	86	1349	N.A.	227								
TOTAL		Kharif	1834	82	30258	23744	78	1023	0.8	5885								
		Rabi/Sum.	2992	79	33914	28608	84	980	0.2	2933								
		Comb.	4827	80	64172	52352	82	996	0.3	8817								

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d					
<b>3. BAJRA</b>										
1.	Andhra Pradesh	Kharif	20	81	498	404	81	2297	2.5	47
2.	Gujarat %	Kharif	177	99	2232	2002	90	1738	N.A.	308
		Sum	272	99	2078	2067	99	2873	N.A.	783
3.	Haryana ###	Kharif	370	68	1532	1438	94	1762	1	652
4.	Karnataka %%	(Kharif Hyv.Ir.)	N.A.							
		(Kharif Hyv.UI)								
		(Kharif Tra.)								
		Comb.								
5.	Madhya Pradesh ***	Kharif	233	99	320	302	94	1575	3.5	366
6.	Maharashtra *	(Ir.)	N.A.							
		(Ul.)								
		(Comp.)								
		Comb.								
7.	Rajasthan	Kharif	4250	100	25736	25515	99	1189	-	5052
8.	Tamil Nadu	Kharif	50	91	240	240	100	2785	4.8	140
		Rabi	17	96	204	184	90	2618	4.0	45
		Comb.	67	92	444	424	95	2743	3.7	185
9.	Telangana	Kharif	1	79	30	30	100	1216	13.6	1.0
10.	Uttar Pradesh	Kharif	917	94	33800	33006	98	2115	N.A.	1939
11.	Daman & Diu	Kharif	0.5	100	8	8	100	1306	8.08	0.6
TOTAL		Kharif.	7013	97	73826	70289	95	1339	0.3	9370
		Rabi/Sum.	289	99	2282	2251	99	2857	-	828
		Comb.	7302	97	76108	72540	95	1399	0.2	10198
<b>4. MAIZE</b>										
1.	Andhra Pradesh	Kharif	95	72	426	424	100	4717	2.6	450
		Rabi	205	62	554	496	90	8144	1.3	1670
2.	Bihar @	(Bha.Hyv.)								
		(Bha. Lv.)								

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d					
		Comb.	209	32	41245	13060	32	2078	N.A.	435
		Rabi	301	59	41265	24460	59	4565	N.A.	2279
		(Gar.Hyv.)								
		(Gar.Lv.)								
		Comb.	164	91	540	476	88	3854	N.A.	631
3.	Chhattisgarh	Kharif	116	90	556	464	83	3119	2	397
4.	Gujarat %	Kharif	299	99	2040	1876	92	1497	N.A.	450
5.	Haryana ###	Kharif	6	7	144	88	61	3000	12.6	18
6.	Himachal Pradesh \$\$\$	Kharif	256	100	2628	2254	86	2779	1.2	639
7.	Jammu & Kashmir	(Plain)	N.A.							
		(Hills)	N.A.							
		Comb.	269	37	1314	794	60	2010	5	541
8.	Jharkhand	(Bha.)	124	N.A.	7830	6102	78	2172	N.A.	271
9.	Karnataka %%	(KharifHyv.Ir.)	N.A.							
		(KharifHyv. Ir. & Ul.)								
		(Kharif Tra.Ir.)								
		(Kharif Tra.Ul.)								
		Comb.	1315	100	12920	11274	87	3205	1.4	4003
		(Rabi Hyv.Ir.)	N.A.							
		(Rabi Hyv.Ul.)								
		(Rabi Tra.Ir.)								
		Comb.	92	100	3316	2430	73	3784	2.9	3465
		(Sum.Hyv.)	9	100	170	143	84	4634	11.5	39
		Rabi/ Sum comb	101	100	3486	2573	74	3860	2.9	3504
10.	Madhya Pradesh ***	Kharif	991	93	1928	1768	92	2308	1.7	2288
11.	Maharashtra *	Kharif	772	75	2834	2426	86	1386	-	1069
		Rabi	201	100	1158	724	63	1887	2.0	380
12.	Odisha	(Aut.)	61	100	2933	2933	100	2878	2.0	176
		(Wint.)	0.1	100	48	48	100	2361	5.7	0.2
		Comb.	61	100	2981	2981	100	2877	2.0	176
		Sum	4	100	340	340	100	3333	4.5	13
13.	Punjab	Kharif	115	94	362	361	100	3582	N.A.	411
14.	Rajasthan	Kharif	875	100	11172	11100	99	1297	-	1135



**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse d					
15.	Tamil Nadu	Kharif	169	48	256	256	100	8936	1.4	1507
		Rabi	165	36	176	176	100	6717	2.0	1108
		Comb.	334	42	432	432	100	7839	1.2	2615
16.	Telangana	Kharif	391	94	2054	2054	100	4845	1.4	1893
		Rabi	253	93	1608	1608	100	6932	1.0	1751
17.	Uttar Pradesh	Kharif	665	97	28348	27546	97	2467	N.A.	1641
		Rabi	15	60	80	70	88	2829	N.A.	42
18.	West Bengal	Kharif	50	100	540	497	92	3404	1.6	170
TOTAL		Kharif	6776	87	119578	85325	71	2617	0.6	17494.1
		Rabi/Sum.	1409	75	49207	30923	63	5225	0.8	11378
		Comb.	8185	85	168785	116248	69	3066	0.5	28872
<b>5. RAGI (MANDUA)</b>										
1.	Andhra Pradesh	Kharif	26	90	270	266	99	1244	4.4	31
		Rabi	8	51	170	162	95	1573	3.51	12
2.	Bihar @	(Bha.)	3	98	200	176	88	795	N.A.	2
3.	Goa									
4.	Gujarat %	Kharif	12	100	218	218	100	862	N.A.	10
5.	Jharkhand	Kharif	19	N.A.	450	276	61	1162	N.A.	23
6.	Karnataka % %	(KharifHyv.Ir.)	N.A.							
		(KharifHyv. Ir. & UI.)								
		(KharifTra.)	N.A.							
		Comb.								
		(Rabi Hyv.Ir.)	N.A.							
		(Rabi Hyv.UI.)								
		Comb.	31	100	1452	965	66	1457	4.9	45
		(Sum. Hyv.Ir.)	3	100	300	270	90	1819	8.5	6
		Rabi/Sum Comb	34	100	1752	1235	70	1492	4.4	50
7.	Maharashtra *	Kharif	82	100	1208	1112	92	1014	-	83
8.	Odisha	(Aut.)	10	100	682	682	100	746	1.0	7.2
		(Wint.)	26	100	660	660	100	724	1.5	19
		Kharif Comb.	36	100	1342	1342	100	730	1.1	26
		Sum	0.4	100	99	99	100	757	5.7	0.3
9.	Tamil Nadu	Kharif	64	96	160	160	100	294	4.0	191

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d					
		Rabi	209	84	200	200	100	4018	1.6	84
		Comb.	273	87	360	360	100	3148	1.6	274
10.	Telangana	Kharif	1	60	30	30	100	1581	4.7	2.4
11.	Uttarakhand	Kharif	84	100	1114	1114	100	1488	1.2	120
12.	Dadra & N. Haveli^	Kharif	1	60	22	22	100	2314	55.4	2
TOTAL		Kharif	918	97	13216	12114	92	1511	1.3	1501
		Rabi/Sum.	251	85	2221	1696	76	3595	1.5	147
		Comb.	1169	95	15437	13810	89	1958	1.0	1647
<b>6. WHEAT</b>										
1.	Assam	Rabi	1	98	700	114	16	1279	0.4	14
2.	Bihar @	Rabi (Hyv.Ir.)								
		Rabi (Hyv.UI.)								
		Rabi (Lv.Ir.)								
		Rabi (Lv.UI.)								
		Rabi Comb.	2150	100	41265	40965	99	2595	N.A.	5579
3.	Chhattisgarh	Rabi (Ir.)	87	88	748	574	77	1140	2	130
		Rabi (UI)	16	85	176	142	73	862	4	12
		Comb.	103	88	924	716	77	1097	2	130
4.	Gujarat %	Rabi (Ir.)	1355	100	6089	6088	100	3336	N.A.	4519
		Rabi(UI.)	39	95	216	185	86	872	N.A.	34
		Rabi Comb.	1393	100	6305	6273	99	3268	N.A.	4553
5.	Haryana ###	Rabi	2576	100	2200	2182	99	4407	0.7	11350
6.	Himachal Pradesh \$\$\$	Rabi	315	99	2794	1778	64	2190	1.2	621
7.	Jammu & Kashmir	(Plain)	N.A.							
		(Hills)	N.A.							
		Rabi Comb.	244	66	1922	1036	54	2050	3	488
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.)	N.A.							
		(Hyv.Ir & UI.)	N.A.							

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d					
		(Tra.Ir.)								
		(Tra. Ir & Ul.)								
		Rabi Comb.	153	60	3854	2947	76	1241	3.6	190
10.	Madhya Pradesh ***	(Hyv. Ir.)	4044	100	3150	2824	90	3096	0.7	12520
		(Lv.Ir.)	917	98	1380	1126	82	2698	1.4	2474
		Comb.	4961	100	4530	3950	87	3022	0.7	14994
		(Ul.)	447	93	1300	1196	92	1498	1.6	670
		Rabi Comb.	5408	99	5830	5146	88	2896	0.6	15664
11.	Maharashtra *	(Ir.)	N.A.							
		(Ul.)	N.A.							
		Rabi (Comb.)	1057	100	8854	7756	88	1713	-	1810.6
12.	Odisha	Sum	0.12	100	60	60	100	1390	4.0	0.2
13.	Punjab	Rabi	3521	100	2332	2332	100	5004	N.A.	17612
14.	Rajasthan	(Ir.)	N.A.							
		(Ul.)	N.A.							
		(Com.)	N.A.							
		Rabi Comb.	3497	100	38580	37604	97	3973	-	13894
15.	Uttarakhand	Rabi	316	100	2668	2663	100	2782	0.813	904
16.	Uttar Pradesh	Rabi	9853	100	229176	228503	100	3675	N.A.	36210
17.	West Bengal	Rabi	188	100	1206	488	40	2708	7.0	510
<b>T O T A L</b>			<b>30888</b>	<b>99</b>	<b>366190</b>	<b>352465</b>	<b>96</b>	<b>3555</b>	<b>0.3</b>	<b>109757</b>
<b>7. BARLEY</b>										
1.	Bihar @	Rabi	7	90	272	240	88	1369	N.A.	10
3.	Chhattisgarh	Rabi	2	56	22	12	55	609	14.99	1
2.	Haryana ###	Rabi	29	29	516	355	50	3414	1.6	99
4.	Himachal Pradesh \$\$\$	Rabi	15	53	1258	656	52	1686	2.7	23
5.	Jharkhand	Rabi	N.A.							
6.	Madhya Pradesh ***	Rabi	72	89	536	500	93	1670	2.4	158
7.	Punjab	Rabi	6	95	252	228	90	3781	N.A.	23
8.	Rajasthan	Rabi	301	97	4952	4924	99	3527	N.A.	1063
9.	Uttarakhand	Rabi	24	96	676	670	99	1491	1.407	34
10.	Uttar Pradesh	Rabi	167	71	1986	1892	95	3132	N.A.	523
<b>T O T A L</b>			<b>624</b>	<b>84</b>	<b>10470</b>	<b>9477</b>	<b>91</b>	<b>3048</b>	<b>0.3</b>	<b>1934</b>

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analysed					
<b>8. GRAM ( BENGALGRAM )</b>										
1.	Andhra Pradesh	Rabi	459	94	1354	1354	100	1218	1.24	559
2.	Bihar @	Rabi	53	96	720	710	99	730	N.A.	39
3.	Chhattisgarh	Rabi	382	99	594	494	83	252	8.5	88
4.	Gujarat %	Rabi	405	92	2385	2320	97	1568	N.A.	635
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.)								
		(UL)								
		Rabi Comb.	633	100	9410	7482	80	696	2.0	440
8.	Madhya Pradesh ***	Rabi	2623	99	5330	4306	81	1115	0.8	2924
9.	Maharashtra *	Rabi	2043	100	13656	12853	94	1096	-	2238
10.	Punjab	Rabi	2	100	92	88	96	1219	N.A.	2
11.	Rajasthan	(Ir.)	N.A.							
		(UL)	N.A.							
		(Comp.)	N.A.							
		Rabi Comb.	2463	100	18736	17700	94	1079	-	2658
12.	Telangana	Rabi	129.91	91	696	696	100	1532	1.87	199
13.	Uttar Pradesh	Rabi	621	96.62	13278	13125	99	1371	N.A.	851
14.	West Bengal	Rabi	36	100	1113	514	46	1313	5.7	47
<b>T O T A L</b>			<b>9943</b>	<b>98</b>	<b>75756</b>	<b>67248</b>	<b>89</b>	<b>1084</b>	<b>0.3</b>	<b>10786</b>
<b>9. REDGRAM (TUR/ ARHAR)</b>										
1.	Andhra Pradesh	Kharif	238	74	1148	1142	99	482	3.4	114
2.	Bihar @	Rabi	17	88	616	568	92	1681	N.A.	28
3.	Chhattisgarh	Kharif	51	67	498	344	69	429	2.5	32
4.	Gujarat %	Kharif	213	95	2910	2837	97	991	N.A.	211
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	1567	99	7406	6738	91	713	1.9	1061
8.	Madhya Pradesh ***	Kharif	505	87	1650	1274	77	644	2.9	325
9.	Maharashtra *	Kharif	1319	100	8950	8328	93	919	-	1212

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE		Area		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)
			Total (000) (ha.)	Cover age % age	Planned	Analyzed				
10.	Tamil Nadu	Kharif	39	97	336	336	100	1282	3.9	50
11.	Telangana	Kharif	295	96	2332	2332	100	903	1.2	266
12.	Uttar Pradesh	Kharif	285	80	12252	11368	93	980	N.A.	279
13.	West Bengal	Rabi	5	100	181	112	62	2635	0.6	13
<b>T O T A L</b>			<b>4538</b>	<b>95</b>	<b>39299</b>	<b>35885</b>	<b>91</b>	<b>803</b>	<b>0.7</b>	<b>3677</b>
<b>10. GREENGRAM (MOONG)</b>										
1.	Andhra Pradesh	Kharif	13	84	374	332	89	377	8.2	5
		Rabi	94	60	466	444	95	867	2.0	81
2.	Bihar @	(Bha.)	6	94	240	200	83	631	N.A.	4
		(Gar.)	158	74	504	460	91	668	N.A.	105
3.	Gujarat %	Kharif	92	77	1368	1140	83	642	N.A.	59
		Sum	43	30	200	200	100	1045	N.A.	45
4.	Karnataka % %	Kharif	366	99	4016	2983	74	399	2.3	139
		Rabi	9	100	110	100	91	254	9	2.2
5.	Maharashtra *	Kharif	387	100	6922	5932	86	400	-	155
6.	Odisha	(Aut.)	11	100	636	636	100	295	2.4	3
		(Wint.)	60	100	1181	1181	100	333	1.8	20
		Kh. Comb.	71	100	1817	1817	100	327	1.6	23
		Sum	169	100	2189	2189	100	340	1.6	58
7.	Rajasthan	Kharif	2323	100	16244	15481	95	559	-	1300
8.	Tamil Nadu	Kharif	23	92	132	132	100	574	6.5	13
		Rabi	159	95	308	308	100	425	2.1	63
9.	Telangana	Kharif	60	89	836	836	100	788	2	47
		Rabi	6	50	130	130	100	948	5	6
10.	Uttar Pradesh	Kharif	49	71	2644	2579	98	287	N.A.	14
		(Zaid)	44	86	600	590	98	885	N.A.	39
11.	West Bengal	Sum	70	100	706	695	98	408	5.0	29
<b>T O T A L</b>		Kharif	<b>3389</b>	<b>98</b>	<b>34593</b>	<b>31432</b>	<b>91</b>	<b>521</b>	<b>0.2</b>	<b>1758</b>
		Rabi/ Sum.	<b>752</b>	<b>83</b>	<b>5213</b>	<b>5116</b>	<b>98</b>	<b>575</b>	<b>0.9</b>	<b>428</b>
		Comb.	<b>4141</b>	<b>96</b>	<b>39806</b>	<b>36548</b>	<b>92</b>	<b>530</b>	<b>0.2</b>	<b>2186</b>

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) (ha.)	Cover age % age	Planned	Analysed					
<b>11. BLACKGRAM (URD /MATHIKALAI)</b>										
1.	Andhra Pradesh	Kharif	15	65	444	324	73	882	4.2	13
		Rabi	288	57	662	654	99	1094	1.6	315
2.	Assam	Rabi	58	84	500	420	84	598	1.0	35
3.	Gujarat %	Kharif	86	93	2764	2383	86	605	2	52
		Sum.	13	39	80	60	75	1585	2	21
4.	Jharkhand	Kharif	36	N.A.	510	396	78	977	N.A.	35
5.	Karnataka % %	Kharif	59	100	1290	1040	81	539	3.7	30
		Rabi	2	100	130	82	63	507	13.2	1
6.	Maharashtra *	Kharif	3405	100	5590	4834	86	442	N.A.	150.5
7.	Odisha	(Aut.)	10	100	757	757	100	294	4.9	3
		(Wint.)	39	100	1992	1992	100	386	1.7	15
		Kh. Comb.	49	100	2749	2749	100	367	1.6	18
		Sum	9	100	746	746	100	377	2.4	3
8.	Rajasthan	Kharif	502	100	7616	7386	97	246	-	124
9.	Tamil Nadu	Kharif	43	67	112	112	100	842	3.3	36
		Rabi	363	91	312	312	100	776	2.4	282
10.	Telangana	Kharif	15	87	328	328	100	938	2.2	14
		Rabi	7	48	52	52	100	1800	5.6	12
11.	Uttar Pradesh	Kharif	519	94	15248	15106	99	410	N.A.	213
		(Zaid)	45	78	680	622	91	716	N.A.	33
12.	West Bengal	Kharif	67	100	860	815	95	671	1.9	45
	T O T A L	Kharif	4797	96	37511	35473	95	424	0.1	731
		Rabi/ Sum.	785	44	3162	2948	93	574	2.0	703
		Comb.	5581	89	40673	38421	94	445	0.4	1433
<b>12. LAKH (KHESARI)</b>										
1.	Bihar @	Rabi	44	93	420	392	93	760	N.A.	33
2.	Chhattisgarh	Rabi	173	96	662	556	84	323	5.9	67
3.	Madhya Pradesh ***	Rabi	50	68	220	204	93	738	1.2	37
4.	West Bengal	Sum	97	100	408	336	82	885	6.7	86
	T O T A L		364	93	1710	1488	87	583	3.6	223
<b>13. MASUR</b>										
1.	Bihar @	Rabi	143	81	980	964	98	630	N.A.	90
2.	Jharkhand	Rabi	9	N.A.	720	346	48	701	N.A.	6

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE		Area		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)
			Total (000) (ha.)	Cover age % age	Planned	Analyzed				
3.	Rajasthan	Rabi	17	98	856	824	96	1375	-	23
4.	Uttar Pradesh	Rabi	463	94	15732	15090	96	978	N.A.	453
5.	West Bengal	Rabi	172	100	2878	2626	91	836	1.0	144
<b>T O T A L</b>			<b>804</b>	<b>92</b>	<b>21166</b>	<b>19850</b>	<b>94</b>	<b>891</b>	<b>0.9</b>	<b>716</b>
<b>14. HORSEGRAM (KULTHI)</b>										
1.	Andhra Pradesh	Kharif	84	40	120	120	100	472	37.9	39.4
		Rabi	30	55	296	296	100	556	3.7	17
2.	Karnataka % %	Kharif	74	96	2640	1939	73	797	5.2	56
		Rabi	73	100	4584	3631	79	700	2.5	51
3.	Odisha	(Wint.)	23	100	2455	2455	100	396	1.2	9
		Sum	0.04	100	5	5	100	625	N.A.	0.02
4.	Tamil Nadu	Rabi	77	91	320	320	100	779	2.4	60
5.	Telangana	Kharif	0	0	0	0	0	0	0	0
		Rabi	1	11	10	10	0	870	5.6	0
<b>T O T A L</b>			<b>360</b>	<b>80</b>	<b>10430</b>	<b>8776</b>	<b>84</b>	<b>653</b>	<b>8.2</b>	<b>232</b>
<b>15. PEAS</b>										
1	Jharkhand		N.A.							
2.	Uttar Pradesh	Rabi	344	85	7636	7423	97	1645	N.A.	565
3.	West Bengal	Rabi	20	100	286	161	56	950	4.9	19
<b>T O T A L</b>			<b>364</b>	<b>86</b>	<b>7922</b>	<b>7584</b>	<b>96</b>	<b>1607</b>	<b>2.9</b>	<b>584</b>
<b>16. MOTH</b>										
1.	Gujarat %		12	80	272	168	62	461.82	N.A.	5.34
2.	Rajasthan	Kharif	954	100	5964	5071	85	329	N.A.	314
<b>T O T A L</b>			<b>965</b>	<b>100</b>	<b>6236</b>	<b>5239</b>	<b>84</b>	<b>331</b>	<b>N.A.</b>	<b>319</b>
<b>17. CHOWLA</b>										
1.	Rajasthan	Kharif	50	98	1956	1718	88	653	N.A.	33
<b>18. GUAR</b>										
1.	Gujarat %	Kharif	145	N.A.	1400	1177	84	730	N.A.	106
2.	Rajasthan	Kharif	2841	100	18284	17828	98	452	N.A.	1285
<b>T O T A L</b>			<b>2986</b>	<b>95</b>	<b>19684</b>	<b>19005</b>	<b>97</b>	<b>466</b>	<b>0.0</b>	<b>1391</b>
<b>19. SAWAN (JHANGORA)</b>										
1.	Uttarakhand	Kharif	46	97	590	585	99	1404	1.3	64
2.	Uttar Pradesh	Kharif	5	80	176	140	80	793	N.A.	4
		(Zaid)	42	94	20	0	0	0	N.A.	0
<b>T O T A L</b>			<b>93</b>	<b>95</b>	<b>786</b>	<b>725</b>	<b>92</b>	<b>740</b>	<b>2.5</b>	<b>68</b>

