



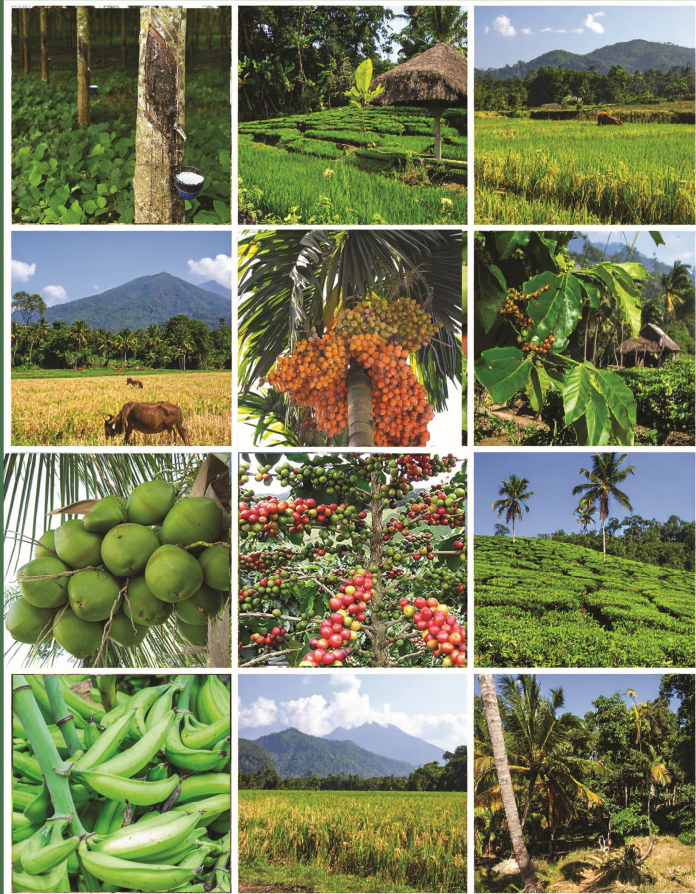
Government of Kerala

# MANUAL OF INSTRUCTIONS

## ESTABLISHMENT OF AN AGENCY FOR REPORTING AGRICULTURAL STATISTICS (EARAS)

DEPARTMENT OF ECONOMICS & STATISTICS  
KERALA  
2025

ESTABLISHMENT OF AN AGENCY FOR REPORTING AGRICULTURAL STATISTICS (EARAS) INSTRUCTION MANUAL



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**GOVERNMENT OF KERALA**

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# INDEX

SL NO	DESCRIPTION	PAGE NO
1.	Brief History of the Department	1
2.	Concepts	3
3.	Methodology of Field Work	20
4.	General Crop Estimation Surveys (GCES)	28
5.	Crop Cutting experiments of Major and Minor Crops	33
6.	Estimation procedure under Revised Sample Design of EARAS in Kerala	45
7.	The Scheme for Improvement of Crop Statistics (ICS)	52
8.	Guidelines for the functioning of District Level Committees (DLC)	53
9.	Preparation of Forecast Report	60
10.	Advance Estimation	63
11.	Forecasting Agricultural Output using Space, Agro-meteorology and Land based observations(FASAL)	67
12.	Annexure	68

## Preface

The scheme “Establishment of an Agency for Reporting Agricultural Statistics (EARAS)” is a fully funded Central Sector Scheme implemented as part of the overarching “Improvement of Agricultural Statistics (IAS)” programme, which itself is a sub-component of the “Integrated Scheme on Agricultural Census, Economics & Statistics.”

The Improvement of Agricultural Statistics (IAS) scheme is salary-oriented, providing 100% grant-in-aid to State Governments for meeting the salary and other allowances of employees engaged in its activities. The primary objective of the scheme is to collect and improve agricultural statistics-specifically, data on area, production, and yield rate of principal agricultural crops.

The scheme comprises three components:

1. Timely Reporting Scheme (TRS)
2. Establishment of an Agency for Reporting Agricultural Statistics (EARAS)
3. Improvement of Crop Statistics (ICS)

The TRS is implemented in 18 land record states, whereas EARAS operates in non-land record states such as Kerala, Odisha, West Bengal, and the North-Eastern States of Arunachal Pradesh, Nagaland, Sikkim, and Tripura. The ICS component aims to improve the quality of statistics on crop area and production through supervision and monitoring.

In Kerala, the Department of Economics & Statistics (DES) functions as the State Agricultural Statistics Authority (SASA). The DES also collects, compiles, and disseminates Horticulture Statistics. As per G.O. (Rt) No.149/2025/AGRI dated 20.02.2025, DES has been designated as the State Horticulture Statistics Authority (SHoSA) as well.

Every data collection scheme requires a comprehensive manual to guide Statistical Investigators in performing their duties efficiently. Beginning with the Agricultural Year 2023–24, several refinements in methodology have been introduced, resulting in more reliable estimates compared to previous years. Incorporating these changes, the Manual of Instructions-originally followed from 2010-has now been revised and updated. These modifications aim to enhance the quality of estimates while simultaneously reducing the workload of Investigators.

Sincere appreciation is extended to all officers and staff of the EARAS Division, as well as the district and taluk level officers and staff, for their dedicated efforts and teamwork in preparing this revised manual. Their collective commitment has greatly contributed to improving the quality and reliability of agricultural statistics in the State.

It is my sincere hope that this Manual of Instructions for EARAS will serve as a valuable reference and practical guide for both Investigators and Supervisory Officers of the Department.

Thiruvananthapuram  
05. 11. 2025

**RAJATH G.S.**  
Director



## ***1. Brief History of the Department***

The Department of Economics & Statistics, Government of Kerala is the nodal agency in the State for collection, compilation and analysis of statistical data relating to various sectors of Kerala Economy. The department had its origin in the scheme 'Improvement of Agricultural Statistics' started in the year 1949 as a post war reconstruction scheme under the Department of Research in the erstwhile Travancore University.

After the integration of Travancore and Cochin States, Government constituted the 'Board of Statistics' in 1951. In 1954 the Board of Statistics was re-organised as the Department of Statistics under the head 'Director of Statistics'. In 1956 District Statistical Offices were established in the four districts of the erstwhile Travancore Cochin state. Consequent on the formation of Kerala State in November 1956, the jurisdiction of the department was extended to Malabar and Kasaragod. In December 1958, Bureau of Economic studies was set up by the State Government. In the year 1963, the Bureau of Economic Studies was amalgamated with Department of Statistics and Bureau of Economics and Statistics came into existence. In 1980, the name of Bureau of Economics and Statistics had been changed as Department of Economics and Statistics.

Year	Event
1949	Started the scheme 'Improvement of Agricultural Statistics' under the Department of Research in the erstwhile Travancore University.
1951	Board of Statistics
1954	Board of Statistics was re-organised as the Department of Statistics under the head 'Director of Statistics'
1956 (before formation of kerala state)	District Statistical Offices were established in the four districts of the erstwhile Travancore Cochin State
1956 (after formation of Kerala state)	Jurisdiction of the department was extended to Malabar and Kasaragod
1958	Bureau of Economic Studies was set up by the State Government
1963	Bureau of Economic Studies was amalgamated with Department of Statistics and Bureau of Economics and Statistics came into existence
1980	Name of Bureau of Economics and Statistics had been changed as Department of Economics and Statistics

Agricultural Statistics in Kerala was collected through Land Utilization Surveys conducted every year by the Bureau of Economics and Statistics till 1975-76. Area, production and yield rate of various agricultural crops and data on Land Utilization, etc. were estimated on the basis of data collected through annual Land Utilisation Surveys. But the estimates prepared at Taluk/District

level were not in good precision on account of the small sample size, quality and coverage. At this juncture Government of India sponsored a scheme Establishment of an Agency for Reporting Agricultural Statistics (EARAS) as a variant of the Timely Reporting Survey (TRS) implemented in the Reporting States. Kerala, West Bengal and Odisha are permanently settled States, as well as non reporting states where the scheme EARAS was introduced as a variant of TRS to suit the collection of Agricultural Statistics from 1975-76 onwards.

Under the scheme EARAS, collection of data for estimating area and yield statistics for every agricultural year by way of complete enumeration of the villages of the State in a phased manner covering 20% of the selected villages was done in each year. The first cycle of the survey was completed within a period of five years - from 1975-76 to 1979-80 and the second cycle in 1984-85.

In 1993-94 the Investigator zones were designed on the basis of area and nature of land of the villages. Hence the design was not suitable for generation of panchayat level data, in 1994-95 the Investigator Zones were reorganized by suiting the villages to Panchayats. From 2000-01 onwards the part panchayats were discontinued and each Investigator Zone was formed with full Panchayat/Panchayats. In the case of very large panchayats, part panchayat still exists in investigator zones.

Cluster formation till 2022-23 was done by clubbing two plots from the left side and two plots from the right side of the Key plot and forming an area of 1000 cents. Distance between the extreme right plot and the extreme left plot of a cluster was much more and may not be homogeneous at all times. This kind of cluster formation was very difficult for the Investigators in the field work and the data obtained may be less reliable. Therefore the cluster formation method was changed during the agricultural year 2023-24 by giving instructions to form clusters by clubbing the neighboring homogeneous plots with the Key plot, ie. Circular method was adopted for cluster formation.

Cluster sampling method is being followed in EARAS scheme in order to obtain representation from the entire area of the Investigator zone.

Crop production is estimated based on scientifically designed crop cutting experiments conducted by Statistical Investigators under the supervision of Statistical Inspectors, Taluk Statistical Officers, and District Level Officers.

With the introduction of crop insurance scheme in the State by the Government of India and to meet the area and production estimates at lower level the sampling design hitherto followed in land area and crop estimation survey under EARAS Scheme had been revised in 1987-88.

## Concepts

### **Sampling Design**

The reorganization of Investigator zones was introduced in 2000-01 without changing the total number of 811 Investigator zones in the State. A multistage stratified random sampling method is followed in the survey. Under the scheme, Corporations and Municipalities are treated as a separate stratum. Municipalities with an area of less than 10 sq. kms are merged with the adjoining Panchayats and treated as a single stratum. Each municipality with an area of more than 10 sq. kms is treated as a single Investigator zone. The blocks are divided into a number of Investigator Zones depending on the area and the nature of land (If any Panchayat/Municipality/Corporation is newly formed, it should be continued as per the re-organization of investigator zones in 2000-01)

### **Sample Size**

In each Investigator zone, 100 Survey/Subdivision numbers are selected randomly from Basic Tax Register in each agricultural year and these are the key plots for cluster formation in the Investigator zone. Normally each cluster consists of 5 plots. Out of 100 clusters, the number of Wet and Dry clusters are allocated in a panchayat in accordance with the proportion of wet land and dry land area of the panchayat. If an investigator zone contains more than one panchayat the 100 clusters are allocated according to the proportion of the area of panchayats arranged in alphabetical order. Then number of clusters allotted to each panchayat is reallocated in to Wet & Dry clusters in proportion to the Wet land area and Dry land area of the Panchayat.

The Taluk Statistical Officers and Statistical Inspectors should verify both the BTR and the selection of key plots pertaining to each Investigator zone. The District Level Officers should verify the above records randomly in every Taluk Statistical Offices.

### **Investigator Zone and Survey Frame**

The Survey numbers and its area falling under the Investigator zone will be sorted out Panchayat wise from the village records/Basic Tax Register and prepare a list called Panchayat wise BTR. This is the survey frame. Unit of land shown in the BTR may be 'Are'. One Are is equal to 2.47067685 cent. List of Survey Numbers of each Panchayat in an Investigator zone will be updated by the Statistical Investigators at the beginning of each agricultural year and the same should be verified by the Statistical Inspector/ Taluk Statistical Officer.

While updating the BTR, newly created survey subdivision numbers for which FMBs are available, may be incorporated with area at the last serial number in the BTR and the area be subtracted from the old survey subdivision number.

If the Investigator zone consists of only one Panchayat, the entire survey numbers of the Panchayat will be listed out and the list of plots (wet land and dry land) are prepared and numbered separately.

Sl No.	Survey No.	Type of land	Wet Sl No.	Area	Dry Sl No.	Area
1	1/1	Wet	1	52		
2	1/2	Wet	2	63		
3	1/3	Dry			1	64
4	1/4	Dry			2	126
5	1/5	Wet	3	82		
6	1/6	Wet	4	162		
7	2/1	Dry			3	112
8	2/2	Wet	5	12		
9	2/3	Dry			4	64
10	3/1	Wet	6	204		

If there are more than one Panchayat in an investigator zone, separate list of plots will be prepared for each panchayat. If a particular Panchayat consists of more than one investigator zone, separate list of survey numbers will be prepared for each Investigator zone of that particular Panchayat. The zones having minor circuit survey numbers (Survey numbers having an area of 20 acres or more), holding wise list of cultivators is prepared and incorporated in the Basic Tax Register by providing continuous serial numbers. Give equal priority to all the survey subdivision numbers for the selection of clusters. If a Panchayath consists of more than one village, Villages must be arranged in the ascending order of name. In villages, there may be more than one survey blocks and in each survey blocks same survey number may come. So the survey blocks of each village must be arranged in the ascending order of survey block number.

In an investigator zone where resurvey has been completed across the entire area of the panchayat/ panchayats by the Survey and Land records department, resurvey records shall be strictly used for the field work of the survey. If a panchayat consists of more than one Village and resurvey is completed in one of the Villages and old survey records are not available, field work can be done using resurvey records. Then number of clusters should be allocated to resurveyed villages and others separately based on total area of villages. If BTR and FMB are not available for cluster formation, cultivators list/house list should be prepared and used for selection of key plots till the BTR and FMB are available with the consent of the Deputy Director.

Survey & Land Records department is in the process of completing the resurvey in all the villages in near future. As and when the resurvey process is completed, the sampling frame should be the List of survey sub division numbers (local body wise Basic Tax Register).

### **Key plot selection**

In each investigator zone, the list of wet land and dry land survey subdivisions is to be prepared in each panchayat as per Basic Tax Register or cultivators list in case of zones having minor circuit (MC) survey numbers where BTR/FMB are not available. In case of MC (ie. for which area is 20 acres or more), list of cultivators is to be collected from concerned Village Offices and the name of cultivators are to be arranged in alphabetical order in the BTR against the survey number.

100 Key plots/Survey subdivision numbers are to be selected from the BTR by using circular systematic random sampling method. For selection of key plots at panchayat level, separate list will be used for wet and dry lands. The selection of key plots is to be done on the basis of fresh random columns allotted every year. Wet land key plots are to be selected first, and then dry land key plots. The random number used for the selection of dry key plots in a panchayat shall be the next lower number to the one used for the selection of wet key plots.

### **Note.**

1. If a key plot selected in a particular year is the same as the one selected in the previous year (i.e., repetition), it should be rejected, and a new key plot must be selected using a fresh random number that is just below the previous one.
2. If a selected key plot is found to be submerged due to sea erosion, it need not be substituted with a fresh key plot for cluster formation. Such plots, having been washed away by sea erosion, shall be treated as uncultivable land.
3. If a selected key plot is found to have been amalgamated or merged with a nearby plot and cannot be distinctly identified, the merged plot as a whole should be considered as the key plot.



### Illustration of Key Plot Selection

Suppose the frame (list of survey sub division numbers) consists of 'N' survey sub divisions (either based on litho map or BTR or FMB) and 'n' sub divisions for key plots are to be selected from the list then the interval 'I' is to be calculated as  $\frac{N}{n}$  rounded to the nearest integer. Random start 'R' is taken from 1 to N using random number tables. Key plots are selected in circular systematic random sampling method.

Some reserve plots are to be selected for substitution purpose for wet and dry plots. Reserve plots for wet plots should be selected just after the selection of wet key plots. Separate random can be used for the selection of reserve plots. The random number below this should be used for the selection of dry key plots.

Order of Random numbers for Selection of Key plots
1. Wet Key plots
2. Wet Reserve Key plots
3. Dry Key plots
4. Dry Reserve Key plots



R

R+I

R+2 I

R+3 I, etc.

R + (n – 1) I will be the key plots selected. If any of these exceeds N, N will be subtracted from it to get a serial number of survey sub division number to be selected.

Example: Let N = 86 and n = 7

Then interval

$I = 86/7 = 12.14 = 12$ ,

(If the Interval has a decimal part and the first digit in the decimal part with below 5 is rounded off and the same number is taken and if it is 5 or more, the next number is selected.)

Let the random start be 60. The serial numbers of the seven key plots will be

1. 60 (random start = 60<sup>th</sup>)
2.  $60 + 12 \times 1 = 72^{\text{th}}$
3.  $60 + 12 \times 2 = 84^{\text{th}}$
4.  $60 + 12 \times 3 = 96$  i.e.,  $(96-86 = 10^{\text{th}})$
5.  $10 + 12 = 22^{\text{nd}}$
6.  $10 + 12 \times 2 = 34^{\text{th}}$
7.  $10 + 12 \times 3 = 46^{\text{th}}$

These plots will be the key plots for forming clusters.

**EXAMPLE**

1.Key plot selection in case of zone having only one Panchayat is shown below.

Total zone area	:	431423 Cent
Total Area of Wet land	:	10780 Cent
Total Area of Dry land	:	420643 Cent
No. of Wet Plots	:	305
No. of Dry Plots	:	10941
No. of Wet Clusters	:	$\frac{10780 \times 100}{431423} = 2.49 \approx 2$

No. of Dry Plots :  $100 - 2 = 98$

Class Interval (Wet) :  $\frac{305}{2} = 152.5 \approx 153$

Class Interval (Dry) :  $\frac{10941}{98} = 111.6 \approx 112$

Suppose wet Random start be 3032

Sl No	Order of selection	Survey No.	Area (Cent)	Desam/ Village	Remarks
1	303	111/5	10	Village X	
2	(458-305) =153	58/3	21	Village Y	

Plots for substitution: Random :2896

Dry RandomStart: 02425

Sl No	Order of selection	Survey No.	Area (Cent)	Desam/ Village	Remark
1	2425	121/4	10	Village X	
2	2537	129/9	21	Village X	
3	2649	141/2	1	Village X	
4	.....	.....	.....	.....	
...	.....	.....	.....	.....	
78	(11049-10941) =108	9 / 4	15	Village Y	
79	220	20/10	10	Village Y	
.....	.....	.....	.....	Village Y	
98	2348	119/2	32	Village X	

Plots for substitution: 06381

2. Key plot selection of an investigator zone which consists of two panchayats namely Azhiyur and Onchiyam.

Total zone area	= 469412cent	
Area of Azhiyur Panchayat	= 241673 cent	
Area of Onchiyam Panchayat:	= 227739cent	
No. of clusters allocated to Azhiyur	= $\frac{241673}{469412} \times 100$	= 51.48 $\approx$ 51
No. of clusters allocated to Onchiyam	= $\frac{227739}{469412} \times 100$	$\approx$ 49 or (100-51)

### Azhiyur

Wet Area:	= 61862 cent	
Dry Area:	= 179811 cent	
Total area of the Panchayat	= 241673 cent	
No. of wet clusters:	= $\frac{61862}{241673} \times 51$	= 13.05 $\approx$ 13
No. of dry clusters:	= 51-13 = 38	
No. of wet plots:	= 737	
No. of dry plots:	= 2249	
Class interval of wet plots	= $\frac{737}{13}$	= 56.69 $\approx$ 57
Class interval of Dry plots	= $\frac{2249}{38}$	= 59.18 $\approx$ 59

Now select 13 wet key plots and 38 Dry key plots as shown in the illustration above.

### Onchiyam

Wet Area:	= 61992 cent	
Dry Area:	= 165747 cent	
Total Area of the Panchayat	= 227739 cent	
No. of wet clusters:	= $\frac{61992}{227739} \times 49$	= 13.33 $\approx$ 13
No. of dry clusters:	= 49-13 = 36	
No. of wet plots:	= 747	
No. of dry plots:	= 1992	
Class interval of wet plots	= $\frac{747}{13}$	= 57.46 $\approx$ 57
Class interval of Dry plots	= $\frac{1992}{36}$	= 55.33 $\approx$ 55

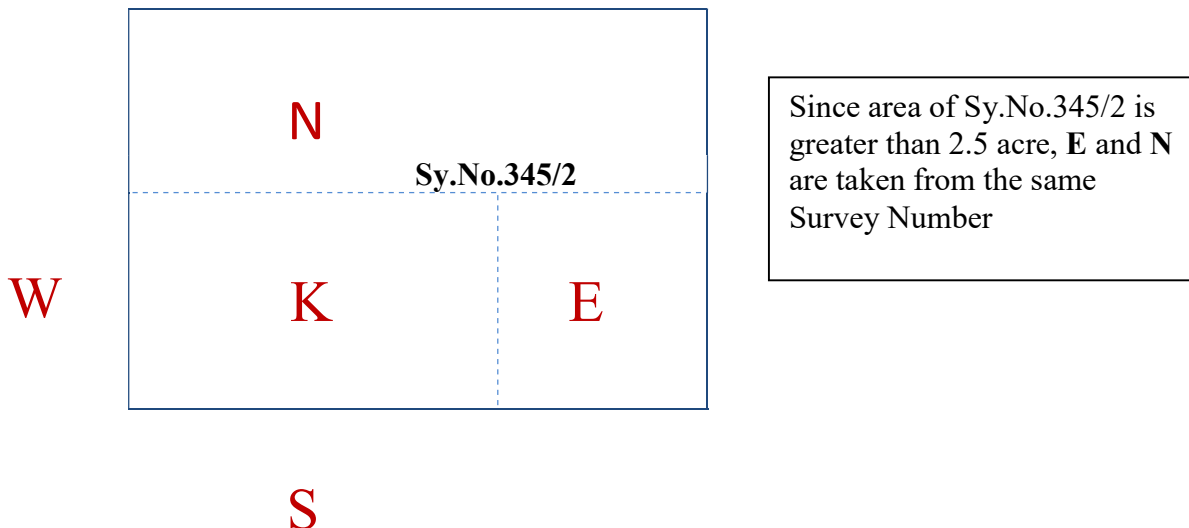
Now select 13 wet key plots and 36 Dry key plots and reserve plots as shown in the illustration above. Random numbers from the beginning of allotted random columns should be used for each panchayat.

## Cluster Formation

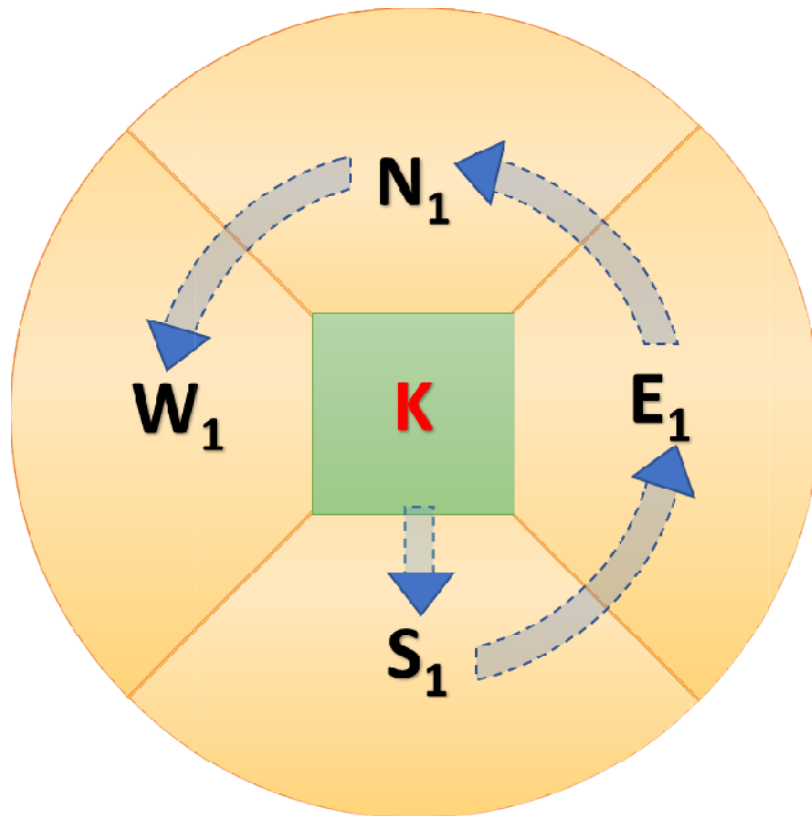
A cluster is formed generally by clubbing the neighbouring homogeneous Wet/Dry plots around the key plot. A cluster should have an average area of 1000 cents and the clubbing plots are to be grouped into five plots. The key plot may not be clubbed with other survey/sub division numbers. If the key plot is merged with another survey/sub division number and if it is not able to identify, that merged plot can be treated as the key plot. The remaining four plots should be of more or less equal area. A plot may be a group of survey/sub division numbers.