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d					
<b>20. KORRA.</b>										
1.	Andhra Pradesh	Kharif	14	43	204	184	90	1100	3.4	16
2.	Telangana	Kharif	0.9	84	20	20	100	1711	15.6	1.58
<b>TOTAL</b>			<b>15</b>	<b>45</b>	<b>224</b>	<b>204</b>	<b>91</b>	<b>1137</b>	<b>3.4</b>	<b>17</b>
<b>21. KODON - KUTKI (KODRA)</b>										
1.	Chhattisgarh	Kharif	53	92	260	208	80	596	19.9	16
2.	Madhya Pradesh ***	Kharif	188	95	864	790	91	429	3.9	807
3.	Uttar Pradesh	Kharif	3	100	78	46	59	618	N.A.	2
<b>TOTAL</b>			<b>244</b>	<b>94</b>	<b>1202</b>	<b>1044</b>	<b>87</b>	<b>467</b>	<b>6</b>	<b>825</b>
<b>22. NAVANE</b>										
1.	Karnataka %%	Kharif	21	100	750	598	80	399	5	8
<b>23. SAVE</b>										
1.	Karnataka %%	Kharif	14	100	340	220	65	1821	10	24
<b>24. SAMAI</b>										
1.	Tamil Nadu	Kharif	14	94	100	100	100	1570	12	22
<b>25. VARAGU</b>										
1.	Tamil Nadu	Kharif	2	98	124	120	97	1951	2	3
<b>26. SUGARCANE</b>										
1.	Andhra Pradesh	(Plt.)	33	92	826	744	90	83000	1.1	3
		(Rt.)	53	89	796	771	97	76000	1.2	4
		(Comb.)	86	90	1622	1515	93	78720	0.8	7
2.	Assam	Kharif	30	91	700	336	48	41010	0.2	1218
3.	Bihar @	(Ir.)								
		(Ul.)								
		(Comb.)	224	97	772	724	94	60649	N.A.	13579
4.	Goa	Kharif	1	100	110	51	46	66192	N.A.	54
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	287	100	1130	1020	90	98195	5.0	267967
8.	Kerala	Kharif	1	0.04	45	45	100	10505	N.A.	11
9.	Maharashtra *	Kharif	1209	100	4840	2406	50	84600	-	102324
10.	Odisha	Kharif	9	100	273	273	100	56423	4.2	505
11.	Punjab	Kharif	91	98	698	683	98	80246	N.A.	7302
12.	Rajasthan	Kharif	4	98	450	388	86	73054	-	326



**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE		Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)
			Total (000) (ha.)	Cover age % age	Planned	Analysed				
13.	Tamil Nadu	Kharif	131	96	468	468	100	107615	1.2	14119
14.	Telangana	(Plt.)	9	63	110	110	100	94000	2.3	1
		(Rt.)	18	62	110	110	100	74000	2.6	1
		(Comb.)	26	62	220	220	100	80523	2	2
15.	Uttar Pradesh	Kharif	2208	98	9336	9278	99	81313	N.A.	179568
16.	West Bengal	Rabi	19	100	425	319	75	79657	8.9	1528
<b>T O T A L</b>			<b>4421</b>	<b>98</b>	<b>22399</b>	<b>18746</b>	<b>84</b>	<b>82946</b>	<b>1.0</b>	<b>595538</b>
<b>27. COCOA</b>										
1.	Kerala	Kharif	14	1	797	797	100	965	N.A.	13
<b>28. CHILLIES</b>										
1.	Andhra Pradesh	Kharif	136	76	452	386	84	5326	2.5	725
		Rabi	17	60	402	384	96	4713	1.72	80
2.	Bihar @	Rabi	2	78	340	282	83	2146	N.A.	5
3.	Chhattisgarh	Rabi	5	14	12	12	100	600	2.2	3
4.	Karnataka %%	Kharif	53	100	790	615	78	2087	12	105
		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	72	85	420	400	95	5360	3.1	386
		Rabi	8	78	128	110	100	5891	3.0	50
<b>T O T A L</b>			<b>369</b>	<b>73</b>	<b>2624</b>	<b>2237</b>	<b>85</b>	<b>3791</b>	<b>2.1</b>	<b>1394</b>
<b>29. CUMIN</b>										
1.	Gujarat %	Rabi	482	99.44	2040	1976	97	779	N.A.	375
2.	Rajasthan	Rabi	780	100	5812	4963	85	549	N.A.	428
<b>T O T A L</b>			<b>1262</b>	<b>100</b>	<b>7852</b>	<b>6939</b>	<b>88</b>	<b>637</b>	<b>N.A.</b>	<b>804</b>
<b>30. FENNEL</b>										
1.	Gujarat %	Rabi	43	85	688	613	89	1753	N.A.	76
<b>31. ARECANUT</b>										
1.	Kerala	Kharif	97	4	1620	1620	100	957	2.1	93
2.	Maharashtra *							N.A		
<b>T O T A L</b>			<b>97</b>	<b>4</b>	<b>1620</b>	<b>1620</b>	<b>100</b>	<b>957</b>	<b>2.1</b>	<b>93</b>
<b>32. PEPPER</b>										
1.	Kerala	Kharif	84	3	1600	1600	100	412	2.2	35

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE		Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)
			Total (000) (ha.)	Cover age % age	Planned	Analysed				
<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	16	N.A.	390	373	96	32602	7	498
2.	Kerala	Kharif	2	0.1	1548	1548	100	2695	N.A.	7
<b>TOTAL</b>			19	N.A.	1938	1921	99	1336	N.A.	505
<b>35. GINGER</b>										
1.	Kerala	Kharif	3	0.2	1411	1411	100	4618	N.A.	15
2.	Meghalaya	Kharif	10	100	756	756	100	7392	0.01	66
<b>TOTAL</b>			13	75	2167	2167	100	6706	0.01	82
<b>36. GARLIC</b>										
1.	Gujarat %	Rabi	11	66	342	291	85	7181	-	81
<b>37. CORIANDER</b>										
1.	Rajasthan	Rabi	60	97.2	2072	1980	96	1488	N.A.	89
<b>38. LICHI</b>										
1.	Bihar @	Rabi	9	85	300	244	81	6513	N.A.	59
<b>39. BANANA</b>										
1.	Bihar @	Rabi	11	97	500	264	53	16238	N.A.	179
2.	Gujarat %									
3.	Kerala	Kharif	36	2	2330	2330	100	9038	1.6	548
4.	Madhya Pradesh ***	Rabi	N.A.	N.A.	138	80	58	N.A.	N.A.	N.A.
<b>TOTAL</b>			46	24	2968	2674	90	10685	1.3	727
<b>40. MANGO</b>										
1.	Bihar @	Rabi	66	94	600	388	65	31092	N.A.	2052
2.	Kerala	Kharif								
<b>TOTAL</b>			66	94	600	388	65	31092	N.A.	2052
<b>41. GUAVA</b>										
1.	Bihar @	Rabi	1	84	280	156	56	13108	N.A.	15
<b>42. JACKFRUIT</b>										
1.	Bihar @	Rabi	4	94	420	232	55	23556	1.9	102
2.	Kerala	Kharif	91	4	1618	1618	100	2860	N.A.	260
<b>TOTAL</b>			95	8	2038	1850	91	3799	1.9	362

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (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 *								N.A.	
<b>TOTAL</b>			<b>39</b>	<b>2</b>	<b>1514</b>	<b>1514</b>	<b>100</b>	<b>403</b>	<b>N.A.</b>	<b>16</b>
<b>44. TAPIOCA</b>										
1.	Kerala	Kharif	62	3	1469	1469	100	41770	1.2	2593
<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	105	97	1004	842	84	7219	1.5	756
2.	Bihar @	(Agh.)	77	64	340	316	93	14446	N.A.	1112
		Rabi	87	70	424	418	99	14297	N.A.	1246
3.	Chhattisgarh	Rabi	11	11	174	16	9	5797	78.0	62
4.	Gujarat %	Rabi	118	100	965	929	96	30234	N.A.	3578
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	14	97	570	475	83	6817	6.3	80
		Rabi	3	100	250	230	92	15109	7.0	44
8.	Madhya Pradesh ***	Rabi	82	70	432	346	80	18458	1.1	1118
9.	Meghalaya	Sum	4	100	234	94	40	11960	0.01	43
10.	Odisha	(Wint.)	4	100	2200	2200	100	10680	1.9	47
11.	Uttar Pradesh	Rabi	552	92	22108	21882	99	26920	N.A.	14870
<b>TOTAL</b>			<b>1107</b>	<b>83</b>	<b>37611</b>	<b>33216</b>	<b>88</b>	<b>21503</b>	<b>1.1</b>	<b>23385</b>
<b>47. ONION</b>										
1.	Bihar @	Rabi	13	71	424	388	92	13350	N.A.	173
2.	Chhattisgarh	Rabi	5	35	54	24	44	5632	N.A.	25
3.	Gujarat %	Rabi	41	78	646	596	92	29269	N.A.	1212
		Sum	7	26	80	40	50	28475	N.A.	204
4.	Jharkhand	Rabi	4	N.A.	630	364	58	8010	N.A.	29

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) (ha.)	Cover age % age	Planned	Analyzed					
5.	Karnataka %%	Kharif	144	100	2270	2043	90	8403	4.3	1165
		Rabi	26.1	100	410	388	95	14623	9.6	363
		Sum	4	100	170	162	95	12286	11.6	49
6.	Madhya Pradesh ***	Rabi	73	92	642	458	71	18760	2.4	1377
7.	Uttar Pradesh	Rabi	12	33	70	60	86	14260	N.A.	167
		(Zaid)	16	49	620	524	85	16371	N.A.	266
<b>TOTAL</b>			<b>345</b>	<b>86</b>	<b>6016</b>	<b>5047</b>	<b>84</b>	<b>14748</b>	<b>1.6</b>	<b>5030</b>
<b>48. BRINJAL</b>										
1.	Bihar @	(Agh.)	19	71	340	332	98	10895	0.36	212
		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
<b>TOTAL</b>			<b>37</b>	<b>53</b>	<b>1550</b>	<b>1270</b>	<b>82</b>	<b>9202</b>	<b>2.3</b>	<b>340</b>
<b>49. TOMATO</b>										
1.	Bihar @	(Agh.)	9	43	140	140	100	12374	0.52	105
		Rabi	6	64	280	226	81	12254	4.39	62
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	27	N.A.	1580	1479	94	15596	3.48	399
		Rabi	3	N.A.	280	262	94	11561	8.19	31
		Sum	1	N.A.	60	54	90	8176	16.4	4
<b>TOTAL</b>			<b>57</b>	<b>13</b>	<b>3540</b>	<b>3021</b>	<b>85</b>	<b>12268</b>	<b>2.8</b>	<b>685</b>
<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	53	96	1284	1216	95	1266	N.A.	67

**ANNEX-V : ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) (ha.)	Cover age % age	Planned	Analysed					
<b>54. GROUNDNUT</b>										
1.	Andhra Pradesh	Kharif	568	99	2604	2492	96	1096	2.49	622
		Rabi	93	55	824	804	98	2438	2.1	227
2.	Chhattisgarh	Kharif	27	68	264	218	83	1524	3.89	42
3.	Goa	Kharif	0.002	100	30	4	13	2300	N.A.	0.005
		Rabi	0.2	100	60	4	53	2526	N.A.	0.4
4.	Gujarat %	Kharif	1629	100	3498	3352	96	2764	N.A.	4504
		Sum	59	89	1229	1197	97	2393	N.A.	142
5.	Karnataka % %	(KharifIr.)	N.A.							
		(KharifUI.)	N.A.							
		(Comb.)	404	100	8308	6471	78	863	2.4	332
		(Rab.UI.)	3	N.A.	130	127	98	2462	13.4	7
		(Sum. Ir.)	N.A.							
		(Sum. UI.)	N.A.							
		Sum (Comb.)	66	N.A.	4864	2856	59	1190	3	75
		Rabi/Sum comb	69		4994	2983	60	1241	1	911
6.	Madhya Pradesh ***	Kharif	201	86	954	792	83	1141	3.2	229
7.	Maharashtra *	Kharif	221	100	4276	2711	63	877	-	194
		Sum	70	98	3416	2383	70	1675	-	116.66
8.	Odisha	(Aut.)	10	100	1068	1068	100	1189	1.8	11
		(Wint.)	1	100	172	172	100	1591	2.8	2
		Kh. comb.	335	97	1160	1160	100	2717	1.5	911
		Sum	13	100	1683	1683	100	2235	5.7	41
9.	Rajasthan	Kharif	735	99	7620	5783	76	2195	-	1612
10.	Tamil Nadu	Kharif	209	97	700	700	100	2479	1.8	518
		Rabi	137	96	460	460	100	3742	1.5	514
		Comb.	335	97	1160	1160	100	2717	1.5	911
11.	Telangana	Kharif	12	79	198	198	100	2743	3.5	34
		Rabi	99	91	1102	1102	100	2348	1.82	231
12.	Uttar Pradesh	Kharif	94	80	7432	7347	99	942	N.A.	88
13.	West Bengal	Rabi	62	100	764	684	87	2288	2.1	142
	TOTAL	Kharif	4112	98	37124	31308	84	1996	0.7	8188
		Rabi/Sum.	603	88	14532	11300	78	2342	0.9	1497
		Comb.	4715	97	51656	42608	82	2040	0.6	9686

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Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) (ha.)	Cover age % age	Planned	Analysed					
<b>55. SESAMUM ( GINGELLY)</b>										
1.	Andhra Pradesh	Kharif	6	79	270	244	90	212	4.4	1
		Rabi	33	59	330	330	100	368	2.7	12
2.	Chhattisgarh	Kharif	15	70	150	110	73	429	10.8	7
3.	Gujarat %	Kharif	110	94	1602	1548	97	512	N.A.	56
4.	Karnataka %%	Kharif	28	100	1880	1121	60	899	5.6	24
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	20	100	2166	593	27	142		3
		Rabi	1.89	100	316	0	0			
8.	Odisha	(Aut.)	2	100	130	130	100	306	13.1	1
		(Wint.)	9	100	613	613	100	308	3.7	3
		Kh. Comb.	335	97	1160	1160	100	2717	1.5	911
		Sum	3	100	316	316	100	219	3.0	0.57
9.	Rajasthan	Kharif	279	97	5568	5189	93	327	-	92
10.	Tamil Nadu	Kharif	12.1	60	224	180	80	553	4.2	7
		Rabi	41	68	256	244	95	728	3.3	30
		(Comb.)	53	66	480	424	88	688	2.8	36
11.	Telangana	Kharif	0	49	40	22	55	149	15.9	0.1
		Rabi	20	87	198	198	100	636	2.7	13
12.	Uttar Pradesh	Kharif	356	94	13468	13193	98	184	N.A.	66
13.	West Bengal	Sum	262	100	3415	3054	89	511	1.9	134
TOTAL		Kharif	1209	94	27681	24361	88	340	1.3	411
		Rabi/Sum.	360	92	4831	4142	86	525	1.5	189
		(Comb.)	1570	93	32512	28503	88	383	1.0	600
<b>56. CASTOR</b>										
1.	Andhra Pradesh	Kharif	37	85	232	232	100	686	5.7	25
2.	Gujarat %	Kharif	735	100	3569	3549	99	1944	N.A.	1432
3.	Karnataka %%	Kharif	0.2	100	150	111	74	777	1.7	0.17
4.	Telangana	Kharif	26	85	150	150	100	1310	8.2	34
TOTAL			798	98	4101	4042	99	1865	2.7	1491
<b>57. RAPE &amp; MUSTARD</b>										
1.	Assam	Rabi	287	100	1250	1042	83	617	0.9	177

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)		
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d						
2.	Bihar @	Rabi	75	84	1008	1002	99	1187	N.A.	89	
3.	Chhattisgarh	Rabi	39	62	384	256	67	448	5.6	16	
4.	Gujarat %	Rabi	173	97	1206	1143	95	1932	N.A.	334	
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.)	7	100	2093	2093	100	293	2.8	2	
10.	Punjab	Rabi	31	92	568	556	98	1482	N.A.	46	
11.	Rajasthan	(Ir.)	N.A.								
		(UI.)	N.A.								
		(Comp.)	N.A.								
		Rabi Comb.	2713	100	28996	27574	95	1581	-	4289	
12.	Uttar Pradesh	Rabi	703	95	27794	27494	99	1260	N.A.	886	
13.	West Bengal	Rabi	610	100	5369	4876	91	1167	0.9	712	
<b>T O T A L</b>			<b>5831</b>	<b>94</b>	<b>78884</b>	<b>73040</b>	<b>93</b>	<b>1383</b>	<b>0.2</b>	<b>8063</b>	
<b>58. LINSEED (ALSI)</b>											
1.	Chhattisgarh	Rabi	16	59	252	132	52	370	7.6	4	
2.	Jammu & Kashmir	Rabi	0.2	N.A.	12	6	50	1113	N.A.	0.2	
3.	Karnataka %%	Rabi	0.1	100	260	34	13	540	25	0.04	
4.	Madhya Pradesh ***	Rabi	94	92	920	802	87	553	4	42	
5.	Maharashtra *	Rabi	5	100	616	76	12	390	N.A.	2	
6.	Uttar Pradesh	Rabi	27	52	692	598	86	688	N.A.	19	
7.	West Bengal	Rabi	4	100	125	87	70	517	8	2	
<b>T O T A L</b>			<b>146</b>	<b>82</b>	<b>2877</b>	<b>1735</b>	<b>60</b>	<b>552</b>	<b>4</b>	<b>70</b>	
<b>59. SAFFLOWER</b>											
1.	Karnataka %%	Rabi	22	100	1770	1049	59	1027	3.4	21	
2.	Maharashtra *	Rabi	22	100	708	89	13	746	N.A.	16.1	
<b>T O T A L</b>			<b>43</b>	<b>100</b>	<b>2478</b>	<b>1138</b>	<b>46</b>	<b>887</b>	<b>2.0</b>	<b>37</b>	
<b>60. SUNFLOWER</b>											
1.	Andhra Pradesh	Kharif	2	85	196	96	49	698	9.5	1	
		Rabi	7	69	322	192	60	1012	3.3	7	
2.	Haryana ###	Rabi	8	N.A.	230	66	29	1644	N.A.	13	
3.	Karnataka %%	(KharifIr.)									