After identifying the key plot in the field, the investigator has to go through anti clock wise direction starting from the south-west point of the key plot and complete a circle. If the area of thus obtained plots is 1000 cents, the cluster formation is completed. If the required area is not obtained, consider concentric circles till the required area is available. The survey/subdivision numbers thus obtained is to be grouped into four plots having more or less equal area as far as possible. Thus a cluster can be formed with five plots and average area 1000 cents. Area of a cluster may not be less than 500 cents. If the area is in between 500 cents and 750 cents, it can be taken as a cluster only with the consent of the Taluk Statistical Officer. The order of plots in the Form I should be K,S,E,N,W. Key plot should be at the beginning in all situations.

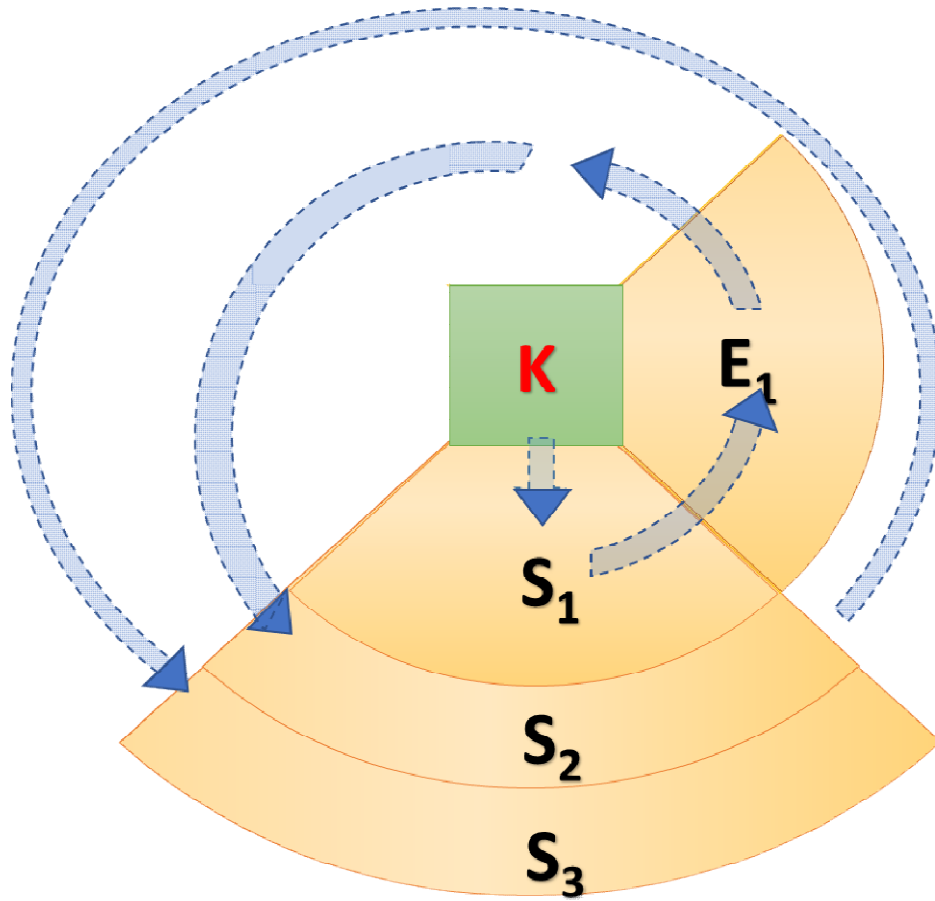
When the area of the key plot is greater than 250 cents, the portion from the south-west of the key plot with an area 200 to 250 cents having a natural or man made boundary can be taken as key plot and the remaining portion at the right and top can be included in the East and North plots.



Recording of plots in the Form I in different situations is illustrated below.

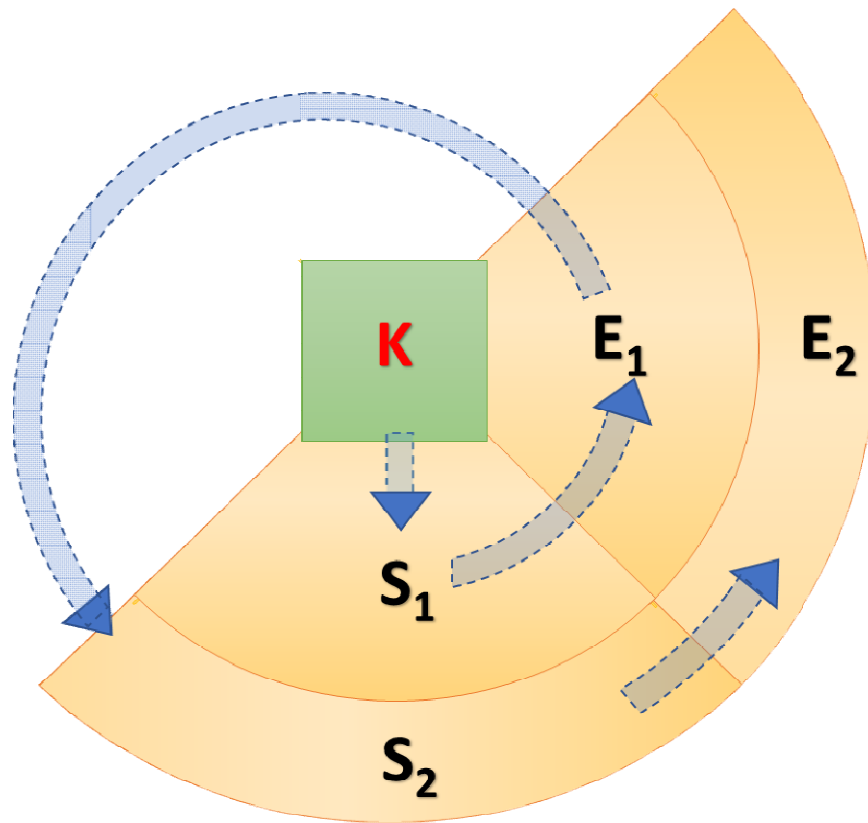


Form 1-**K**, $S_1$ , $E_1$ , $N_1$ , $W_1$   
 CCE -**K**, $S_1$ , $E_1$ , $N_1$ , $W_1$



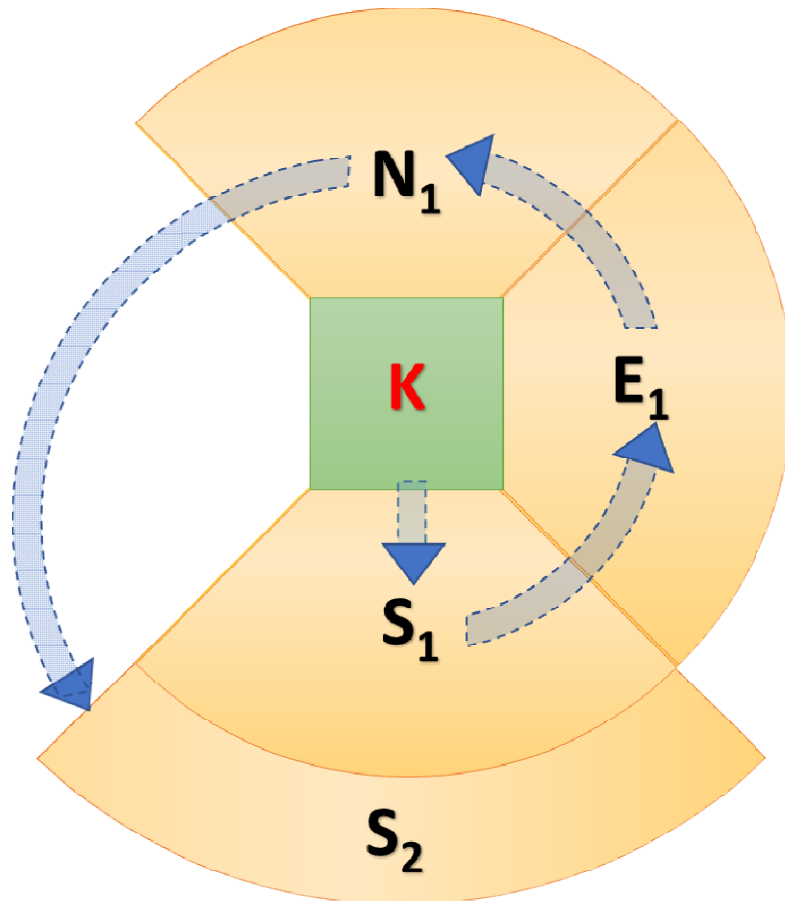
Form 1- $K, S_1, E_1, S_2, S_3$   
 CCE  $-K, S_1, E_1, S_2, S_3$



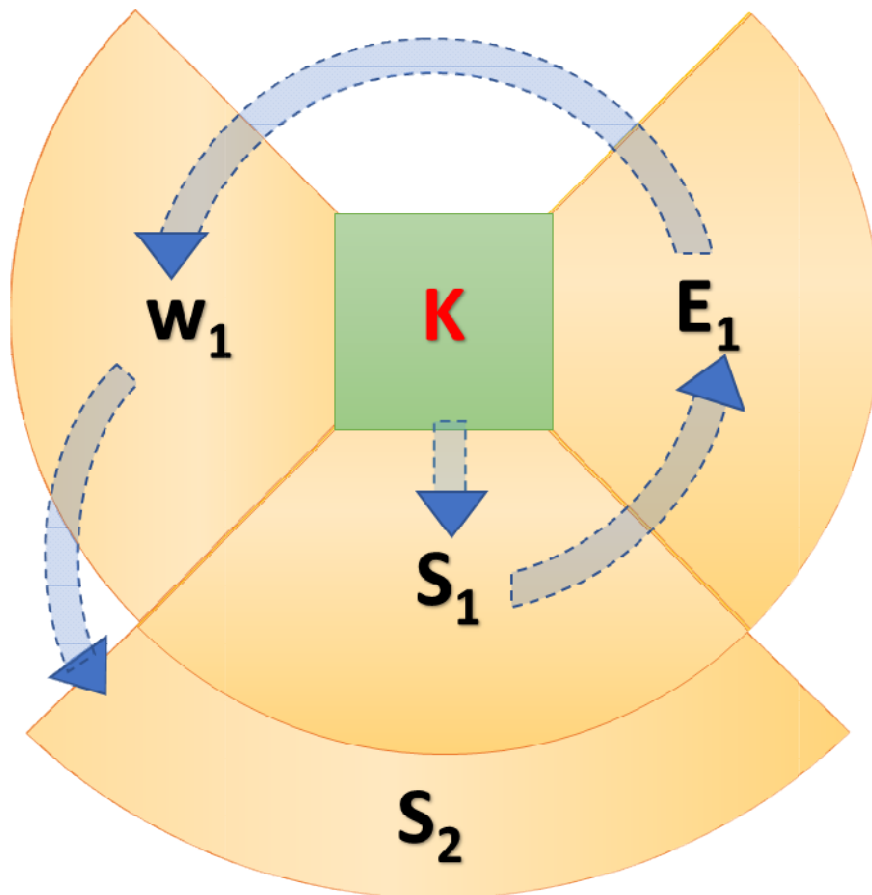


Form 1-**K**,**S<sub>1</sub>**,**E<sub>1</sub>**,**S<sub>2</sub>**,**E<sub>2</sub>**

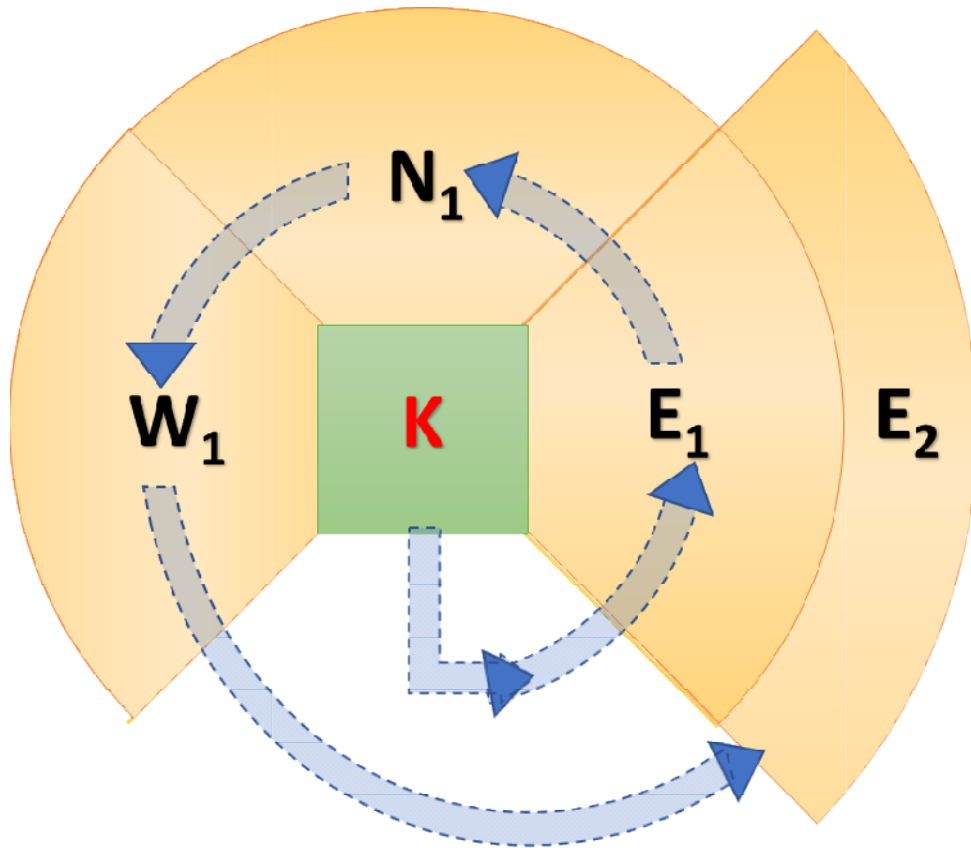
CCE -**K**,**S<sub>1</sub>**,**E<sub>1</sub>**,**S<sub>2</sub>**,**E<sub>2</sub>**



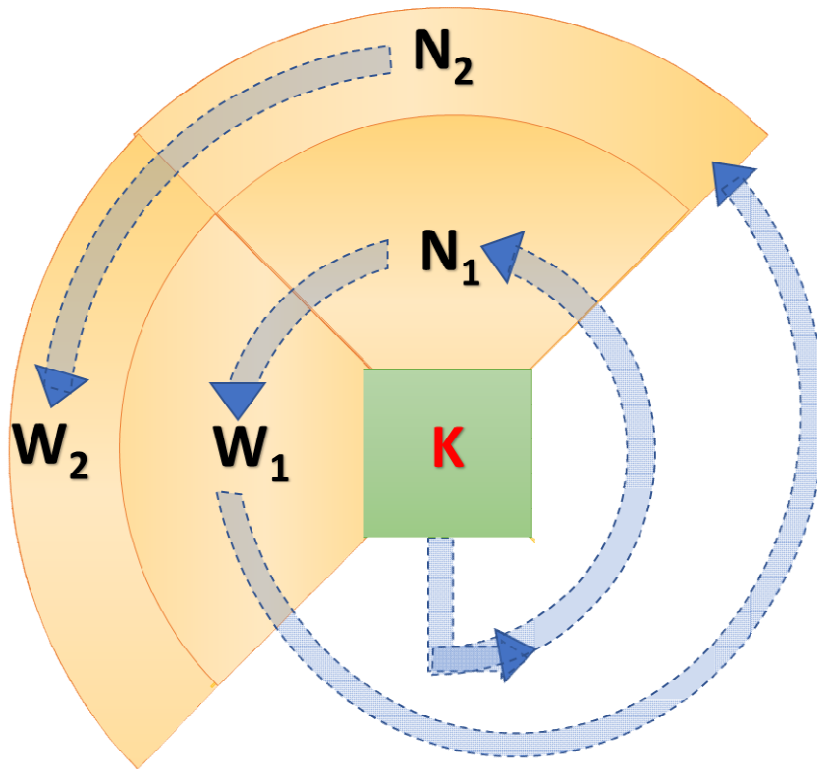
Form 1-**K**,**S<sub>1</sub>**,**E<sub>1</sub>**,**N<sub>1</sub>**,**S<sub>2</sub>**  
 CCE -**K**,**S<sub>1</sub>**,**E<sub>1</sub>**,**N<sub>1</sub>**,**S<sub>2</sub>**



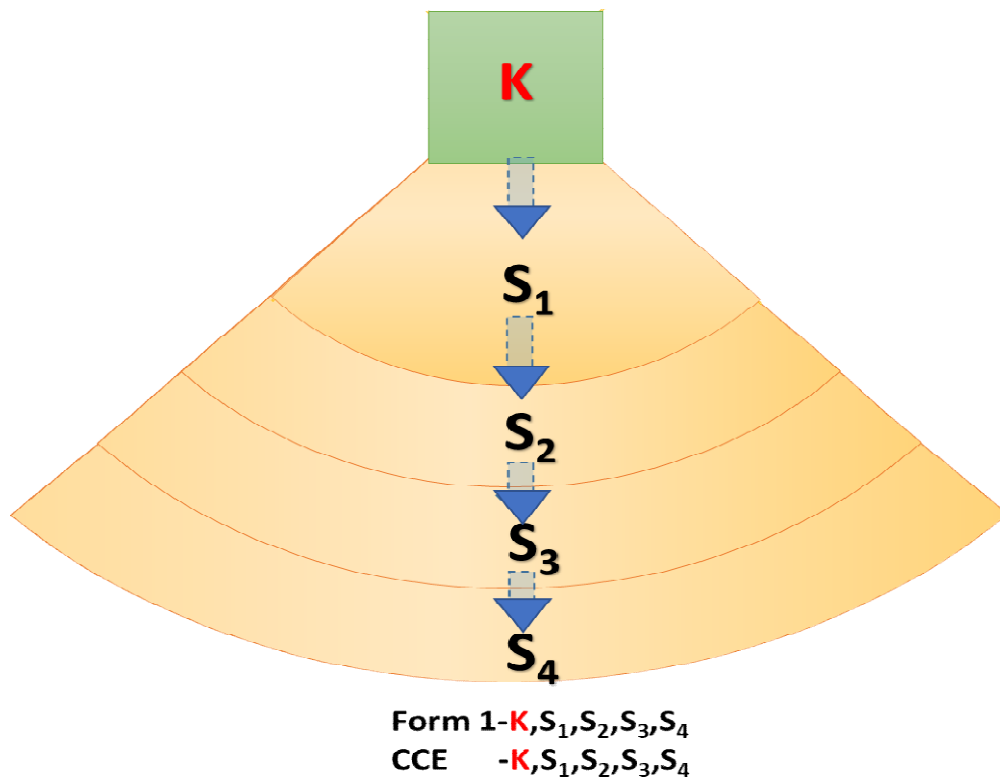
Form 1- $K, S_1, E_1, W_1, S_2$   
 CCE  $-K, S_1, E_1, W_1, S_2$



Form 1- $K, E_1, N_1, W_1, E_2$   
 CCE  $-K, E_1, N_1, W_1, E_2$



Form 1- $K, N_1, W_1, N_2, W_2$   
 CCE  $-K, N_1, W_1, N_2, W_2$



Note: -

1. While forming clusters, care should be taken to ensure that whole cluster to lie within the boundary of concerned local body.
3. The enumerated details may be clubbed together for recording it in 5 columns. In such cases the clubbed survey numbers of plots should be recorded against each column.
4. In case more than 5 plots are to be selected for achieving the 10 acres, the details of such survey numbers are to be amalgamated as five plots and recorded in the Form I Diary.
5. A rough sketch of cluster formation should be drawn at the left page of the Form I diary if the cluster is not formed in the normal way. Rough sketch of cluster having fallow area is needed in the Form-I and the fallow area must be marked separately.



## Concepts and Definitions

1. **Agricultural year** – Agricultural year is defined as the period of 12 months from 1<sup>st</sup> July to 30<sup>th</sup> June. The EARAS survey is conducted based on the Agricultural year.
2. **Season** – Agricultural year is divided into three non-overlapping seasons of four months duration each.

They are: -

- a) Autumn – (Early Kharif)- July to October
- b) Winter – (Late Kharif) - November to February
- c) Summer – (Rabi) - March to June

3. **Seasonal crops** – Crops which are harvested during the period of four months in the season are defined as the seasonal crops of the respective season. Thus paddy, pulses, tapioca, vegetables etc., which are harvested during different periods of the year will be classified as Autumn paddy, Autumn pulses, etc. according to the period of harvest. The seasonal crops for which the major period of harvest in that village falls within July to October will be autumn crops, November to February - winter crops and March to June - Summer crops.
4. **Annual crops** – Banana, plantain, sugarcane, pineapple and betel leaves are to be considered as annual crops.
5. **Perennial crops** – Crops which are standing for more than one year will be treated as perennial crops. Most of the perennial crops are tree crops. In the case of sugarcane cultivated in Devikulam taluk even though the period exceeds 12 months it will be treated as annual crops and not as perennial.
6. **Bearing trees** – In the case of crops, which are to be recorded as bearing is defined as those, which have flowered at least once.
7. **Plot** – A plot is defined as a patch or piece of land, which has separate survey sub-division number in the basic tax register.
8. **Unit of observation** – A unit of observation is defined as the area identified separately for area enumeration. It shall be a plot or a group of plots or the land in possession of one cultivator.
9. **Investigator zone** – The area allotted for field work to one Investigator will be treated as an Investigator zone. It shall be one or more Panchayats or in rare cases part of a Panchayat.

**Irrigation** –Irrigation is defined as the process of letting water inside the plot, for the benefit of the crops grown which involves some artificial, either mechanical or manual effort. Thus rain-fed areas will not be considered as irrigation. Letting of water out of the field from water logged areas like Kuttanad to facilitate cultivation will not be treated as irrigation for the purpose of the survey. If the irrigation to a particular crop is benefited for other crops, that crops should also be considered as irrigated. In the case of Seasonal and annual crops like banana, Tapioca etc., if the crop was cultivated in the previous year and the crop was irrigated during the planting period and that crop is harvested in the current year, the crop should be considered as irrigated even though there is no irrigation during the current year

**Source of irrigation – Code 1 and 2** – Canal irrigation. When a canal is given as a source it should be an artificially built one for conveying water from a river, lake or reservoir. If the canal is owned by ‘Government’ it is Government canal (Code 1) and if it is owned by private individuals, it is private canal (Code 2).

**Code 3 and 4:** If the source of water is from tank, it is termed as tank irrigation. Irrigation from tanks may be through small canals (field bothies) or pump sets or other means. Water obtained from tanks through small canals (field bothies) will be considered as tank irrigation and not as

canal irrigation. But if the source of water in the tank itself is from 'canal' then the source will be canal irrigation and not tank irrigation. Tank will be classified under Government tank if it is owned by Government or public bodies (Code 3) and private tank if owned by private individuals (Code 4).

Codes 5 and 6: wells: If the water obtained for irrigation is from wells either through pump sets or lifting by other means, it is termed as well irrigation. It is again classified into Government (Code-5) or Private (Code-6) according to ownership.

Code 7: If the water obtained for irrigation is from Tube wells / Bore wells this code may be used.

Code 8: Other minor and lift irrigation schemes. This will include Government minor irrigation schemes such as lift irrigation/diversion channels, deepening of thodu, construction of crossbars, etc.

Code 9: By pumps from rivers, lakes, rivulets and spring etc.

Code 10: By country wheels from rivers, lakes, rivulets and spring etc.

Code 11: By other means from rivers, lakes, rivulets and spring etc.

Code 12: Others.