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse d					
		(KharifUL.)								
		Comb.	103	100	4614	2219	48	730	3.4	71
		(Rabi Ir.)								
		(Rabi UL)								
		Comb.	23	100	4188	1147	27	695	6.7	16
		(Sum. Ir.)	3	100	1240	259	21	1035	16.9	3
		Rabi/Sum. Coml	26	100	5428	1406	26	737	6.3	19
4.	Maharashtra *	Kharif	19	100	1044	157	15	340	N.A.	7
		Rabi	3	100	336	8	2	349	N.A.	1
		Sum	5.2	100	774	68	9	1779	N.A.	9.2
		Rabi/Sum. Coml	9	100	1110	76	7	1210	N.A.	10
5.	Tamil Nadu	Kharif	0.2	55	96	4	4	995	5	0
		Rabi	4	94	204	184	90	898	4	4
6.	Uttar Pradesh	(Zaid)	3	63	170	20	12	1382	N.A.	5
7.	Telangana	Kharif	0	0	0	0	0	0	0	0
		Rabi	4	71	36	36	87	2231	5	5
	TOTAL	Kharif	124	100	5950	2476	42	670	3.1	79
		Rabi/Sum.	61	91	7500	1980	26	1103	2.4	63
		Comb.	186	97	13450	4456	33	813	2.0	142
<b>61. SOYABEAN</b>										
1.	Andhra Pradesh	Kharif	1.4	90	104	30	36	1720	9	1
2.	Bihar	Kharif	19.6	86	112	108	36	754	4	15
3.	Chhattisgarh	Kharif	72	94	210	198	94	1015	10.2	80
4.	Karnataka % %	Kharif	334	100	1964	1626	83	1200	2.8	380
5.	Madhya Pradesh ***	Kharif	6014	95	2774	2450	88	457	3.9	2748
6.	Maharashtra *	Kharif	4124	100	13392	12667	95	1170	N.A.	4824
7.	Rajasthan	Kharif	119	100	7320	7137	98	469	N.A.	525
8.	Telangana	Kharif	172	96	650	650	100	1808	2.7	311
9.	Uttar Pradesh	Kharif	22	91	532	524	98	513	N.A.	11
	TOTAL		10877	97	27058	25390	94	776	1.3	8896
<b>62. TARA MEERA</b>										
1.	Rajasthan	Rabi	764	68	1640	1532	93	602	N.A.	460
<b>63. COCONUT ##</b>										
1.	Kerala	Kharif	761	29	2430	2430	100	6328	0.8	4814
2.	Maharashtra *							N.A.		
	TOTAL		761	30	2430	2430	100	6328	0.8	4814



**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000 ) ( ha.)	Cover age % age	Planned	Analyse d					
<b>64. NIGER</b>										
1.	Maharashtra *	Kharif	8	68	778	256	33	153	N.A.	1.2
<b>65. COTTON \$ (Lint)</b>										
1.	Andhra Pradesh	Kharif	654	83	952	924	97	1880	2.0	1229
2.	Gujarat %	Kharif (Ir.)	1879	100	5451	5353	98	1704	N.A.	3303
		Kharif (Ul.)	775	95	2584	2000	77	1122	N.A.	870
		Kharif Comb.	2655	98	8035	7353	92	1534	N.A.	4173
3.	Haryana ###	Kharif	615	45	940	908	97	275	N.A.	995
4.	Karnataka %%	(Ir.)								
		(Ul.)								
		Kharif Comb.	697	N.A.	3620	3099	86	518	2.9	202
		Rabi	5	N.A.	140	106	76	18	13.0	87
5.	Madhya Pradesh ***	Kharif	557	98	962	819	85	1227	2.1	4017
6.	Maharashtra *	(Ir.)	N.A.							
		(Ul.)								
		(Comp.)								
		Kharif Comb.	4491	100	13620	12992	95	248	N.A.	6542
7.	Punjab	Kharif	248	100	668	664	99	2363	N.A.	586
8.	Rajasthan	Kharif	760	99	7264	6957	96	1869	-	8363
9.	Tamil Nadu	Kharif	97	95	564	564	100	414	1.4	235
		Rabi	73	78	256	256	100	427	2.6	183
		Comb.	170	88	820	820	100	419	1.4	418
10.	Telangana	Kharif	2127	89	1420	1420	100	1769	1.1	3762
11.	Uttar Pradesh	Kharif	3	33	80	56	70	396	N.A.	1
TOTAL		Kharif	12904	95	38125	35756	94	1047	0.4	30106
		Rabi	78	78	396	362	91	401	2.6	270
		Comb.	12982	95	38521	36118	94	1043	0	30376
<b>66. JUTE. @@</b>										
1.	Assam	Kharif	64	95	600	494	82	2218	1.2	792
2.	Bihar @	Kharif	48	96	200	184	92	2046	N.A.	116
3.	Meghalaya	Kharif	7	60	64	56	88	826	0.06	69
4.	Odisha	Kharif	0.2	100	38	38	100	2169	5.0	0
5.	West Bengal	Kharif	505	100	2898	2670	92	1600	0.5	7901
TOTAL		Kharif	624	99	3800	3442	91	1690	0.4	8879

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) ( ha.)	Cover age % age	Planned	Analyse d					
<b>67. MESTA. @@</b>										
1.	Andhra Pradesh	Kharif	2	96	200	180	90	1918	1.4	3
2.	Bihar @	Kharif	14	100	200	164	82	2041	N.A.	28
3.	West Bengal	Kharif	12	100	168	152	90	1300	1.7	166
<b>T O T A L</b>			28	100	568	496	87	1703	1.2	197
<b>68. TOBACCO</b>										
1.	Andhra Pradesh	(N)	17	89	314	302	96	2986	7.5	49
		(V)	62	96	370	352	95	1888	8.9	116
		Rabi (Comb.)	78	95	684	654	96	2121	6.7	166
2.	Gujarat %	Kharif	48	97	286	254	89	1966	-	95
3.	Karnataka % %	Rabi	81	100	280	263	94	1011	7	78
4.	Maharashtra *	Rabi	0.5	100	88	12	14	1815	-	1
5.	Telangana	(N)	0.3	22	10	10	100	2966	6.4	1
		(V)	1	23	20	20	100	3146	9.7	4
		Rabi (Comb.)	2	23	30	30	100	3111	8.9	5
6.	Uttar Pradesh	Rabi	35	91	100	78	78	2806	N.A.	98
		(Zaid)	1	19	20	10	50	1844	N.A.	1.8
		Comb.	36	89	120	88	73	2779	N.A.	100
<b>T O T A L</b>		Kharif	129	99	566	517	91	1367	3.4	173
		Rabi	116	92	922	784	85	2337	5.9	271
		Comb.	245	96	1488	1301	87	1826	3	444
<b>69. ISABGOL</b>										
1.	Gujarat %	Rabi	10	82	332	280	84	825	N.A.	8
2.	Rajasthan	Rabi	334	99	4456	3891	87	511	N.A.	171
<b>T O T A L</b>			343	99	4788	4171	87	520	N.A.	179
<b>70. AVARE (SEM)</b>										
1.	Karnataka % %	Kharif	14	98	560	509	91	931	2.2	12
		Rabi	6	99	100	100	100	869	-	4866
<b>71. COWPEA (LOBIA)</b>										
1.	Goa	Kharif	0.001	100	170	1	1	480	NA	0.005
		Rabi	4.40	100	190	15	8	877	NA	4

**ANNEX-V :ESTIMATES OF YIELD RATES AND PRODUCTION UNDER CES DURING 2019-20**

Sl. No.	STATE	Area under Crop		No. of Experiments		Response % age	Estimated yield rate (Kg/ha.)	Standard Error % age	Total Production (000 tonnes)	
		Total (000) (ha.)	Coverage % age	Planned	Analyzed					
2.	Karnataka % %	Kharif	20	99	1030	752	73	299	6	6
		Rabi	1.5	N.A.	70	60	86	430	18	1
		Summer	0.64	N.A.	40	18	45	264	24	0.2
		Rabi/Sum. Coml	2.12	N.A.	110	78	71	380	15.2	1
3.	Kerala	Kharif	6	N.A.	1990	1990	100	6177	NA	36
4.	Tamil Nadu	Kharif	48	88	112	112	100	784	4	38
		Rabi	18	77	112	112	100	702	7	13
<b>Total</b>			<b>101</b>	<b>80</b>	<b>3714</b>	<b>3138</b>	<b>84</b>	<b>961</b>	<b>NA</b>	<b>97</b>
<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	1.6	N.A.	100	71	71	19463	29	30
<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	90	54	54	100	1036	4.7	11

**Note :-**

1. : All primary data have been supplied by concerned SASA.
2. \*\* : Estimated average yield is in number of Jackfruits/hec. and production in million numbers for Kerala State.
3. ## : Estimated average yield is in number of coconuts/hec. and production in million nuts.
4. \$ : Production of cotton in `000' bales of 170 Kgs. each.
5. \* : Coverage % repeated from the year 2011-12.
6. @@ : Production of Jute and Mesta in `000' bales of 180 Kgs. each.
7. %% : Coverage % age repeated from the year 2015-16 .
8. \$\$ : Data repeated from the year 2011-12 Linseed, Potato, R&M and Saffron.
9. @ : coverage percentage repeated from the year 2013-14 .
10. : N.A. = Not Available
11. \$\$\$ : Coverage Percentage repeated from the year 2014-15.
12. \*\*\* : Figure repeated from the year 2013-14 in respect for crops Banana, Onion and Papaya and all other crop 2015-16 for Madhya Pradesh.
13. % : Coverage % age repeated from the year 2016-17 .
14. ### : Data repeated from the year 2015-16.
15. ^: coverage % repeated from the year 2018-19

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

Sl. No.	STATE	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	829	5697	6868	774	3542	4576
2	Assam	Kharif	2005	4189	2121	1895	3959	2089
3	Bihar	Kharif	3037	9872	3250	2826	6169	2183
4	Chhattisgarh	Kharif	3996	9611	2034	3666	6775	1848
5	Gujarat	Kharif	850	2732	3215	850	1822	2144
6	Haryana	Kharif	1206	3941	3268	1447	4824	3334
7	Himachal Pradesh	Kharif	70	141	2250	73	144	1980
8	Jammu & Kashmir	Kharif	281	88	3430	281	587	2093
9	Jharkhand	Kharif	1342	4163	2108	1358	3013	2219
10	Karnataka	Kharif	897	4471	2108	916	2775	3030
		Rabi	239	1114	4890	152	486	3160
11	Kerala	Kharif	135	388	2878	152	449	2947
		Rabi	56	199	3548	1982	149	3232
12	Madhya Pradesh	Kharif	1935	2120	1127	1982	4684	2363
13	Meghalaya	Kharif	97	239	1743	97	240	1644
14	Odisha	Kharif	293	933	3188	3648	7428	1899
15	Punjab	Kharif	3142	17626	5610	2920	11779	4132
16	Rajasthan	Kharif	220	721	3284	220	481	2291
17	Tamil Nadu	Kharif	1567	5802	3702	1742	6388	3666
		Rabi	1907	7265	3809	149	661	4450
18	Uttarakhand	Kharif	230	598	2339	239	562	2350
		Rabi	1272	4617	3630	1280	4350	3400
19	Dadra & Nagar Haveli	Kharif	41	82	1996	14	30	2106
20	Daman & Diu	Kharif	1	0.2	1273	1	0.2	1273
21	Puducherry	Kharif	4	13	3280	13	47	3500
		Rabi	14	40	2928	5	17	3682
<b>2. JOWAR</b>								
1	Chhattisgarh	Kharif	1	4072	1403	2.9	4	1403
2	Karnataka	Kharif	88	131	1569	128	177	1387
		Rabi	634	701	1106	699	810	1159
3	Madhya Pradesh	Kharif	190	283	1491	108	165	1529
<b>3. BAJRA</b>								
1	Andhra Pradesh	Kharif	20	47	2297	25	58	2328
2	Gujarat	Kharif	177	308	1738	435	913	2098
3	Haryana	Kharif	370	652	1762	193	1019	259
4	Karnataka	Kharif	321	352	1153	322	367	1140
5	Madhya Pradesh	Kharif	233	366	1575	296	657	2219
6	Maharashtra	Kharif	673	512	1575	693	512	761
7	Rajasthan	Kharif	4250	5052	762	4287	4686	1093
8	Tamil Nadu	Kharif	50	140	2785	67	185	2743
9	Telangana	Kharif	1	1.0	1216	9	10	1158
<b>4. MAIZE</b>								
1	Bihar	Rabi	301	2279	4565	464	68	3380
2	Haryana	Kharif	6	18	3000	6	17	2837
3	Himachal Pradesh	Kharif	256	639	2779	287	730	2340
4	Jammu & Kashmir	Kharif	269	541	2010	269	541	2015
5	Jharkhand	(Bha.)	124	271	2172	249	495	1986
6	Karnataka	Kharif	1315	4003	3205	1287	3740	2906
7	Karnataka	Rabi	101	3504	3860	137	518	3781
8	Madhya Pradesh	Kharif	991	2288	2308	1383	3986	2882
9	Maharashtra	Rabi	201	380	1887	355	908	2559
10	Odisha	Rabi	4	13	3333	4	13	3333
11	Uttar Pradesh	Rabi	15	42	2829	64	163	2547
12	West Bengal	Kharif	50	170	3404	50	170	3404
<b>5. RAGI (MANDUA)</b>								
1	Andhra Pradesh	Kharif	26	31	1244	34	45	1320
2	Jharkhand	Kharif	19	23	1162	15	13	875

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

Sl. No.	STATE		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	591	1010	1798	641	1164	1816
4	Tamil Nadu	Kharif	64	191	294	89	275	3247
5	Uttarakhand	Kharif	84	120	1488	84	120	1430
6	Dadra & N. Haveli	Kharif	1	2	2314	0.9	1	1650
<b>6. WHEAT</b>								
1	Chhatisgarh	Rabi	103	130	1097	110	115	1050
2	Haryana	Rabi	2576	11350	4407	2534	11876	4687
3	Himachal Pradesh	Rabi	315	621	2190	286	563	1970
4	Jharkhand	Rabi	112	227	2022	215	439	2046
5	Karnataka	Rabi	153	190	1241	150	180	1198
6	Madhya Pradesh	Rabi	5408	15664	2896	6551	19607	2993
7	Rajasthan	Rabi	3497	13894	3973	3118	10918	3501
8	Uttar Pradesh	Rabi	9853	36210	3675	9853	33816	3432
9	West Bengal	Rabi	188	510	2708	188	510	2708
<b>7. BARLEY</b>								
1	Chhatisgarh	Rabi	2	1	609	2	1	609
2	Haryana	Rabi	29	99	3414	12	47	3837
3	Himachal Pradesh	Rabi	15	23	1686	20	31	1510
4	Madhya Pradesh	Rabi	72	158	1670	30	64	2131
<b>8. GRAM ( BENGALGRAM )</b>								
1	Andhra Pradesh	Kharif	238	114	482	459	559	1218
2	Bihar	Rabi	17	28	1681	53	39	730
3	Chhatisgarh	Kharif	51	32	429	382	88	231
4	Gujarat	Kharif	213	211	991	406	635	1568
5	Haryana	Kharif	4	6	1068	44	47	1072
6	Jharkhand	Rabi	1	79	2076	230	275	1197
7	Karnataka	Kharif	1567	1061	713	869	676	782
8	Madhya Pradesh	Kharif	505	325	644	1926	2729	1417
9	Maharashtra	Kharif	1319	1212	919	2043	2239	1096
10	Punjab	Kharif	39	50	1282	2	2	1219
11	Rajasthan	Kharif	295	266	903	2463	2658	1079
12	Uttar Pradesh	Kharif	285	279	980	621	851	1371
13	West Bengal	Rabi	5	13	2635	36	47	1313
<b>9. REDGRAM (TUR/ARHAR)</b>								
1	Chhatisgarh	Kharif	51	32	429	51	32	628
2	Haryana	Kharif	4	6	1068	1	1	1120
3	Jharkhand	Rabi	1	79	2076	231	242	1048
4	Karnataka	Kharif	1567	1061	713	1545	1126	729
5	Madhya Pradesh	Kharif	505	325	644	249	275	1103
6	Tamil Nadu	Kharif	39	50	1282	42	53	1273
7	West Bengal	Rabi	5	13	2635	5	4	852
<b>10. GREENGRAM (MOONG)</b>								
1	Bihar	Kharif	6	4	631	7	5	628
2	Karnataka	Kharif	366	139	399	372	138	371
3	Karnataka	Rabi	9	2	254	10	3	948
4	Telangana	Rabi	6	6	948	6	6	948
5	West Bengal	Sum	70	29	408	73	30	418
<b>11. BLACKGRAM (URD /MATHIKALAI)</b>								
1	Gujarat	Kharif	86	52	605	86	52	605
2	Jharkhand	Kharif	36	35	977	128	112	869
3	Karnataka	Kharif	59	30	539	65	32	695
4	Karnataka	Rabi	2	1	507	3	8	344
5	Telangana	Rabi	7	12	1800	7	13	1800
6	West Bengal	Kharif	67	45	671	67	45	671
<b>12. LAKH (KHESARI)</b>								
1	Chhatisgarh	Rabi	173	67	323	183	114	620
2	West Bengal	Rabi	97	86	885	4	5	1097

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

Sl. No.	STATE	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	62	33	849
2	FALSE	FALSE	FALSE	FALSE	FALSE			
<b>14. HORSEGRAM (KULTHI)</b>								
1	Andhra Pradesh	Kharif	84	39	472	57	10	175
2	Karnataka	Kharif	74	56	797	38	16	421
3	Karnataka	Rabi	73	51	700	115	13	116
4	Telangana	Rabi	1	0	870	1	1	1000
<b>15. PEAS</b>								
1	West Bengal	Rabi	20	19	950	17	20	1173
<b>16. GROUNDNUT</b>								
1	Andhra Pradesh	Kharif	568	622	1096	568	622	1095
		Rabi	93	227	2438	93	227	2439
2	Chhattisgarh	Kharif	27	42	1524	27	42	1524
3	Gujarat	Kharif	1629	4504	2764	1629	4503	2764
		Rabi	59	142	2393	59	142	24
4	Karnataka	Kharif	404	332	863	393	370	941
		Rabi	69	911	1241	111	133	1198
5	Madhya Pradesh	Kharif	201	229	1141	217	345	1587
6	Maharashtra	Kharif	221	194	877	221	203	866
		Rabi	70	116.66	1675	70	18	1687
7	Odisha	Kharif	335	911	2717	11	14	1241
		Rabi	13	41	2235	18	30	1610
8	Rajasthan	Kharif	735	1612	2195	740	1612	2195
9	Tamil Nadu	Kharif	209	518	2479	209	519	2479
		Rabi	137	514	3742	137	514	3742
10	Telangana	Kharif	12	34	2743	12	33	2743
		Rabi	99	231	2348	99	232	2348
11	Uttar Pradesh	Kharif	94	88	942	94	89	942
12	West Bengal	Rabi	62	142	2288	67	151	2264
<b>17. SESAMUM ( GINGELLY)</b>								
1	Andhra Pradesh	Kharif	6	1	212	39	13	343
2	Chhattisgarh	Kharif	15	7	429	15	7	448
3	Gujarat	Kharif	110	56	512	166	108	649
4	Karnataka	Kharif	28	24	899	29	25	864
5	Madhya Pradesh	Kharif	370	152	411	315	126	400
6	Maharashtra	Kharif	20	3	142	26	520	200
7	Odisha	Kharif	335	911	2717	14	4	291
8	Rajasthan	Kharif	279	92	327	280	92	328
9	Tamil Nadu	Kharif	12	7	553	53	36	688
10	Telangana	Kharif	0	0	149	21	13	636
11	Uttar Pradesh	Kharif	356	66	184	356	66	184
<b>18. CASTOR</b>								
1	Andhra Pradesh	Kharif	37	25	686	38	26	684
<b>19. SAFFLOWER</b>								
1	Karnataka	Rabi	22	21	1027	26	25	972
<b>20. SUNFLOWER</b>								
1	Andhra Pradesh	Kharif	2	1	1027	2	1	698
		Rabi	7	7	746	7	7	1012
2	Haryana	Rabi	8	13	887	9	17	1846
3	Karnataka	Kharif	103	71	730	101	80	796
		Rabi	26	19	737	28	23	821
4	Tamil Nadu	Rabi	4	4	898	4	4	898
5	Telangana	Rabi	4	5	2231	4	9	2231
<b>21. SOYABEAN</b>								
1	Andhra Pradesh	Kharif	1	1	1720	1	2	1747
2	Chhattisgarh	Kharif	72	80	1015	72.3	80	1105
3	Madhya Pradesh	Kharif	6014	2748	457	6194	4887	789

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

Sl. No.	STATE		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	654	1229	1880	657	2058	649
2	Gujarat	Kharif	2655	4173	1534	2655	8617	552
3	Haryana	Kharif	615	995	275	723	2484	584
4	Karnataka	Kharif	697	202	518	817	2330	485
5	Madhya Pradesh	Kharif	557	4017	1227	650	1646	430
6	Maharashtra	Kharif	4491	6542	248	4491	6639	251
7	Rajasthan	Kharif	760	8363	1869	760	2788	624
8	Tamil Nadu	Kharif	97	235	414	170	418	418
9	Telangana	Kharif	2127	3762	1769	2127	6833	546
<b>23. JUTE</b>								
1	Bihar	Kharif	48	116	2046	48	647	25
2	Meghalaya	Kharif	7	69	826	7	69	1847
3	West Bengal	Kharif	505	7901	1600	505	7901	2815
<b>24. MESTA</b>								
1	Andhra Pradesh	Kharif	2	3	1918	2	21	1918
2	Bihar	Kharif	14	28	2041	14	155	2041
3	West Bengal	Kharif	12	166	1300	12	166	2406

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 2019-20**

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>1. RICE</b>								
1.	Andhra Pradesh	Kh.	3572	5305	1496	226	3261	64
		Rabi	2946	6708	829	-	-	-
2.	Assam	Aut.	185	1730	N.A.	513	1482	N.A.
		Wint.	92	2682	N.A.	2692	2153	N.A.
		Sum.	559	2612	N.A.	507	2459	N.A.
3.	Bihar	Bha.	344	2747	187	376	2248	257
		Agh.	28828	3875	1960	10127	2407	633
		Gar.	366	3199	60			
4.	Chhattisgarh	Kh.	1720	2519	1588	1676	1716	2408
5.	Goa	Kh.				158	2481	24
		Rabi	110	2899	10			
6.	Gujarat ^	Kh.	6220	3212	624	1250	1756	138
		Sum.			N.A.			
7.	Haryana \$\$\$	Kh.	974	3109	1277	-	-	-
8.	Himachal Pradesh				N.A.			
9.	Jammu & Kashmir		688	3182	222	104	2980	59
10.	Jharkhand				N.A.			
11.	Karnataka	Kh.	6519	5696	665	4680	3968	232
		Rabi	961	4155	8			
		Sum.	2743	4919	231			
12.	Kerala	Aut.	715	2274	17	1549	2768	38
		Wint.	2588	3117	77	552	1674	3
		Sum.	773	3542	56	26	2104	0.10
13.	Madhya Pradesh ##		1078	2050	697	1238	608	1238
14.	Maharashtra	Kh.	661	2004	309	4244	1807	744
		Comp.	-	-	-			
		Sum.	-	-	-			
15.	Meghalaya	Aut.	238	1428	33			
		Wint.	796	1929	43	102	4683	3.0
16.	Odisha	Aut.	400	2291	9	5437	1782	417
		Wint.	9293	2671	956	18710	2355	2267
		Sum.	6051	3188	293			
17.	Punjab		1976	5610	3142			
18.	Rajasthan							
19.	Tamil Nadu ^	K/K/S	428	N.A.	206	-	-	-
		S/T/P	1260	N.A.	1235	-	-	-
		N/K	300	N.A.	338	-	-	-
20.	Telangana	Kh.	2380	3649	1612	40	2720	18
		Rabi	2180	3710	1585	-	-	-
21.	Uttarakhand	Kh.	1947	4224	170	725	1881	60
22.	Uttar Pradesh				N.A.			
23.	West Bengal	Aus.	1454	2714	N.A.	423	1949	N.A.
		Aman.	7931	2935	N.A.	4862	2376	N.A.
		Sum.	10989	3462	N.A.	109	2765	N.A.
24.	Dadra & Nagar Haveli		-	-	-	78	1996	41
25.	Daman & Diu		-	-	-	20	1271	1.4
26.	Puducherry	I	88	3280	4	-	-	-
		II	140	2732	9	-	-	-