Code 13: No irrigation

10. **Irrigated area (Net)** – Irrigated area is defined as the area, which receives irrigation at least once during the agricultural year for all crops during the life span of all crops.
11. **Area under irrigation crops** – The area under a crop will be treated as irrigated if irrigation facilities are available and used for cultivating the crop.
12. **Building and courtyard** – The area exclusively used for building and courtyard will come under this category.
13. **Other non-agricultural uses** – This stand for all land occupied by roads/railways/tanks (below 10 cents) or canals and other lands put to other than agricultural use.
14. **Barren and uncultivable land**– This covers all barren and uncultivable lands like mountains, deserts, etc. Land which cannot be brought under cultivation unless at a high cost shall be classified as uncultivable, whether such a land is in isolated blocks or within cultivated holdings.
15. **Miscellaneous tree crops and groves not included in the net area sown**– Area occupied by casuarina trees, thatching grass, bamboo bushes and other groves for fuel etc. will come under this category. It may be noted that the above trees and groves do not come under the category of crops and hence they are not included under net area sown.
16. **Permanent pastures and other grazing lands** – These cover all grazing lands, whether they are permanent pastures and meadows or not.
17. **Cultivable waste** – These include lands available for cultivation but not taken up for cultivation or abandoned after a few years for one season or the other. Such lands may be either fallow or covered with shrubs and jungles, which are not put to any use. They may be assessed or unassessed and may lie in isolated blocks or within cultivated holdings. Lands once cultivated but remaining uncultivated for five years or more in succession shall also be included in this category.
18. **Current fallow**– This class comprises cropped areas, which are kept fallow during the current year. **If any seedling area is not cropped again in the same year it may be treated as current fallow.**
19. **Other fallow** – All lands, which were taken up for cultivation but are temporarily out of cultivation for a period of not less than one year and not more than five years are included under this category. The reasons for keeping such lands as fallow may be one of the following.

- a. Poverty of cultivators
- b. Inadequate supply of water
- c. Malarial climate
- d. Silting of canals and rivers and Un-remunerative nature of farming

**Similarly, the land growing nurseries such as paddy, rubber, garden plants, orchids are enumerated under this category.**

## **20. Area Under Social forestry**

The land under “Social forestry is the land on which the trees are planted by the side of railway lines, road sides and river and canal banks with a view to meeting the fuel and the fodder needs of the rural population and to serve the broader goals of soil conservation and of provision of shed and shelter for crops. It also includes village forests/Plantations which are being used by common man.

## **21. Waterlogged area**

Waterlogged land is the land where water is at/or near the surface and stands for most part of the year. It is generally found in low-lying areas and it excludes lakes, ponds and tanks. No cultivation either in the past or near future is possible in these places in the normal circumstances.

## **22. Still Water land (Water bodies)**

The land under Still water is broadly the land occupied by water bodies like river, lakes, ponds, reservoirs, backwater, canals, tanks including nature made deeps in which water stands still for most part of the period. This is the land on which there is no vegetative growth of any kind.

## **23. Marshy land**

Marsh land which gets permanently or periodically inundated by water and characterized by vegetation which includes grass and weeds.

## **24. Net area sown**

In calculating the net area sown, area sown more than once will be counted only once. Area cultivated during any part of the agricultural year should come under net area sown. Hence the net area sown will not exceed the geographical area.

## **25. Gross area-**

According to this concept the area under various crops in the same plot can be more than the existing area. A single crop should not exceed the geographical area.

For eg. Consider a plot having 50 cents with the following crops

Banana - 400Nos, Pineapple-1000 Nos, Tubers-10cents, Tapioca-5 cents.

Converting the crops given in numbers into area (adopted the standard number of plants/trees per acre). Area under banana will be 50 cents (800 per acre) and pineapple 20cents (5000 per acre) so the gross cropped area will be  $50+20+10+5=85$ cents and net area will be 50 cents.

### **3. Methodology of Field Work**

Separate enumeration is to be done in wet and dry lands. For recording the enumerated details Form I Diary will be issued to all field staff.

1. After selecting the key plots, the investigator may, if required, gather the addresses of the key plots owners from the village offices. This will help the investigator to verify the correctness of the plot identified by him using the litho map. The name and address of the key plot owner may be noted in the Form I diary. If the plot belongs to more than one cultivator, the name of any one cultivator may be noted.
2. Name of the Panchayat with ward number also may be noted against each cluster in the Form I diary.
3. If the cluster is formed with more than 5 Survey numbers/Sub divisions, note the details of all the survey /subdivision numbers as 5 plots in the Form I diary.
4. In Form I diary, the details to be included in NUC for wet clusters are as Follows.

Building & Courtyard, Non agriculture use, Barren & uncultivable land, Miscellaneous tree crops, Pastures and grazing land, Social Forestry, Still water, Water logged area and Marshy land.

#### **Wet Land Enumeration**

All selected wet land clusters of the Investigator zone should be visited in all the three seasons ( Autumn, Winter & Summer) during an agricultural year.

During the summer visit, the data on land utilization, area of perennial crops, Annual crops, irrigation details etc.should be collected along with the details of seasonal crops. The details of seasonal crops, vegetables and Horticrops cultivated in that particular season will be recorded in the Form I Diary during each visit. The field work in each season of wet land clusters will be completed as per the time schedules given here under.

<b>Season</b>	<b>Date of completion of field work</b>	<b>Date of receipt of zone/block abstract at the District Office</b>
Autumn	31 <sup>st</sup> August	10 <sup>th</sup> September
Winter	30 <sup>th</sup> November	10 <sup>th</sup> December
Summer	31 <sup>st</sup> March	10 <sup>th</sup> April

#### **Dry land enumeration**

Two visits will be made in the dry land clusters in an agricultural year for collecting data.

- 1) In dry land, during the first visit (July-December), the details of seasonal crops of both Autumn and Winter seasons are to be collected.
- 2) The visit to dry lands will be closely followed by the first visit of wet lands.
- 3) In the second visit (January-June) the data on land utilisation, perennial crops, annual crops and irrigation data will be collected. Data on seasonal crops of summer season will also to be collected during second visit.
- 4) Additional information regarding the whole area of plantation crops also to be furnished in the IIIA/IIIB schedules separately to the Directorate in time. Banana, Sugar cane and seasonal crops which are harvested in next year are recorded with letter 'C'.

The data on seasonal crops collected from both wet and dry lands for all the visits prescribed will relate to all crops harvested/will be harvested in the agricultural year in the corresponding seasons and entries will be made against the appropriate season in the spaces provided in the schedules. The standing crops, which will be harvested only in the next year, will be entered against the column for summer indicating the fact by marking the area with the letter 'C'

Work Allocation statement of the Investigator zone should be prepared during the beginning of each Agricultural Year. Basic Tax Register (BTR) should be updated before preparing the Work Allocation Statement.

### **AREA ENUMERATION**

There are five forms for collection and compilation of data on area enumeration. They are –

1. Form I – Field diary of the Investigator
2. Form II – Land utilization and irrigation
3. Form III A – Area under seasonal crops
4. Form III B – Area under annual and perennial crops
5. Form IV – Seasonal Crop abstract report.

Details of the field work like method of filling up of the schedules, source of data and the time schedule to be followed are given below:

#### ***Form I – Field diary of the Investigator***

This is the basic record for collection of data under area enumeration. (The details required in the remaining forms will have to be copied from this record). This will be supplied as registers containing 400 pages. Four pages are intended for one cluster.

The following points should be strictly adhered to, while filling up this form.

- a) The entries should be made in ink preferably with a ball point pen. This form may be filled after the completion of field work in each cluster. In any case the details of enumeration must be recorded at the end of each day's field work.
- b) The entries should be neat and legible. The register is to be kept as a record and therefore should be handled carefully.
- c) All Inspecting Officers should verify the entries made in this form during their regular inspections.
- d) The names of Taluk/Block/Corporation/Municipality, investigator zone number/ Panchayat(s), the type of land (wet/dry), date of visit should be entered at first.
- e) When an Investigator is relieved from fieldwork in a zone, the Taluk Statistical Officer should ensure that the up-to-date Form I diary is obtained from the Investigator before his relief. The periods during which each Investigator made entries in the diary should be noted on the last page of each cluster.

- f) Area of seasonal crops is to be enumerated in cents. If the crop area is below 1 cent, area should be entered in two decimal places.

Separate Form I diary need not be filled in for wet and dry clusters. The various items on which data are to be collected in Form I diary are discussed below.

Introduction Page - Items are self - explanatory.

### **Block A-Land Utilisation**

The survey sub division number of the unit as identified by the investigator should be entered here. It must be a survey sub division number as in the litho map or as in the basic tax register. In the case of amalgamated plots all the survey numbers comprising the unit of identification should be entered. Enumerated area of the survey/sub division numbers are entered in the corresponding columns

Other details in this block for recording the classification of area will be filled in only during the last visit. ie. 13-way classification of the land should be enumerated only in the summer season for wet land and second visit of dry land.

The area brought under cultivation in any one season of the year, irrespective of the fact whether the area (whole or part) has been converted into NUC or NUC subsequently converted to cropped land, should be treated as area under cultivation for the agricultural year.

The area of the plot entered should be corrected to the nearest cent. The area as per the basic tax register should be entered here. In the case of key and side plots plots with more than 2.5 acres, the actual area enumerated should be entered. At the time of identification, if it is found that there is a change in area due to sea-erosion or change in actual possession the actual change in the area should also be noted in brackets with a (+) or (-) symbol.

### **Block B - Area under seasonal crops**

This block is meant for recording the area under seasonal crops which are harvested in each plot during each season. During each visit the investigator records the details of crops harvested or will be harvested during that season under the corresponding columns. The name of the crop and the area under the crop (split into irrigated and unirrigated) should be entered in the respective columns.

**(Wherever columns are not provided to record separately the area irrigated under a crop, the area may be circled to indicate the fact that it is irrigated.)**

The area under seasonal crops of other seasons and area under annual or perennial crops should be recorded as "COS" (crops for other season) for the wet clusters. When there is a standing seasonal crop in a particular season of the visit of the investigator, which will be harvested only during the next season or the season subsequent to the next season such area of the standing crops to be noted in the column of the respective seasons against the name of the crops in Form I diary and the corresponding area will also be recorded as "COS" under the column of the same (season) visit. Area under a crop is enumerated in summer season and the crop will be harvested in the next agricultural year, then "C" should be given with the crop.



## Appendix-II

In the case of paddy, the variety of seed, whether high yielding or local should be noted with symbols (HY) for high yielding varieties and (L) for local varieties. The high yielding varieties usually cultivated in the state are as follows.

- |              |                     |                  |
|--------------|---------------------|------------------|
| 1. Aathira   | 21. Jaiva           | 48. Ranjini      |
| 2. Ahalya    | 22. Jayanthi        | 49. Remanika     |
| 3. Aiswariya | 23. Jyothi          | 50. Remya        |
| 4. Akshaya   | 24. Jyotsna         | 51. Reshmi       |
| 5. Amritha   | 25. Kairali         | 52. Revathy      |
| 6. Anashwara | 26. Kanakam         | 53. Sabari       |
| 7. Arathy    | 27. Kanchana        | 54. Sagara       |
| 8. Aruna     | 28. Karthika        | 55. Samyuktha    |
| 9. Asha      | 29. Karishma        | 56. Shreyas      |
| 10. Bhadra   | 30. Karuna          | 57. Supriya      |
| 11. Bhagya   | 31. Krishnanjana    | 58. Suvarnamodan |
| 12. Bharathy | 32. Kumbham         | 59. Swarnaprabha |
| 13. Deepthi  | 33. Lakshmi         | 60. Thulam       |
| 14. Dhanya   | 34. Makaram         | 61. Uma          |
| 15. Ezhome-1 | 35. Makom           | 62. Vyttila-3    |
| 16. Ezhome-2 | 36. Mangala Mashuri | 63. Vyttila-4    |
| 17. Ezhome-3 | 37. Matta Triveni,  | 64. Vyttila-5    |
| 18. Ezhome-4 | 38. Manurpriya      | 65. Vyttila-6    |
| 19. Harsha   | 39. Manurathna      | 66. Vyttila-7    |
| 20. Hraswa   | 40. Neeraja         | 67. Vyttila-8    |
|              | 41. Nila            | 68. Vaisakh      |
|              | 42. Onam            | 69. VTL 9        |
|              | 43. Panchami        | 70. VTL 10       |
|              | 44. Pavithra        |                  |
|              | 45. Pavizham        |                  |
|              | 46. Pournami        |                  |
|              | 47. Prathyasha      |                  |

***(The list shown above is not exhaustive)***

In case a paddy neither local nor listed as HYV will be treated as other improved variety and will be included in the HYV with remarks.

During the first visit it may happen that some of the standing crops in the field will be harvested during the Autumn season (July-October) itself while some others will be harvested only during winter season (November – February). The area under these crops which will be harvested during July-October will be entered under Autumn, those harvested during November-February under winter while those harvested during the rest of the year under summer. In the case of standing crops which will be harvested only after the agricultural year the area may be given under summer season along with the letter ‘C’ to indicate that the harvest will take place only in the subsequent agricultural year.

During the subsequent visits, the Investigator has to enumerate the details of those seasonal and annual crops, Horticulture and vegetables which were not covered in the previous visit(s). Since the interval between two visits in a plot is about three to four months it is likely that some of the short duration crops like pulses are missed by the investigator at the time of his visit. Therefore, it is suggested that during each visit the details may be collected by observation as well as by enquiry wherever possible. Also seasonal green manure crops may also be enumerated under the respective seasons. In fact, it is necessary to record details by enquiry method in the case of harvested crops.

During the first visit in a wet cluster, the Investigator may come across the following situations in the case of seasonal crops.

1. There were crops in the field, which were harvested during the same season prior to his visit, and there is no crop at present. This may happen rarely in the case of autumn paddy, ragi first crop, sweet potato first crop, pulses first crop, tapioca, tubers etc.
2. There is standing crop which will be harvested during the season. (All the crops mentioned above)
3. There is standing crop, which will be harvested only during the next season or the season subsequent to the next season (ginger, turmeric, cotton and tapioca)
4. There is no seasonal crop at the time of visit and no crop was harvested during the season.

The area under the 1<sup>st</sup> and 2<sup>nd</sup> categories will be entered under the same season in which he visits the plot with the name of the crop. In the case of 3<sup>rd</sup> category the instruction to record COS will be followed

The area under 4<sup>th</sup> category need not be accounted in the case of dry land during the first visit. But in the case of wet land the area under the 4<sup>th</sup> category will be entered under the season of visit against any of the following classifications:

1. Not under cultivation (including non-agricultural uses)
2. Fallow For the Season (FFS).

The wet land plots are visited thrice during the year to record the details of crops grown and harvested during each season. If there is no crop in the plot or its portion, such areas are to be entered against the appropriate classification shown above in Block B of Form I during the respective season. It may, sometimes, happen that in a plot, the same patch (or different patches with approximately equal in area) is left uncultivated during the different seasons.

In order to identify the portions left as fallow during each season, it is instructed to draw a rough sketch of the plot on the top of Form I itself and mark the portion left as fallow during each season at the time of each visit.

When a wet land plot in a particular season is used for fish farming only the area of that part of the plot will then be treated as fallow for the season (FFS) and that area is to be recorded as FFS in the Form 1 Diary during that season, giving suitable remarks within brackets.

In the case of tapioca, it is possible that the crops during a particular year will be harvested only during the next year and as such along with the name of crop, the letters A, B and C may also be used to identify the period of sowing also. These letters indicate the following:

- A. Sown during the previous year and harvested during this year.
- B. Sown and harvested during the same year
- C. Sown during this year and will be harvested during the next year.

During the subsequent visits, care should be taken:

- (1) To record the seasonal crops which were raised and harvested during the previous season, if the same has been missed; and
- (2) To avoid duplication of the entries regarding crops which will be harvested during the next season entered in the previous visit.

During the second time the Investigator will be visiting the plots along with the details entered in the field diary during the first visit. If the crops which will be harvested during the second season have already been noted in the diary, the corresponding entries are to be ticked to indicate that these details were noted during the previous visit. He will then record the details

of other crops, if any cultivation is in the plot after his first visit. The same procedure is to be followed during the third visit.

In the case of tapioca, since the harvest is spread over all the 12 months of the year, only the area under the plants, which will be harvested during each season, need to be entered under the respective seasons.

Recording Crops on Bunds – According to the present practice, area of bunds is included under cropped areas. The number of trees grown on bunds is to be recorded, but the entire area will be assigned to the crop raised in the plot. Even if seasonal crops are raised on the bunds this procedure will be followed.

### **Block C-Annual Crops**

Sugarcane, banana, plantain, pineapple and betel leaves are treated as annual crops, since the period extended to two or more seasons. For these five crops the area (number in the case of plantain) under the standing crops at the time of the first visit and area already harvested during the year will have to be entered under this block. This is to avoid duplication of entries in successive visits since these crops will be harvested only once in a year, from the same plot.

Columns under sugarcane, banana and plantain are divided into two each with letter A for the first and letter C for the second. For sugarcane and banana, under A, area harvested or will be harvested during the current year will be recorded and the area that will be harvested during the next year will be noted under C.

In the case of plantain, the number of plants harvested during the year is to be entered under A and the number of pits is to be entered under C. The young plants in the pits of harvested plantains also should be counted as one under C. For banana, sugarcane and betel leaves the area irrigated and unirrigated may be given separately in the respective columns. For pineapple and banana, the area under the plants corrected to the nearest cent should be noted. If there are only a few plants, the area under which is less than half a cent then area should be reported as two decimal places.

### **Block D– Perennial crops**

This block to be filled in only during the last visit to the plot.

Block D is for recording the number/area of perennial trees grown in the plot. List of these crops are given in Appendix. The classification of the trees/standards to bearing and young is to be entered in the case of coconut, arecanut, cashew, pepper, jack, mango, tamarind, nutmeg, cocoa, papaya and drumstick. In the case of coconut, arecanut, columns are provided to record details of irrigation. The names of all important crops have been printed in Block D. Whenever a perennial crop other than those listed in Form I, is cultivated over substantial areas it may be separately enumerated in a column left blank in Block 'D'. In the case of the following crops viz. Tea, coffee, rubber, cardamom, lemongrass, green manure crops, fodder grass and other trees only the area need be entered. The average stands per cent given below may be adopted for recording area in the case of stray plants; rubber 2, tea 30, coffee 6, cardamom 7. In the case of Block B, C and D where the area of the number of trees is to be given, the gross area concept is to be followed. So it may not be necessary that the total area recorded will be equal to the geographical area, it may be greater than geographical area.

In block B, C and D, wherever columns are not provided to record area irrigated under a crop separately, the area may be circled to indicate the fact that it is irrigated.

### **Block E – Irrigation**

In this block columns have been provided for noting (1) the source of irrigation (2) the number of units (this column is applicable only in respect of tanks and wells) (3) the net area irrigated and (4) the gross area irrigated. The source of irrigation will be entered using appropriate codes (serial number of the various sources listed below).

In a plot if there is an irrigation source, which is not for irrigation purposes in that plot, then that source should not be accounted. Only artificial canals can be treated as irrigation canal. The source like tube well and bore well will be accounted separately.

#### **The different sources of irrigation: -**

1. Government canals
2. Private canals
3. Government tanks
4. Private tanks
5. Government wells
6. Private wells
7. Tube well
8. Other minor and lift irrigation schemes
9. By pumps from rivers, lakes, rivulets, etc.
10. By country wheels from rivers, lakes, rivulets and springs
11. By other means from rivers, lakes, rivulets and springs
12. Others
13. No irrigation

In case the source of irrigation is tanks or wells (ie. Codes 3, 4, 5, 6 & 7) the number of wells or tanks situated in the plot and availed for irrigation purpose should be entered. This information is required for estimating the number of tanks and wells used for irrigation purposes. Care may be taken to see that early or late irrigation is not missed in enumeration. **Dewatering is not considered as irrigation.**

Banana, Sugarcane and seasonal crops irrigated in previous year will be recorded as irrigated crops.(ie. to identify whether the harvested crops have got irrigation in any time after sowing).

### **Form II – Land utilization and irrigation**

Totals of each cluster as given in the last column of Form I need to be copied into this register, separately for dry and wet lands; the entries of wet land preceding that of dry land. Though we are not taking villages into consideration care should be taken to enter the totals of all clusters of a particular Panchayat on continuous order especially when an investigator zone covers more than one Panchayat.

There are 32 columns in this form. Column no. 5 to 17 relates to land utilization and the rest relates to irrigation. As such the required entries are to be copied from blocks A and E of Form I. The entries are to be totaled for each Panchayat, Investigator zone and for each Block. Further the sum of column 5 to 17 should be equal to the total area of each cluster as entered in Form I. This will tally with the zone totals and block totals as well.

### **Form III A – Seasonal crops**

The details required for this form are to be copied from Block B of Form I. The details are to be entered for wet and dry clusters separately soon after the visits to the plots during each season. Thus there will be two sets of Form III A for each season; one for the clusters classified as wet in the basic tax register and the other for clusters classified as dry where seasonal crops are grown. Appropriate noting to be given in the printed word wet/dry on top right hand corner of the form may be made to make it clear whether the form relates to either wet or dry clusters. One line is to be used for entries in respect of each cluster as entered in the last column of Form I. Separate sets of forms should be used for each panchayat and Investigator zone. All seasonal crops grown in dry land clusters will be entered in Form III A (dry). Thus in Form IIIA all wet land clusters will come under III A (wet) and those of dry land clusters growing at least one seasonal crop will come under III A (dry). Separate sheets for Autumn, Winter and Summer are provided for recording the details of crops harvested or will be harvested during each season.

Columns 4 to 65 – These columns relate to the area under crops harvested or will be harvested during each season as available in Block B of Form I. The area of each crop should be entered in appropriate column, if there is no entry in any column it may be left blank.

In the case of paddy, details are to be given separately for high yielding and local varieties as well as for irrigated and unirrigated areas. The names of seasonal crops cultivated in each cluster during the season should be entered in these columns. The headings of few columns are left blank. These columns may be used for entering additional crops, if any in the same category. In the case of wet land plots, record the details of area during the season, under the following classification in the last three columns (col. 66 to 68).

1. Not under cultivation
2. Fallow for the season
3. Crop for other season

### **Form III B – Area under annual and perennial crops**

This form is used to copy down the details of annual and perennial crops from Block C and D of Form I. The general instructions for filling up Form IIIA will be followed in the case of form III B also. In this case also the details are to be entered separately for wet and dry land clusters.

In Form III B (dry) all clusters of plots classified as dry in the basic tax register should be listed even if there were no annual or perennial crops. Annual and perennial crops grown in the wet lands may be entered in Form III B (wet). Thus all the dry land clusters will come under Form III B (dry) and those wet land clusters (growing annual and perennial crops) will come under Form III B (wet).

The columns in this form are discussed below:

*Columns 1 to 3* – The serial number, cluster number and area of the cluster are to be entered.

*Columns 4 to 69* – The number of trees/area of various perennial crops are to be copied from Form I.

*Columns 70 to 81* – These columns are meant for recording the details of annual crops.

Panchayat wise totals and block totals are also to be furnished and verified. Extract of panchayat and block totals are to be forwarded to the District Office in the prescribed form as per time schedule.

### **Form IV – Crop abstract report**

This form is meant for preparing and forwarding the abstract of the crop harvested during each season. Details for this form are to be copied from the totals of Form IIIA. This should be prepared by Statistical Inspector /Taluk Statistical Officer in duplicate. The abstract prepared from

IIIA (wet and dry) separately for each Panchayat /Block should be sent to the Deputy Director as per time schedule.

While sending Form IV, if there are large variations of area of crops compared to the previous year in any Panchayat, reason for the same may be reported after conducting necessary enquiry in the field so as to find out whether the variation is due to sampling or some other reasons.

#### 4. GENERAL CROP ESTIMATION SURVEYS (GCES)

One of the important objectives of GCES is to obtain reliable estimates of production and productivity of food and nonfood crops in the State, which are prominent in view of crop production. The estimates of yield rate thus arrived at are generally adopted for the purpose of planning, policy formulation and implementation, etc. The most important component of production statistics is yield rate. The yield estimates of crops are obtained through the analysis of data collected through the scientifically designed crop cutting experiments (CCE) under GCES.

Form V in respect of yield estimation surveys may be recorded by the Investigator promptly and kept ready for inspection. The district level officers should verify this record while they go to the field for inspection of crop cutting experiments.

Crop estimation surveys are to be conducted on the following major crops every year.

1. Paddy–Autumn, Winter and Summer	7. Cocoa
2. Tapioca	8. Banana
3. Coconut	9. Plantain
4. Arecanut	10. Sesamum
5. Cashew	11. Jack
6. Pepper	

The crop estimation surveys are also conducted on the selected minor crops for every year. The number of crop cutting experiments to be conducted in each Panchayat for paddy is 4 during each season and 3 each for coconut and Banana and 2 each for tapioca, arecanut, cashew, cocoa, pepper, plantain, sesamum and jack in an agricultural year. If an investigator zone consists of two panchayats or a panchayat consists of two investigator zones, total 8 Crop Cutting Experiments (4+4) should be conducted for paddy during each season. In municipal areas having separate investigator zones 4 crop-cutting experiments will be conducted in respect of paddy per season and for city corporation areas also 4 experiments will be conducted for paddy per season in an Investigator zone.

The number of crop cutting experiments in wet land or dry land is to be decided in proportion to the area of the concerned crop during the last agricultural year.

#### **Selection of plots**

The number of plots to be selected for crop estimation survey in each investigator zone is given in the following chart.

Procedure for selection of survey numbers for crop cutting experiments.

### Major Crops

Name of crop	Frame	Random column No.	No. of plots to be selected	No. of trees/area	Schedule	Weights to be rounded
1. Paddy A/W/S	Survey no. wise list of wet land paddy growing plots in each zone during the season	<b>1(A) 2(W) 3(S)</b>	Panchayat/Inv. zone - 4 Municipality-4 Corporation-4 (Investigator Zone)	One cut of 5 x 5 M <sup>2</sup> area in each plot	VI A	10 gm
2. Tapioca	List of wet land & dry land clusters	<b>4</b>	2 Plots	One cut of 2 x 2 M <sup>2</sup> area in each plot. If 2x2 M <sup>2</sup> area is not available take 1x4 M <sup>2</sup> or 4x1 M <sup>2</sup> area	VI B	50 Gm
3. Coconut	List of wet land & dry land clusters	<b>5</b>	3 Plots	5 bearing trees in each plot	VII A	(In Number)
4. Arecanut	List of wet land & dry land clusters	<b>6</b>	2 Plots	5 bearing trees in each plot	VII B	10gm (In Number & Weight)
5. Cashew	List of dry land clusters	<b>7</b>	2 Plots	5 bearing trees in each plot	VII C	10 gm (In Number & Weight)
6. Pepper	List of dry land clusters	<b>8</b>	2 Plots	5 bearing standards in each plot	VII D	10 gm (Weight with berries and without berries)
7. Banana	List of wet land & dry land clusters	<b>9</b>	3 Plots	3 plants from each plot	VIII A	50 gm (In Number & Weight).
8. Cocoa	List of wet land and dry land clusters	<b>10</b>	2 Plots	5 bearing trees from each plot	VII E	50 gm (In Number & Weight)
9. Plantain	List of wet land and dry land clusters	<b>11</b>	2 Plots	3 plants from each plot	VIII B	50 gm (In Number & Weight)

10.Sesamum	List of wet land plots	<b>12</b>	2 Plots	1 cut of 5x5 M <sup>2</sup> area in each plot	VIII C	10 gm
11. Jack	List of dry land clusters	<b>13</b>	2 Plots	2 bearing trees in each plot	VIII D	(In Number)
<b>Minor Crops</b>						
Garlic	List of dry land clusters	<b>2</b>	2 Plots	One cut of 2 x 2 M <sup>2</sup> area in each plot		10 gm
Clove (Grambu)	List of dry land clusters	<b>3</b>	2 Plots	5 bearing trees from each plot		10 gm
Betel leaves	List of wet & dry land clusters	<b>1</b>	2 Plots	5 betel wine trees	X (F)	10 gm (In Number & Weight)
Tobacco	List of wet & dry land clusters	<b>13</b>	2 Plots	One cut of 2 x 2 M <sup>2</sup> area in each plot	VIII-I	50 gm
Bitter Gourd	List of wet & dry land clusters	<b>3</b>	2Plots	Area of the crop in the selected patch or plot	X –G	10 gm
Cowpea	List of wet & dry land clusters	<b>1</b>	2Plots	Area of the crop in the selected patch or plot	X-H	10 gm
Ginger, Groundnut, Sweet potato, Turmeric	List of wet & dry land clusters	<b>3</b>	2 Plots	One cut of 2 x 2 M <sup>2</sup> area in each plot If 2x2 M <sup>2</sup> area is not available take 1x4 M <sup>2</sup>	Ginger – IX A Turmeric – IX B	50 gm
Sugar cane	List of wet & dry land plots	<b>3</b>	2 Plots	1 cut of 5x5 M <sup>2</sup> in each plot	VIII F	250 gm
Drum stick	List of dry land clusters	<b>3</b>	2 Plots	2 bearing trees in each plot	X (E)	50 gm (In Number & Weight)
Nutmeg	List of wet and dry land clusters	<b>3</b>	2 Plots	2 bearing plants	X(D)	10 gm (In Number & Weight)
Pineapple	List of wet & dry land clusters	<b>2</b>	2 Plots	5 bearing plants	IX C	50 gm



Mango	List of dry land clusters	<b>1</b>	2 Plots	2 bearing plants	XA	50 gm (In Number & Weight)
Papaya	List of wet and dry land clusters	<b>3</b>	2 Plots	2 bearing trees	X (B)	50 gm (In Number & Weight)
Tamarind	List of Wet and dry land clusters	<b>3</b>	2 plots	2 bearing trees		50gm (with and without shell)
Chena 2021-22	List of Wet and dry land clusters	<b>1</b>	2 plots	3 plants		50gm
Brinjal 2021-22	List of Wet and dry land clusters	<b>3</b>	2 plots	3 plants		50 gm
Snake gourd 2020-21	List of Wet and dry land clusters	<b>1</b>	2 plots	Area of the crop in the selected patch or plot		50 gm
Cucumber 2020-21	List of Wet and dry land clusters	<b>3</b>	2 plots	Area of the crop in the selected patch or plot		50 gm
Taro (Chembu) 2022-23	List of Wet and dry land clusters	<b>1</b>	2 plots	3 plants		50gm
Okra (Ladies finger) 2022-23	List of Wet and dry land clusters	<b>3</b>	2 plots	3 plants		10 gm
Yam	List of Wet and dry land clusters	<b>2</b>	2 plots	3 plants		50gm

The selection should be made by the investigator under the guidance of the Taluk Statistical Officer/Statistical Inspector.

The selection of plots for paddy crop cutting should be completed one month before the commencement of harvest and coconut, arecanut and cocoa plots should be selected during July/August. Plots for other crops should be selected during July, August or September and should be completed before 31st December.

The required number of suitable plots for a particular crop will be selected at Random from the frame prepared as above. Suitable plots are defined as one which grows the crop and which is flowered at least once during the life span of the plant. It should also be able to accommodate the required experimental cuts/trees/standards.

The random number used for the plot selection of a particular crop in dry land is followed by the random number for the selection of plot in wet land area.

In respect of crop cutting experiments (except for paddy, sugarcane and sesamum) the required number of plots may be selected from the key plots using simple random sampling method.

If the crop selected for CCE is grown in the key plot, it must be considered for crop cutting. If the key plot selected does not grow the crop for which crop cutting experiment is to be conducted, the investigator should look for the crop in the side plots in anticlock wise direction starting from "S". If the selected plot is clubbed with survey/subsurvey numbers and sufficient number of trees are seen in more than one plot such plots may be arranged in ascending order and the first suitable plot from so arranged plots may be selected. If the CCE plot is not selected from that cluster, next cluster may be selected for completing the required number of CCEs. The process should be continued until a suitable key or side plot is selected. If a suitable plot is not arrived after verifying all the wet clusters, consider the first cluster of dry land and repeat the same procedure and vice versa.

### **Wet land Paddy –**

For wet land paddy, stratified multistage random sampling design is followed to carry out the crop estimation survey. The CD Blocks in the Taluks is the first stage strata. The investigator zones in the State are the first stage unit of sampling. The survey numbers/plots of each investigator zone are the second stage-sampling unit. The experimental plot of specified shape and size is the ultimate unit of sampling. Post stratification of data in accordance with the four-fold classification will be adopted to workout yield rates, within each Panchayat and investigator zone. The Investigator will classify the wet land paddy growing plots in the wet land clusters during each season according to the following four categories.

i) HYV irrigated ii) HYV unirrigated iii) Local irrigated iv) Local unirrigated

The following points are to be taken into account for conducting crop cutting experiments of paddy.

- 1 A total of 4 crop cutting experiments have to be conducted on paddy in each season in a panchayat/municipality/corporation zone in proportion to the availability of area under four-fold classification. If a zone contains more than one Panchayath, then 4 CCEs per Panchayath must be conducted.
- 2 In each Panchayat 4 paddy crop cutting experiments must be conducted per season. This should be selected from the four categories of HY(I), HY(UI), L(I), L(UI).
- 3 In the municipal areas, 4 CCEs must be conducted per season. In Corporation areas, since a corporation may include more than one Investigator zone, 4 CCEs must be conducted per Investigator zone in proportion to the availability of area under four-fold classification.
- 4 If less than four categories of paddy are available for selecting 4 CCEs, the 4 CCEs should be allocated among the available categories in proportion to their area.
- 5 If fewer than 4 suitable paddy plots are available within a selected cluster for conducting the CCEs, but enough paddy plots exist outside the cluster, then conduct as many CCEs as possible within the cluster and shortfall should be compensated from the plots outside the cluster, by preparing a list of available paddy growing plots and following the standard selection procedure.
- 6 If there is only one category of paddy cultivation in a Zone, 4 CC experiments should be conducted from that category.
- 7 If a panchayat consists of more than one investigator zone then 4 CCEs should be conducted from each investigator zone.

- 8 If there is only one paddy growing plot in a particular zone in a season, CCE can be conducted from that plot.
- 9 If in a zone there is no paddy cultivation in a season in the selected clusters but there is paddy outside the cluster, then the following procedure may be followed.
  - a. If there are four or more paddy growing plots, required number of cuts should be conducted in that zone.
  - b. If the number of paddy growing plots available is less than 4, then available number of CCE should be conducted.
  - c. The selection of four-fold classification of paddy should be strictly adhered if it is possible.
- 10 If 4 CCEs are selected in a Panchayat/Municipality/Corporation Zone from clusters and they include in any one category (HYV or Local) and the other variety is available out side the clusters, select one more CCE from the other variety from out side the clusters.
- 11 Selection of plots for CCE should be verified by Statistical Inspector and approved by Taluk Statistical Officer.

### **Dry paddy:-**

From the agricultural year 2021-22, Department started estimation of production and productivity of dry paddy by conducting crop cutting experiments. To conduct CCE in dry land paddy, following guidelines are issued:

- i. 2 plots are to be selected from each local body (if a local body consists of more than one zone, 2 plots are to be selected from each zone)
- ii. If a zone consists of more than one panchayat, 2 plots are to be selected from each local body.
- iii. If only one plot is available from a local body, then it is enough to conduct one CCE
- iv. Same random column can be used which is used for selection of wet paddy plots
- v. No need of four folds classification.
- vi. Selection of CCE plots is to be done using the list of paddy growing plots. If 5x5 m<sup>2</sup> area is available in the plot, it can be selected for CCE.
- vii. Even though as per BTR the land is classified as dry, if land is physically wet it cannot be classified as dry paddy. (This condition is applicable only for paddy)

## **1. Crop Cutting experiments of Major and Minor Crops**

### **1. Distribution of paddy crop cutting experiments in zone area**

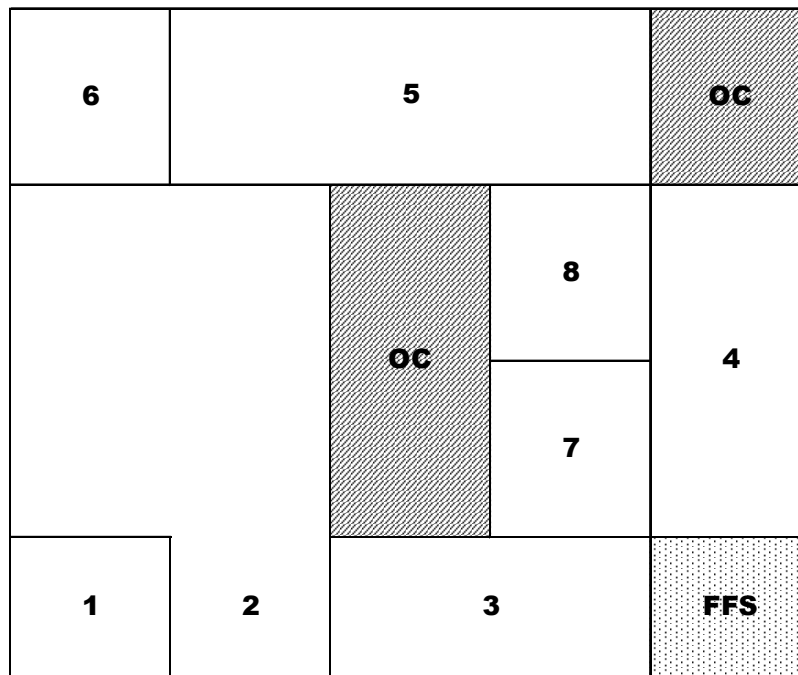
1. If an Investigator zone comprises only one Panchayat, then 4CCEs should be conducted from the zone in proportion to the availability of area under four-fold classification.
2. If the Investigator zone comprises more than one Panchayat, the following steps should be taken to conduct desired number of CCEs
  - a) List of paddy growing plots are to be prepared for different Panchayats in the same zone separately.
  - b) Four CCEs should be selected from each panchayat.
  - c) The four experiments proposed for each panchayat may be distributed as per the four-fold classification i.e HY(I), HY(UI), L(I), L(UI).

- d) Paddy plots to be listed cluster wise starting from K, S, E, N, W plots as per Form I diary based on the ascending order of Survey/subdivision numbers.

3. If a panchayat comprises more than one zone then 4 CCEs should be conducted from each zone.

**Identification of plot:** The first step in the fieldwork is the identification of the selected survey subdivision number with the help of the survey map and the address of the owner taken from the basic tax register or other records and by local enquiry. Note the boundaries of the plot after correct identification.

**Selection of Patch (Kandom):** If the selected survey subdivision number has more than one patch, all the patches in the selected plots growing the crop have to be serially numbered beginning from the south west corner and proceeding anti-clock wise. One patch may be selected by simple random sampling method.



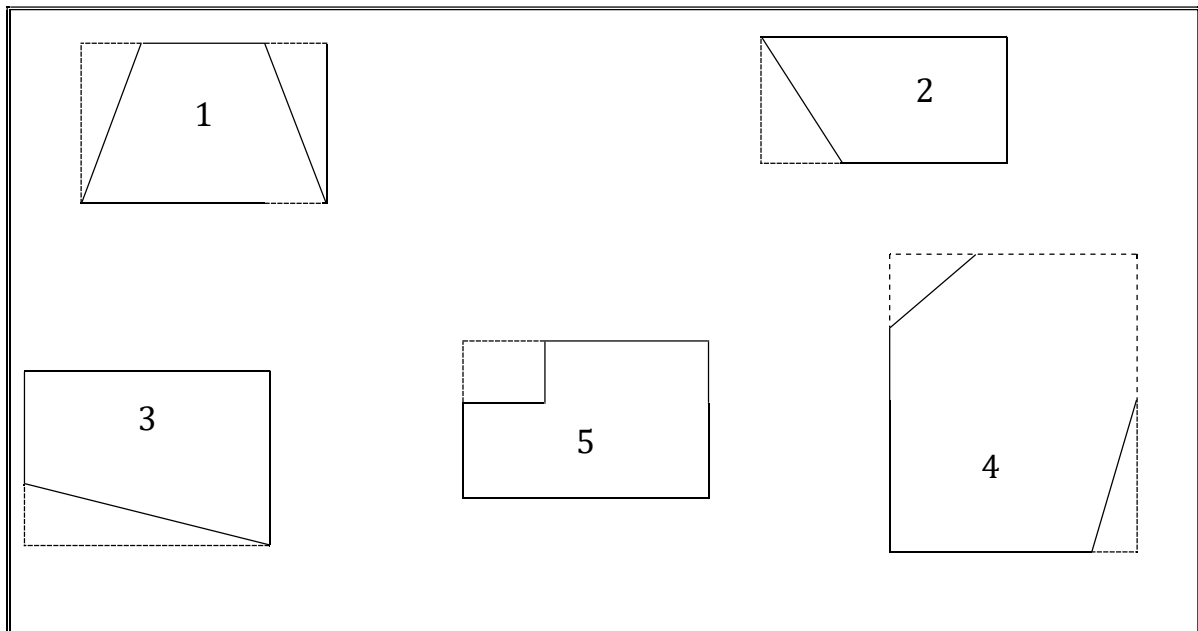
Meet the cultivator and ascertain the date of harvest, and collect other pre-harvest details.

### Location and marking of an experimental cut

#### i) Fixing the starting point of the patch

In each selected patch, locate area of  $5 \times 5\text{m}^2$  for paddy CCE. After fixing the starting point as described below, measure the length and breadth in normal steps. (i.e. 1 step = 80cm approximately)

If the patch is not approximately rectangular in shape, consider the least rectangle including all plants.



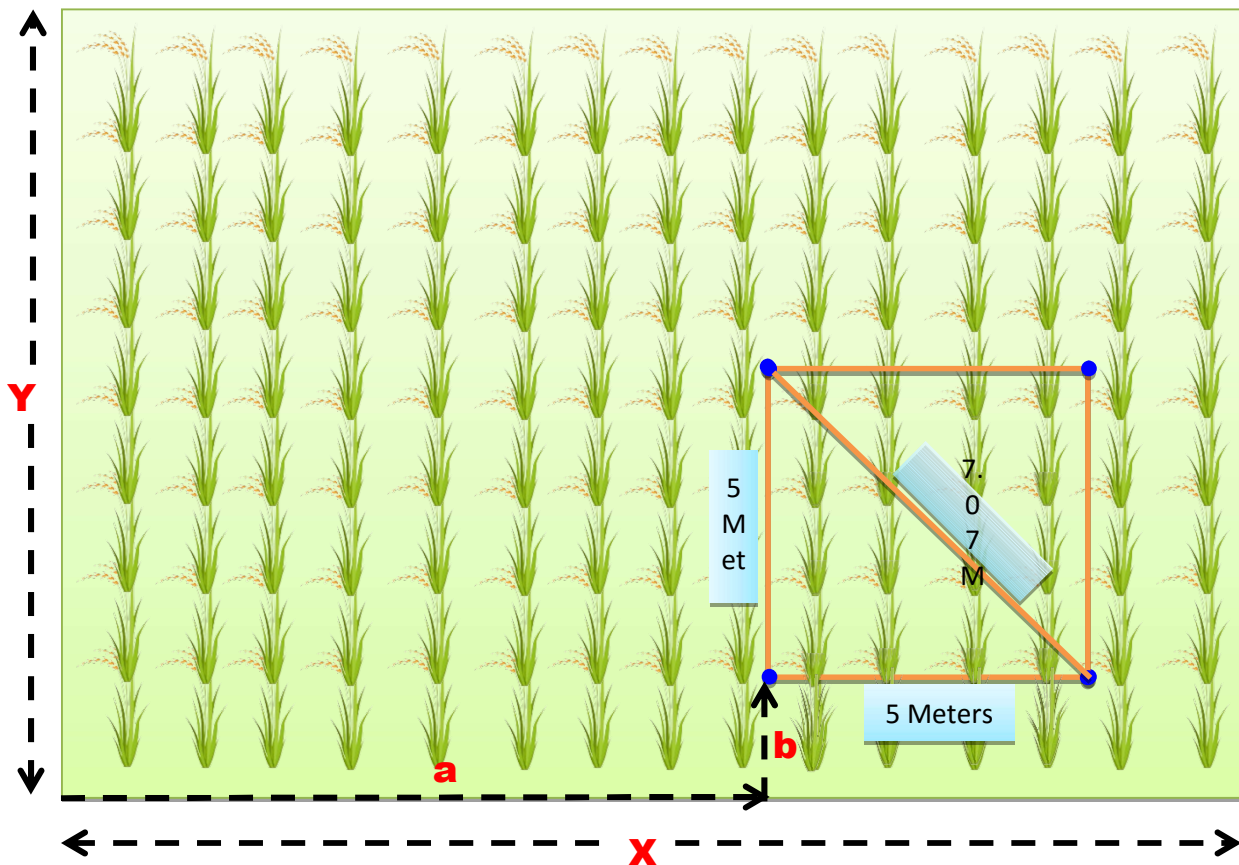
The south west corner of the rectangle is the starting point. (see fig 1,2,3,4 & 5)

ii) Locating the 5x5 meter square –Beginning from the starting point of south west corner mentioned above, measure in uniform steps, the side ‘x’ towards the right (east) and ‘y’ (towards the north) perpendicular to the first side.

Deduct seven from both ‘x’ and ‘y’ and obtain the balance. Take random numbers ‘a’ and ‘b’ less than or equal to the balance obtained. If the random number obtained is zero, it need not be rejected.

Measure ‘a’ steps from the starting point towards east and ‘b’ steps in the vertical direction inside the field and take the intersection. This point will fix the south west corner (ie. Origin) of the experimental portions. Fix the first peg here.

The experimental cut is marked with the help of the crop cutting frame. Construct the crop-cutting frame with pegs and strings supplied. Tie the string to the second and third pegs with a length of 5 m such that the length of the diagonal is 7.07m. If the diagonal of this triangle is 7.07m; and the adjacent sides have a measurement of 5m, then it constitutes a right angled triangle. Secondly fix the first peg again in the north east point such that the side of the triangle is 5m. Then it makes a square of 5m i.e.  $5 \times 5 \text{m}^2$ .



Care should be taken to ensure that there is no loss of grain at any stage such as harvesting, winnowing, cleaning and weighing. Weigh the cleaned grain and record the weight in kg. Correct to two decimal places. All details required in the prescribed final schedules should be collected.

Three samples of 250gms are to be collected for diage experiment in a block. The Taluk Statistical Officer may fix the Investigator zones and plots from which these samples are to be collected and inform the investigator at the earliest. The first sample should be collected at the beginning of the season, second towards the middle and third towards the end of the harvesting season. The samples collected should be sent to the Taluk Statistical Officer within 24 hours. The Taluk Statistical Officer should weigh each sample immediately on receipt and again on alternate days after drying till two consecutive days weights are of the same. The details relating to diage experiments should be sent to the head office through the district office.

### **Submission of returns**

The following returns relating to crop cutting experiments on paddy are to be submitted.

i) Pre-harvest schedules – Immediately after the final selection of the plot, the Investigator will visit the plot and collect the required preliminary details in the pre harvest schedule. The pre-harvest schedules are to be sent to the District Office as per the following time schedule.

Autumn	-	15 <sup>th</sup> August
Winter	-	15 <sup>h</sup> December
Summer	-	15 <sup>th</sup> March

## ii) Progress report

The monthly progress report relating to the survey should be sent by 1<sup>st</sup> working day of every succeeding month to the District office by the Taluk Statistical Officer. The consolidated progress report in the prescribed Performa should be sent by the Deputy Director by 3<sup>rd</sup> working day of every succeeding month to the Directorate.

## iii) Inspection report of Paddy

The inspection reports of Taluk Statistical Officer/Statistical Inspector/District Officer/Additional District Officer/Deputy Director should be sent to the Directorate. The due dates for each season are as follows:

Autumn	- 15 <sup>th</sup> November
Winter	- 15 <sup>th</sup> March
Summer	- 15 <sup>th</sup> July

## **The number of harvest stage inspections is fixed as follows:**

Statistical Inspector/ Taluk Statistical Officer	: At least one in a Panchayat subject to a minimum of twelve or 50 percent of the experiments in the block.
District level officers	: At least one in each Block
State Level Officers	: As many as possible

## iv) Results of the driage experiments

The data on driage experiments may be sent by the Taluk Statistical Officer to the District office within 15 days after conducting the last experiment in the Taluk.

## v) Special report from the Deputy Director

A report on Panchayat wise may be prepared and forwarded by Deputy Director to the headquarters within one week at the end of each season after the harvest is over describing the salient features of the crop specially mentioning percentage of crop damage, if any, due to drought, pest and other diseases, flood, etc. in each Taluk. The report should contain specific remarks of all status of crop poor/normal/good with reason.