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	3328	5	-	-	-
T O T A L			110563	3655	-	60424	2323	-
<b>2. JOWAR</b>								
1.	Andhra Pradesh	Kh.				236	944	37
		Rabi				546	1350	118
2.	Chhattisgarh		14	1403	0.965			
3.	Gujarat ^	Kh.	318	669	39			
		Rabi				N.A.		
4.	Karnataka	Kh.	500	2406	13	1317	1430	76
		Rabi	1716	1781	97	7238	984	537
		Sum.						
5.	Madhya Pradesh ##					1378	1491	N.A.
6.	Maharashtra	Kh.						
		Rabi	3015	1023	445	14863	724	1528
7.	Rajasthan							
8.	Tamil Nadu	Kh.	32	N.A.	16	408	N.A.	214
		Rabi	148	N.A.	23	492	N.A.	192
9.	Telangana	Kh.	7	N.A.	N.A.	505	1208	55
		Rabi	164	2167	21	190	1133	8
10.	Uttar Pradesh					N.A.		
T O T A L			5914	1553	654	27173	869	-
<b>3. BAJRA</b>								
1.	Andhra Pradesh	Kh.				404	919	21
2.	Gujarat ^	Kh.	1342	1319	164			
		Sum.	8575	2764	228			
3.	Haryana \$\$\$	Kh.	1456	1738	393			
4.	Karnataka	Kh.	565	1376	56	2420	1105	265
5.	Madhya Pradesh ##	Kh.				302	1444	N.A.
6.	Maharashtra							
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.	30	1501	0.006			
10	Uttar Pradesh	Kh.				N.A.		
11	Daman & Diu	Kh.	0	0	0	8	1306	0.496
T O T A L			12283	904	1266	3263	996	-
<b>4. MAIZE</b>								
1.	Andhra Pradesh	Kh.				424	4636	95
		Rabi				496	8259	205
2.	Bihar	Bha.	13060	2072	209			
		Rabi				24460	7565	301
		Gar.				476	4796	165
3.	Chhattisgarh	Kh.	-	-	-	464	3119	116
4.	Gujarat ^	Kh.	3471	1265	311			
5.	Haryana \$\$\$	Kh.	76	2296	9	-	-	-
6.	Himachal Pradesh	Kh.				N.A.		
7.	Jammu & Kashmir		60	1883	22	734	1798	246
8.	Jharkhand	Bha.				N.A.		
9.	Karnataka	Kh.	4159	3779	336	7115	3008	978
		Rabi	2213	3890	85	217	2381	6
		Sum.	143	4634	9	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
10.	Madhya Pradesh ##		21	2710	N.A.	1747	1772	N.A.
11.	Maharashtra	Kh.						
		Rabi						
12.	Odisha	Aut.	24	1614	0.02	2909	2878	61
		Wint.	31	2624	0.07	17	1760.5	0.04
		Sum.	339	3329	4			
13.	Punjab		361	3582	115			
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.	929	6312	95	1125	4257	294
		Rabi	1606	6834	246	2	3321	0.2
17.	Uttar Pradesh					N.A.		
18.	West Bengal		121	4340	N.A.	376	2390	N.A.
T O T A L			26834	2687	-	40774	5714	-
5. RAGI								
1.	Andhra Pradesh	Kh.				266	1274	26
		Rabi				162	1630	8
2.	Bihar					176	795	3
3.	Goa					-	-	-
4.	Gujarat ^		100	804	12			
5.	Jharkhand						N.A.	
6.	Karnataka	Kh.	1235	2223	35	6163	1771	556
		Rabi	553	1616	17	412	1258	14
		Sum.	270	1828	29		N.A.	
7.	Maharashtra							
8.	Odisha	Aut.				682	746	10
		Wint.				660	724	26
		Sum.	99	757	0.4			
9.	Uttarakhand		8	2277	0.1	1106	1482	84
10.	Tamil Nadu	Kh.	16	N.A.	2	144	N.A.	61
		Rabi	200	N.A.	18	-	-	-
11.	Telangana					30	1493	1.084
12.	Dadra & Nagar Haveli					22	2314	9.53
T O T A L			2481	1700	114	9823	2417	797
6. WHEAT								
1.	Assam	Rabi	12	1331	N.A.	102	1344	N.A.
2.	Bihar	Rabi	38790	2622	2053	2444	1995	94
3.	Chhattisgarh	Rabi	574	1140	87	142	862	16
4.	Gujarat ^	Rabi	16481	1264	1775	120	535	22
5.	Haryana \$\$\$	Rabi	1917	3820	2628	-	-	-
6.	Himachal Pradesh	Rabi					N.A.	
7.	Jammu & Kashmir	Rabi	306	2156	52	730	1959	191
8.	Jharkhand	Rabi					N.A.	
9.	Karnataka	Rabi	2135	1501	107	811	645	47
10.	Madhya Pradesh ##	Rabi	3950	3024	4944	1196	1498	447
11.	Maharashtra	Rabi						
12.	Odisha	Sum.	60	1394	0.12	-	-	-
13.	Punjab	Rabi	2332	5004	3521			
14.	Rajasthan	Rabi					N.A.	
15.	Uttarakhand	Rabi	1714	3325	201	949	1808	113

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	488	2739	N.A.			
T O T A L			68759	2097	-	6494	1642	-
<b>7. BARLEY</b>								
1.	Bihar @@	Rabi	-	-	-	240	1369	7
2.	Chhattisgarh	Rabi	-	-	-	12	609	1.7
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	228	3781	6	-	-	-
8.	Rajasthan	Rabi	N.A.					
9.	Uttarakhand	Rabi	35	1813	0.457	635	1473	24
10.	Uttar Pradesh	Rabi	N.A.					
T O T A L			621	3223	42	1387	1282	-
<b>8. GRAM ( BENGALGRAM )</b>								
1.	Andhra Pradesh	Rabi	-	-	-	1386	1184	459
2.	Bihar	Rabi	-	-	-	710	730	53
3.	Chhattisgarh	Rabi	-	-	-	494	252	382
4.	Gujarat ^	Rabi	1317	1358	173			
5.	Haryana \$\$\$	Rabi	251	728	32	266	290	50
6.	Jharkhand	Rabi	N.A.					
7.	Karnataka	Rabi	1464	789	76	6018	683	557
8.	Madhya Pradesh ##	Rabi	2104	1260	N.A.	2202	1013	N.A.
9.	Maharashtra	Rabi						
10.	Punjab	Rabi	88	1219	1.5	-	-	-
11.	Rajasthan	Rabi	N.A.					
12.	Telangana	Rabi	163	1681	59	533	1401	69
13.	Uttar Pradesh	Rabi	N.A.					
14.	West Bengal	Rabi	64	1682	N.A.	446	1453	N.A.
T O T A L			5451	822	-	12055	838	-
<b>9. REDGRAM ( TUR/ ARHAR )</b>								
1.	Andhra Pradesh	Kh.	-	-	-	1148	455	238
2.	Bihar	Rabi	-	-	-	568	1681	17
3.	Chhattisgarh	Kh.	-	-	-	344	429	51
4.	Gujarat ^	Kh.	1572	1209	254			
5.	Haryana \$\$\$	Kh.	248	991	5	-	-	-
6.	Jharkhand	Rabi	N.A.					
7.	Karnataka	Kh.	771	738	186	5967	709	1381
8.	Madhya Pradesh ##	Kh.	280	841	N.A.	994	572	N.A.
9.	Maharashtra	Kh.						
10.	Tamil Nadu	Kh.	24	N.A.	0.5	312	N.A.	38
11.	Telangana	Kh.	1952	705	7	214	659	285
12.	Uttar Pradesh	Kh.	N.A.					
13.	West Bengal	Rabi	-	-	-	120	1382	N.A.
T O T A L			4847	897	-	9667	384	-
<b>10. GREENGRAM (MOONG)</b>								
1.	Andhra Pradesh	Kh.	-	-	-	332	440	94
		Rabi	-	-	-	444	841	94
2.	Bihar	Bha.	-	-	-	200	631	6
		Gar.	-	-	-	460	666	158

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.			2983	399	366
		Rabi	N.A.			100	254	9
5.	Maharashtra							
6.	Odisha	Aut.	0	0	0	636	295	11
		Wint.	21	208	1.4	1160	334	59
		Sum.	683	340	16	1506	339	153
7.	Rajasthan	Kh.	N.A.					
8.	Tamil Nadu	Kh.	132	N.A.	1	-	-	-
		Rabi	16	N.A.	13	292	N.A.	136
9.	Telangana	Kh.	38	703	0.069	798	770	57
		Rabi	98	972	2	32	893	1
10.	Uttar Pradesh	Kh.	N.A.					
		Zaid	N.A.					
11.	West Bengal	Sum.	183	210	N.A.	512	149	N.A.
T O T A L			1604	493	-	9848	425	-
11. BLACKGRAM (URD/MATHIKALAI)								
1.	Andhra Pradesh	Kh.	-	-	-	324	919	15
		Rabi	-	-	-	654	1044	288
2.	Assam	Rabi	-	-	-	420	623	N.A.
3.	Gujarat ^	Kh.	472	621	42	723	539	64
		Sum.	58	1478	4			
4.	Karnataka	Kh.	N.A.			1040	539	59
		Rabi	N.A.			82	507	2
5.	Maharashtra	Kh.						
6.	Odisha	Aut.	0	0	0	757	294	10
		Wint.	18	307	0.6	1974	387	38
		Sum.	242	358	2	504	380	7
7.	Rajasthan @	Kh.	N.A.					
8.	Tamil Nadu	Kh.	16	N.A.	38	96	N.A.	31
		Rabi	56	N.A.	74	256	N.A.	288
9.	Telangana	Kh.	328	1047	0.006	-	-	-
		Rabi	52	1778	3	0	0	0
10.	Uttar Pradesh	Kh.	N.A.					
		Zaid	N.A.					
11.	West Bengal	Kh.	-	-	-	800	696	N.A.
T O T A L			1242	482	-	7630	545	-
12. LAKH (KHESARI)								
1.	Bihar	Rabi	-	-	-	392	760	44
2.	Chhattisgarh	Rabi	-	-	-	556	323	173
3.	Madhya Pradesh ##	Rabi	-	-	-	204	760	N.A.
4.	West Bengal	Sum.	29	1304	N.A.	306	1050	N.A.
T O T A L			29	1304	-	1458	654	-
13. MASUR								
1.	Bihar	Rabi	-	-	-	964	630	143
2.	Rajasthan	Rabi	N.A.					
3.	Uttar Pradesh	Rabi	N.A.					
4.	West Bengal	Rabi	393	469	N.A.	2233	845	N.A.
T O T A L			393	469	-	3197	780	-

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	84
		Rabi	-	-	-	250	403	30
2.	Karnataka	Kh.	N.A.			1939	796	74
		Rabi	N.A.			3631	699	73
3.	Odisha	Wint.	18	379	0.03	2437	396	23
		Sum.	-	-	-	5	625	0.04
4.	Tamil Nadu	Rabi	320	N.A.	261	-	-	-
5	Telangana	Kh.	-	-	-	-	-	-
		Rabi	-	-	-	10	872	0.1
T O T A L			338	379	261	8362	540	283
<b>15. PEAS</b>								
1.	Uttar Pradesh	Rabi	N.A.					
2.	West Bengal	Rabi	25	1274	N.A.	123	1004	N.A.
T O T A L			25	1274	-	123	1004	-
<b>16. MOTH</b>								
1.	Gujarat ^		N.A.					
2	Rajasthan	Kh.	-	-	-	-	-	-
T O T A L			-	-	-	-	-	-
<b>17. CHOWLA</b>								
1.	Rajasthan	Kh.	N.A.					
<b>18 . GUAR</b>								
1.	Gujarat ^	Kh.	N.A.					
2	Rajasthan @	Kh.	N.A.					
T O T A L			N.A.					
<b>19 . SAWAN (JHANGORA)</b>								
1.	Uttarakhand	Kh.				585	1404	46
2	Uttar Pradesh	Kh.	N.A.					
		Zaid	N.A.					
T O T A L			N.A.			585	1404	46
<b>20. KORRA</b>								
1.	Andhra Pradesh	Kh.				184	1008	0.28
2	Telangana	Kh.	2	2785	0.004	18	1569	0.318
T O T A L			2	N.A.	0	202	1306	1
<b>21. KODON-KUTKI (KODRA)</b>								
1.	Chhattisgarh	Kh.	-	-	-	208	596	53
2.	Madhya Pradesh ##	Kh.	-	-	-	790	450	N.A
3.	Uttar Pradesh	Kh.	N.A.					
T O T A L			-	-	-	998	480	-
<b>22. NAVANE</b>								
1.	Karnataka	Kh.	N.A			589	399	21
<b>23. SAVE</b>								
1.	Karnataka	Kh.	N.A			220	1821	14
<b>24. SAMAI</b>								
1.	Tamil Nadu	Kh.	-	-	-	100	N.A.	13
<b>25. VARAGU</b>								
1.	Tamil Nadu	Kh.	-	-	-	120	N.A.	2
<b>26. SUGARCANE</b>								
1.	Andhra Pradesh	Pt.	806	86000	33	-	-	-
		Rt.	784	76000	53	-	-	-

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.	-	-	-	336	34142	N.A.
3.	Bihar	Kh.	-	-	-	724	60649	224
4.	Goa	Kh.	-	-	-	51	66192	0.8
5	Haryana \$\$\$	Kh.	848	73281	96	-	-	-
6	Jharkhand	Kh.	N.A.					
7.	Karnataka	Kh.	1020	98195	287	N.A.		
8.	Kerala	Kh.	N.A.					
9.	Maharashtra	Kh.	5933	81000	901			
10.	Odisha	Kh.	273	56423	9	-	-	-
11.	Punjab	Kh.	683	80246	91	-	-	-
12.	Rajasthan	Kh.	N.A.					
13.	Tamil Nadu	Kh.	468	N.A.	131	-	-	-
14.	Telangana	Plt.	110	95000	7	-	-	-
		Rt.	108	77000	14	-	-	-
15.	Uttar pradesh	Kh.	N.A.					
16.	West Bengal	Rabi	308	81197	N.A.	11	116772	N.A.
T O T A L			11341	78103	1623	1122	53513	225
27. COCOA								
1.	Kerala	Kh.	N.A.					
28. CHILLIES								
1.	Andhra Pradesh	Kh.	310	5375	129	-	-	-
		Rabi	384	4858	17	-	-	-
2.	Bihar	Rabi	-	-	-	282	2146	2
3.	Chhattisgarh	Rabi	12	600	5	-	-	-
4.	Karnataka	Kh.	330	2961	34	285	573	19
		Rabi	N.A					
		Sum.	N.A					
5.	Madhya Pradesh ##	Rabi	48	573	N.A	-	-	-
6.	Telangana	Kh.	392	5445	69	8	5430	1
		Rabi	108	5610	7	-	-	-
T O T A L			1584	4598	261	575	872	22
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.	-	-	-	756	7392	10
T O T A L			-	-	-	756	7392	10

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	66
<b>41. GUAVA</b>								
1.	Bihar	Rabi	-	-	-	156	13108	1.13
<b>42. JACKFRUIT</b>								
1.	Bihar	Rabi	-	-	-	232	23556	4.3
2.	Kerala		N.A.					
<b>T O T A L</b>			-	-	-	232	23556	4.3
<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	116	8858	-	726	6894	N.A.
2.	Bihar	Agh.	-	-	-	316	14446	77
		Rabi	-	-	-	418	14297	87
3.	Chhattisgarh	Rabi	-	-	-	16	5797	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.	120	10452	1.67	355	63	12
		Rabi	230	15109	2.89	-	-	-
8.	Madhya Pradesh ##	Rabi	346	14329	N.A.	-	-	-
9.	Meghalaya	Sum.	-	-	-	94	11962	4
10.	Odisha	Wint.	2200	10680	4	-	-	-
11.	Uttar Pradesh	Rabi	N.A.					
<b>T O T A L</b>			3983	15927	-	1925	8720	-
<b>47. ONION</b>								
1.	Bihar	Rabi	-	-	-	388	13350	13
2.	Chhattisgarh	Rabi	24	5632	5	-	-	-
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.	1308	11782	64	735	5788	82
		Rabi	388	14623	26	-	-	-
		Sum.	162	12286	4.18	-	-	-
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			3517	17888	-	1677	5822	-
48. BRINJAL								
1.	Bihar	Agh.	-	-	-	332	10895	19
		Rabi	-	-	-	326	9057	8
2.	Jharkhand	Agh.	N.A.					
		Rabi	N.A.					
T O T A L			-	-	-	658	10359	27
49. TOMATO								
1.	Bihar	Agh.	-	-	-	140	12374	9
		Rabi	-	-	-	226	10254	6
2.	Jharkhand	Agh.	N.A.					
		Rabi	N.A.					
T O T A L			-	-	-	366	11486	15
50. CAULIFLOWER								
1.	Bihar	Rabi	-	-	-	314	13455	27
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.	192	2285	28	2300	1035	540
		Rabi	804	2464	93	-	-	-
2.	Chhattisgarh	Kh.	-	-	-	218	1246	27
3.	Goa	Kh.	-	-	-	4	2300	0.002
		Rabi	4	2526	0.17	-	-	-
4.	Gujarat ^	Kh.	7417	1368	1566	-	-	-
		Sum.	803	2156	28	-	-	-
5.	Karnataka	Kh.	1009	1182	28	5462	840	377
		Rabi	-	-	-	127	2462	3
		Sum.	2556	1190	66	-	-	-
6.	Madhya Pradesh ##	Kh.	124	634	N.A.	668	1061	N.A.
7.	Maharashtra	Kh.						
		Sum.						
8.	Odisha	Aut.	4	1017	0.01	1064	1189	9.66
		Wint.	33	1659	0.5	139	1559	0.9
		Sum.	1188	2900	10	495	1488	9
9.	Rajasthan @	Kh.						
10.	Tamil Nadu	Kh.	104	N.A.	21	596	N.A.	188
		Rabi	388	N.A.	111	72	N.A.	26
11.	Telangana	Kh.	198	2891	8	-	-	-
		Rabi	1102	2306	97	0	0	0
12.	Uttar Pradesh	Kh.	N.A.					
13.	West Bengal	Rabi	559	2285	N.A.	119	1896	N.A.



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			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			16485	1658	-	11264	1065	-
55. SESAMUM (GINGELLY)								
1.	Andhra Pradesh	Kh.	-	-	-	244	213	6
		Rabi	-	-	-	330	1004	33
2.	Chhattisgarh	Kh.	-	-	-	110	429	15
3.	Gujarat ^	Kh.	965	462	80.1	-	-	-
4.	Karnataka	Kh.	N.A.			1121	899	28
5.	Kerala	Kh.	N.A.					
6.	Madhya Pradesh ##	Kh.	-	-	-	1314	374	N.A.
7.	Maharashtra	Kh.						
		Rabi						
8.	Odisha	Aut.				130	306	2
		Wint.	13	273	0.02	600	308	9
		Sum.	167	244	1	149	204	2
9.	Rajasthan @	Kh.						
10.	Tamil Nadu	Kh.	88	N.A.	3	92	N.A.	9
		Rabi	120	N.A.	25	124	N.A.	15
11.	Telangana	Kh.	2	N.A.	N.A.	20	145	0.20
		Rabi	196	659	19	0	0	0
12.	Uttar Pradesh	Kh.	N.A.					
13.	West Bengal	Sum.	1483	579	N.A.	1571	549	N.A.
T O T A L			3034	523	-	5805	546	-
56. CASTOR.								
1.	Andhra Pradesh	Kh.	-	-	-	232	1266	37
2.	Gujarat ^	Kh.	2399	1809	522	-	-	-
3.	Karnataka	Kh.	N.A.			111	777	0.23
4.	Rajasthan	Kh.	N.A.					
5.	Telangana	Kh.	7	1466	0.295	143	1355	25
T O T A L			2406	1808	522	486	495	37
57. RAPE & MUSTARD								
1.	Assam	Rabi	48	626	N.A.	994	628	N.A.
2.	Bihar	Rabi	-	-	-	1002	1187	75
3.	Chhattisgarh	Rabi	-	-	-	256	448	39
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.	741	407	2	1352	248	4.9
10.	Punjab	Rabi	556	1482	31	-	-	-
11.	Rajasthan @	Rabi			N.A.			
12.	Uttar Pradesh	Rabi	N.A.					
13.	West Bengal	Rabi	4201	1099	N.A.	675	909	N.A.
T O T A L			8753	1235	-	4763	669	-
58. LINSEED								
1.	Chhattisgarh	Rabi	-	-	-	132	370	16
2.	Jammu & Kashmir	Rabi	N.A.					
3.	Karnataka	Rabi	N.A.			34	540	0.08
4.	Madhya Pradesh ##	Rabi	-	-	-	802	448	N.A.
5.	Maharashtra	Rabi						
6.	Uttar Pradesh	Rabi	N.A.					