## vi) Final schedules

The crop cutting schedules may be forwarded to the Deputy Director immediately after the survey in an Investigator zone is completed.

## **2. Tapioca**

Selection of Plots – The number of crop cutting experiments to be conducted from each Investigator zone for tapioca is two in an agricultural year. One Plot should be selected from the list of wet clusters and the other plot from dry clusters. The Investigator should visit first to the key plot and ascertain whether it is a suitable plot for the experiment.(as per **general instructions No. DES/2859/2022-A1(EARAS) dt. 14/07/2022 , minimum 1 cent in the selected plot**).

If the key plot is not suitable for crop cutting, selection may be made first from the plot 'S' of the cluster. If it is not suitable, then plots E, N and W should be verified and select accordingly. If the entire plots in the cluster do not grow tapioca, the Investigator will go to the next cluster. The process should be continued until a suitable plot is selected. If the entire wet clusters are not suitable, consider the first dry clusters and vice versa.

If the selected area has more than one patch, patch selection should be done by using simple random survey method. If the selected survey subdivision number contains more than one cluster growing tapioca, then one of them should be selected by simple random sampling method for conducting the experiment. In short plot selection and cultivator selection should be done simultaneously. If the plot S, E, N or W selected for CCE contains more than one survey subdivision number, arrange this survey sub division numbers which are suitable for CCE in ascending order and select this first one. The patches should be numbered starting from southwest corner and proceeding anti clock wise.

#### **Location of cut in the selected plot/patch:**

Starting from the south west corner of the patch/plot measure the side 'x' towards the right (east) and 'y' perpendicular to 'x' (north) of the patch in steps take two random numbers less than 'x' and the other less than 'y'. Let the number be 'c' and 'd' Measure 'c' steps towards east and 'd' steps from there towards north. This point determines the southwest corner of the experimental cut. Measure 2 X 2 m square with this point. If the 2 x 2m square thus located does not fall in the selected plot/patch, reject the random number in pair and the experimental cut may be located by choosing fresh random numbers. In case 2 x 2 M<sup>2</sup> is not available, then 1 x 4 m square in size may be considered.

#### **Harvesting and recording of weight**

All tapioca plants in the experimental cut should be harvested cleaned off the soil sticking to tuber and weighed. Weight should be recorded correct to the nearest 50 gm. The details required for the prescribed form (VI B) should be collected.

The following returns should be submitted in connection with tapioca crop cutting experiments.

- 1) **Progress report:** The Taluk Statistical Officer should send the monthly progress report to the Deputy Director by first working day of every succeeding month. The consolidated progress report should be sent by the Deputy Director by third working day of every succeeding month to the Director.
- 2) **Final schedule:** The final schedules in the prescribed form should be submitted to the District Office within one week of the harvest in a Taluk. The Deputy Director should consolidate the schedules and forwarded to the directorate within two weeks of the last crop cutting experiments.
- 3) **Inspection report:** Inspection report in the prescribed form should be sent by Taluk Statistical Officer/Deputy Director to the headquarters within two weeks of last inspections. Taluk Statistical Officer/Statistical Inspector should inspect at least 10 experiments or 50 percent of the experiments in a Block. The district level officers should inspect at least 6 experiments at harvest stage.

#### **4. CCE of other crops**

**Coconut, Arecanut, Tapioca, Banana, Plantain, Betel leaves, Ginger, Turmeric, Nutmeg, Sugarcane, Tamarind, Pineapple, Cocoa.**

The plots for CCE of the above crops are to be selected from wet and dry clusters.

##### **(a) Coconut, Banana.**

3 crop cutting plots are to be selected for these crops in each investigator zone from the frame in which both wet land plots and dry land plots are included according to the proportion of the area of cultivation of these crops in the wet land and dry land. Nevertheless at least one crop cutting experiment should be included in each category of land.



**(b) Arecanut, Plantain, Cocoa, Betel leaves, Ginger, Turmeric, Nutmeg, Sugarcane, Tamarind.**

2 crop cutting experiments may be done in each investigator zone. The crop cutting plots are to be selected each from wet land and dry land clusters. If CCE plot is not available from a category by visiting all clusters of that category the short fall may be compensated from the next category. This procedure should be followed to all other crops in the case of short fall.

**(c) Cashew, Pepper, Jack, Mango**

These cropcutting plots are to be selected from the dry clusters only. If the number of dry clusters are less than or equal to 10, single digit random numbers may be used from the prescribed random column. If number of clusters is above 10, 2-digit random number may be used from the prescribed random column for plot selection.

The below mentioned methods should be strictly followed for the selection of crop cutting plots from wet and dry land plots. The selection of dry land clusters may be done only after the selection of wet land clusters. Selection from the wet / dry clusters should be done according to the number of wet / dry clusters. If the selected cluster is not suitable for CCE, consider the next cluster and so on. If the entire wet clusters are not suitable for CCE, consider the first dry cluster and vice versa. Selection may be done by simple random method. The number of bearing trees/standards to be selected for crop cutting experiments from each plot is 5 for coconut, arecanut, cashew, pepper and cocoa. **Bearing trees means trees which are flowered atleast once.**

**Example 1**

**Crop: Coconut**

**Random Column 5**

	<b>Wet</b>	<b>Dry</b>	<b>Remark</b>
Clusters in the zone	9	91	
No of plots to be selected	1	2	
Random no.s selected	6606	5752 2287	
Clusters selected	W 6	D 57, D 22	

**Example 2**

	<b>Wet</b>	<b>Dry</b>	<b>Remarks</b>
Clusters in the zone	75	25	
No of plots to be selected	2	1	
Random No selected	02,15 66,06	2287	
Clusters selected	W2, W66	D 22	

The selected plots are to be visited to ascertain the suitability of the plot for crop cutting experiments i.e. to verify whether the required number of bearing trees of the crop is in the plot. If the key plot does not contain the required number of bearing trees it may be looked for in the Plot 'S'. If it contains more than one survey subdivisions clubbed together, suitable survey division numbers should be serially numbered by ascending order. Then select the first survey sub division number for CCE. If all clubbed survey sub division numbers of S are not suitable then proceed to E

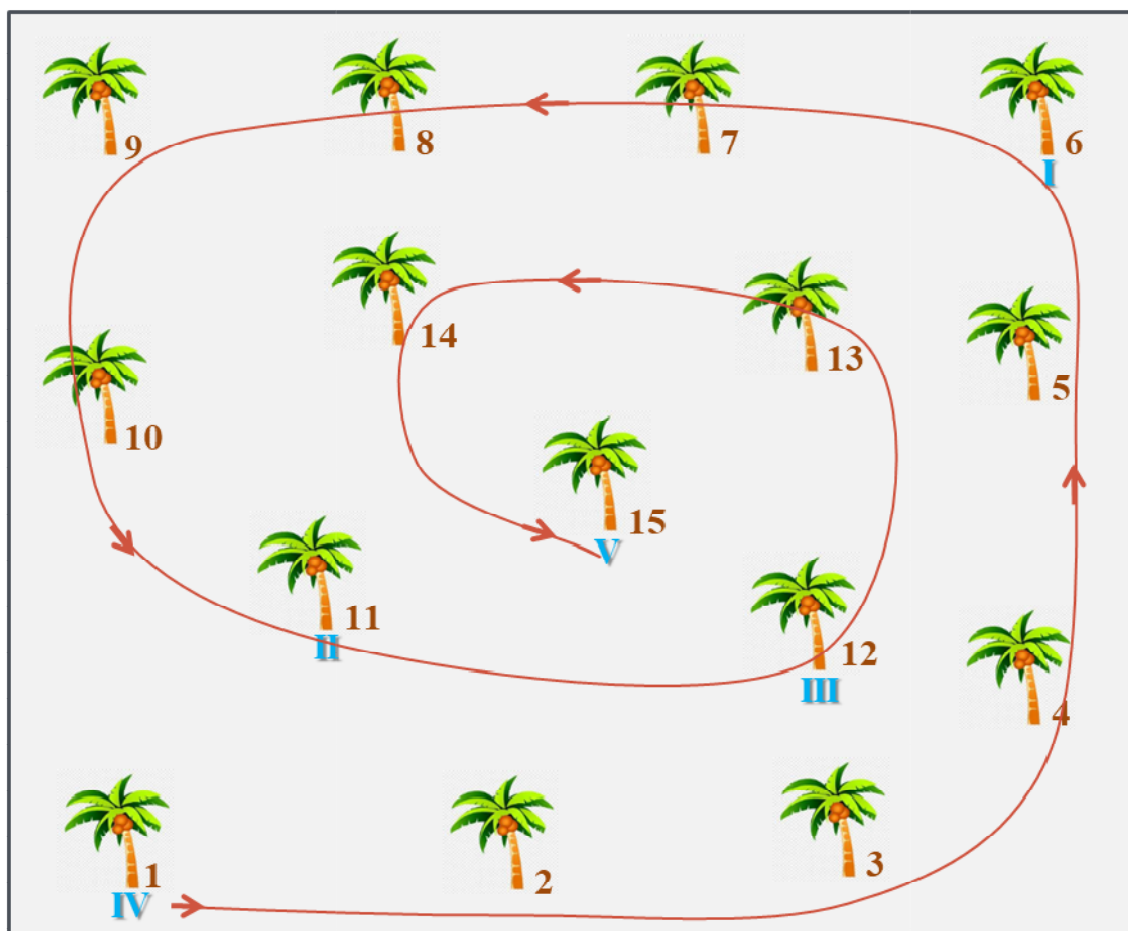
Plot and repeat the same process till we get a suitable CCE plot. If there is no suitable plot in E consider N and W. If the required CC plot is not available in the entire cluster, the next cluster may be selected till a suitable plot is obtained. If wet clusters are not suitable for CCE, consider the first dry cluster and viceversa. If the selected survey subdivision number contains more than one suitable cultivators, cultivator selection should be done. Patch selection can be done if it is necessary.

For selecting plots for conducting crop-cutting experiments on cocoa, clusters selected for coconut or arecanut may be utilized if there grow the requisite cocoa crop.

**Selection of trees:** For selecting trees/standards for crop cutting, the bearing trees/standards in the plot should be serially numbered starting from the south-west corner and proceeding in anti clock wise direction. The investigator should draw a rough sketch of the survey sub division with the exact lay out of the trees in the plot in his rough note for facilitating correct identification of selected trees. Five bearing trees/standards are selected by simple random sampling method for coconut, arecanut, cashew, pepper and cocoa. The selected trees/standards should be given permanent identification mark, preferably in the order of selection. The following example will make the method of selection of trees clear.

*Let the total no. of bearing trees is 14. Out of these the selection of 5 trees is shown below:-*

### Coconut CCE tree selection



Let the no.of  
Wet plot=14  
Dry plot=86

Random selected  
Wet -0215  
Dry1-6606  
Dry2-5752

Tree selection in Wet  
No.of trees=15

Random selected  
I -Tree1-0625  
II -Tree2-1172  
III -Tree3-1220  
IV -Tree4-0139  
V -Tree5-1581

If there is no proposed crop, or the plot is not suitable for the crop cutting experiment, the succeeding cluster to be selected. (No need to consider random no.)

If suitable plot is not available after searching all the wet land clusters, the process may be started by searching from first dry land cluster and find out the substitute clusters and in the same way if, dry land cluster is not getting after the searching of all dry land cluster, search from first wet land cluster and take substitute plot.

The crop cutting plot may be selected from the key plot itself. If the key plot is not suitable for crop cutting experiment; we may examine the plots from S, E, N, W in the order for this purpose. If S1 is a clubbed plot having different survey subdivision numbers suitable for CCE, then such suitable survey subdivisions may be arranged in ascending order, and first suitable plot from so arranged plots may be selected for CCE.

If there is more than one cultivator in this survey subdivision number select one cultivator by using simple random sampling method.

The random numbers are to be used for selection of plot / patch and tree. Tree selection may be done only after the succeeding random number which is used for plot/patch selection. i.e. no need of taking fresh random column.

Considering the CCE of cashew, cocoa, tamarind and drumstick, if a single cultivator is not getting adequate number of trees for CCE, and are available in the cluster from more than one cultivator, selection can be done from the cluster.

### Collection of Details

(i) **Coconut** – The details of harvest are collected in form VII A. The details of harvest conducted on all the five selected trees in a plot are to be entered in one form. The number of harvest will vary from plot to plot and the details of each harvest are to be noted separately in the form. During each harvest, the details of nuts plucked may be entered separately as tender, ripe, over ripe, barren and the number of nuts fallen down after various harvest. At the time of harvest, the number of nuts in three bunches to be harvested subsequently may be noted in the space provided in the form. This is

to check the number of nuts at the time of harvest. The details of all the harvest conducted during the Agricultural year should be collected and recorded.

**Arecanut** – The details of harvest are to be entered in Form VII B. The number and weight of the nuts plucked as tender and ripe may be entered separately in this form.

**Cashew** – The details of harvest are to be entered in the Form VII C. The harvest details of trees in a plot are recorded in one form. During the peak period of the harvest, cashew nuts are plucked from the trees at an interval of two or three days. Care should be taken to see that no harvest of the selected trees is missed and that complete details are collected and entered in the form.

**Pepper** – The details of crop cutting experiments are to be recorded in Form VII D. The produce from pepper plant will be harvested once or twice. The weights of berries with and without spikes are recorded separately for each plant.

**Cocoa** – The details of crop cutting experiments are to be collected in Form VII E. The number and weight of the ripe nuts should be recorded in the Block III of the schedule.

### **Crop Cutting Experiments – Banana and Plantain**

The number of crop cutting experiments to be conducted from each Investigator zone is 3 for Banana and 2 for plantain in an agricultural year. The list of wetland and dry land plots constitute the frame for selecting 3 plots for banana and 2 plots for plantain, using simple random method for conducting crop-cutting experiments. CCE for banana can be allocated to wet and dry clusters in proportion to the area of banana. Atleast one CCE should be allotted to wet/dry clusters. In the case of plantain, one CCE from wet clusters and the other from dry clusters should be selected.

For banana 3 plants should be selected from each plot by using simple random method. In the case of plantain also, 3 plants should be selected from each plot by using simple random method and experiments to be conducted. In the case of Plantain, select 3 plants from the bunched plantain.

**Sesamum** – Two experimental cuts are to be conducted separately from wet and dry plots in an Investigator zone. The list of wet/dry land plots growing sesamum constitutes the frame for the survey. The experiment should be conducted from a 5x5 metre square area. The details of experiments conducted should be entered in form VIII C. The weight of sesamum should be entered in Kg. If sufficient plots are not available for conducting CCE, wet/dry plots may be selected from outside clusters. Procedure for CCE, is the same as in the case of paddy.

**Jack** – For jack the number of experimental cuts to be conducted from an Investigator zone is two. The dry land plot constitutes the frame for the survey. Two plots are to be selected for conducting experiments taking two bearing trees from each plot. The number of fruits counted should be entered in Form VIII D.

### **Instructions for Crop Cutting Experiments on Minor Crops**

The following instructions are issued for the conduct of crop cutting experiments on minor crops for the year 1996-97 onwards.

Selection of minor crops has been done in accordance with the availability of crops in each district.

**1. Garlic** – The number of crop cutting experiments to be conducted in each Investigator zone is 2. From the list of dry land plots growing garlic, the required number of plots is to be selected by simple random sampling method.

Two plots will be selected for conducting crop cutting experiments in an Investigator zone.

If the selected plot has more than one patch, a patch may be selected at random. From the south-west corner of the selected plot/patch, measure in a uniform step to the side 'x' towards the

right (east) and side 'y' perpendicular to 'x' towards the north. Take a random number 'a' and 'b' less than or equal to x and y respectively. Make 'a' steps from the south-west corner towards the east and then 'b' steps from the vertical direction inside the field. This point will fix the south-west corner of the experimental plot. Random column 3 may be used for the selection of plots for crop cutting experiments.

The experiments will be conducted in 2 x 2 meter square plot. The cleaned produce is to be weighed and the weight recorded to be corrected to 10 gram.

**2.Clove (Grambu)** – From the list of dry land plots, the required number of plots having five bearing trees are to be selected by simple random sampling method. The selected plots are to be visited to ascertain the suitability of the plot for conducting crop-cutting experiment, ie., to verify whether there are the required number of bearing trees or not. If the selected plot does not contain the required number of bearing trees, the next plot in the list will be visited. The visit will be continued until a suitable plot is obtained from the list.

**Selection of trees** – For selecting trees for crop cutting, the bearing trees in the plot should be serially numbered, starting from the south-west corner and proceeding in anti-clock wise direction. Five trees will be selected. The selected trees should be given a permanent identification number, preferably in the order of selection. Random column for clove is 1.

**Collection of details** – The details of harvests during the agricultural year, as well as other relevant information, should be collected using the prescribed form. Periodical visit should be made to the plot to collect the harvest data from the selected trees. The data should be collected in kilogram, corrected to nearest 10 gram. It should be ensured that no harvest during the agriculture year is missed. The weight of the dry produce, for 200 gram, may also be recorded.

**3. Betel leaves** – The experimental plot in each Investigator zone will be selected from the list of wet land and dry land clusters. Two plots will have to be selected for conducting crop-cutting experiments in each Investigator zone by using random column 1. The Investigator should visit the plot to ascertain whether it is suitable for the experiment or not.

**Selection of trees** – For selection of crop cutting on betel wines five trees each growing at least one betel wine (which is in the yielding stage) may be selected at random. If the betel wine is grown separately on stems of arecanut poles or other type of scantlings, five poles having at least one betel wine each may be selected. Weight of the leaves on each harvest should be recorded in kilogram correcting up to 10 gram. Number of leaves in each harvest may also be recorded. The details of harvests may be collected and recorded for the 12 months of the agricultural year as the harvest is done normally in all the months with periodically ranging from 3 –7 days.

**4. Tobacco** – The required number of plots will be selected from the list of wetland and dry land plots. Two plots are to be selected in an Investigator zone by using random column 13. The selection of random numbers and location of the CC Plot is same as in Tapioca.

The experiment is to be conducted in 2 x 2 metre square plot and weight should be recorded in kilograms corrected to 10 gram. Also, the weight of dry tobacco should be reported in 50 gm.

### **Ginger, Groundnut, Sweet potato, Turmeric and Sugar cane**

The required numbers of plots are to be selected from the list of wet and dry clusters by simple random sampling method. As in the case of other crops, suitable plots are to be selected in the same manner.

The selection of random numbers and location of the CC Plot is same as in Tapioca.

The experiments will be conducted in  $2 \times 2 \text{ m}^2$  plot for all crops except sugarcane. The experiment will be conducted in  $5 \times 5 \text{ m}^2$  plot for sugarcane. For other crops ( $2 \times 2$ )  $\text{m}^2$  area is to be taken, if it is not available ( $1 \times 4$ )  $\text{m}^2$  can also be taken.

In the case of sugar cane if sufficient plots are not available for conducting CCE, plot may be selected from out side clusters. List of growing plots is prepared and selection can be done. Procedure for CCE is same as in the case of paddy.

**Pineapple** –2 suitable experimental plots may be selected from the combined frame of wet and dry land clusters having representation from both by using random column 2. If CCE plot is not available from wet clusters, select two plots from dry clusters and vice versa.

**Mango** - From the dry land clusters, two plots having two bearing plants are to be selected by simple random sampling method. The selected plots are to be visited to ascertain the suitability of the plot for conducting the CCE.

**Cowpea and Bitter Gourd:** -Two clusters each are selected for cowpea and bitter gourd. The plot with minimum area of 0.50 cent or more are considered for taking crop cutting experiments for these crops. The crop cutting plots are selected from the list of wet and dry land plots. Representation for each crop should be given for wet and dry land.

The same selection procedure of coconut and other crops is to be followed for this crop. The details of yield of each crop are collected and entered in the prescribed schedule. It should be ensured that any harvest of the selected plot is not missed. The total yield/production of once planted cowpea/bitter Gourd plants is to be collected.

**Tamarind, Nutmeg, Drumstick, Papaya:-** From the list of dry/wet land plots, the required number of plots having two bearing trees are to be selected by simple random method. The selected plots are to be visited to ascertain the suitability of the plot for conducting CCE. The same selection procedure of coconut and other crops is to be followed for these crops also. In case of plots having two bearing plants in the same plot are not available in the cluster for Tamarind, Drumstick, Papaya two adjacent plots having one bearing plant each may be clubbed together to form a single plot for crop cutting.

**Selection of trees:-** Selection of trees is as same as in coconut, arecanut etc. Permanent identification mark may be given to the selected trees.

**Collection of details:-** Periodical visits should be made to the plot and the details of all harvests from the selected trees should be collected. It should be ensured that no harvest during the agriculture year is missed.

The details of the number and weight of the drumstick/papaya are to be recorded in the prescribed schedule. Care should be taken to see that no harvest of the selected plot is missed.

### **Digitalisation of General Crop Estimation Survey (DGCES)**

Ministry of Agriculture and Farmers' Welfare, GoI introduced software for digitalizing the CCEs. Paddy is included in DGCES in Kerala. DGCES has three stages Form I, Form II and Form III. Pre harvest details are entering in Form I, harvest details are entering at the time of harvesting in Form II and driage details are entering in Form III if the experiment is selected for driage. Mobile App is used for data entry by the investigators and supervisors are using Web Portal for monitoring and approval. Started DGCES in Kerala during 2023-24 Autumn season as piloting in Alappuzha and Palakkad districts. From 2023-24 Winter season onwards DGCES has been introduced in all the districts for paddy. Sugarcane has also been included in DGCES from 2024-25 Winter season onwards.

## **Estimation procedure under Revised Sample Design of EARAS in Kerala**

A) The following estimates are prepared from the data collection in area enumeration.

- (1) Area under different land use
- (2) Area under different crops
- (3) Source- wise area irrigated

Estimate will be proposed for each investigator zone (sub-stratum) in each Block/Municipality (stratum) notations used.

$N_1$  = No. of Wet land clusters in the zone

$n_1$  = No. of wet land clusters in the sample

$N_2$  = No. of Dry land clusters in the zone

$n_2$  = No. of Dry land clusters in the sample

$W$  = Wet land area in the zone

$D$  = Dry land area in the zone

$W_j$  = Area of the  $j^{\text{th}}$  wet land cluster ( $j=1 \dots n_1$ )

$d_j$  = Area of  $j^{\text{th}}$  dry land cluster ( $j=1 \dots n_2$ )

$y_{ij}$  = Area of  $i^{\text{th}}$  land use/crop area in  $j^{\text{th}}$  wet land cluster.

$x_{ij}$  = Area of  $i^{\text{th}}$  land use/crop area in  $j^{\text{th}}$  dry land cluster

$y_i$  = Estimate of area of the  $i^{\text{th}}$  land use/crop area in the wet land in the zone.

$x_i$  = Estimate of area of  $i^{\text{th}}$  land use/crop area in dry land in the zone.

$z_i = x_i + y_i$  = total area of  $i^{\text{th}}$  land /crop area in the zone

$$Y_i = \frac{\sum_{j=1}^{n_1} y_{ij}}{\sum_{j=1}^{n_1} w_j} W X_i = \frac{\sum_{j=1}^{n_2} x_{ij}}{\sum_{j=1}^{n_2} d_j} D$$

$$V(Y_i) = \frac{N_1(N_1 - n_1)}{n_1(n_1 - 1)} \left[ \sum_{j=1}^{n_1} y_{ij} - R_{i1} w_j \right]^2, \text{ where } R_{i1} = \frac{\sum_{j=1}^{n_1} y_{ij}}{\sum_{j=1}^{n_1} w_j}$$

$$V(X_i) = \frac{N_2(N_2 - n_2)}{n_2(n_2 - 1)} \left[ \sum_{j=1}^{n_2} x_{ij} - R_{i2} d_j \right]^2, \text{ where } R_{i2} = \frac{\sum_{j=1}^{n_2} x_{ij}}{\sum_{j=1}^{n_2} d_j}$$

$$V(Z_i) = V(X_i) + v(Y_i)$$

(B) Stratum (Block/Municipality) estimate of  $j^{\text{th}}$  land use / crop area are obtained by adding together the zone wise estimates therein.

(C) Stratum wise variance of the estimate is also obtained by adding together the zone variance of a particular land use crop area.

(D) Estimate of average yield per hectare of paddy in a stratum is obtained as the weighted average of the yield obtained for HYV irrigated, HYV unirrigated, Local Variety Irrigated, Local Variety unirrigated separated in experiments. In the case of other crops the yield per hectare is calculated from the simple average.

### Important

- (1) All CC Plots must be selected before Oct.15<sup>th</sup> except Jack, Mango and Cashew. Selection of Jack, Mango and Cashew may be done by the completion of 1<sup>st</sup> visit of dry clusters. Plots may be substituted later if the selected trees have not flowered during the year.
- (2) The field work of the newly added grama panchayats to a Municipal Corporation will be done as how they are treated as investigator zones in the concerned Block panchayath. The data generated for these zones will be pooled with the municipal corporation.

### Appendix-III

#### Average nutrient content of common Manures and Fertilizers

Material	Nutrient contents (Percentage)		
	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Ammonium Sulphate	20.5		
Ammonium Phosphate Sulphate	16.0	20.0	
Ammonium Sulphate Nitrate	26.0		
Ammonium Nitrate	33.5		
Ammonium Phosphate	20.0	20.0	
Calcium Ammonium Nitrate	20.5/25.0		
Diammonium Phosphate	18.0	46	
Nitrate of soda	16.5		
Urea	46.0		
Super Phosphate(Single)		18.0	
Super Phosphate (Double)		35.0	
Super Phosphate (Triple)		46.0	
Mussoriephos		18-20	
Muriate of Potash			50/60
Bone Meal	35	21.0	
Fish Meal	4.1	3.9	0.3-1.5
Sheep Manure	0.8-1.6	0.3-0.4	0.3-0.4
Paultry Manure	1.2-1.5	1.4-1.8	0.8-0.9
FYM	1.0	0.5	1.0
Compost	0.5	0.4	0.8
Groundnut Cake	7.0	1.5	1.5
Castor Cake	4.3	2.0	1.3
Neem Cake	5.0	1.0	1.5
Gingelly Cake	6.2	2.0	1.2
Coconut Cake	3.0	1.9	1.8
Mahua Cake	2.5	0.8	1.8
Farm Yard Manure	1	0.5	1
Cowdung	1.5	0.3	0.2
Biogas Slurry	1.6-1.8	1.1-2.0	0.8-1.2
Meat Meal	11	1.5	0.6



The Blood (Dried)	11.5		0.6
Sunhemp	2.6	0.5	2.0
Daincha	3.3	0.7	1.3
Kolinji	3.2	0.3	1.3
Sesbania	2.7	0.5	2.2
Glivicida	2.9	0.5	2.8
Paddy Straw	0.36	0.08	0.71
Household Ash	0.5-1.9	1.6-4.2	2.3-3.1
Cowpith Compost	1.25	0.06	1.20

### Conversion of Nutrient (Kg. /ha.) to Common Fertilizers (Kg. /Ha.)

Rate of Application	Ammonium Sulphate (20% N)	Urea (46% N)	Super Phosphate (18% P <sub>2</sub> O <sub>5</sub> )	Muriate of Potash	
				50% K <sub>2</sub> O	60% K <sub>2</sub> O
10	50	22	56	20	17
20	100	43	111	40	33
30	150	65	167	60	50
40	200	87	222	80	67
50	250	109	278	100	83
60	300	130	333	120	100
70	350	152	389	140	117
80	400	174	444	160	133
90	450	196	500	180	150
100	500	217	556	200	167
110	550	239	611	220	183
120	600	261	667	240	200
130	650	283	722	260	217
140	700	304	778	280	233
150	750	326	833	300	250

### Submission of final schedules

The final schedules in the prescribed forms may be sent to the headquarters within one week of the completion of the harvest in an investigator zone. The details in respect of each zone may be noted in the EARAS monthly progress report.

### Appendix-IV Returns relating to EARAS

Sl. No	Name of return	From whom due	To whom due	Due date
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Work allocation statement	TSO	D.D	5 <sup>th</sup> July
2	Consolidated work allocation statement	D.D	Director	10 <sup>th</sup> July
3	Monthly progress report on area enumeration	TSO	D.D	1 <sup>st</sup> working day of every month

4	Consolidated monthly progress report on area enumeration	D.D	Director	3 <sup>rd</sup> working day of every month
5	Consolidated monthly expenditure on EARAS	D.D	Director	3 <sup>rd</sup> working day of every month
6	Form IV abstract of wet lands			
	(1) Autumn	Inv	TSO	5 <sup>th</sup> September
		TSO	DD	10 <sup>th</sup> September
	(2) Winter	Inv	TSO	5 <sup>th</sup> December
		TSO	DD	10 <sup>th</sup> December
	(3) Summer	Inv	TSO	5 <sup>th</sup> April
		TSO	DD	10 <sup>th</sup> April
7	Form IV – Abstract of dry lands( 1 <sup>st</sup> visit)	Inv	TSO	2 <sup>nd</sup> January
		TSO	DD	5 <sup>th</sup> January
	Form IV – Abstract of dry lands( 1 <sup>st</sup> visit)	Inv	TSO	5 <sup>th</sup> July
8	Form IV – Consolidated statement for taluks (wet)	D.D	Director	Autumn-31 <sup>st</sup> September Winter- 15 <sup>th</sup> January Summer- 15 <sup>th</sup> June
9	Form IV – Consolidated statement for taluks (dry)	D.D	Director	5 <sup>th</sup> February
10	Form II Abstract	TSO	DD	15 <sup>th</sup> July
11	Form III A	TSO	DD	15 <sup>th</sup> July
12	Form III B	TSO	DD	15 <sup>th</sup> July
13	Form A	TSO	Director	30 <sup>th</sup> June
14	Consolidated statements on Form II, III A & III B	D.D	Director	30 <sup>th</sup> August
15	Progress report on crop cutting experiments			
	a) Paddy b) Tapioca c) Cashew, pepper, coconut, arecanut d) Other crops	TSO	DD	1 <sup>st</sup> working day of every month
16	Consolidated progress report on item 15	D.D	Director	2 <sup>nd</sup> working day of every month
17	Pre-harvest schedule of paddy			
	1) Autumn (Wet/Dry)	TSO	DD	20 <sup>th</sup> August/ 10 <sup>th</sup> September
	2) Winter (Wet/Dry)	TSO	DD	20 <sup>th</sup> November
	3) Summer (Wet/Dry)	TSO	DD	20 <sup>th</sup> March
18	Consolidated statement of pre-harvest schedules for taluks			

	1) Autumn	DD	Director	31 <sup>st</sup> August
	2) Winter	DD	Director	31 <sup>st</sup> December
	3) Summer	DD	Director	31 <sup>st</sup> March
19	Inspection report on crop cutting of paddy			
	1) Autumn	DD	Director	15 <sup>th</sup> November
	2) Winter	DD	Director	15 <sup>th</sup> March
	3) Summer	DD	Director	15 <sup>th</sup> July
20	Driage results on paddy	TSO	Deputy Director	15 days after the last CCE from each block
		DD	Director	
21	Special report of Deputy Director			
	1) Autumn	DD	Director	15 <sup>th</sup> November
	2) Winter	DD	Director	15 <sup>th</sup> March
	3) Summer	DD	Director	15 <sup>th</sup> July
22	Inspection report on crop cutting on tapioca	DD	Director	Within 30 days when CCE is completed
23	Final schedules on crop cutting on paddy	TSO	DD	Immediately after the completion of CCEs in the taluk
24	Compilation sheets of crop cutting on paddy			
	1) Autumn	DD	Director	15 <sup>th</sup> November
	2) Winter	DD	Director	15 <sup>th</sup> March
	3) Summer	DD	Director	15 <sup>th</sup> July
25	Final schedules on crop cutting on crops other than paddy	TSO	DD	Within two weeks when CCE in the taluk is completed
		DD	Director	Within one month the when CCE is completed

**Appendix-V**  
**The Cut off date for receipt of the forecast report**

<b>Sl. No.</b>	<b>Name of Crop</b>	<b>Cut-of date from Taluk</b>	<b>Cut-off Date (To Directorate)</b>
1.	Paddy-Autumn	25 <sup>th</sup> July	1 <sup>st</sup> August
2.	Paddy-Winter	26 <sup>th</sup> November	1 <sup>st</sup> December
3.	Paddy-Summer	10 <sup>th</sup> March	25 <sup>th</sup> March
4.	First Advance Estimate of other principal Crops (Seasonal)	1 <sup>st</sup> August	5 <sup>th</sup> August
5.	Second Advance Estimate of other principal Crops (Seasonal)	1 <sup>st</sup> December	5 <sup>th</sup> December
6.	Third Advance Estimate of other principal crops (Seasonal)	1 <sup>st</sup> March	5 <sup>th</sup> March

7.	Coconut	5 <sup>th</sup> August	15 <sup>th</sup> August
8.	Arecanut	5 <sup>th</sup> August	15 <sup>th</sup> August
9.	Pepper	10 <sup>th</sup> August	20 <sup>th</sup> August
10.	Cashew	15 <sup>th</sup> March	25 <sup>th</sup> March
11.	Banana	10 <sup>th</sup> August	20 <sup>th</sup> August
12.	Plantain	10 <sup>th</sup> August	20 <sup>th</sup> August
13.	Tapioca	10 <sup>th</sup> August	20 <sup>th</sup> August
14.	Pappaya	10 <sup>th</sup> August	20 <sup>th</sup> August
15.	Ginger	31 <sup>st</sup> December	15 <sup>th</sup> January
16.	Turmeric	31 <sup>st</sup> December	15 <sup>th</sup> January
17.	Sweet Potato	10 <sup>th</sup> August	20 <sup>th</sup> August
18.	Chillies	5 <sup>th</sup> April	15 <sup>th</sup> April
19.	Cardamom	25 <sup>th</sup> March	31 <sup>st</sup> March
1.	Pre harvest schedules of Autumn Paddy	15 <sup>th</sup> August	
2.	Pre harvest schedules of Winter Paddy	15 <sup>th</sup> December	
3.	Pre harvest schedules of Summer Paddy	15 <sup>th</sup> March	

## APPENDIX VI

### Crops to be covered by EARAS in Kerala

Sl. No.	Crop	Code	Period	
1	2	3	4	
<b>A. Seasonal crops</b>				
1	Autumn paddy	1	July - October	
2	Winter paddy	2	November February	—
3	Summer paddy	3	March – June	
4	Autumn pulses	4	July - October	
5	Winter pulses	5	November February	—
6	Summer pulses	6	March – June	
7	Horse gram	7	November February	-
8	Autumn tapioca	8	July - October	
9	Winter tapioca	9	November February	—
10	Summer tapioca	10	March – June	
11	Autumn sweet potato	11	July – October	
12	Winter sweet potato	12	November February	—
13	Summer sweet potato	13	March – June	
14	Tubers*	14	July – December	
15	Other vegetables	15	July – December	
16	Autumn sesamum	16	July - October	
17	Winter sesamum	17	November February	-
18	Summer sesamum	18	March - June	
19	Jowar	19	July - October	

20	Ragi	20	July - October
21	Other cereals and millets	21	July - October
22	Groundnut	22	July - October
23	Ginger	23	November - February
24	Turmeric	24	November - February
25	Cotton	25	November - February
26	Tobacco	26	July - October
27	Chillies	27	July - October
28	Onion	28	
29	Tur	29	
30	Other seasonal crops**	30	

\*Includes arrow root, koorka and potato

\*\* Includes Kolinchi, Chittaratha, Kacholam

## B. Annual Crops

31	Betel leaves	31	July - June
32	Banana	32	July – June
33	Plantain	33	July-June
34	Sugarcane	34	November - February
35	Pineapple	35	July-June

## C. Perennial Crops

36	Coconut
37	Arecanut
38	Palmyra
39	Cashew
40	Mango
41	Jack
42	Tamarind
43	Pepper
44	Rubber
45	Tea
46	Coffee
47	Cardamom
48	Cloves
49	Nutmeg
50	Cinnamon
51	Cocoa

52	Pappaya
53	Drumstick
54	Lemongrass
55	Fodder grass
56	Green manure crops
57	Other oil seed trees
58	Other fruit trees
59	Other trees included under net area sown

- Note:
1. Area under kudappana and vashana will be enumerated under other trees
  2. Area under neem, oil palm and castor plant will be enumerated under 'other oil seed trees'.
  3. Area under kudampuli will be enumerated under other fruit trees

## **2. The Scheme for Improvement of Crop Statistics (ICS)**

The scheme for ICS, which began modestly in 1973-74, reached optimum coverage in subsequent years. Since then, the scale of sample checks has been more or less stabilized. During 2001-2002, the scheme was implemented in 22 States and Union Territories including the EARAS States of Kerala, Orissa and West Bengal. In all the States, the checks were carried out by both agencies, except in Delhi, where the work was undertaken only in the Central Samples.

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

- a) Physical verification of the crop enumeration conducted by the village primary workers in a sample of about 10,000 villages in each season,**
- b) Verification of the aggregation of crop-wise area in the Khasra register of these villages**
- c) Inspection of about 31,000 crop-cutting experiments at harvest stage each year.**

The Sample checks are undertaken by the supervisory staff of NSO (FOD) and of the State Government on a matching basis in two non-overlapping samples. The basic data collected through these checks are exchanged between the two agencies. The scheme is under implementation in 20 States and 2 Union Territories.

Three schedules viz. AS.1.0, AS.1.1 and AS.2.0 for recording the findings of the sample check on (a) enumeration of area in a village (b) aggregation of area and (c) the crop cutting experiments respectively are designed to be filled-in by the supervisory staff of NSO (FOD) and State agencies after doing sample checks. The filled-in schedules are sent to both the agencies on reciprocal basis for tabulation and analysis. The NSO is responsible for all aspects of the scheme right from the primary stage of preparation of survey design and selection of sample units and field work for data processing and report writing. E - schedules are developed by NSO for AS 2.0.

The programme of sample check on Area enumeration actually consists of selecting and locating 4 clusters.

With the help of village maps the actual utilization to which the survey numbers are put to be recorded during each season and the corresponding entries by the primary workers in respect of these fields are compared.

The programme of sample check on area aggregation consists of finding out totals of area figures recorded by the primary worker under the different utilizations in the register commonly known as Khasra, Lal Kitab, Adangal etc. maintained by him and comparing them with the totals as arrived at by the supervisor.

The concurrent inspection of crop cutting experiments at harvest stage consists of examining whether the conduct of the experiments by the state primary workers conforms to the procedures prescribed under the GCES. The inspection covers such aspects as the selection of fields and random coordinates, marking of experimental plots of specified size, harvesting of plants, weighment of the produce etc. In addition, the position regarding the supply and use of equipments for conducting the experiments, training received by primary workers, crop conditions, use of inputs etc. is also ascertained.

The observations of the supervisor on area enumeration and area aggregation are recorded in two specially designed schedules AS.1.0 and AS.1.1. As the sample for ICS is generally chosen as a sub-sample of the villages under TRS or EARAS, the sample checks also help in finding out the actual manner of functioning of both the schemes. The observations of the supervisor on conduct of crop cutting experiments are recorded in schedule AS.2.0. The ICS sample villages for C.C Experiments being part of GCES villages, reveal the manner of implementation of GCES in different States.

The data collected through the sample check programme under the scheme for ICS are analyzed facilitating factual appraisal of the state systems with reference to the following.

- Timeliness in completion of area enumeration and working of the Timely Reporting Scheme (TRS).
- Discrepancies in recording crop and crop areas, their frequency and impact.
- Discrepancies in recording ancillary information, their frequency and impact.
- Discrepancies in crop abstract statements and their impact.
- Departures from the prescribed procedure for conducting crop cutting experiments and their impact.

The yield data from the supervised experiments are also made use of for obtaining the average yield rates of specified crops and their standard errors. These estimates are forwarded to the Ministry of Agriculture Development & Farmers' Welfare. They serve as one of the sources for preparation of advance estimates of crop production.

Two features introduced later in the ICS programme are (a) sample checks of aggregation of area figures above village level (b) District Level Committee consisting of representatives of the Central and State Governments for Joint Study to probe into the reasons for differences between the entries of the supervisor and primary worker in area enumeration. NSO has digitalized AS 2.0 and the process of digitalising the schedule AS1.0 is in progress.

### **GUIDELINES FOR THE FUNCTIONING OF DISTRICT LEVEL COMMITTEES (DLC)**

1. OBJECTIVE: - The main objective in forming DLCs is to probe into the reasons for the difference between the crop wise and non crop area figures recorded by the State primary worker during the crop inspection and those observed by the Central / State Supervisor during sample check on area enumeration under the scheme for Improvement of Crop Statistics (ICS).
2. SELECTION OF DISTRICTS FOR JOINT STUDY: - District Level Committee would be formed in two Districts in each State For this purpose, those Districts where the differences between the two sets of figures are quite large or negligible would be selected. The Districts selected in the previous year may not be considered for the selection for the current year.
3. Composition: - The District Level Committee would comprise the Assistant Director or above officer of the NSO (FOD) and equivalent and above officer in charge of ICS scheme at the District level. District level Gazetted officer from the Agriculture / Land Records or of other concerned Department may also be associated, if desired. In case the concerned

Assistant Director in SRO / NSRO is not available, the services of the equivalent officer posted in adjoining SRO / NSRO may be utilized for joint inspection.

4. Scope:- Under the ICS Scheme, sample checks are carried out in respect of (i) area enumeration (ii) area aggregation and (iii) crop cutting experiments. The DLC would, however confine itself to the spot verification of entries as recorded in Block 3.3 of schedule AS 1.0 (Sample Check on Area Enumeration).
5. Selection of Villages: - During each season, 4 sample villages (2 from Central and 2 from State samples) from each District will be selected for spot verification of area figures by the members of DLC. Villages selected in the earlier seasons will also be considered for selection during the current season, if they conform to the prescribed criteria. For this purpose, the Senior Statistical Officer of the NSO and the District Statistical Officer (DSO) would arrange to collect the office copies of filled in schedules AS 1.0 for the selected villages for the Central and State samples respectively in the selected District. While selecting the villages, care should be taken to ensure that:
  - (i) in these villages the extent of variations between the two sets of figures is quite large or nil
  - (ii) they are well spread over the entire District
  - (iii) they represent maximum number of supervision.

During its first meeting, the members would also draw tentative programme for visiting these four villages. While drawing the programme, it needs to be ensured that the field visits take place when the crops of the concerned season are standing in the fields.

6. Spot Verification: - The physical verification of crop enumeration needs to be completed well in time before the seasonal crops are harvested. For the physical verification the members would visit all the survey numbers selected for sample check and record their own findings by joint assessment of the area under the crop / non-crop utilization in each of the survey / serial number. If Patwari's entries ('b' entries) are not available in all the sample villages in the selected District, joint inspection need not be done in that District and only form DLC –I may be sent.

It would be desirable that the concerned Supervisor (ICS) and the Primary Worker accompany the members of the DLC during the physical verification so that their help can be taken to find out the basis for the entries made by them.

7. Reports: - The committee would prepare following reports: -
  - i) Preliminary Report: - After the DLC meets for the first time and selects the four villages, it would prepare a preliminary report (DLC-I) giving the date of the meeting, names and designation of the members and other officers who participated in the meeting, number of sample villages of which filled – in schedules were examined for selection of village, name of the four villages selected for spot verification and the dates proposed for visiting these villages.
  - ii) Village-wise Reports: - This Report (DLC-II) would be prepared after the committee has completed the physical verification of the area figures for all the survey numbers selected for sample check in the selected village. This report would indicate the actual survey numbers visited and the type of mistakes noticed between the two sets of figures. General comments on the reasons for the mistakes noticed and the quality of the field work would also be given in this report.
  - iii) General Report: - After visiting all the four villages, the committee would meet again to review the overall performance. A brief critical note (DLC-III) would be prepared on the basis of the findings of spot verification indicating the names of the villages visited along with the dates of visits, types of errors noticed, reasons for wide variation of entries between the Central and State sample villages, if any and suggestions for improving the quality of area enumeration by the primary worker, sample check by the Supervisor (ICS) and the functioning of the committee.



Specimen of the formats (DLC-I, II & III) proposed for recording the details of findings are enclosed. Four copies of each report would be prepared so that the members (Senior Statistical Officer and District Statistical Officer) can retain one copy each and forward one copy each to concerned SASA and the Director, NSO (FOD), Faridabad.

The committee would also arrange a meeting of all the concerned Central and State Supervisors to discuss the type of errors noticed along with the reasons for committing such errors and to clarify doubts, if any, so as to avoid repetition of such errors in future.

**DLC -I**  
**National Sample Survey Office**  
**(Field Operation Division)**  
**District Level Committee**  
**Preliminary Report**

State\_\_\_\_\_District\_\_\_\_\_Year\_\_\_\_\_Season\_\_\_\_\_

1. Date of meeting \_\_\_\_\_
2. Name(s) and designation of the members attending the meeting.
 

	i)	
	ii)	
	iii)	
3. Name and designation of other Officers attending the meeting
 

	i)	
	ii)	
	iii)	
4. No. of sample villages
 

	Central	State	Total
--	---------	-------	-------
- (a) For which schedule AS 1.0 examined.
- (b) No. of sample villages out of (a) above for which both 'a' and 'b' set of figures available.
5. Details of villages selected for spot verification
 

Name of the villages	Central / State	Name of the Supervisor	Proposed date for spot verification
1)			
2)			
3)			
4)			

\_\_\_\_\_  
 Signature of the Members (with name and date)

( **Senior Statistical Officer** )

( **D.S.O** )

( **Others** )

Forwarded to :-

- i) State Agricultural Statistics Authority, \_\_\_\_\_
- ii) Director, NSO (FOD), N.H-IV, Faridabad

**DLC-II**  
**National Sample Survey Office**  
**(Field Operation Division)**  
**District Level Committee**  
**Report on spot verification**

State \_\_\_\_\_ District \_\_\_\_\_ Year \_\_\_\_\_ Season \_\_\_\_\_

Date of visit by the DLC team \_\_\_\_\_

**I. Identification particulars of the village visited**

- |                                                                                                                                          |                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Tehsil / Taluk / Anchal _____<br>2. Name of the village _____<br><br>3. Order of selection _____<br>4. Sample (Central / State) _____ | 5(a) Name of Central / State Supervisor with designation whose work was verified _____<br><br>5(b) Name of Primary Worker with designation _____<br>6. Other Official(s) present at the time of visit.<br>(a) NSSO _____<br>(b) State _____ |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**II. Observations by the Committee Members**      Yes / No

- |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|--|---|-------|--|----|-------|--|-----|-------|--|----|-------|--|
| 1. Whether girdawari was done in time                                      | _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
| 1.1 If 'No' record reasons thereof                                         | _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
| 2. Whether sample check was done in time by the Supervisor.                | _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
| 2.2 If 'No' record reasons thereof                                         | _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
| 3. Whether season's crop were standing at the time of visit of the members | _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
| 4. Survey / Serial Nos. Visited for verification*                          | <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Cluster nos.</td> <td style="width: 40%;">Survey / Serial nos.</td> <td style="width: 30%;"></td> </tr> <tr> <td style="text-align: center;">I</td> <td>_____</td> <td></td> </tr> <tr> <td style="text-align: center;">II</td> <td>_____</td> <td></td> </tr> <tr> <td style="text-align: center;">III</td> <td>_____</td> <td></td> </tr> <tr> <td style="text-align: center;">IV</td> <td>_____</td> <td></td> </tr> </table> | Cluster nos. | Survey / Serial nos. |  | I | _____ |  | II | _____ |  | III | _____ |  | IV | _____ |  |
| Cluster nos.                                                               | Survey / Serial nos.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
| I                                                                          | _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
| II                                                                         | _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
| III                                                                        | _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |
| IV                                                                         | _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                      |  |   |       |  |    |       |  |     |       |  |    |       |  |

\*All the selected Survey / Sr. Nos. are to be visited for verification

## 5. Details of the mistake(s) observed (Code)

Agency responsible for mistakes	No. of Survey / Serial nos. where								Total
	No mistake was observed	Mistakes were observed according to error type							
	e <sub>0</sub>	e <sub>1</sub>	e <sub>2</sub>	e <sub>3</sub>	e <sub>4</sub>	e <sub>5</sub>	e <sub>6</sub>	e <sub>7</sub>	e <sub>1</sub> to e <sub>7</sub>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Supervisor									
Primary Worker									

e<sub>0</sub> = No mistakes.

e<sub>1</sub> = Wrong identification of crop.

e<sub>2</sub> = Measurement of field not done as per State procedure.

e<sub>3</sub> = Irrigation particulars wrongly recorded or not recorded.

e<sub>4</sub> = Seed variety wrongly recorded or not recorded.

e<sub>5</sub> = Conceptual mistakes observed.

e<sub>6</sub> = Enumeration done without following state procedure.

e<sub>7</sub> = Others (specify)

i) Reason for mistakes \_\_\_\_\_

ii) Quality of work of the :-

Primary Worker \_\_\_\_\_

Supervisor \_\_\_\_\_

Signature of the Members (with name and date)

( **Senior Statistical Officer** )

( **D.S.O** )

( **Others** )

Forwarded to:-

i) State Agricultural Statistics Authority, \_\_\_\_\_

ii) Director, NSO (FOD), N.H-IV, Faridabad

**DLC –III**  
**National Sample Survey Office**  
**(Field Operation Division)**  
**District Level Committee**  
**General Report**

State \_\_\_\_\_ District \_\_\_\_\_ Year \_\_\_\_\_ Season \_\_\_\_\_

1. Name of villages visited with order of selection

- i) \_\_\_\_\_
- ii) \_\_\_\_\_
- iii) \_\_\_\_\_
- iv) \_\_\_\_\_

2. Type of errors noticed

- i) \_\_\_\_\_
- ii) \_\_\_\_\_
- iii) \_\_\_\_\_
- iv) \_\_\_\_\_

3. Reason(s) for wide variation if any, in the Central and State sample villages between the Supervisor's and Primary Worker's entries.