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			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	-	-	-	85	334	N.A.
T O T A L			-	-	-	1053	432	16
59. SAFFLOWER								
1.	Karnataka	Rabi	-			1049	1027	22
2.	Maharashtra	Rabi						
T O T A L			0	-	0	1049	1027	22
60. SUNFLOWER								
1.	Andhra Pradesh	Kh.	-	-	-	146	299	2
		Rabi	-	-	-	300	378	7
2.	Haryana \$\$\$	Rabi	92	4571	7	-	-	-
3.	Karnataka	Kh.	778	1001	21	1441	662	82
		Rabi	545	1055	9	603	452	14
		Sum.	259	1035	3	-	-	-
4.	Maharashtra	Kh.						
		Rabi						
		Sum.						
5.	Tamil Nadu	Kh.	-	-	-	4	N.A.	0.06
		Rabi	88	N.A.	0.2	96	N.A.	4
6.	Telangana	Kh.	0	0	0	0	0	0
		Rabi	36	2156	0.956	0	0	0
7.	Uttar Pradesh	Zaid	N.A.					
T O T A L			1798	1179	41	2590	534	109
61. SOYABEAN								
1.	Andhra Pradesh	Kh.	-	-	-	30	1759	1
2.	Bihar	Kh.				108	754	20
3.	Chhattisgarh	Kh.	-	-	-	198	1015	72
4.	Karnataka	Kh.	85	1012	14	1541	1208	320
5.	Madhya Pradesh ##	Kh.	-	-	-	2450	457	N.A.
6.	Maharashtra *	Kh.						
7.	Rajasthan @	Kh.						
8.	Telangana	Kh.	183	2381	12	467	1685	160
9.	Uttar Pradesh	Kh.	N.A.					
T O T A L			268	1652	26	4794	839	573
62. TARA MEERA								
1.	Rajasthan	Rabi	N.A.					
63. COCONUT #								
1.	Kerala	Kh.	N.A.					
2.	Maharashtra		N.A.					
T O T A L			-	-	-	-	-	-
64. NIGER								
1.	Maharashtra	Kh.	N.A.					
65. COTTON (LINT)								
1.	Andhra Pradesh	Kh.	284	253	115	640	1686	538
2.	Gujarat ^	Kh.	6811	1335	1856	2242	620	804
3.	Haryana \$\$\$	Kh.	696	509	647	-	-	-
4.	Karnataka	Kh.	1356	627	184	1743	470	514
		Rabi	10	132	0.02	96	128	4.83
			-	-	-	-	-	-
5.	Madhya Pradesh ##	Kh.	588	1317	N.A.	231	982	N.A.
6.	Maharashtra *	Kh.				-	-	-
7.	Punjab	Kh.	664	2363	248	-	-	-
8.	Rajasthan	Kh.	-	-	-	-	-	-

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			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.	104	N.A.	17	460	N.A.	80
		Rabi	128	N.A.	32	128	N.A.	41
10	Telangana	Kh.	333	2892	289	1087	1758	1837
11	Uttar Pradesh		N.A.					
T O T A L			10974	1246	3387	6627	821	3819
66. JUTE								
1.	Assam	Kh.	-	-	-	494	2167	N.A.
2.	Bihar	Kh.	-	-	-	184	2046	48
3.	Meghalaya	Kh.	-	-	-	56	826	7
4.	Odisha	Kh.	4	2475	0.01	34	2147	0.14
5.	West Bengal	Kh.	2044	3033	N.A.	626	2507	N.A.
T O T A L			2048	3032	-	1394	2250	55
67. MESTA								
1.	Andhra Pradesh	Kh.	0	0	0	180	1918	1.714
2.	Bihar	Kh.	-	-	-	184	2046	48
3.	West Bengal	Kh.	68	2508	N.A.	84	1877	N.A.
T O T A L			68	2508	-	448	1963	-
68. TOBACCO								
1.	Andhra Pradesh	(N)	-	-	-	290	3416	22
		(V)	-	-	-	354	1001	61
2.	Gujarat ^	Kh.	200	1849	62	-	-	-
3.	Karnataka	Kh.	61	1097	9	202	1000	72
4.	Maharashtra	Rabi						
5	Telangana	(N)	10	1361	0.23	0	0	0
		(V)	18	3191	0.32	0	0	0
6	Uttar Pradesh		N.A.					
T O T A L			289	1759	71	846	463	156
69. ISABGOL								
1	Gujarat ^	Rabi	175	700.37	7.34			
2	Rajasthan	Rabi	N.A.					
T O T A L			-	-	-	-	-	-
70. AVARE (SEM)								
1	Karnataka	Kharif	N.A.			509	931	14
		Rabi	N.A.			100	869	5.6
T O T A L			-	-	-	609	913	19
71. COWPEA (LOBIA)								
1	Goa	Kharif	-	-	-	1	480	0.001
		Rabi	15	877	4	-	-	-
2	Karnataka	Kharif	-	-	-	752	299	20
		Rabi	-	-	-	60	430	1.48
		Sum.	18	264	0.64	-	-	-
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
T O T A L			166	803	6	847	285	22
72. TAMARIND								
1.	Kerala	Kharif	N.A.					
73. NUTMEG								
1.	Kerala	Kharif	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
<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				54	1129	11

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 and all other crops from the year 2015-16 for Madhya Pradesh ##.
3. \$\$\$ : Figures repeated from the year 2014-15.
4. ^ : Figures repeated from the year 2018-19.

**ANNEX - VIII:- ESTIMATES OF YIELD RATE FOR IRRIGATED AND UNIRRIGATED PLOTS ACCORDING TO HIGH YIELDING AND LOCAL VARIETIES UNDER CES 2019-20**

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. ANALY-SED	YIELD RATES Kg/ha.	AREA `000' ha.	NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA `000' ha.	NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA `000' ha.	NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA `000' ha.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>I. RICE</b>														
1.	Andhra Pradesh	Kh.	3572	5305	1496	-	-	-	226	3261	64	-	-	-
		Rabi	2946	6708	829	-	-	-	-	-	-	-	-	-
2.	Assam	Aut.	28	1831	N.A.	157	1712	N.A.	38	1786	N.A.	475	1458	N.A.
		Wint.	61	3145	N.A.	31	1771	N.A.	699	2627	N.A.	1993	1987	N.A.
		Sum.	507	2631	N.A.	52	2429	N.A.	399	2557	N.A.	108	2095	N.A.
3.	Bihar @@	Bha.	344	2747	187	-	-	-	-	-	-	376	2248	257
		Agh.	19885	4261	1306	8943	3103	654	6170	2698	335	3957	2079	298
		Gar.	242	3359	46	124	2702	15	N.A.					
4.	Chhattisgarh		1154	2551	998	566	2454	590	-	-	-	1676	1716	2408.1
5.	Goa	Kh.	-	-	-	-	-	-	158	2481	24	-	-	-
		Rabi	110	2899	10	-	-	-	-	-	-	-	-	-
6.	Gujarat	Kh.	5802	3426.1	582	418	246.97	42	933	1756.8	138	317	597.01	0.05
		Sum.	N.A.											
7.	Haryana		408	3514	535	566	2817	742	-	-	-	-	-	-
8.	Himachal Pradesh		N.A.											
9.	Jammu & Kashmir		172	3302.5	57.41	516	3139.7	164	74	3159.5	43.441	30	2471.5	15
10.	Jharkhand	Agh.	N.A.											
11.	Karnataka	Kh.	5742	5736	652	777	3704	13	2982	4121	178	1698	3461	54
		Rabi	961	4155	8	30	3235	0.09	-	-	-	-	-	-
		Sum.	2743	4919	231	4	3886	0.01	-	-	-	-	-	-
12.	Kerala	Aut.	697	2279	17	18	275	0.04	1388	2796	37	161	1196	0.652
		Wint.	2212	3181	74	376	1605	3	170	2214	2	382	1195	2
		Sum.	747	3543	56	26	1337	0.035	23	2214	0.092	3	416	0.006
13.	Madhya Pradesh		682	2063	N.A.	396	2008	N.A.	-	-	-	1238	608	1238
14.	Maharashtra	Kh.	661	2004.2	309	-	-	-	4244	1806.5	744	-	-	-
		Comp.	-	-	-	-	-	-	-	-	-	-	-	-
		Sum.	-	-	-	N.A.								
15.	Meghalaya	Aut.	-	-	-	238	1428	33	-	-	-	-	-	-
		Wint.	2	2091	0.002	794	1929	43	-	-	-	102	4683	3
16.	Odisha	Aut.	387	2291	9	13	1485	0.004	4591	1843	375	846	1240	42
		Wint.	9057	2676	946	236	2163	9	17198	2396	2125	1512	1738	142
		Sum.	6051	3188	293	-	-	-	-	-	-	-	-	-
17.	Punjab		1976	5610	3142	-	-	-	-	-	-	-	-	-
18.	Rajasthan		N.A.											
19.	Tamil Nadu ^	K/K/S	428	N.A.	206	-	-	-	-	-	-	-	-	-
		S/T/P	1260	N.A.	1235	-	-	-	-	-	-	-	-	-
		N/K	300	N.A.	338	-	-	-	-	-	-	-	-	-
20.	Telangana	Kh.	2380	3649	1612	-	-	-	40	2720	18	-	-	-
		Rabi	2180	3710	1585	-	-	-	-	-	-	-	-	-

Sl. No.	STATE		IRRIGATED						UN-IRRIGATED					
			HIGH YIELDING VARIETIES			LOCAL VARIETIES			HIGH YIELDING VARIETIES			LOCAL VARIETIES		
			NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA '000' ha.	NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA '000' ha.	NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA '000' ha.	NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA '000' ha.
			3	4	5	6	7	8	9	10	11	12	13	14
21.	Uttarakhand		1467	4456	141	480	3072	28	3	2633	0.179	722	1879	59.868
22.	Uttar Pradesh		N.A.											
23.	West Bengal	Aus.	1425	2711	N.A.	29	2864	N.A.	347	2070	N.A.	76	1398	N.A.
		Aman	7380	2988	N.A.	551	2225	N.A.	4390	2419	N.A.	472	1978	N.A.
		Sum.	10525	3469	N.A.	464	3297	N.A.	95	2734	N.A.	14	2977	N.A.
24.	Dadra & Nagar Haveli		-	-	-	-	-	-	-	-	-	78	1996	41
25.	Daman & Diu		-	-	-	-	-	-	12	1347	1	8	1094	0.43
26.	Puducherry	I	88	3280	4	-	-	-	-	-	-	-	-	-
		II	140	2732	9	-	-	-	-	-	-	-	-	-
		III	70	3328	5	-	-	-	-	-	-	-	-	-
<b>2. JOWAR</b>														
1.	Andhra Pradesh	Kh.	-	-	-	-	-	-	-	-	-	236	944	37
		Rabi	-	-	-	-	-	-	-	-	-	546	1350	118
2.	Chhattisgarh		-	-	-	14	1403	0.965	-	-	-	-	-	-
3.	Gujarat	Kh.	164	687	20	154	649.02	19	-	-	-	-	-	-
		Rabi	N.A.											
4.	Karnataka	Kh.	486	2407	12	14	1470	0.02	1130	1581	64	187	579	11
		Rabi	1673	1795	96	43	955	2	6317	987	513	921	913	23
		Sum.	-	-	-	-	-	-	-	-	-	-	-	-
5.	Madhya Pradesh		-	-	-	-	-	-	676	1591	N.A.	702	1021	N.A.
6.	Maharashtra	Kh.	-	-	-	-	-	-	-	-	-	-	-	-
		Rabi	3015	1023	445	-	-	-	14863	724	1528	-	-	-
7.	Rajasthan		N.A.											
8.	Tamil Nadu	Kh.	32	N.A.	15.7	-	-	-	376	N.A.	196	32	N.A.	18
		Rabi	148	N.A.	22.7	-	-	-	452	N.A.	173	40	N.A.	19
9.	Telangana	Kh.	7	N.A.	N.A.	-	-	-	-	-	-	505	1208	55
		Rabi	164	2167	21	-	-	-	190	1133	7.9	-	-	-
10.	Uttar Pradesh		N.A.											
<b>3. BAJRA</b>														
1.	Andhra Pradesh		-	-	-	-	-	-	-	-	-	404	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		563	1376	56	2	2001	0	2325	1107	263	95	805	1.8
5.	Madhya Pradesh		-	-	-	-	-	-	224	1637	N.A.	78	890	N.A.
6.	Maharashtra		-	-	-	-	-	-	-	-	-	-	-	-
7.	Rajasthan		N.A.											
8.	Tamil Nadu	Kh.	32	N.A.	8	-	-	-	208	N.A.	41	-	-	-
		Rabi	36	N.A.	1	-	-	-	148	16	1	-	-	-

Sl. No.	STATE	IRRIGATED						UN-IRRIGATED					
		HIGH YIELDING VARIETIES			LOCAL VARIETIES			HIGH YIELDING VARIETIES			LOCAL VARIETIES		
		NO. OF EXPTS.	YIELD RATES	AREA	NO. OF EXPTS.	YIELD RATES	AREA	NO. OF EXPTS.	YIELD RATES	AREA	NO. OF EXPTS.	YIELD RATES	AREA
		ANALY-SED	Kg/ha.	'000' ha.	ANALY-SED	Kg/ha.	'000' ha.	ANALY-SED	Kg/ha.	'000' ha.	ANALY-SED	Kg/ha.	'000' ha.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
9	Telangana	-	-	-	30	1501	0.006	-	-	-			
9.	Uttar Pradesh	N.A.											
10	Daman & Diu	-	-	-	-	-	-	-	-	-	8	1306	0.50
4. MAIZE													
1	Andhra Pradesh	Kh.	-	-	-	-	-	-	-	-	424	4636	95
		Rabi	-	-	-	-	-	-	-	-	496	8259	205
2.	Bihar	Bha.	6947	2717	88	6113	1601	121	-	-	-	-	-
		Rabi	-	-	-	-	-	-	-	-	24460	7565	301
		Gar.							346	5020	130	130	3959
3.	Chhattisgarh		-	-	-	-	-	-	-	-	464	3119	116
4.	Gujarat		2872	1465	257	599	305	54	-	-	-	-	-
5.	Haryana		52	2409	6	24	2070	3	-	-	-	-	-
6.	Himachal Pradesh	N.A.											
7.	Jammu & Kashmir		14	2157	5	46	1807	17	220	2007	65	514	1724
8.	Jharkhand	N.A.											
9.	Karnataka	Kh.	4035	3778	333	124	3871	3.25	6855	3006	972	260	3384
		Rabi	2209	3883	83	4	4216	2	207	2392	6	10	557
		Sum.	141	4667	9	2	3434	0.2	-	-	-	-	-
10.	Madhya Pradesh		15	2733	N.A.	6	2561	N.A.	648	1899	N.A.	1099	1679
11.	Maharashtra	Kh.	-	-	-								
		Rabi	-	-	-								
12.	Odisha	Aut.	10	1484	0.02	14	2433	0.003	1851	3009	55	1058	1618
		Wint.	27	2761	0.06	4	1800	0.01	12	1794	0	5	1727
		Sum.	326	3333	4	13	1642	0.01	-	-	-	-	-
13	Punjab	Kh.	361	3582	115	-	-	-	-	-	-	-	-
14.	Rajasthan	Kh.	-	-	-	-	-	-	-	-	-	-	-
15	Tamil Nadu	Kh.	108	N.A.	39	-	-	-	148	N.A.	129	-	-
		Rabi	112	N.A.	72.74	-	-	-	64	N.A.	92	-	-
16	Telangana	Kh.	929	6312	95	-	-	-	1125	4257	294	-	-
		Rabi	-	-	-	1606	6834	246			2	3321	0
17.	Uttar Pradesh	N.A.											
18.	West Bengal		116	4527	N.A.	5	-	N.A.	194	2669	N.A.	182	2093
5. WHEAT													
1.	Assam		8	1353	N.A.	4	1287	N.A.	16	1590	N.A.	86	1298
2.	Bihar		28854	2763	1627	9936	2083	426	1349	1938	30	1095	2022
3.	Chhattisgarh		462	1197	61	112	1007	26	-	-	-	142	862
4.	Gujarat		14051	2628	661	2430	455	1114	98	624	18	22	140
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. ANALY-SED	YIELD RATES Kg/ha.	AREA '000' ha.	NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA '000' ha.	NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA '000' ha.	NO. OF EXPTS. ANALY-SED	YIELD RATES Kg/ha.	AREA '000' ha.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
6.	Himachal Pradesh	N.A.											
7.	Jammu & Kashmir	234	2206	39	72	2009	13	382	2104	108	348	1773	84
8.	Jharkhand	N.A.											
9.	Karnataka	1969	1504	105	166	1211	1	631	683	35	180	530	12
10.	Madhya Pradesh	2824	3096	4044	1126	2698	900	0	0	0	1196	1498	0
11.	Maharashtra	-	-	-	-	-	-	-	-	-	-	-	-
12.	Odisha Sum.	54	1383	0.11	6	1520	0.01	-	-	-	-	-	-
13.	Punjab	2332	5004	3521	-	-	-	-	-	-	-	-	-
14.	Rajasthan	N.A.											
15.	Uttarakhand	1484	3506	175	230	2106	26	0	0	0	949	1812	113
16.	Uttar Pradesh	N.A.											
17.	West Bengal	441	2757	N.A.	47	2567	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 2019-20**

Sl. No.	S T A T E		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 Pesticides.	Not treated with pesticides
1	2	3	4	5	6	7	8	9	10	
<b>1. PADDY</b>										
1.	Andhra Pradesh	Kh.Ir.	-	95	5	45	53	2	76	24
		Kh.Ul.	-	77	23	36	37	27	22	78
		Rabi.Ir.	-	96	4	57	41	2	82	18
2.	Assam	Aut.	-	9	91	43	12	45	12	88
		Wint.	-	27	73	47	15	38	4	96
		Sum.	-	52	58	73	17	10	22	78
3.	Bihar	Bha.	13		87					
		Agh.	76		24					
		Gar.	17		83					
4.	Chhattisgarh	Hyv.Ir.	-	96	4	98	1	1	0	100
		Lv. Ir.	-	53	47	97	2	1	0	100
		Ul.	-	59	41	84	8	8	0	100
5.	Goa	Kh.	95	-	5	70	20	10	20	80
		Rabi	100	-	-	80	15	5	20	80
6.	Gujarat	Ir.	N.A.							
		Ul.	N.A.							
		Sum.	N.A.							
7.	Haryana		-	58	42	100	0	0	71	29
8.	Himachal Pradesh		N.A.							
9.	Jammu & Kashmir		N.A.							
10.	Jharkhand	Bha.	-	-	100	70	30	-	-	-
		Agh.	60	-	40	40	60	-	-	-
11.	Karnataka	Kh. Hyv.Ir.		78	22	0	0	100	100	0
		Kh.Hyv.Ul.								
		Kh.Tra.Ir.								
		Kh.Tra.Ul.								
		Rabi Hyv.Ir.		97	3	11	6	82	46	54
		Rabi. Tra.Ir.								
		Sum. Hyv.Ir.		100	0	1	34	65	58	42
12.	Kerala	Aut.	0	92	8	80	16	4	51	49
		Wint.	0	76	24	80	18	2	59	41
		Sum.	0	96	4	91	1	8	68	32
13.	Madhya Pradesh	Hyv. Ir.	-	100	-	96	1	3	100	0
		Lv. Ir.	-	-	100	99	0	1	100	0
		Ul.	-	-	100	70	5	25	100	0
14.	Maharashtra *	Kh. Ir.	N.A.							
		Kh. Ul.	N.A.							
		Kh. Comp.	N.A.							
		Sum.	N.A.							

Sl. No.	S T A T E		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 Pesticides.	Not treated with pesticides
1	2	3	4	5	6	7	8	9	10	
15.	Meghalaya	Aut.	-	-	100	35	23	1833	80	20
		Wint.	-	1	99	25	11	64	3	98
16.	Odisha	Aut.	90	0	10	88	7	4	34	66
		Wint.	35	0	5	93	4	3	47	53
		Sum.	100	0	0	96	2	1	67	33
17.	Punjab		-	100	0	100	0	0	96	4
18.	Rajasthan		-	56	44	60	0	39	69	31
19.	Tamil Nadu	K/K/S	100	0	0	64	35	1	52	48
		S/T/P	100	0	0	53	37	10	92	8
		N/K	100	0	0	71	21	8	84	16
20.	Telangana	Kh. Ir.	-	21	79	96	0	4	43	57
		Kh. Ul.	-	5	95	96	4	0	64	36
		Rabi	-	22	78	97	0	3	46	54
21.	Uttarakhand		0	55	45	48	52	0	28	72
22.	Uttar Pradesh		N.A.							
23.	West Bengal	Aus.	-	98	2	99	-	1	84	17
		Aman	-	95	5	95	0	5	63	37
		Sum.	0	97	3	100	0	0	83	17
24.	Dadra & Nagar Haveli		-	-	100	0	100	0	0	100
25.	Daman & Diu		-	80	20	0	100	0	100	0
26.	Puducherry	I	100	-	-	-	45	55	38	63
		II	100	-	-	-	44	56	33	67
		III	100	-	-	-	19	81	40	60
<b>2. JOWAR</b>										
1.	Andhra Pradesh	Kh.	-	36	64	51	21	28	43	57
		Rabi	-	67	33	68	23	9	70	30
2.	Chhattisgarh		-	0	100	0	0	100	0	100
3.	Gujarat	Kh.	-	0.0	49	55	28	17	33	67
		Rabi	51							
4.	Karnataka ***	Kh.Hyv.Ir.		89	11	0	0	100	100	0
		Kh.Hyv.Ul.								
		Kh.Tra.Ir.								
		Kh.Tra.Ul.								
		Rabi Hyv.Ir.		89	11	1	10	89	8	92
		Rabi Hyv.Ul.								
		Rabi Tra.Ir.								
		Rabi Tra.Ul.								
		Sum.Hyv.Ir.								