- i) \_\_\_\_\_
- ii) \_\_\_\_\_
- iii) \_\_\_\_\_
- iv) \_\_\_\_\_

4. Suggestions for improvement on

- a) Area enumeration by Primary Workers.
- b) Sample Check by Supervisors
- c) Functioning of the Committee

5. General remarks:-

Signature of the Members (with name and date)

( **Senior Statistical Officer** )

( **D.S.O** )

( **Others** )

Forwarded to :-

- i) State Agricultural Statistics Authority, \_\_\_\_\_
- ii) Director, NSO (FOD), N.H-IV, Faridabad

**DLC -IV**  
**REPORT ON DISTRICT LEVEL COMMITTEE**

STATE: \_\_\_\_\_ SEASON: \_\_\_\_\_ YEAR: \_\_\_\_\_

- | <u>Item of information</u>                                                | <u>Name of the Districts</u> |           |
|---------------------------------------------------------------------------|------------------------------|-----------|
|                                                                           | (1) _____                    | (2) _____ |
| 1. Date of constitution                                                   | _____                        | _____     |
| 2. If not constituted, date(s) of issue of reminders from Hqrs.           | _____                        | _____     |
| 3. Date(s) of meetings for drawing programme for physical verification    | _____                        | _____     |
| 4. Name of villages visited for physical verification                     | (a) _____                    | (a) _____ |
|                                                                           | (b) _____                    | (b) _____ |
|                                                                           | (c) _____                    | (c) _____ |
|                                                                           | (d) _____                    | (d) _____ |
| 5. Date(s) of receipt for report at Hqrs.                                 | _____                        | _____     |
| 6. In case of non receipt of report, action taken by State unit           | _____                        | _____     |
| 7. Date(s) of issue of comments on report received from the field, if any | _____                        | _____     |
| 8. Consolidated details of the mistake observed (code) as per DLC-I       |                              |           |

Samples	Agency responsible for mistakes	No of Survey / Serial nos. where								Total
		No mistake was observed	Mistakes were observed according to error type							
		e <sub>0</sub>	e <sub>1</sub>	e <sub>2</sub>	e <sub>3</sub>	e <sub>4</sub>	e <sub>5</sub>	e <sub>6</sub>	e <sub>7</sub>	e <sub>1</sub> to e <sub>7</sub>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Central	Supervisors									
	Primary Workers									
State	Supervisors									
	Primary Workers									

9. No. of villages for which guidelines were followed \_\_\_\_\_
10. Reasons for not following the guideline, if any \_\_\_\_\_

**To**

**C & T Unit**  
**NSO (FOD) Hqrs.**  
**Faridabad**

**(S.S.O / Astt. Director)**  
**NSO (FOD), Hqrs. Faridabad**  
**State Unit: \_\_\_\_\_**

## **Preparation of Forecast Report**

The Department of Economics & Statistics prepares forecast report on area and yield per hectare on important crops in the state, every agricultural year. The data collected through the forecast report is the main source to prepare advance estimate of crops of respective season in an agricultural year.

Kerala being a non-land record state, the advance estimate is prepared on the basis of the forecast report and the final estimate is arrived on the basis of the data collected through Area Enumeration and crop estimation surveys under EARAS scheme.

At present, the assessment of area, yield and productivity of the crops are worked out on the basis of condition factors (except paddy) reported from taluks. The assessment of area under the crop and yield rate must be done at Zone level by the investigator and block level by the Statistical Inspectors. The Block level forecast report will be consolidated in taluks and forwarded to Deputy Director. At district level the Deputy Directors will check the condition factors as well as forecast report and forward the reports to the Directorate.

Crops for which the Forecast Estimate to be prepared

	Name of Crop	Area	Wight
1	Paddy Autumn	Ha	Kg/Ha
2	Paddy Winter	Ha	Kg/Ha
3	Paddy Summer	Ha	Kg/Ha
4	Coconut	Ha	Nos/Ha
5	Arecanut	Ha	Nos/Ha
6	Tapioca	Ha	Kg/Ha
7	Pepper (Dry Pepper)	Ha	Kg/Ha
8	Banana	Ha	Kg/Ha
9	Plantain	Ha	Kg/Ha
10	Ginger (Dry Ginger)	Ha	Kg/Ha
11	Turmeric (Dry Turmeric)	Ha	Kg/Ha
12	Cashew	Ha	Kg/Ha

### **1.Paddy**

Generally there are 3 forecast reports for paddy in 3 seasons. The first forecast is prepared on the basis of area estimate only, whereas the second and third forecast reports are prepared after assessing both area and yield rate. If any omission of area happened in first forecast then it must be included in the second forecast report. In case of an area where the sowing took place later (ie. after the enquiry to prepare the first report) such area should also be accounted in the second and third forecast report, and that fact should be noted in the remarks. In the case of paddy, the assessment should be in qualitative terms instead of condition factors. The methodology to prepare the first forecast report ie, forecast report of autumn paddy the assessment of yield rate may be done as follows.

#### **At Zone Level**

During each season, Investigator should meet a minimum of 10 prominent leading cultivators in the zone, who are using high yielding varieties and local variety seeds and inquire about the area and yield of current year and previous year. It must be ensured that in each season the same crop is grown during previous and current year. The format for collecting data is as follows.

## HY Variety / LOCAL Variety

Name of cultivator	Area (CY) Cent	Area(PY) Cent	Yield(CY) Cent	Yield(PY) Cent
1				
2				
.				
.				
.				
10				
Total HY/Local paddy area in the zone = .....				

Investigator should submit the list of HY & Local varieties to the Statistical Inspector.

**Block Level**

After receiving the list from all zones in a block the Statistical Inspector/ TSO select 10 leading cultivators in the block for each variety. Then calculate the yield of current year (CY) and previous year (PY) of the block for HY and local variety by weighted average method. The method of preparation of Forecast report at block level is given below.

## HY VARIETY

Name of cultivator	Area (CY) Cent	Area(PY) Cent	Yield(CY) Kg/Ha	Yield(PY) Kg/Ha
1	$a_1$	$b_1$	$x_1$	$y_1$
2	$a_2$	$b_2$	$x_2$	$y_2$
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
10	$a_{10}$	$b_{10}$	$x_{10}$	$y_{10}$
			Weighted Average $X_1$	Weighted average $Y_1$

$$X_1 = \frac{a_1x_1 + a_2x_2 + \cdots \cdots \cdots + a_{10}x_{10}}{a_1 + a_2 + \cdots \cdots + a_{10}}$$

$$Y_1 = \frac{b_1y_1 + b_2y_2 + \cdots \cdots \cdots + b_{10}y_{10}}{b_1 + b_2 + \cdots \cdots + b_{10}}$$

## Local variety

Name of cultivator	Area (CY) Cent	Area(PY) Cent	Yield(CY) Kg/Ha	Yield(PY) Kg/Ha
1	$a_1$	$b_1$	$x_1$	$y_1$
2	$a_2$	$b_2$	$x_2$	$y_2$
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
10	$a_{10}$	$b_{10}$	$x_{10}$	$y_{10}$
			Weighted Average $X_2$	Weighted average $Y_2$

$$X_2 = \frac{a_1x_1 + a_2x_2 + \cdots \dots + a_{10}x_{10}}{a_1 + a_2 + \cdots \dots + a_{10}}$$

$$Y_2 = \frac{b_1y_1 + b_2y_2 + \cdots \dots + b_{10}y_{10}}{b_1 + b_2 + \cdots \dots + b_{10}}$$

Let the total paddy Area of the block be

HY (CY)= $A_1$     Local (CY)= $A_2$   
 HY (CY)= $B_1$     Local (PY)= $B_2$

Then the weighted average of the yield (CY) is

$$W_1 = \frac{A_1X_1 + A_2X_2}{A_1 + A_2}$$

And weighted average of yield (PY) is

$$W_2 = \frac{B_1Y_1 + B_2Y_2}{B_1 + B_2}$$

Prepare the forecast report at the taluk as given below and forward to the DD.

#### Forecast Report

Name of Block	Area (CY) Ha	Area(PY) Ha	Yield(CY) Kg/Ha	Yield(PY) Kg/Ha
$B_1$	$A_1 + A_2$	$B_1 + B_2$	$w_1$	$w_1$
$B_2$				
.				
.				
.				

The Statistical Inspector/ TSO must conduct an enquiry to gather the information about the approximate area under the crop in the season for each block of the taluk and inquire at Krishibhavan, Padasekharasamithy, paddy producers samithy and other concerned Panchayat committees in his jurisdiction to ascertain the approximate area under High yield and Local variety. Similarly the estimates for winter and summer crops may also be arrived at the second and third forecast report. The name and address of the cultivators who furnish the information must be recorded in a register. DD should contact atleast 3 cultivators in every season and verify the details recorded in the register.

## 2. Other Crops

In respect of forecast of other crops also, the Investigator should contact 10 prominent leading cultivators for collection of details on area & yield of current year & previous year. In the case of other crops Investigator must find the condition factor (CF) on area of the crops for each cultivator by using the formula,

$$CF = \frac{\text{Area of crops during current year}}{\text{Area of crops during previous year}} \times 100$$

SI/TSO should select 10 leading cultivators in block level from the list submitted by the investigators. For the block level **CF of area**, take the simple average and for the block level **yield**, take weighted average.



## FORECAST REPORT OF OTHER CROPS

Name of cultivator	Area (CY) Ha	Area (PY) Ha	CF (Area) $\frac{CY}{PY}$	Yield (CY) Kg/Ha	Yield (PY) Kg/Ha
1					
2					
.					
.					
10					
Block			Simple average	Weighted average	Weighted average

With regard to Pepper, Ginger and Turmeric usually cultivator report the yield in terms of green pepper, raw ginger and raw turmeric respectively while reporting the forecast data, the quantity must be converted into black pepper, dry ginger and cured turmeric by using a conversion ratio. For ascertaining the ratio, knowledgeable cultivators may be contacted for understanding the trend and structure of materials of produce of conversion ratio and enter the details in the prescribed forms.

**ADVANCE ESTIMATION**

Generally crop wise area sown particulars are available only after conducting EARAS Survey in every season. But it is too late to estimate complete production at this juncture and of no use. This estimation should be well in advance prior to the EARAS Survey to access whether the estimated production is sufficient to cater the needs of stake-holders.

Further it is also required for the purpose of planning and to take policy decisions to regulate market fluctuations, public distribution, Export and Import policies, MSP etc ; and to take major policy decisions during the agriculture season (prior to the completion of EARAS Survey), data on agriculture production is essential and as such as GOI, Ministry of Agriculture introduced a system of preparing "Advance Estimates" in the year 1997-98 and being in implementation for estimation of production. The methodology followed for preparation of these estimates is shown below. Advance estimates are mainly for food grains, oil seeds, fibre crops and miscellaneous crops (32 crops). The advance estimates are treated as provisional estimates as they are based on incomplete information. The data collected through the forecast report is the main source to prepare advance estimate of crops of the respective seasons. Final estimate is arrived on the basis of the data collected through the Area enumeration and the crop estimation Surveys under EARAS Scheme.

State level Core Group Committee, chaired by Secretary Planning and Economic Affairs Dept., Govt. of Kerala has been set up with following officials as members for guidance and monitoring.

1. Director, Department of Economics and Statistics. (Convener).
2. Director, Department of Agriculture.
3. Director, Department of meteorology.
4. Joint Director (EARAS), Department of Economics and Statistics.
5. Joint Director (Agriculture Division) State Planning Board
6. Principal, Agriculture College, Vellayani, TVM

Govt. have also constituted a District level Core Group Committee for the finalisation of advance estimate of area and Production of agricultural crops at district level.

1. Deputy Director, Dept. of Economics and Statistics (Chairperson).
2. ADO, Dept. of Economics and Statistics.
3. Representatives for Principal Agricultural Office Agricultural Department
4. Representatives for District Planning Office.
5. Taluk Statistical Officers, Dept. of Economics and Statistics.

- [ 1. GO (Rt) No. 340/04/plg dt. 14.09.2004  
 2. GO (Rt) No. 431/07/plg dt. 05.10.2007  
 3. GO (Rt) No. 196/16/plg dt. 12.05.2016].

### **Timelines for Advance Estimates**

We have to prepare 3 advance & 1 final estimates relating to area, production and yield of principal crops and forward to Gov. of India in due time. The timelines for the Advance Estimates submitted to Government of India are given below.

Estimates	Data Receipt Timelines	States & Seasons Covered
1 <sup>st</sup> AE	Mid-August	Major States & Kharif Only
2 <sup>nd</sup> AE	1 <sup>st</sup> –2 <sup>nd</sup> week of January	Major States & Kharif and Rabi
3 <sup>rd</sup> AE	1 <sup>st</sup> –2 <sup>nd</sup> week of April	Major States & Kharif, Rabi and Summer
Final Estimate (erstwhile 4 <sup>th</sup> AE)	1 <sup>st</sup> Week of August	All States/UTs & Kharif, Rabi and Summer

### **List of Crops for which Advance Estimate is to be prepared.**

FOODGRAINS			OILSEEDS	
1	Rice		17	Groundnut
	Paddy		18	Castorseed
2	Wheat		19	Nigerseed
	COARSE CEREALS		20	Sesamum
3	Jowar	9	21	Rapeseed & Mustard
4	Bajra	10	22	Linseed
5	Maize	11	23	Safflower
6	Ragi	12	24	Sunflower
7	SMALL MILLETS		25	Soyabean
	Korra			FIBRE CROPS
	Kodra		26	Cotton #
	Varagu	13	27	Jute ##
	Kodo	14	28	Mesta ##
	Kutki	15	29	Sannhemp
	Samai	16		MISCELLANEOUS CROPS
	Cheena		30	Sugarcane
	Kudom			(a) Planted
	Others			(b) Harvested
8	Barley		31	Guarseed
			32	Tobacco

### **Preparation of First advance Estimates – Mid August**

#### **1. Area Estimation**

The exercise of Advance Estimates starts with the First Advance Estimates in area being sown under Kharif Crops. The estimates for **Kharif area** shall be based on weekly sowing progress extrapolated with

- ☐ previous sowing trends,
- ☐ rainfall,
- ☐ reservoir status,

- ☐ weather condition and
- ☐ any other factors affecting crop sowing

## 2. *Yield Estimation*

Initial indicative **Kharif crop yield** shall be estimated by taking average of previous 3 years and considering various parameters like

- ☐ climatic condition,
- ☐ rainfall intensity,
- ☐ dry spell,
- ☐ crop damage due to heavy rains,
- ☐ germination,
- ☐ growth,
- ☐ flowering,
- ☐ pod set,
- ☐ grain filling,
- ☐ pests and diseases.

Production is calculated using the formula Area x Yield

### **Preparation of Second advance Estimates – 1<sup>st</sup> – 2<sup>nd</sup> week of January**

#### 1. *Area Estimation*

The States where digital crop survey is operational, shall use their Kharif area based on crop survey for **Kharif crop area** estimates.

The States not conducting digital crop survey shall use District wise EARAS area estimates for compiling **Kharif crop area** estimates.

The **Area for Rabi** Estimates shall be based on weekly sowing progress extrapolated with

- ☐ previous sowing trends,
- ☐ rainfall,
- ☐ reservoir status,
- ☐ weather condition and
- ☐ any other factors affecting crop sowing

#### 2. *Yield Estimation*

**Kharif crop yield** should be based on crop cutting experiments conducted under GCES.

For longer duration Kharif crops like Tur, crop yield shall be estimated by taking average of previous 3 years and considering various parameters.

Initial indicative **Rabi yield** shall be estimated by taking average of previous 3 years and considering various parameters.

- ☐ climatic condition,
- ☐ rainfall intensity,
- ☐ dry spell,
- ☐ crop damage due to heavy rains,
- ☐ germination,
- ☐ growth,
- ☐ flowering,
- ☐ pod set,

- ☐ grain filling,
- ☐ pests and diseases.

### **Preparation of Third advance Estimates – 1<sup>st</sup> – 2<sup>nd</sup> week of April**

#### **1. Area Estimation**

The States conducting crop survey shall use their Kharif and Rabi area based on crop survey for **Kharif & Rabi crop area** estimates.

The States not conducting digital crop survey shall use EARAS area estimates for **Kharif & Rabi crop area** estimates

The **Area for Summer** Estimates shall be based on weekly sowing progress extrapolated with

- ☐ previous sowing trends,
- ☐ rainfall,
- ☐ reservoir status,
- ☐ weather condition and
- ☐ any other factors affecting crop sowing.

#### **3. Yield Estimation**

Both **Kharif & Rabi** crop yields should be based on crop cutting experiments.

Initial indicative **Summer yield** shall be estimated by taking average of previous 3 years yield.

### **Final advance Estimates – 1<sup>st</sup> Week of August**

#### **1. Area Estimation**

The States conducting digital crop survey shall use their area for **Kharif, Rabi and Summer** season based on crop survey.

The States not conducting digital crop survey shall use crop abstract based on **100% enumeration** of all villages for area estimates.

#### **4. Yield Estimation**

Crop yields of **Kharif, Rabi & Summer** crops shall based on crop cutting experiments results only.

### **Concluding Remarks**

For the estimation of area and production of crops, the Central Government is providing 100% financial support under TRS/EARAS and ICS schemes, technical guidance through field offices of NSO and a National Workshop on Agricultural Statistics and Conference held every year. The States are therefore, required to review and improve their system of collection and submission of data on area and production of crops on a continuous basis keeping in view increasing importance of these statistics.

## **11. Forecasting Agricultural Output using Space, Agro-metereology and Land based observations (FASAL)**

As per the decision of the expert committee meeting on 27-01-2014, a pilot study was conducted in Palakkad and Alappuzha districts of the state based on remote sensing method. The committee examined the results and found that the estimates ISRO and DES are comparable.

In the Expert Committee meeting held on 21-04-2014, the scientist ISRO explained the methodology being followed for estimating area and production of paddy by remote sensing. He also informed that currently there is a project in the Ministry of Agriculture for monitoring rice crop in 12 states coordinated and oversean by “Mahalanobis National Crop Forecasting Centre”, (MNCFC) New Delhi. But Kerala is not a member in the above project. So the committee decided to request Ministry of Agriculture to include DES Kerala in the project.

As per the request, Ministry of Agriculture agreed to include Kerala in FASAL project for the assessment of area and other crops and yield estimates of paddy for two districts, provided all possible support for the collection of ground truth data is given by the state Government. As per discussion with DES, it was proposed that the paddy area and other crops estimation work may be done in Alappuzha and Palakkad districts.

As part of Krishi Mapper, Ground Truthing (GT) is conducting in Alappuzha and Palakkad districts through smart phones using Android based application. Web portal is also available for monitoring GT. GT should be done for paddy (80%) and other crops (20%).

## LIST OF INVESTIGATOR ZONES

### THIRUVANANTHAPURAM

Taluk Statistical Office	Name of Block	Zone No.	Panchayath
Chirayinkeezhu	Chirayinkeezhu	1	Kizhuvilam
			Mudakkal
		2	Anchuthengu
			Chirayinkeezhu
			Kadakkavoor
			Vakkom
	Kilimanoor	1	Madavoor
			Pallickal
		2	Kilimanoor
			Nagaroor
		3	Navaikulam
		4	Karavaram
		5	Pazhayakunnummel
		6	Pulimath
	Varkala	1	Edava
			Elakamon
		2	Cherunniyoor
			Vettoor
		3	Manamboor
			Ottoor
		4	Chemmaruthy
	Pothencode	5	Azhoor
	Attingal Municipality	1	Attingal Municipality
	Varkala Municipality	1	Varkala Municipality
Nedumangad	Nedumangad	1	Karakulam
		2	Aruvikkara
		3	Anad
		4	Panavoor
		5	Vembayam
	Vellanad	1	Poovachal
		2	Aryanad
			Kuttichal
		3	Vithura
		4	Tholikkode
		5	Vellanad
			Uzhamalakkal

	Vamanapuram	1	Manickal
			Nellamad
		2	Nanniyode
		3	Peringammala
		4	Kallara
			Pangode
		5	Pullampara
			Vamanapuram
	Nedumangad (M)	1	Municipality
Neyyattinkara	Athiyanloor	1	Kanjiramkulam
			Athiyanloor
		2	Kottukal
			Karumkulam
		3	Venganoor
	Parassala	1	Kulathur
			Poovar
		2	Parassala
			Karode
		3	Chenkal
			Thirupuram
	Perumkadavila	1	Aryancode
			Kunnathukal
		2	Amboori
			Vellarada
		3	Kollayil
			Perumkadavila
		4	Ottasekharamangalam
			Kallikkad
	Vellamad	6	Kattakkada
	Nemom	2	Vilappil
			Vilavoorkkal
		3	Maranalloor
		4	Balaramapuram
			Pallichal
		5	Malayinkeezhu
	Neyyattinkara (M)	1	Neyyattinkara (M)
Thiruvananthapuram	Thiruvananthapuram (C)	1	Thiruvananthapuram (C)
		2	Thiruvananthapuram (C)
		3	Thiruvananthapuram (C)
		4	Thiruvananthapuram (C)
		5	Thiruvananthapuram (C)
		6	Thiruvananthapuram (C)
		7	Thiruvananthapuram (C)
		8	Thiruvananthapuram (C)
		9	Thiruvananthapuram (C)

	Nemom	1	Kalliyoor
	Pothencode	1	Andoorkonam
		2	Pothencode
		3	Mangalapuram
		4	Kadinamkulam

KOLLAM			
Taluk Statistical Office	Name of Block	Zone No.	Panchayath
Kollam	Chittumala	1	East Kallada
		2	Kundara
			Perayam
		3	Panayam
			Perinad
		4	Mandrothuruthu
			Thrikkaruva
	Ithikkara	1	Kalluvathukkal
		2	Adichanalloor
			Chathanloor
		3	Chirakkara
			Poothakkulam
	Mughathala	1	Mayyanad
		2	Thrikkovilvattom
			Elampalloor
			Kottamkara
		3	Nedumpana
	Paravoor ( M )	1	Paravoor ( M )
	Kollam ( C )	1	Kollam ( C )
	Kollam ( C )	2	Kollam ( C )
	Kollam ( C )	3	Kollam ( C )
Karunagappally	Chavara	1	Chavara
			Neendakara
		2	Thekkumbhagam
			Thevalakkara
		3	Panmana
	Oachira	1	Alappad
			Kulasekharapuram
		2	Clappana
			Oachira
		3	Thodiyoor
		4	Thazhava
	Karunagappally (M)	1	Karunagappally ( M )