Sl. No.	S T A T E		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 Pesticides.	Not treated with pesticides
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 Ul.	N.A.							
7.	Rajasthan		-	54	47	55	2	43	9	91
8.	Tamil Nadu	Kh.	81	0	19	75	14	11	44	56
		Rabi	80	0	20	93	5	2	35	65
9.	Telangana	Kh.	-	13	87	91	3	6	16	84
		Rabi	-	43	57	85	2	13	14	86
10.	Uttar Pradesh		N.A.							
<b>3. BAJRA</b>										
1.	Andhra Pradesh		-	47	53	28	41	31	17	83
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.	0	97	3	0	0	100	100	0
		Kh.Hyv.Ul.								
		Kh.Tra.Ul.								
5.	Madhya Pradesh		-	9	91	93	1	6	0	100
6.	Maharashtra	Kh. Ir.	N.A.							
		Kh. Ul..	N.A.							
		Kh. Comp.	N.A.							
	Rajasthan		-	54	46	38	5	58	5	95
8.	Tamil Nadu	Kh.	88	0	12	31	47	22	91	9
		Rabi	90	0	10	77	17	6	77	23
9.	Telangana		-	43	57	91	4	5	22	78
10.	Uttar Pradesh		N.A.							
11.	Daman & Diu		-	80	20	0	100	0	100	0
<b>4. MAIZE</b>										
1.	Andhra Pradesh	Kh.	-	81	19	42	50	8	66	34
		Rabi	-	85	15	55	43	2	73	27
2.	Bihar	Bha.	38		62					
		Rabi	86		14					
		Gar.	82		18					

Sl. No.	S T A T E		PERCENTAGE AREA UNDER							Treated with Pesticides.	Not treated with pesticides
			Seed Variety			Fertilized/Manure					
			High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured			
1	2	3	4	5	6	7	8	9	10		
3.	Chhattisgarh		0	39	61	67	18	15	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.	0	97	3	0	0	100	100	0	
		Kh. Hyv.UI.									
		Kh. Tra.Ir.									
		Rabi Hyv.Ir.	0	99	1	1	15	84	29	71	
		Rabi Hyv.UI.	100	-	-	86	12	2	3	97	
		Rabi. Tra.Ir.	-	-	-	-	-	-	-	-	
		Sum.Hyv.UI.	0	99	1	0	0	100	0	100	
10.	Madhya Pradesh		-	43	57	73	17	10	0	100	
11.	Maharashtra	Kh.	N.A.								
		Rabi	N.A.								
12.	Odisha	Aut.	91	0	9	57	23	20	12	88	
		Wint.	77	0	23	69	13	19	15	85	
		Sum.	100	0	0	79	15	6	16	84	
13.	Punjab		0	84	16	95	0	5	81	19	
14.	Rajasthan	Kh.	-	43	57	66	14	20	5	95	
15.	Tamil Nadu	Kh.	100	0	0	63	24	13	27	73	
		Rabi	100	0	0	64	30	7	24	76	
16.	Telangana	Kh.	-	27	73	96	0	4	46	54	
		Rabi	-	18	82	91	0	9	49	51	
17.	Uttar Pradesh		N.A.								
18.	West Bengal		-	66	34	58	-	42	2	98	
<b>5. RAGI</b>											
1.	Andhra Pradesh	Kh.	-	15	85	30	29	41	5	95	
		Rabi	-	20	80	20	55	25	18	82	
2.	Bihar				100						
3.	Goa		-	-	-	-	-	-	-	-	
4.	Gujarat		0	0	100	0	63	37	0	100	
5.	Jharkhand		-	-	100	30	70	-	-	-	
6.	Karnataka ***	Kh. Hyv.Ir.	0	84	16	0	0	100	100	0	
		Kh. Hyv.UI.									
		Kh. Tra. Ir.									
		Kh.Tra.UI.									

Sl. No.	S T A T E	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 Pesticides.	Not treated with pesticides	
1	2	3	4	5	6	7	8	9	10	
	Rabi Hyv.Ir.	0	95	5	6	22	73	16	84	
	Rabi Hyv.UI.									
	Sum. Hyv.Ir.	0	93	7	4	27	69	17	83	
7	Maharashtra	N.A.								
8	Odisha	Aut.	-	-	100	21	39	40	4	96
		Wint.	-	-	100	6	26	69	1	99
		Sum.	-	-	100	27	41	31	4	96
9.	Tamil Nadu	Kh.	92	0	8	61	33	6	9	91
		Rabi	94	0	6	51	47	2	29	71
10.	Telangana		-	15	85	93	0	7	0	100
11.	Uttrakhand		0	0	100	0	99	1	0	100
12.	Dadra & Nagar Haveli		0	-	100	0	100	0	0	100
<b>6. WHEAT</b>										
1.	Assam		0	21	79	40	25	35	5	95
2.	Bihar		89		11					
3.	Chhattisgarh	Hyv.Ir.	0	91	9	94	3	3	0	100
		Lv..Ir.	0	49	51	89	4	7	0	100
		UI.	0	20	80	72	9	19	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	N.A.								
8.	Jharkhand		40	-	60	70	30	-	-	-
9.	Karnataka ***	Hyv.Ir.	0	88	12	0	2	98	1	99
		Hyv.UI.								
		Tra.Ir.								
		Tra.UI.								
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.	96	0	4	97	2	2	38	62
13.	Punjab		0	100	0	99	0	1	81	19
14.	Rajasthan	N.A.								
15.	Uttrakhand		0	56	44	34	66	0	28	72
16.	Uttar Pradesh	N.A.								
17.	West Bengal		-	95	5	100	0	0	55	45
<b>7. BARLEY</b>										
1.	Bihar				100					
2.	Chhattisgarh		-	0	100	59	41	0	0	100

Sl. No.	S T A T E	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 Pesticides.	Not treated with pesticides
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	-	91	9	100	0	0	55	45
8.	Rajasthan	N.A.							
9.	Uttrakhand	0	0	100	0	100	0	0	100
10.	Uttar Pradesh	N.A.							
<b>8. GRAM ( BENGALGRAM )</b>									
1.	Andhra Pradesh	-	94	6	63	31	6	88	12
2.	Bihar			100					
3.	Chhattisgarh	0	24	76	74	1	25	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	0	99	1	1	7	92	11	89
8.	Madhya Pradesh Ir .	-	29	61	85	3	12	0	100
	UI.	-	13	87	59	7	34	0	100
9.	Maharashtra	N.A.							
10.	Punjab	0	91	9	53	0	47	77	23
11.	Rajasthan	N.A.							
12.	Telangana	-	47	53	89	1	10	35	65
13.	Uttar Pradesh	N.A.							
14.	West Bengal	-	20	80	61	0	39	36	64
<b>9. REDGRAM (TUR/ARHAR)</b>									
1.	Andhra Pradesh	-	82	18	52	37	11	70	30
2.	Bihar			100					
3.	Chhattisgarh	0	10	90	31	24	45	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	99	1	0	0	100	100	0
8.	Madhya Pradesh	-	22	78	36	1	63	0	100
9.	Maharashtra	N.A.							
10.	Tamil Nadu	89	0	11	34	43	23	70	30
11.	Telangana	-	25	75	95	2	3	48	52
12.	Uttar Pradesh	N.A.							
13.	West Bengal (Rabi)	-	8	92	14	-	86	3	97

Sl. No.	S T A T E		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 Pesticides.	Not treated with pesticides
1	2	3	4	5	6	7	8	9	10	
<b>10. GREENGRAM (MOONG)</b>										
1.	Andhra Pradesh	Kh.	-	63	37	48	14	38	48	52
		Rabi	-	48	52	21	11	68	50	50
2.	Bihar	Bha.	4		96					
		Gra.	80		20					
3.	Gujarat	Kh.	83	0	17	45	44	11	71	29
4.	Karnataka	Kh.	0	98	2	0	0	100	100	0
		Rabi	0	100	0	6	23	71	21	79
5.	Maharashtra		N.A.							
6.	Odisha	Aut.	-	-	100	39	10	51	19	81
		Wint.	-	-	100	13	16	70	17	83
		Sum.	-	-	100	32	6	62	35	65
7.	Rajasthan		-	56	44	32	5	63	41	59
8.	Tamil Nadu	Kh.	73	0	27	55	39	6	91	9
		Rabi	93	0	7	62	6	32	53	47
9.	Telangana	Kh.	-	6	94	77	5	18	57	43
		Rabi	-	20	80	68	2	30	43	57
10.	Uttar Pradesh	Kh.	N.A.							
		Zaid	N.A.							
11.	West Bengal	Rabi	-	45	55	67	0	33	66	34
<b>11. BLACKGRAM (URD/MATHIKALAI)</b>										
1.	Andhra Pradesh	Kh.	-	56	44	53	19	27	53	47
		Rabi.	-	72	28	23	15	62	65	35
2.	Assam		0	0	100	0	0	100	0	100
3.	Gujarat		96	0	4	62	28	9	63	37
4.	Karnataka	Kh.	0	98	2	0	0	100	100	0
		Rabi	0	77	23	16	15	69	1	99
5.	Maharashtra		N.A.							
6.	Odisha	Aut.	-	-	100	36	17	46	15	85
		Wint.	-	-	100	9	14	77	12	88
		Sum.	-	-	100	29	7	64	46	54
7.	Rajasthan		-	57	43	39	1	60	59	41
8.	Tamil Nadu	Kh.	100	0	0	78	14	8	61	39
		Rabi	96	0	4	66	15	19	60	40
9.	Telangana	Kh.	-	2	98	88	4	8	47	53
		Rabi	-	16	84	91	7	2	71	29
10.	Uttar Pradesh	Kh.	N.A.							
		Zaid	N.A.							
11.	West Bengal		-	23	77	40	0	60	26	74

Sl. No.	S T A T E	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 Pesticides.	Not treated with pesticides		
1	2	3	4	5	6	7	8	9	10		
<b>12. LAKH</b>											
1.	Bihar			100							
2.	Chhattisgarh	-	5	95	12	4	84	0	100		
3.	Madhya Pradesh	-	4	96	38	0	62	0	100		
4.	West Bengal	-	19	81	67	0	33	57	43		
<b>13. MASUR</b>											
1.	Bihar	-	-	100	-	-	-	-	-		
2.	Jharkhand	-	-	100	-	100	-	-	-		
3.	Rajasthan	N.A.									
4.	Uttar Pradesh	N.A.									
5.	West Bengal	-	25	75	60	1	39	21	79		
<b>14. HORSEGRAM (KULTHI)</b>											
1.	Andhra Pradesh	Kh.	-	2	98	40	3	57	2	98	
		Rabi	-	4	69	11	23	66	16	84	
2.	Karnataka	Kh.	0	93	7	0	0	100	100	0	
		Rabi	0	96	4	18	11	71	3	97	
3.	Odisha	Wint.	0	0	100	10	13	78	9	91	
		Sum.	0	0	100	20	20	60	0	100	
4.	Tamil Nadu		69	0	31	50	27	23	42	58	
5.	Telangana	Kh.	-	0	0	0	0	0	0	0	
		Rabi	0	0	0	80	0	20	100	0	
<b>15. PEAS</b>											
1.	Uttar Pradesh	N.A.									
2.	West Bengal	-	17	83	28	0	72	11	89		
<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.	Uttrkhand		0	0	100	0	99	1	0	100	
2.	Uttar Pradesh	Kh.	N.A.								
		Zaid	N.A.								



Sl. No.	S T A T E	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 Pesticides.	Not treated with pesticides	
1	2	3	4	5	6	7	8	9	10	
<b>20. KORRA</b>										
1.	Andhra Pradesh	-	18	82	47	26	27	26	74	
2	Telangana	-	31	69	38	22	40	27	73	
<b>21. KODON-KUTKI (KODRA)</b>										
1.	Chhattisgarh	-	0	100	6	18	76	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	100	0	0	0	100	100	0	
<b>23. SAVE</b>										
1.	Karnataka	0	95	5	0	0	100	100	0	
<b>24. SAMAI</b>										
1.	Tamil Nadu	100	0	0	52	43	5	43	57	
<b>25. VARAGU</b>										
1.	Tamil Nadu	100	0	0	62	36	1	36	64	
<b>26. SUGARCANE</b>										
1.	Andhra Pradesh	Plt.	-	71	29	34	65	1	37	63
		Rt.	-	73	27	47	54	3	37	63
2.	Assam	0	0	100	53	0	47	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	0.00	0.00	100.00	100.00	0.00	
8.	Kerala	N.A.								
9.	Maharashtra	N.A.								
10.	Odisha Wint.	0.00	0.00	100.00	92.67	0.37	6.96	51.28	48.72	
11.	Punjab	0.00	100.00	0.00	98.70	0.00	1.30	81.26	18.74	
12.	Rajasthan @	-	61.70	38.30	89.23	8.07	2.70	48.50	51.50	
13.	Tamil Nadu	100	0	0	61	27	12	67	33	
14.	Telangana	Plt.	-	38	62	98	0	2	38	62
		Rt.	-	55	45	100	0	0	44	56
15.	Uttar Pradesh	N.A.								
16.	West Bengal	-	54	46	100	0	0	39	61	
<b>27. COCOA</b>										
1.	Kerala	N.A.								

Sl. No.	S T A T E		PERCENTAGE AREA UNDER							Treated with Pesticides.	Not treated with pesticides
			Seed Variety			Fertilized/Manure					
			High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured			
1	2	3	4	5	6	7	8	9	10		
<b>28. CHILLIES</b>											
1.	Andhra Pradesh	Kh.	-	82	18	59	36	5	85	15	
		Rabi	-	57	43	53	44	3	65	35	
2.	Bihar				100						
3.	Chhattisgarh		-	0	100	20	0	80	0	100	
4.	Karnataka	Kh.	0	65	35	0	0	100	100	0	
		Rabi									
		Sum.									
5.	Madhya Pradesh		-	100	0	0	100	0	0	100	
6.	Telangana	Kh.	-	24	76	80	0	20	77	23	
		Rabi	-	1	99	99	0	1	98	2	
<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	87	13	0	0	100	100	0	
<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						

Sl. No.	S T A T E	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 Pesticides.	Not treated with pesticides	
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	-	33	67	33	66	1	0	100	
<b>45. PINE APPLE</b>										
1.	Kerala	N.A.								
<b>46. POTATO</b>										
1.	Assam	Rabi.	-	14	86	31	49	20	14	86
2.	Bihar	Agh.			100					
		Rabi.			100					
3.	Chhattisgarh		0	0	100	44	11	45	0	100
4.	Gujarat		100	0	0	67	30	3	75	25
5.	Jammu & Kashmi	Kh.	N.A.							
		Rabi.	N.A.							
6.	Jharkhand	Agh.	40	-	60	70	30	-	-	-
		Rabi.	40	-	60	50	50	-	-	-
7.	Karnataka	Kh.	0	100	0	0	0	100	100	0
		Rabi.	0	100	0	3	4	93	80	20
		Summer								
8.	Madhya Pradesh		-	91	9	94	0	6	0	100
9.	Meghalaya	Sum.	-	-	100	62	33	5	19	81
10.	Odisha	Wint.	-	-	100	94	5	2	36	64
11.	Uttar Pradesh	N.A.								

1	2		3	4	5	6	7	8	9	10
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 Pesticides.	Not treated with pesticides
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	100	27	6	67	0	100
3.	Gujarat		N.A.							
4.	Jharkhand		25	-	75	50	50	-	-	-
5.	Karnataka ***	Kh.	0	96	4	0	0	100	100	0
		Rabi	0	80	10	1	15	84	38	62
		Sum.	0	100	0	1	17	82	59	41
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	0	0	100	100	0
		Rabi	0	100	0	1	13	86	76	24
		Summer	0	100	0	0	2	98	78	22
<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.	-	90	10	34	60	6	44	56
		Rabi	-	90	10	45	53	2	73	27
2.	Chhattisgarh		0	16	84	62	17	21	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

Sl. No.	S T A T E		PERCENTAGE AREA UNDER							Treated with Pesticides.	Not treated with pesticides
			Seed Variety			Fertilized/Manure					
			High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured			
1	2	3	4	5	6	7	8	9	10		
5.	Karnataka	Kh.Ir.	0	100	0	0	0	100	100	0	
		Kh.UI.									
		Rabi	0	100	0	44	5	51	25	75	
		Sum.Ir.	0	100	0	1	13	86	21	79	
		Sum.UI.									
6.	Madhya Pradesh		-	39	61	64	5	31	3	97	
7.	Maharashtra	Kh.	N.A.								
		Sum.	N.A.								
8.	Odisha	Aut.	-	-	100	60	9	31	17	83	
		Wint.	-	-	100	43	17	40	12	88	
		Sum.	-	-	100	79	5	15	39	61	
9.	Rajasthan		-	51	49	88	3	9	75	25	
10.	Tamil Nadu	Kh.	97	0	3	46	45	9	34	66	
		Rabi	97	0	3	57	41	2	75	25	
11.	Telangana	Kh.	-	19	81	99	1	0	81	19	
		Rabi	-	11	89	96	1	3	82	18	
12.	Uttar Pradesh		N.A.								
13.	West Bengal		-	88	12	79	0	21	75	25	
<b>55. SESAMUM (GINGELLY)</b>											
1.	Andhra Pradesh	Kh.	-	45	55	43	12	45	16	84	
		Rabi	-	52	48	42	18	40	42	58	
2.	Chhattisgarh		-	18	82	38	22	40	0	100	
3.	Gujarat		75	0	25	61	13	26	35	65	
4.	Karnataka		0	98	2	0	0	100	100	0	
5.	Kerala		N.A.								
6.	Madhya Pradesh		-	82	18	22	27	51	0	100	
7.	Maharashtra	Kh.	N.A.								
		Rabi	N.A.								
8.	Odisha	Aut.	-	-	100	30	17	53	20	80	
		Wint.	-	-	100	24	14	62	16	84	
		Sum.	-	-	100	35	15	51	27	73	
9.	Rajasthan		-	38	62	22	2	76	8	92	
10.	Tamil Nadu	Kh.	91	0	9	13	41	46	84	16	
		Rabi	90	0	10	58	28	14	69	31	
11.	Telangana	Kh.	-	12	88	76	0	24	0	100	
		Rabi	0	36	64	94	0	6	34	66	
12.	Uttar Pradesh		N.A.								
13.	West Bengal		-	56	44	31	0	19	23	77	
<b>56. CASTOR</b>											
1.	Andhra Pradesh		-	75	25	49	37	14	71	29	

Sl. No.	S T A T E	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 Pesticides.	Not treated with pesticides	
1	2	3	4	5	6	7	8	9	10	
2.	Gujarat	100	0	0	74	15	11	62	38	
3.	Karnataka	0	100	0	0	0	100	100	0	
4.	Telangana	-	35	65	99	0	1	67	33	
<b>57. RAPE &amp; MUSTARD</b>										
1.	Assam	-	1	99	39	32	29	9	91	
2.	Bihar	15		85						
3.	Chhattisgarh	0	13	87	32	14	54	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	18	42	24	76	
10.	Punjab	-	91	9	46	0	54	93	7	
11.	Rajasthan	N.A.								
12.	Uttar Pradesh	N.A.								
13.	West Bengal	-	86	14	99	0	1	61	39	
<b>58. LINSEED</b>										
1.	Chhattisgarh	-	1	99	10	12	78	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	-	0	100	9	0	91	3	97	
<b>59. SAFFLOWER</b>										
1.	Karnataka	0	92	8	0	5	94	5	95	
2.	Maharashtra	N.A.								
<b>60. SUNFLOWER</b>										
1.	Andhra Pradesh	Kh.	-	67	33	38	60	2	68	32
		Rabi	-	85	15	50	45	5	59	41
2.	Haryana	Rabi	-	100	0	100	0	0	0	100

Sl. No.	S T A T E		PERCENTAGE AREA UNDER							Treated with Pesticides.	Not treated with pesticides
			Seed Variety			Fertilized/Manure					
			High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured			
1	2	3	4	5	6	7	8	9	10		
3.	Karnataka	Kh.	0	100	0	0	0	100	100	0	
		Kh.UI.									
		Rabi	0	100	0	1	17	82	15	85	
		Rabi.UI.									
		Sum.	0	100	0	1	12	86	17	83	
4.	Maharashtra	Kh.	N.A.								
		Rabi	N.A.								
		Sum.	N.A.								
5.	Tamilnadu	Kh.	100	0	0	0	100	0	100	0	
		Rabi	96	0	4	85	13	2	62	38	
6.	Telangana	Kh.	-	0	0	0	0	0	0	0	
		Rabi	-	11	89	84	0	16	0	100	
7.	Uttar Pradesh	Zaid	N.A.								
<b>61. SOYABEAN</b>											
1.	Andhra Pradesh		-	60	40	30	70	0	67	33	
2.	Chhattisgarh		0	42	58	81	8	11	0	100	
3.	Karnataka		0	100	0	0	0	100	100	0	
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		-	53	47	95	1	4	24	76	
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		-	86	14	59	39	2	92	8	
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.	0	99	1	0	0	100	100	0	
		UL									
		Rabi Ir.	0	81	19	0	0	100	0	100	
		Rabi UI.									
		Sum.									
5.	Madhya Pradesh		-	96	4	84	6	10	88	12	

Sl. No.	STATE		PERCENTAGE AREA UNDER							Treated with Pesticides.	Not treated with pesticides
			Seed Variety			Fertilized/Manure					
			High Yielding Varieties of Seed	Improved Seed	local Seed	Where Chemical Fertilizer used	Where Other Manure used	Un - manured			
1	2	3	4	5	6	7	8	9	10		
6.	Maharashtra	Ir.	N.A.								
		Ul..	N.A.								
		Comp.	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	64	32	4	92	8	
		Rabi	100	0	0	68	30	2	17	84	
10	Telangana		-	21	79	97	0	3	58	42	
11	Uttar Pradesh		N.A.								
<b>66. JUTE</b>											
1.	Assam		-	26	74	58	16	26	0	100	
2.	Bihar				100						
3.	Meghalaya		-	0	100	7	12	81	0	100	
4.	Odisha		-	0	100	87	5	8	42	58	
5.	West Bengal		-	93	7	96	0	4	60	40	
<b>67. MESTA</b>											
1.	Andhra Pradesh		-	64	36	39	10	51	2	98	
2.	Bihar				100						
3.	West Bengal		-	75	25	90	0	10	25	75	
<b>68. TOBACCO</b>											
1.	Andhra Pradesh	(N)	-	65	35	55	40	5	63	37	
		(V)	-	95	5	73	25	2	91	9	
2.	Gujarat		100	0	0	50	39	11	50	50	
3.	Karnataka		0	100	0	0	0	100	100	0	
4.	Maharashtra		N.A.								
5	Telangana	(N)	-	100	0	100	0	0	80	20	
		(V)	-	11	89	100	0	0	50	50	
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	0	0	100	100	0	
		Rabi	0	40	60	21	0	79	75	25	
<b>71. COWPEA (LOBIA)</b>											
1.	Karnataka	Kharif	0	99	1	0	0	100	100	0	
		Rabi	0	100	0	15	28	57	38	62	
		Summer	0	100	0	0	0	100	0	100	
2.	Goa	Kh.	0	0	100	20	30	50	10	90	
		Rabi	10	0	90	20	25	55	20	80	



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 Pesticides.	Not treated with pesticides
1	2		3	4	5	6	7	8	9	10
3.	Tamil Nadu	Kh.	77	0	23	63	29	8	57	43
		Rabi	79	0	21	78	14	8	61	39
<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	0	0	100	100	0
<b>76. BEANS</b>										
1.	Andhra Pradesh		0	0	100	0	19	81	0	100
<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 crop Banana, Onion and Papaya for Madhya Pradesh.

**ANNEX : X(a) :- RESULTS OF FIELD DRIAGE EXPERIMENTS UNDER CES 2019-20**

CROP	S T A T E		No. Of Experiments		Percentage
			Planned	Analysed	recovery
1	2		3	4	5
PADDY	Andhra Pradesh	Kh.Ir.	3572	700	89.63
		Kh.UI.	232	62	89.01
		Rabi Ir.	2976	687	90.91
	Bihar	Bha.Ir.	280	121	43.00
		Bha.UI.	196	97	49.00
		Agh.Hyv.Ir.	13968	13565	97.00
		Agh.Hyv.UI.	3528	3466	98.00
		Agh.Lv.Ir.	6207	6055	98.00
		Agh.Lv.UI.	1056	1056	100.00
		Gar.Hyv.	150	79	53.00
		Gar.Lv.	70	45	64.00
		Chhattisgarh	Hyv.Ir.	1196	1154
	Lv.Ir.		652	566	92.50
	UI.		1858	1676	91.70
	Goa	Kh.	190	158	88.87
		Rabi	190	110	87.40
	Gujarat	Ir.	2840	2742	97
		UI.	1958	1686	86
		Sum.			
	Haryana %		990	864	85.69
	Himachal Pradesh		1898	1200	N.A.
	Jammu & Kashmir		380	158	91.14
	Jharkhand	Agh.Hyv.Ir.			N.A.
		Agh.Hyv.UI.			
		Agh.Lv.Ir.			
		Agh.Lv.UI.			
		Bha.			
	Kerala	Aut.	540	540	92.00
		Wint.	669	669	93.00
		Sum.	430	430	94.00
	Madhya Pradesh	Hyv.Ir.	598	518	94.95
		Lv.Ir.	376	290	96.59
		UI.	1108	1043	93.57
	Maharashtra **	Kh.	1106	712	93.79
		Sum.			N.C
	Meghalaya	Aut.	55	53	N.A.
		Wint.	178	178	N.A.
	Punjab		274	136	90.96
	Rajasthan		3944	3303	94.57
	Tamil Nadu	K/K/S	214	214	93.04
		S/TP	630	630	93.22
		N/K	150	150	93.31
	Telangana	Ir.	2380	707	86.04
		UI.	40	15	83.58
		Rabi	2180	642	85.82
	Uttarakhand		806	561	83.81
	Uttar Pradesh		N.A.	N.A.	95.10
	West Bengal	Aus.	535	535	87.32
		Aman.	8614	8614	89.38
		Sum.	7522	7522	89.08
Dadra & Nagar Haveli		78	78	95.10	
Daman & Diu		20	20	96.00	
Puducherry	I	88	88	92.84	
	II	140	140	92.68	
	III	70	70	92.64	

CROP	S T A T E		No. Of Experiments		Percentage
			Planned	Analysed	recovery
1	2		3	4	5
JOWAR	Andhra Pradesh	Kh.	310	65	62.20
		Rabi.	572	181	63.10
	Chhattisgarh	Kharif	42	14	84.50
	Gujarat	Kh.	822	612	74
		Rabi	-	-	-
	Madhya Pradesh		600	584	55.20
	Maharashtra **	Kh.	2128	1543	94.24
		Rabi	2228	1472	94.21
	Rajasthan		10564	9826	94.88
	Tamil Nadu	Ir.	440	440	55.36
		UI.	640	640	58.28
	Telangana	Kh.	514	156	58.54
		Rabi	354	106	63.06
	Uttar Pradesh		N.A.	N.A.	56.38
BAJRA	Andhra Pradesh		498	151	61.15
	Gujarat	Kh.	2232	2002	90
		Sum.	-		
	Haryana %		1532	1438	56.30
	Madhya Pradesh		252	228	49.08
	Maharashtra **		856	511	94.42
	Rajasthan		25736	25515	96.81
	Tamil Nadu	Kh	240	240	58.32
		Rabi	204	184	69.28
	Telangana		30	8	64.89
	Uttar Pradesh #		N.A.	N.A.	58.88
	Daman & Diu		8	8	85.00
	MAIZE	Andhra Pradesh	Kh.	426	133
Rabi			554	167	68.13
Bihar		Bha.Hyv.	280	222	79.00
		Bha.Lv.	350	275	79.00
		Rabi	380	179	47.00
		Gar.Hyv.	190	130	68.00
		Gar.Lv.	60	36	60.00
Chhattisgarh		Kharif	556	464	83.50
Gujarat		Kh.	2040	1846	90
Haryana %			144	88	45.90
Himachal Pradesh			2570	2268	N.A.
Jammu & Kashmir			416	184	71.61
Jharkhand		Bha.		N.A.	
Madhya Pradesh			1418	1293	53.31
Maharashtra ***		Kh.	112	90	92.50
		Rabi	84	58	92.71
Punjab			90	36	55.25
Rajasthan		Kh.	11172	11100	92.97
Tamil Nadu		Kh	256	256	71.30
		Rabi	176	176	73.58
Telangana		Kh.	2054	479	66.08
		Rabi	1608	441	65.80
Uttar Pradesh			N.A.	N.A.	58.39
West Bengal		198	198	46.69	

CROP	S T A T E		No. Of Experiments		Percentage
			Planned	Analysed	recovery
1	2		3	4	5
RAGI	Andhra Pradesh	Kh.	200	50	61.22
		Rabi	170	49	63.46
	Bihar	Bha.	112	59	53.00
	Goa			N.A.	
	Gujarat	Kh.	218	218	100
	Jharkhand			N.A.	
	Maharashtra **		492	332	94.15
	Tamil Nadu	Kh.	160	160	54.12
		Rabi	200	200	53.34
	Telangana		30	8	55.07
	Uttarakhand		567	463	57.19
Dadra & Nagar Haveli		22	22	91.97	
WHEAT	Bihar	Hyv.Ir.	18642	18241	98.00
		Hyv.UI.	21	21	100.00
		Lv.Ir.	5763	5763	100.00
		Lv.UI.	333	333	100.00
	Chhattisgarh	Hyv.Ir.	582	462	93.00
		Lv.Ir.	166	112	92.70
		UI.	176	142	92.40
	Gujarat^	Ir.	-	16481	95
		UI.	-	120	55
	Haryana %		2200	2182	89.00
	Himachal Pradesh		2666	2236	N.A.
	Jammu & Kashmir		358	78	91.37
	Jharkhand	Hyv.Ir.		N.A.	
		Hyv.UI.			
		Lv.Ir.			
		Lv.UI.			
	Madhya Pradesh	Hyv.Ir.	2498	2204	96.97
		Lv.Ir.	974	974	97
		UI.	1060	966	96.35
	Maharashtra **		464	256	95.02
	Punjab		282	278	97.32
Rajasthan		38580	37604	97.96	
Uttarakhand		793	544	69.56	
Uttar Pradesh		N.A.	N.A.	97.05	
West Bengal		766	766	65.83	
BARLEY	Bihar		150	90	60.00
	Chhattisgarh		22	12	80.90
	Haryana %		516	355	96.60
	Himachal Pradesh		1160	750	N.A.
	Jharkhand		N.A.		
	Madhya Pradesh		430	396	96.04
	Punjab		110	76	98.77
	Rajasthan		4952	4924	98.28
	Uttarakhand		339	247	58.50
	Uttar Pradesh		N.A.	N.A.	97.05
	GRAM	Bihar		400	357
Chhattisgarh			594	494	91.60
Gujarat^			-	1317	70
Haryana %			562	512	88.70
Jharkhand			N.A.		
Madhya Pradesh		UI	2608	1360	91.56
		Ir	1078	888	96.33

CROP	S T A T E		No. Of Experiments		Percentage
			Planned	Analysed	recovery
1	2		3	4	5
	Maharashtra **		2200	1550	94.62
	Punjab		32	18	97.84
	Rajasthan		18736	17700	96.78
	Uttar Pradesh		N.A.	N.A.	98.10
	West Bengal		252	252	56.57
REDGRAM (TUR)	Bihar		308	231	75.00
	Gujarat		2910	2837	97.45
	Jharkhand		N.A.		
	Maharashtra *		3602	3006	83.45
	Uttar Pradesh		N.A.	N.A.	65.10
	West Bengal	(Rabi)	83	83	52.14
GREENGRAM (MOONG)	Bihar	Bha.	120	48	40.00
		Gar.	252	203	81.00
	Rajasthan		16244	15481	95.92
	Uttar Pradesh	Kh.	N.A.	N.A.	92.74
		Zaid	N.A.	N.A.	N.A.
	West Bengal	Sum.		N.A.	
BLACKGRAM	Rajasthan		7616	7386	93.09
	Uttar Pradesh	Kh.	N.A.	N.A.	92.74
		Zaid.	N.A.	N.A.	94
	West Bengal		326	326	44.20
LAKH (KHESARI)	Bihar		210	173	81.00
	Chhattisgarh		662	556	N.A.
	West Bengal		170	170	52.02
MASUR	Bihar		490	379	77.00
	Jharkhand		N.A.		
	Rajasthan		856	824	97.02
	Uttar Pradesh		N.A.	N.A.	94.86
	West Bengal		658	658	54.97
	PEAS	Uttar Pradesh		N.A.	N.A.
West Bengal			133	133	56.13
MOTH	Rajasthan		5964	5671	96.16
CHOWLA	Rajasthan		1956	1718	96.32
GWAR	Rajasthan		18284	17828	94.60
SAWAN	Uttarakhand		311	223	57.99
	Uttar Pradesh	Kh.	N.A.	N.A.	85.87
		Zaid	N.A.	N.A.	85.87
SAMAI	Tamil Nadu	Kh.	100	100	90.97
VARAGU	Tamil Nadu	Kh.	124	120	90.68
SUGARCANE	Bihar		238	209	88.00
	Punjab		N.A.	N.A.	N.A.
	Rajasthan		450	388	99.80
KORRA	Andhra Pradesh		204	59	70.77
	Telangana		20	8	73.55
KODON- KUTKI	Chhattisgarh		260	208	90.80
	Madhya Pradesh		180	176	90.36
	Uttar Pradesh (Kodan)		N.A.	N.A.	95.17
CHILLIES	Andhra Pradesh	Kh.	452	147	45.33
		Rabi	402	175	46.05

CROP	S T A T E		No. Of Experiments		Percentage
			Planned	Analysed	recovery
1	2		3	4	5
	Bihar		170	109.00	64.00
	Telangana	Kh.	380	129.00	55.59
		Rabi	128	32.00	58.50
SAFFRON	Jammu & Kashmir		114	84	25.66
CORIANDER	Rajasthan		2072	1980	94.36
ARECANUT	Maharashtra ****		180	21	55.40
CASHEWNUT	Maharashtra		N.C		
CUMIN SEED	Rajasthan		5812	4963	95.84
METHI	Rajasthan		1284	1216	97.21
GROUNDNUT	Andhra Pradesh	Kh.	2604	539	63.74
		Rabi	824	312	66.39
	Chhattisgarh		264	218	86.60
	Gujarat	Kh.	3498	3352	96
		Sum.^	-	803	46
	Goa	Kh.	30	4	97.02
		Rabi	60	4	97.46
	Madhya Pradesh		480	384	76.26
	Maharashtra **		1386	948	82.63
	Rajasthan		7620	5783	87.43
	Tamil Nadu	Kh.	700	700	72.16
		Rabi	460	460	75.38
	Telangana	Kh.	196	55	65.09
		Rabi	1112	218	64.29
	Uttar Pradesh		N.A.	N.A.	66.23
West Bengal		199	199	44.56	
SESAMUM	Maharashtra *	Kh.	674	512	75.96
		Rabi	202	93	46.03
	Rajasthan		5568	5189	94.14
	Uttar Pradesh		N.A.	N.A.	23.58
	West Bengal		1020	1020	20.65
CASTOR	Andhra Pradesh		232	89	57.90
	Gujarat		3569	3549	99.44
	Telangana		150	33	57.96
RAPE & MUSTARD	Bihar		532	503	95.00
	Haryana %		1040	990	96.70
	Jammu & Kashmir		142	12	88.68
	Jharkhand		N.A.		
	Punjab		254	198	96.71
	Rajasthan		28996	27574	96.91
	Uttar Pradesh		N.A.	N.A.	94.43
	West Bengal		1513	1513	25.92
	LINSEED	Jammu & Kashmir		8	2
Maharashtra *			882	675	76.53
Rajasthan			N.A.		
Uttar Pradesh			N.A.	N.A.	94.04
West Bengal			73	73	33.63
SUNFLOWER	Andhra Pradesh	Kh.	196	76	83.69
		Rabi	322	98	82.82
	Haryana %	Rabi	260	92	46.10
	Maharashtra*	Kh.	680	524	77.05
		Rabi	578	463	80.10
		Sum.		N.A.	
	Telangana	Kh.		N.A.	
		Rabi	36	11	83.80
Uttar Pradesh	Zaid	N.A.	N.A.	92.21	

CROP	S T A T E		No. Of Experiments		Percentage
			Planned	Analysed	recovery
1	2		3	4	5
SAFFLOWER	Karnataka ###	Rabi UI.	98	52	28.20
	Maharashtra *		2538	1562	61.54
	Rajasthan		N.A.		
	Uttar Pradesh		N.A.	N.A.	92.91
BANANA	Bihar		250	24	10.00
MANGO	Bihar		300	95	32
GUAVA	Bihar		140	59	42
LICHI	Bihar		150	43	29
POTATO	Bihar	Agh.	170	86	51
		Rabi	210	198	94
ONION	Bihar	Rabi	210	139	66
BRINJAL	Bihar	Agh.	170	87	51
		Rabi	170	91	54
TOMATO	Bihar	Agh.	70	32	46
		Rabi	140	98	70
CAULIFLOWER	Bihar		170	91	54
JACKFRUIT	Bihar		210	50	24
TARA MEERA	Rajasthan		1640	1532	96.48
COTTON	Gujarat Irr		5451	5353	98.20
	Gujarat UnIrr		2584	2000	77.40
	Madhya Pradesh			N.A.	
	Maharashtra *		3364	2834	84.20
	Punjab		56	56	95.30
	Rajasthan		7264	6957	100
	Uttar Pradesh		N.A.	N.A.	90.93
JUTE	Bihar		100	53	53.00
	Meghalaya		28	28	N.A.
	West Bengal		640	640	6.99
MESTA	Andhra Pradesh		200	174	82.36
	Bihar		100	43	43.00
	West Bengal		240	200	6.99
TOBACCO	Maharashtra *		72	52	72.22
	Uttar Pradesh	Rabi	N.A.	N.A.	26.65
		Zaid	N.A.	N.A.	N.A.
ISABGOL	Rajasthan		4456	3891	95.91
AVARE	Karnataka	UI.	88	84	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 by SASA Maharashtra.
2. \*\*\* :- Figures given are for 1998-99 as no information was received ever since the year 1999-2000 .
3. \*\*\*\* :- Figures given are for 2001-02 as no information was received ever since the year 2002-03.
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.
7. N.A. - Not Available

**ANNEX-X(b):RESULTS OF CENTRAL DRIAGE EXPERIMENTS ORGANISED BY STATE  
UNDER C.E.S. DURING 2019-20**

Sl. No.	STATE	CROP		No. Of Experiments		Percentage Recovery	Percentage recovery as per field driage
				Planned	Analysed		
1	2	3		4	5	6	7
1.	Assam	Paddy	Aut.	224	124	89	No Field driage
			Wint.	450	394	89	No Field driage
			Sum.	300	158	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	244	-	No Field driage
		Sugarcane		-	-	-	
2.	Karnataka ^	Paddy	Kh.Hyv.Ir.	784	598	81.68	No Field driage
			Kh.Hyv.UI.	468	452	84.27	No Field driage
			Kh.Tra.Ir.	80	80	87.31	No Field driage
			Kh.Tra.UI.	82	82	86.21	No Field driage
			Rabi Hyv. Ir.	54	54	82.99	No Field driage
			Rabi Tra. Ir.	-	-	82.99	No Field driage
			Sum.Hyv.Ir.	222	216	80.90	No Field driage
			Sum.Tra.UI.	-	-	80.84	No Field driage
		Jowar	Kh.Hyv.Ir.	84	82	48.13	No Field driage
			Kh.Hyv.UI.	210	168	45.92	No Field driage
			Kh.Tra.UI.	-	-	-	No Field driage
			Rabi Hyv.Ir.	172	114	46.32	No Field driage
			Rabi Hyv.UI.	404	352	46.54	No Field driage
			Rabi Tra.Ir.	-	-	-	No Field driage
			Rabi Tra.UI.	-	-	44.18	No Field driage
			Sum. Hyv. Ir.	4	4	46.44	No Field driage
		Bajra	Kh.Hyv.Ir.	112	66	39.86	No Field driage
			Kh.Hyv.UI.	308	178	45.41	No Field driage
			Kh. Tra. Ir.	-	-	-	No Field driage
			Kh.Tra.UI.	-	-	41.13	No Field driage



Sl. No.	STATE	CROP	No. Of Experiments		Percentage recovery	Percentage recovery as per field driage	
			Planned	Analysed			
1	2	3	4	5	6	7	
		Maize	Kh.Hyv.Ir.	376	324	52.51	No Field driage
			Kh.Hyv.UI.	876	680	50.12	No Field driage
			Kh.Tra.Ir.	-	-	-	No Field driage
			Kh.Tra.UI.	-	-	52.22	No Field driage
			Rabi Hyv. Ir.	210	158	50.13	No Field driage
			Rabi Hyv. UI.	40	40	43.72	No Field driage
			Sum Hyv Ir.	14	14	56.30	No Field driage
			Rabi Tra.UI.	-	-	41.38	No Field driage
		Ragi	Kh.Hyv.Ir.	232	202	49.52	No Field driage
			Kh.Hyv.UI.	686	650	45.82	No Field driage
			Kh.Tra.UI.	-	-	49.80	No Field driage
			Rabi Hyv.Ir.	44	44	44.42	No Field driage
			Rabi Tra.UI.	18	18	42.41	No Field driage
			Sum.Hyv. Ir.	40	40	45.77	No Field driage
		Wheat	Hyv.Ir.	130	104	77.92	No Field driage
			Hyv.UI.	98	64	79.90	No Field driage
			Tra.Ir.	-	-	-	No Field driage
			Tra.UI.	-	-	78.91	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	38.24	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	27.82	No Field driage
		Save		32	26	23.94	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

Sl. No.	STATE	CROP		No. Of Experiments		Percentage 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	43.74	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	No Field driage
			Kh.UI.	302	176	35.59	No Field driage
			Rabi.Ir.	80	72	39.95	No Field driage
			Rabi.UI.	94	66	42.02	No Field driage
			Sum.Ir.	46	46	43.20	No Field driage
		Cotton		-	-	33.36	No Field driage
		Soyabean	Ir.	-	-	-	No Field driage
			UI.	106	86	46.87	No Field driage
		Tobacco		-	-	-	No Field driage
		Avare		44	37	34.73	No Field driage
		Cowpea		96	82	28.25	No Field driage
3.	Odisha **	Paddy	Aut.	-	-	85.26	No Field driage
			Wint.	-	-	87.34	No Field driage
			Sum.	-	-	87.74	No Field driage
		Maize	Aut.	-	-	34.42	No Field driage
			Wint.	-	-	31.90	No Field driage
			Sum.	-	-	30.98	No Field driage
		Ragi	Aut.	-	-	41.00	No Field driage
			Wint.	-	-	41.42	No Field driage
			Sum.	-	-	38.60	No Field driage
		Wheat	Sum.	-	-	92.10	No Field driage
		Greengram	Aut.	-	-	93.42	No Field driage
			Wint.	-	-	94.36	No Field driage
			Sum.	-	-	94.46	No Field driage
		Blackgram	Aut.	-	-	93.95	No Field driage
			Wint.	-	-	94.44	No Field driage
			Sum.	-	-	94.44	No Field driage

Sl. No.	STATE	CROP		No. Of Experiments		Percentage recovery	Percentage recovery as per field driage
				Planned	Analysed		
1	2	3		4	5	6	7
		Horsegram	Wint.	-	-	94.38	No Field driage
			Sum.	-	-	95.07	No Field driage
		Groundnut	Aut.	-	-	51.53	No Field driage
			Wint.	-	-	54.96	No Field driage
			Sum.	-	-	54.52	No Field driage
		Sesamum	Aut.	-	-	93.73	No Field driage
			Wint.	-	-	93.38	No Field driage
			Sum.	-	-	94.69	No Field driage
		Rape & Mustard	Wint.	-	-	82.59	No Field driage
		Jute	Aut.	-	-	5.73	No Field driage
4.	Rajasthan	Jowar		46	43	53.86	91.63
	\$	Bajra		50	50	56.54	99.39
		Maize	Kh.	40	38	59.10	97.58
		Wheat		58	52	97.58	98.81
		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 2019-20							
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
<b>1. ANDHRA PRADESH</b>							
Paddy	Kh. Rabi	1945-46 1945-46	1954-55 1954-55	5 x 5 5 x 5	1/400 1/400	MANDAL MANDAL	Ir. _ UL. Ir.
Jowar	Kh. Rabi	1951-52 1951-52	1955-56 1955-56	5 x 5 5 x 5	1/400 1/400	MANDAL 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 MANDAL	
Ragi	Kh. Rabi	1951-52 1951-52	1955-56 1955-56	5 x 5 5 x 5	1/400 1/400	MANDAL 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 MANDAL	
Blackgram	Kh. Rabi	1962-63 N. A.	1963-64 N.A.	5 x 5 5 x 5	1/400 1/400	MANDAL MANDAL	
Horsegram	Kh. Rabi	1980-81 N. A.	1980-81 N. A.	5 x 5 5 x 5	1/400 1/400	MANDAL 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 MANDAL	
Groundnut	Kh. Rabi	1957-58 1957-58	1959-60 1959-60	5 x 5 5 x 5	1/400 1/400	MANDAL MANDAL	
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	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>2. ASSAM @</b>							
Paddy	Aut. Wint. Sum.	1947-48 1947-48 1974-75	1951-52 1951-52 1974-75	5 x 5 5 x 5 5 x 5	1/400 1/400 1/400	R.Circle R.Circle 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 2019-20**

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
<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 2019-20**

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
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	
<b>5. GOA</b>							
Paddy	Kh.	1967-68	1967-68	5 x 5	1/400	TALUKA	
	Rabi	1967-68	1967-68	5 x 5	1/400	TALUKA	
Ragi		1970-71	1970-71	5 x 5	1/400	TALUKA	
<b>6. GUJARAT</b>							
Paddy	Kh.	1945-46	1956-57	5 x 5	1/400	TALUKA	Ir.-UI.
	Sum	2000-01	2000-01	5 x 5	1/400	TALUKA	
Jowar	Kh.	1956-57	1956-57	5 x 5	1/400	TALUKA	
	Rabi	1945-46	1956-57	5 x 5	1/400	TALUKA	
Bajra	Kh.	1946-47	1956-57	5 x 5	1/400	TALUKA	
	Sum	1974-75	1974-75	5 x 5	1/400	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	Ir.- UI.
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.	1951-52	1957-58	5 x 5	1/400	TALUKA	
	Sum.	1977-78	1983-84	5 x 5	1/400	TALUKA	

APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2019-20							
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
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	Ir.- Ul.
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	5 x 5	1/400	TEHSIL	
	Rabi	2003-04	2003-04	5 x 5	1/400	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	Hyv. & Lv.
	Bha.	2002-03	2002-03	10 x 5	1/200	ANCHAL	

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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 2019-20							
Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape	Stratum	Pre-stratification	
1	2	3	4	5	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	
	Sum.	2007-08	2007-08	5 x 5	1/400	TALUK	
Groundnut	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.
	Rabi	2005-06	2005-06	5 x 5	1/400	TALUK	UI.
Sesamum	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	
<b>12. KERALA</b>							
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	2 x 2	1/2500	TALUKA	
Cocoa		1982-83	1982-83	5 bearing trees	–	TALUKA	
Banana		1985-86	1985-86	3 plants	–	TALUKA	
Mango		2004-05	2004-05	2 bearing trees	N.A.	TALUKA	

APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2019-20							
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
Jackfruit		1988-89	1988-89	2 bearing trees	-	TALUKA	
Pine Apple		1981-82	1981-82	5 bearing trees	-	TALUKA	
Plantain		1986-87	1986-87	3 Plants	-	TALUKA	
Tapioca		1963-64	1963-64	2 x 2	1/2500	TALUKA	
Coconut		1976-77	1976-77	5 bearing trees	-	TALUKA	
Sesamum		1984-85	1984-85	5 x 5	1/400	TALUKA	
<b>13. MADHYA PRADESH</b>							
Paddy		1945-46	1955-56	5 x 5	1/400	R.I. CIRCLE	Ir.(Hyv./Lv.) & UI.
Jowar		1946-47	1955-56	5 x 5	1/400	R.I. CIRCLE	
Bajra		1954-55	1956-57	5 x 5	1/400	R.I. CIRCLE	
Maize		1952-53	1957-58	5 x 5	1/400	R.I. CIRCLE	
Wheat		1944-45	1957-58	5 x 5	1/400	R.I. CIRCLE	Ir.(Hyv./Lv.) & UI.
Barley		1951-52	1957-58	5 x 5	1/400	R.I. CIRCLE	
Gram		1950-51	1955-56	5 x 5	1/400	R.I. CIRCLE	
Tur		1950-51	1957-58	10 x 5	1/200	R.I. CIRCLE	
Lakh		1957-58	1957-58	5 x 5	1/400	R.I. CIRCLE	
Soyabean		1980-81	1983-84	5 x 5	1/400	R.I. CIRCLE	
Kodon Kutki		1950-51	1955-56	5 x 5	1/400	R.I. CIRCLE	
Chillies		1957-58	1957-58	5 x 5	1/400	R.I. CIRCLE	
Banana		1957-58	1957-58	25 trees	-	TALUKA	
Potato		1957-58	1957-58	5 x 5	1/400	R.I. CIRCLE	
Onion		1957-58	1957-58	5 x 5	1/400	R.I. CIRCLE	
Papaya		1957-58	1957-58	25 trees	-	TALUKA	
Groundnut		1957-58	1957-58	5 x 5	1/400	R.I. CIRCLE	
Sesamum		1957-58	1957-58	5 x 5	1/400	R.I. CIRCLE	
Rape & Mustard		1957-58	1957-58	5 x 5	1/400	R.I. CIRCLE	
Linseed		1957-58	1957-58	5 x 5	1/400	R.I. CIRCLE	
Cotton		1944-45	1957-58	10 M x 11 Rows	-	R.I. CIRCLE	
<b>14. MAHARASHTRA</b>							
Paddy	Kh.	1945-46	1952-53	10 x 10	1/100	TEHSIL	Ir./UI./Comp.
	Sum.	1984-85	1993-94	10 x 5	1/200		
				10 x 10	1/100	TEHSIL	
				10 x 5	1/200		
Jowar	Kh.	1946-47	1952-53	10 x 10	1/100	TEHSIL	
Jowar	Rabi	1945-46	1952-53	10 x 10	1/100	TEHSIL	Ir./UI.
Bajra		1946-47	1958-59	10 x 10	1/100	TEHSIL	Ir/UI./Comp.
Maize	Kh.	1976-77	1958-59	10 x 10	1/100	TEHSIL	
	Rabi	1990-91	-	10 x 10	1/100	TEHSIL	
Ragi		1946-47	1951-52	10 x 5	1/200	TEHSIL	
Wheat		1945-46	1951-52	10 x 10	1/100	TEHSIL	Ir./UI.

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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
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	10 x 5	N.A.	TEHSIL	
Blackgram		2001-02	2001-02	10 x 5	N.A.	TEHSIL	
Sugarcane		1959-60	1964-65	10 x 5	1/400	TEHSIL	
Arecanut		1959-60	1959-60	Cluster of 9 palms	-	TEHSIL	
Cashewnut		1967-68	1967-68	Cluster of 6 trees	1/100	TEHSIL	
Groundnut	Kh.	1946-47	1957-58	10 x 10	1/100	TEHSIL	
	Sum.	2001-02	2001-02	10 x 10	1/100	TEHSIL	
Sesamum	Kh.	1959-60	1960-61	10 x 10	1/100	TEHSIL	
	Rabi	1959-60	1960-61	10 x 10	1/100	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.	1983-84	1992-93	10 x 10	1/100	TEHSIL	
	Sum	1989-90	1993-94	10 x 10	1/100	TEHSIL	
	Rabi	N.A.	N. A.	10 x 10	1/100	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	10 x 5	N. A.	TEHSIL	
Cotton		1946-47	1957-58	20 x 10	Jan-50	TEHSIL	Ir./Ul./Comp.
Tobacco		1951-52	1958-59	10 x 10	1/100	TEHSIL	
<b>15. MEGHALAYA</b>							
Paddy	Aut.	1971-72	1973-74	5 x 5	1/400	DISTRICT	
	Wint	1971-72	1973-74	5 x 5	1/400	DISTRICT	
Potato	Sum.	1973-74	1977-78	5 M x 7 Rows	-	DISTRICT	
Jute		1973-74	Not adopted	5 x 5	1/400	DISTRICT	
<b>16. ODISHA</b>							
Paddy	Aut.	1944-45	1959-60	5 x 5	1/400	C.D.BLOCK	
	Wint.	1944-45	1959-60	5 x 5	1/400	C.D.BLOCK	
	Sum.	1963-64	1963-64	5 x 5	1/400	C.D.BLOCK	
Maize	Aut.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
	Wint.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
	Sum.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
Ragi	Aut.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
	Wint.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
	Sum.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
Wheat	Sum.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
Greengram	Aut.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
	Wint.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
	Sum.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
Blackgram	Aut.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
	Wint.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
	Sum.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
Horsegram	Wint.	1976-77	1990-91	5 x 5	1/400	C.D.BLOCK	
	Sum.	1976-77	1990-91	5 x 5	1/400	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
				Dimentions (MxM)	Size (ha.)		
1		2	3	4	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	
<b>17. PUNJAB</b>							
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	
<b>18. RAJASTHAN</b>							
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	Ir./UI./Comp.
Wheat		1949-50	1952-53	5 x 5	1/400	TEHSIL	
Barley		1951-52	1953-54	5 x 5	1/400	TEHSIL	
Gram		1951-52	1956-57	5 x 5	1/400	TEHSIL	Ir./UI./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./UI./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	

**APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2019-20**

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
Isabgol		1997-98	1998-99	5 x 5	1/400	TEHSIL	
<b>19. TAMIL NADU</b>							
Paddy	K/K/S	1944-45	1955-56	5 x 5	1/400	BLOCK	
	S/T/P	1944-45	1955-56	5 x 5	1/400	BLOCK	
	N/K	1985-86	1985-86	5 x 5	1/400	BLOCK	
Jowar		1950-51	1955-56	5 x 5	1/400	BLOCK	Ir./UI.
Bajra		1950-51	1955-56	5 x 5	1/400	BLOCK	Ir./UI.
Ragi		1950-51	1955-56	5 x 5	1/400	BLOCK	Ir./UI.
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	Ir./UI.
Sesamum		1973-74	1973-74	10 x 5	1/200	BLOCK	Ir./UI.
Cotton		1959-60	1964-65	10 x 5	1/200	BLOCK	Ir./UI.
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.	1945-46	1954-55	5 x 5	1/400	MANDAL	Ir. UI.
	Rabi	1945-46	1954-55	5 x 5	1/400	MANDAL	Ir.
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	

APPENDIX -I : STATEWISE CROP COVERAGE AND DETAILS OF DESIGN UNDER CES DURING 2019-20						
Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape	Stratum	Pre-stratification
1	2	3	4	5	6	7
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>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 2019-20						
Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape	Stratum	Pre-stratification
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	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	1958-59	1959-60	5 x 5	1/400	BLOCK
	Rabi	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	1988-89	-	5 x 5	1/400	BLOCK
	Zaid	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 2019-20**

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 ft x 10 ft	1/435.6 acres	BLOCK	
Greengram		1951-52	1951-52	10 ft x 10 ft	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 2019-20								
Crop		Year of initiation of survey	Year of adoption of results	Plot Size & Shape	Stratum	Pre-stratification		
1		2	3	Dimentions (MxM) Size (ha.)	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 2019-20**

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	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, TamilNadu, Telangana, Uttar Pradesh and West Bengal	18
5	Ragi	Andhra Pradesh, Bihar, Goa, Gujarat, Jharkhand, Karnataka, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttarakhand and Dadra & NagarHaveli.	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 WestBengal.	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	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	Areca nut	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	Coriander	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 2019-20**

Sl. No.	State	Agency	Designation	Crops covered (Percentage)
1	2	3	4	5
1	Andhra Pradesh	1. Statistical	1. Assistant Statistical Officer	All Crops 50 %.
		2. Agriculture	2. Agriculture Extension Officer	All Crops 50 %.
2	Assam	Statistical	Field Assistant	All Crops. (100%)
3	Bihar	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.
4	Chhattisgarh	1. Revenue	1. Revenue Inspector	All Crops (100%)
		2. Agriculture	1. Headquarter Patwari 2. Rural Agriculture Extension Officer	
5	Goa	Agriculture	Investigator	All Crops.
6	Gujarat	Agriculture	Gram Sevak	All Crops
7	Haryana	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).
8	Himachal Pradesh	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 2019-20**

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

**APPENDIX - III: PRIMARY FIELD AGENCY FOR CROP CUTTING EXPERIMENTS UNDER  
CES 2019-20**

Sl. No.	State	Agency	Designation	Crops covered (Percentage)
1	2	3	4	5
15	Meghalaya	Block Department SDSCO Agriculture Deptt.	Gram Sevak Agriculture Assistant(SDSCO) Agriculture Assistant (Agri.)	All Crops.
16	Odisha	Directorate of Economics & Statistics	Statistical Field Surveyor	All Crops.
17	Punjab	Agriculture	1. Agricultural Inspector 2. Compost Inspector	All Crops
18	Rajasthan	Revenue	Inspector Land Records	All Crops
19	Tamil Nadu	1.Agricultural Department (GCES,NAIS)	Agricultural Officer Deputy Agriculture Officer	All Crops
		2.Statistical Department (GCES,NAIS)	Block Statistical Inspector	
		3.Horticulture Department (GCES,NAIS)	Assistant Horticulture Officer	
20	Telangana	1. Statistical	1. Assistant Statistical Officer	All Crops 50 %.
		2.Agriculture	2. Agriculture Extension	All Crops 50 %.
21	Uttarakhand	Revenue	1. Patwari / Lekhpal 2. Revenue Inspector	All Crops (100%)
22	Uttar Pradesh	1 .Revenue	Revenue Inspector	All Crops
		2. Cane Development	Cane Inspector	Sugarcane crop (only in factory areas)
		3.Cotton Development	Cotton Supervisor & Kamdar	Cotton Crop.

**APPENDIX - III: PRIMARY FIELD AGENCY FOR CROP CUTTING EXPERIMENTS UNDER  
CES 2019-20**

<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>23</b>	<b>West Bengal</b>	1. Agricultural Statistics (B.A.E & S)	Asstt. Investigator	All Crops
		2. Agriculture Department	Krishi Prajukti Sahayak (K.P.S)	
<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 (55%)
		2. Statistical	Statistical Investigator	
		3. Rural Deptt.	(i) Gram Sevak (ii) Village Panchayat Secretary	All Crops (36%) All Crops (9%)
<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 2019-20**

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	1870	14230	9666	23896	230	140	371
		Agriculture					215	114	
2	Assam	Statistical	243	5800	5450	11250	78	78	78
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	500	440	940	16	16	19
		(Rabi)	23						
6	Gujarat	Agriculture	3207	35834	19216	55050	1281	997	1256
7	Haryana *	Agriculture (Kh.)	719	5036	9584		----- NC -----		
		(Rabi)	758	4548			----- 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	86966	52882	139848	0	0	0
		Agricultural	1960				0	0	0
		Horticulture	1113				0	0	0
		RDPR	8786				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	86470	52496	138966	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	2012	234	2246	55	0	55
16	Odisha	Statistical	607	46135	11192	57327	607	607	607
17	Punjab	Agriculture (Kh.)	812	3720		3720	10	-	0
		(Rabi)	718		3230	3230	-	10	0
18	Rajasthan \$	Agriculture (Kh.)	8512	129702	107384	237086	----- NC -----		
		(Rabi)	4269				----- NC -----		

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	831	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.)	5	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
<b>Total</b>			<b>84878</b>	<b>957419</b>	<b>791189</b>	<b>1748608</b>	<b>4903</b>	<b>4639</b>	<b>4909</b>
<b>Percentage %</b>							<b>7.4</b>	<b>7.0</b>	<b>7.4</b>

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.

4. NC: Not Collected

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

$$\bar{x} = \text{d. f. } \frac{\sum_{i=1}^S a_i \bar{x}_{ij}}{\sum_{i=1}^S a_i}$$

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

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

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

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

the mean square between villages

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

the mean square within villages

The percentage standard error is given by

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

**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 2019-20**

Sl No.	State	Crops	Contents of produce for weighthment		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
		Kodan Kutki	Wet grain	Dry grain	Village	Whole	15 days	District
		Groundnut	Wet Pods	Dry pods	Village	whole	15 days	District
5	Goa	Paddy (Kh. & Rabi)	Wet Paddy	Dry Paddy	Village	5 Kgs.	10 to 15 days	Stratum
6	Gujrat	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 paddy	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 weighthment		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
12	Kerala	Sunflower(Kh. Rabi & Sum.)	Flower	Grain	Expts.	1 Kg.	C.W.	District
		Tobacco	Green leaves	Cured leaves	Expts.	1 Kg.	C.W.	District
13	Madhya Pradesh	Paddy (Aut. Wint. & Sum)	Wet Paddy	Dry Paddy	Both	250 grms.	C.W.	District
14	Maharashtra	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
		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
15	Meghalaya	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
16	Odisha	Cashewnut	Wet Nut	Dry Nut	Village	5 Kgs.	C.W.	District
		Paddy (Aut. & Wint.)	Wet Paddy	Dry Paddy	Both	Whole	7-10 days	District
17	Punjab	Jute	Wet Plants	Dry Nut	Both	Whole	20-28 days	District
		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
18	Rajasthan	Rape & Mustard (Wint.)	Wet Pods	Dry grain	Both	250 gms.	C.W.	State
		Jute	Wet Plants	Dry Fibre	Both	1 kgs.	C.W.	State
		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
18	Rajasthan	Cotton	Wet Kapas	Dry grain	Village	Whole II Picking	15 Days	State
		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	
		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	
		20	Telangana	Turmeric	Wet Turmeric	Dry Turmeric	Not Done	1 Kgs.	C.W.
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	
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	
21	Uttar Pradesh	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 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	
22	Uttarakhand	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.	N.A.	District
		Cotton (Desi/American)	Wet Cotton	Dry Cotton	Expts.	Whole	Same day	District	
23	West Bengal	Tobacco	Wet leaf & Stalk	Dry leaf & Stalk	Village	10 kgs.	20 days	District	
		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	
24	Dadar & Nagar Haveli	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	
Mesta	Plants	Dry Fibre	Expts.	20 kgs.	12 days	Block			
25	Daman & Diu	Paddy	Wet Paddy	Dry Paddy	Expts.	1 kg / Sample	3 days	Stratum	
		Ragi	Wet grain	Dry grain	Expts.	1 kg / Sample	3 days	Stratum	
26	Puducherry	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 2019-20**

Number of experiments planned under crops													
Sl. No	State	Rice	Jowar	Bajra	Maize	Ragi	Tur	Cotton	Jute	Sugar-Cane	Ground-nut	Other *	Sub-Total
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	-	-	290
		Wint. 120											
3	Bihar	Aut. 40	-	-	40	-	-	-	-	40	-	-	360
		Wint. 240											
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	-	-	-	-	-	-	-	120
		Wint. 80											
10	Karnataka	144	50	50	50	40	40	56	-	40	70	80	620
11	Kerala	Aut. 100	-	-	-	-	-	-	-	-	-	-	200
		Wint. 100											
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	-	-	-	-	-	-	-	650
		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	460
		Ph-II	-	-	-	-	-	-	-	-	-	-	
18	Telangana	70	40	-	50	-	40	40	-	-	40	80	360
19	Uttar Pradesh	660	40	150	170	-	60	-	-	200	-	100	1380
											40		
20	Uttrakhand	50	-	-	-	40	-	-	-	40	-	-	130
21	West Bengal	Aut. 100	-	-	-	-	-	-	80	-	-	-	340
		Wint. 160										20	
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 2019-20**

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	Andhra Pradesh	120	-	-	-	-	60	40	-	-	220	680
2	Assam	40	-	-	50	-	-	-	70	70	230	520
3	Bihar	40	-	-	230	-	40	-	40	40	390	750
4	Chhattisgarh	-	-	-	40	-	40	-	30	40	150	350
5	Gujarat	-	-	-	150	-	40	-	50	-	240	990
6	Haryana	-	-	-	180	30	70	-	100	-	380	700
7	Himachal Pradesh	-	-	-	110	40	-	-	-	-	150	300
8	Jammu & Kashmir	-	-	-	120	-	-	-	-	-	120	280
9	Jharkhand	-	-	-	40	-	20	-	20	20	100	220
10	Karnataka	40	70	-	50	-	40	40	-	40	280	900
11	Kerala	100	-	-	-	-	-	-	-	220	320	520
12	Madhya Pradesh	-	-	-	250	-	140	-	60	74	524	1152
13	Maharashtra	-	150	-	150	-	100	-	-	50	450	1300
14	Odisha	140	-	-	-	-	-	-	-	40	180	830
15	Punjab	-	-	-	220	30	30	-	40	-	320	700
16	Rajasthan	-	-	-	130	80	120	-	90	-	420	940
17	Tamil Nadu	40	40	-	-	-	-	40	-	200	320	780
18	Telangana	80	40	-	-	-	-	-	-	-	120	480
19	Uttar Pradesh	-	-	-	570	-	50	-	100	200	920	2300
20	Uttrakhand	-	-	-	60	-	-	-	-	-	60	190
21	West Bengal	140	-	-	110	-	-	-	110	50	410	750
22	Puducherry (I)	10	-	-	-	-	-	-	-	-	10	
	(II)	10	-	-	-	-	-	-	-	-	10	30
<b>TOTAL</b>		<b>760</b>	<b>300</b>	<b>0</b>	<b>2460</b>	<b>180</b>	<b>750</b>	<b>120</b>	<b>710</b>	<b>1044</b>	<b>6324</b>	<b>15662</b>

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, Arecanut - 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

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