Sasthamkotta (Kunnathur)	Sasthamcotta	1	Sasthamcotta
			West Kallada
		2	Kunnathur
			Poruvazhy
		3	Mynagappally
			Sooranadu South
		4	Sooranadu North
Kottarakkara	Chadayamangalam	1	Elamadu
			Vellinaloor
		2	Chadayamangalam
			Nilamel
		3	Ittiva
	Kottarakkara	4	Kadakkal
			Kummil
		5	Chithara
		1	Ezhukone
			Kareepra
		2	Pooyappally
		3	Neduvathoor
		4	Veliyam
	Vettikkavala	1	Melila
		2	Ummanoor
		3	Kulakkada
			Pavithreswaram
		4	Vettikkavala
		5	Mylom
	Kottarakkara ( M )	1	Kottarakkara ( M )
Pathanapuram	Anchal	1	Edamulakkal
		2	Alayamon
			Kulathupuzha
		3	Arienkavu
			Thenmala
		4	Anchal
			Karavallor
		5	Yeroor
	Pathanapuram	1	Piravanthur
		2	Pathanapuram
		3	Pattazhi
			Pattazhi Vadakkekkara
		4	Thalavoor
		5	Vilakudy
	Punalur (M)	4	Punalur (M)

PATHANAMTHITTA			
Taluk Statistical Office	Name of Block	Zone No.	Panchayath
Mallappally	Mallappally	2	Kottanadu
			Kottangal
		3	Anikkadu
			Mallappally
		4	Kallooppara
			Kunnamthanam
	Koipram	2	Ezhumattoor
			Puramattom
Thiruvalla	Mallappally	1	Kaviyoor
	Koipram	3	Koipram
		4	Eraviperoor
		5	Thottappuzhasserry
	Pulikkezhu	1	Kadapra
			Niranam
		2	Peringara
		3	Nedumpram
			Kuttoor
	Thiruvalla (M)	1	Thiruvalla (M)
Adoor	Parakodu	1	Kalanjoor
		2	Enadimangalam
			Kodumon
		3	Ezhamkulam
		4	Erathu
			Kadampanad
	Pandalam	3	Pallickal
			Pandalam Thekkekkara
	Thumpamon	3	Pandalam Thekkekkara
			Thumpamon
Kozhanchery	Pandalam	1	Aramula
		2	Kulanada
			Mezhuveli
	Elanthur	1	Elanthur
			Mallapuzhassery
		2	Chennerkkara
			Omallur
		3	Kozhanchery
			Naranganam

	Konni	1	Malayalapuzha
			Thannithode
		2	Konni
		3	Aruvapulam
		4	Pramadom
		5	Mylapra
	Pathanamthitta (M)		Vallicodu
Ranni	Ranni	1	Pathanamthitta (M)
		1	Vadasserikkara
		2	Naranammoozhy
			Perunadu
		3	Pazhavangadi
			Ranni
		4	Angadi
			Vechuchira
		5	Chittar
			Seethathodu
	Koipram	1	Ayroor
	Elanthur	4	Cherukole
<b>ALAPPUZHA</b>			
<b>Taluk Statistical Office</b>	<b>Name of Block</b>	<b>Zone No.</b>	<b>Panchayath</b>
Cherthala	Thycattussery	1	Arukutty
			Panavally
		2	Perumbalam
			Thucattussery
		3	Chennam-pallyppuram
	Pattanakkad	1	Aroor
			Ezhupunna
			Kuthiyathode
		2	Kodamthuruthu
			Thuravur
		3	Vayalar
			Pattanakkad
	Kanjikuzhi	1	Kadakkappally
			Cherthala South
		2	Kanjikkuzhy
			Mararikkulam North
	Cherthala Municipality	3	Thanneermukkam
		1	Cherthala (M)
Ambalappuzha	Aryad	1	Muhamma
		2	Mannancherry
		3	Aryad
			Mararikulam South

	Ambalapuzha	1	Punnapra North
			Punnapra South
		2	Ambalapuzha North
			Ambalapuzha South
		3	Purakkad
	Alapuzha Municipality	1	Alapuzha (M)
Kuttanadu	Chambakulam	1	Kainakary
			Nedumudi
		2	Thakazhy
			Chambakulam
	Veliyanad	3	Edathuva
			Thalavady
		1	Kavalam
			Neelamperur
		2	Pulinkunnu
			Veliyanad
		3	Muttar
			Ramankari
Chengannur	Chengannur	1	Budhanur
			Puliyoor
		2	Ala
			Cheriyannad
		3	Pandanad
			Thiruvannandoor
		4	Mulakkuzha
			Venmony
	Chengannoor (M)	1	Chengannoor (M)
Mavelikkara	Mavelikkara	1	Chennithalathripperumthura
			Mannar
		2	Chettikulangara
			Thekkekkara
	Bharanikkavu	3	Thazhakkara
		1	Chunakkara
			Nooranad
		2	Thamarakkulam
			Vallikunnam
	Mavelikara Municipality	3	Bharanikkavu
		4	Palamel
Karthikappally	Harippad	1	Mavelikara (M)
			Cheruthana
			Karthikappally
			Veeyapuram
			Pallippad

		2	Karuvatta
			Kumarapuram
			Thrikkunnapuzha
	Muthukulam	1	Cheppad
			Chingoli
		2	Muthukulam
			Pathiyur
		3	Arattupuzha
			Kandalloor
		4	Devikulangara
			Krishnapuram
	Harippad (M)	1	Harippad (M)
	Kayamkulam (M)	1	Kayamkulam (M)

KOTTAYAM			
Taluk Statistical Office	Name of Block	Zone No.	Panchayath
Meenachil	Erattupetta	1	Thidanad
	Erattupetta (M)		Erattupetta (M)
		2	Melukavu
			Thalappalam
		3	Moonnilavu
			Thalanad
		4	Poonjar
			Teekoy
	Erattupetta	5	Poonjar Thekkekara
	Lalam	1	Bharananganam
		2	Kadanad
		3	Karoor
		4	Kozhuvanal
			Mutholy
		5	Meenachil
	Uzhavoor	1	Kadaplamattom
			Marangattupilly
		2	Kanakkari
			Kuravilanagad
		3	Ramapuram
		4	Uzhavoor
			Veliyannoor
	Pala (M)	1	Pala (M)

	Pampady	6	Kidangoor
Kottayam	Ettumanoor	1	Arpookkara
		2	Athirampuzha
		3	Ayimanam
		4	Kumarakom
		5	Neendoor
		6	Thiruvappu
	Pallom	1	Ayarkunnam
		2	Panachikkad
		3	Puthuppally
			Vijayapuram
	Pampady	1	Akalakkunnam
		2	Kooropada
			Manarcaud
		3	Meenadom
			Pampady
	Pampady	4	Pallikkathode
	Ettumanoor (M)	1	Ettumanoor (M)
	Kottayam (M)	1	Kottayam (M)
Vaikom	Kaduthuruthy	1	Kaduthuruthy
		2	Kallara
		3	Mulakkulam
			Njezhoor
		4	Thalayolapparambu
			Velloor
	Vaikom	1	Chembu
			Maravanthuruthu
		2	Thalayazham
		3	T.V. Puram
	Vaikom (M)		Vaikom (M)
	Vaikom	4	Udayanapuram
		5	Vechoor
	Uzhavoor	5	Manjoor
Kanjirappally	Kanjirappally	1	Erumely
			Manimala
		2	Kanjirappally
		3	Koottickal

		4	Koruthode
			Mundakayam
		5	Parathode
	Pampady	5	Elikkulam
	Vazhoor	6	Chirakkadavu
Changanasseri	Vazhoor	1	Karukachal
		2	Kangazha
		3	Nedumkunnam
		4	Vazhoor
		5	Vellavoor
	Madappally	1	Madappally
			Vazhappally
		2	Paippad
			Thrikkodithanam
		3	Vakathanam
	Pallom	4	Kurichy
	Changanasseri (M)	1	Changanasseri (M)
<b>IDUKKI</b>			
<b>Taluk Statistical Office</b>	<b>Name of Block</b>	<b>Zone No.</b>	<b>Panchayath</b>
Devikulam	Adimali	1	Adimali
		2	Pallivasal
		3	Vellathooval
	Devikulam	1	Mangulam
			Marayoor
		2	Vattavada
		3	Kanthalloor
Udumbanchola	Adimali	4	Bison Valley
	Devikulam	4	Chinnakkanal
			Santhampara
	Kattappana	1	Chakkupallam
		2	Erattayar
			Vandanmedu
	Nedumkandam	1	Rajakad
			Rajakumary
		2	Senapathy
			Udumbanchola
		3	Nedumkandam

		4	Karunapuram
		5	Pambadumpara
Peerumed	Azhutha	1	Kumily
			Vandiperiyar
		2	Peerumade
		3	Elappara
		4	Kokkayar
			Peruvananthanam
	Kattappana	4	Upputhara
Thodupuzha	Thodupuzha	1	Edavatty
		2	Manakkad
		3	Kumaramangalam
		4	Muttam
		5	Karinkunnam
	Purapuzha		
	Elamdesom	1	Kodikkulam
			Vannapuram
		2	Karimannur
		3	Udumbannur
		4	Velliyamattom
		5	Alakkode
	Kudayathur		
	Idukki	4	Arakulam
	Thodupuzha ( M )	1	Thodupuzha ( M )
Idukki	Idukki	1	Kamakshy
			Mariyapuram
		2	Vathikudy
		3	Idukki - Kanjikuzhy
	Vazhathope		
	Adimali	5	Konnathady
	Kattappana	3	Ayyappan coil
Kanchiyar			
Kattappana (M)	1	Kattappana (M)	
			Not included in EARAS
	Devikulam		Munnar
			Devikulam
			Edamalakkudy
ERNAKULAM			
Taluk Statistical Office	Name of Block	Zone No.	Panchayath
Aluva	Angamali	1	Ayyampuzha
		2	Karukutty
			Mookkannur
		3	Manjapra
Thuravoor			



		4	Malayattoor-Neeleswaram
		5	Kalady Kanjoor
	Parakkadavu	1	Nedubassery Parakkadavu
			Chengamanadu Sreemoolanagaram
		2	Edathala Aluva (M)
			Choornikkara Keezhumadu
	Vazhakkulam	4	Edathala Aluva (M)
		5	Choornikkara Keezhumadu
	Angamaly (M)	1	Angamaly (M)
	Parakkadavu	3	Kunnukara Puthenvelikkara
North Paravoor	Paravoor	1	Chendamangalam Parur (M)
			Chittattukara Vadakkekkara
		2	Ezhikkara Kottuvally
			Alangad Karumalloor
		3	Kadungallore Varappuzha
			Eloor (M)
	Alangad	1	Alangad Karumalloor
		2	Kadungallore Varappuzha
			Eloor (M)
		3	Alangad Karumalloor
Kunnathunad	Vazhakkulam	1	Kizhakkambalam
		2	Vazhakkulam
		3	Vengola
	Vadavucode	1	Thiruvaniyoor
		2	Poothrikka Aikkaranad
			Mazhuvannoor
		4	Kunnathunadu
		5	Vadavucode-Puthercruz
	Perumbavoor(M)	1	Perumbavoor(M)
Muvattupuzha	Muvattupuzha	1	Valakom Marady
			Paipra
		3	Arakuzha Avoly
			Ayavana
		5	Kalloorkkadu Manjalloor
			Manjalloor
	Pambakkuda	1	Elanji

		2	Pampakuda
			Ramamangalm
		3	Thirumarady
			Palakuzha
	Muvattupuzha (M)	1	Muvattupuzha (M)
	Koothattukulam(M)	1	Koothattukulam(M)
	Piravom(M)	1	Piravom(M)
Kanayannur	Mulanthuruthy	5	Maneed
	Mulanthuruthy	1	Edakkattuvayal
		2	Mulanthuruthy
			Chottanikkara
		3	Udayamperoor
		4	Amballoor
	Edappilly	1	Cheranallor
			Kadamakkudy
	Edappilly	2	Mulavukadu
			Elamkunnappuzha
	Thrikkakara (M)	1	Thrikkakara (M)
	Thrappunithura (M)	1	Thrappunithura (M)
	Kochi (C)	1	Kochi (C)
		2	Kochi (C)
	Kalamassery (M)	1	Kalamassery (M)
	Maradu (M)	1	Maradu (M)
Kochi	Palluruthy	1	Kumblangi
			Chellanam
		2	Kumbalam
	Vypin	1	Edavanakkadu
			Kuzhupilly
			Pallippuram
		2	Nayarambalam
			Njarakkal
	Kochi (C)	3	Kochi (C)
Kunnathunad	Koovappady	1	Asamannur
		2	Vengoor
		3	Mudakuzha
		4	Rayamangalam
		5	Koovappady
			Okkal
Kothamangalam	Kothamangalam	1	Kavalangad
		2	Pothanikkad
			Paigottoor
		3	Varapetty
			Pallarimangalam
		4	Nellikuzhi
			Pindimana

		5	Keerampara
			Kuttampuzha
		6	Kottapady
	Kothamangalam(M)	1	Kothamangalam(M)
THRISSUR			
Taluk Statistical Office	Name of Block	Zone No.	Panchayath
Thrissur	Anthikkad	1	Anthikkad
		2	Arimpur
		3	Chazhur
		4	Manalur
		5	Thanniyam
	Cherpu	1	Avinissery
			Vallachira
		2	Cherpu
		3	Paralam
	Puzhakkal	1	Adat
			Tholur
		2	Avannoor
		3	Kaipparambu
		4	kolazhy
			Mulamkunnathukavu
	Ollukkara	1	Madakkathara
		2	Nadathara
		3	Panancherry
		4	Puthur
	Thrissur (C)	1	Thrissur (C)
		2	Thrissur (C)
		3	Thrissur (C)
Mukundapuram	Chalakkudy	1	Kadukutty
		2	Kodassery
		3	Koratty
		4	Melur
		5	Athirapally
			Pariyaram
	Irinjalakkuda	1	Karalam
			Kattoor
		2	Muriyad
			Parappukkara

	Kodakara	1	Alagappa nagar
			Puthukkad
		2	Kodakara
		3	Mattathur
		4	Nenmenikkara
			Thrikkur
		5	Varandarapilly
	Vellangallur	1	Padiyoor
			Poomangalam
		2	Puthenchira
		3	Vellangallur
		4	Velookara
	Chalakkudy (M)	1	Chalakkudy (M)
	Iringalakuda (M)	1	Iringalakuda (M)
	Mala	1	Aloor
		2	Annamanada
		3	Kuzhur
		4	Mala
Kodungallur	Mala	5	Poyya
	Mathilakom	1	Edathuruthy
		2	Kaipamangalam
			Perinjanam
		3	Edavilange
			Mathilakam
		4	Sree narayanapuram
		5	Eriyad
	Kodungallur (M)	1	Kodungallur (M)
Chavakkad	Chavakkad	1	Kadappuram
			Orumanayoor
			Punnayur
		2	Punnayoorkulam
			Vadakkekkad
	Mullassery	1	Venkidangu
		2	Mullassery
		3	Elavally
			Pavaratty
	Thalikkulam	1	Valappad

		2	Nattika
			Thalikkulam
		3	Engadiyoor
			Vadanapally
	Guruvayoor (M)	1	Guruvayoor (M)
	Chavakkad (M)	1	Chavakkad (M)
Thalappally	Chowannur	1	Choondal
			Kandanissery
		2	Kadagod
		3	Chowannur
			Kadavallur
		4	Kattakampal
			Porkulam
		5	Velloor
	Pazhayannur	1	Chelakkara
		2	Kondazhy
		3	Pazhayannur
		4	Thiruvilluamala
		5	Panjal
			Vallathol Nagar
	Wadakkancherry	1	Desamangalam
			Varavoor
		2	Erumapetty
		3	Mulloorkara
			Thekkumkara
	Kunnamkulam (M)	1	Kunnamkulam (M)
	Wadakkancherry (M)	1	Wadakkancherry (M)
<b>PALAKKAD</b>			
<b>Taluk Statistical Office</b>	<b>Name of Block</b>	<b>Zone No.</b>	<b>Panchayath</b>
Chittoor	Chittoor	1	Eruthempathy
		2	Kozhinjanpara
		3	Nelleppully
		4	Perumatty
		5	Vadakarapathy
	Kollengode	1	Koduvayoor
			Vadavannur

		2	Kollengode
			Puthunagaram
		3	Muthalamada
		4	Muthalamada
		5	Pattanchery
	Nenmara	1	Elevencherry
		2	Pallassena
		3	Ayiloor
		4	Nenmara
	Chittoor-Thathamangalam (M)	1	Chittoor-Thathamangalam (M)
Alathur	Nenmara	5	Melarcod
		6	Vandazhy
	Alathur	1	Kizhakkenchery (P)
		2	Kizhakkenchery(P)
		3	Vadakkenchery
		4	Kannambra
			Puthucod
		5	Tharur
		6	Kavassery
		7	Alathur
			Erimayur
	Kozhalmannam	1	Kozhalmannam
		2	Kottayi
			Mathur
		3	Kuthanur
		4	Peringottukurissy
		5	Thenkurissi
Palakkad	Kozhalmannam	6	Kannadi
	Malampuzha	1	Akathethara
			Puthupariyaram
		2	Malampuzha
		3	Marutharode
			Kodumba
		4	Puthussery
		5	Puthussery
	Palakkad	1	Keralassery
			Kongad
		2	Mankara
			Mannur
		3	Parali
			Pirayiri

		4	Mundur
	Kollengode	6	Peruvemba
	Chittoor	6	Elapully
		7	Polpully
	Palakkad (M)	1	Palakkad (M)
Ottappalam	Ottappalam	1	Ambalapara
		2	Ananganad
		3	Chalavara
		4	Lakkidiperur
		5	Vaniyamkulam
		6	Nellaya
		7	Vallappuzha
		8	Trikkadeeri
	Pattambi	1	Koppam
		2	Ongallur
		3	Muthuthala
			Paruthur
		4	Thiruvegapura
		5	Kolukkalloor
			Vilayoor
	Thrithala	1	Anakkara
		2	Chalissery
			Kapur
		3	Nagalassery
		4	Pattithara
		5	Thirumittacode
		6	Thrithala
	Sreekrishnapuram	1	Kadampazhipuram
		2	Karimpuzha
		3	Pookkottukavu
		4	Sreekrishnapuram
		5	Vellinezhy
	Ottappalam (M)	1	Ottappalam (M)
	Shornur (M)	1	Shornur (M)
	Pattambi (M)	1	Pattambi (M)
	Cherpulassery (M)	1	Cherpulassery (M)
Mannarkkad	Sreekrishnapuram	6	Karakurussy
	Mannarkkad	1	Alanallur
		2	Kottupadam
		3	Kottupadam
		4	Thachanattukara
		5	Kumaramputhur
			Kanjirapuzha
		6	Thenkara

		7	Thachampara
		8	Karimba
	Attappady	1	Sholayar
		2	Sholayar
		3	Puthoor
		4	Puthoor
		5	Agali
		6	Agali
	Mannarkkad (M)	1	Mannarkkad (M)

MALAPPURAM			
Taluk Statistical Office	Name of Block	Zone No.	Panchayath
Ernad	Nilamboor	1	Edakkara
			Pothukallu
		2	Moothedam
			Vazhikkadavu
		3	Chungathara
		4	Chaliyar
	Arikkode	1	Cheekkode
			Keezhparambu
		2	Kuzhimanna
			Pulpatta
		3	Areacode
			Kavanoor
		4	Oorgatiri
		5	Edavanna
	Kondotty	1	Chelempira
			Cherukavu
		2	Pallickal
		3	Muthuvalloor
			Pulikkal
		4	Vazhakkadu
			Vazhayoor
	Wandoor	1	Thrikkalangod
		2	Pandikkadu
		3	Porur
		4	Thiruvali
		5	Wandoor



		6	Mampad
	Kalikav	1	Chokad
			Kalikavu
		2	Amarambalam
			Karulayi
		3	Thuvoor
		4	Karuvarakundu
	Malappuram	1	Ponmala
		2	Anakkayam
		3	Morayur
			Pookottur
	Vengara	5	Orakam
	Kottakkal(M)	1	Kottakkal(M)
	Manjeri (M)	1	Manjeri (M)
	Nilambur(M)	1	Nilambur(M)
Thirur	Malappuram (M)	1	Malappuram (M)
	Kondotty (M)	1	Kondotty (M)
	Kuttippuram	1	Kuttippuram
		2	Irimpiliyam
		3	Edayoor
		4	Marakkara
			Athavanad
		5	Kalpakanchery
	Thanur	1	Niramarathur
			Thanalur
		2	Cheriyamundam
			Valavannur
		3	Permannaklari
			Ponmundam
		4	Ozhur
	Thirurangadi	1	Nannambra
		2	Munniyoor
		3	Peruvallur
			Thenjippalam
		4	Vallikkunnu
	Tirur	1	Purathur
		2	Thriprangode
		3	Thalakkad
			Thirunavaya
		4	Mangalam
			Vettam
	Vengara	1	Edarikkodu
			Thennala

		2	Kunnamangalam
			Vengara
		3	A.R. Nagar
		4	Parappoor
	Malappuram	4	Othukkungal
	Thanur (M)	1	Thanur (M)
	Parappangadi (M)	1	Parappangadi (M)
	Thiruangadi (M)	1	Thiruangadi (M)
	Valancheri (M)	1	Valancheri (M)
	Tirur (M)	1	Tirur (M)
Perinthalmanna	Mankada	1	Moorkkanad
			Puzhakkattiri
		2	Kuruva
			Makkaraparambu
		3	Koottilangadi
			Mankada
	Perinthalmanna	1	Keezhattur
			Melathur
		2	Vettathoor
		3	Thazhekkode
		4	Alipparamba
		5	Ealamkulam
			Pulamanthole
		6	Angadippuram
	Kalikav	5	Edappetta
	Malappuram	5	Kodur
	Perinthalmanna (M)	1	Perinthalmanna (M)
Ponnani	Perumpadappu	1	Perumpadappu
		2	Nannammukku
		3	Alamcode
		4	Marancheri
		5	Veliyamkode
	Ponnani	1	Edappal
		2	Vattamkulam
		3	Thavannur
		4	Kaladi
	Ponnani (M)	1	Ponnani (M)
<b>KOZHIKODE</b>			
<b>Taluk Statistical Office</b>	<b>Name of Block</b>	<b>Zone No.</b>	<b>Panchayath</b>
Kozhikkod	Chelannur	1	Nanmanda
			Thalakulathur
		2	Kakkoor

			Narikkuni
		3	Chelannur
			Kakkodi
	Koduvally	1	Omassery
			Thamarassery
		2	Kattippara
			Puthuppady
		3	Kizhakoth
			Madavoor
		4	Koodaranji
			Thiruvambadi
		5	Kodencherry
	Kunnamangalam	1	Kunnamangalam
			Kuruvattoor
		2	Chathamangalam
			Mavoor
		3	Karassery
			Kodiyathoor
		4	Perumanna
			Peruvayal
	Kozhikkode	1	Kadalundi
		2	Olavanna
	Ferroke - Ramanattukara(M)	1	Ramanattukara(M)
			Ferroke(M)
	Koduvally(M)	1	Koduvally(M)
	Mukkam(M)	1	Mukkam(M)
	Kozhikode(C)	1	Kozhikode(C)
		2	Kozhikode(C)
		3	Kozhikode(C)
		4	Kozhikode(C)
Koilandy	Balussery	1	Koorachundu
		2	Unnikulam
		3	Panangad
		4	Kottoor
			Naduvannur
		5	Balusseri
			Ulliyeri

	Melady	1	Meppayur
			Thurayoor
		2	Keezhariyoor
			Thikkodi
	Panthalayini	1	Atholi
		2	Chemmancherry
			Chengotukavu
		3	Arikkulam
			Moodadi
		1	Chakkittapara
	Perambra	2	Changaroth
		3	Perambra
		4	Kayanna
			Koothali
		5	Cheruvannoor
			Nochad
	Payyoli(M)	1	Payyoli(M)
	Quilandy (M)	1	Quilandy (M)
Vadakara	Kunnummel	1	Naripetta
		2	Kuttiyadi
			Velam
		3	Kayakkodi
			Kunnummel
		4	Maruthomkara
		5	Kavilumpara
	Thodannoor	1	Ayancheri
		2	Thiruvallur
		3	Villiapally
		4	Maniyoor
	Thuneri	1	Edachery
			Tuneri
		2	Nadapuram
			Puramery
		3	Chekkiyad
		4	Valayam
		5	Vanimel
	Vadakara	1	Azhiyoor

			Onchiyam
		2	Chorode
		3	Eramala
	Vadakara (M)	1	Vadakara (M)
<b>WAYANAD</b>			
<b>Taluk Statistical Office</b>	<b>Name of Block</b>	<b>Zone No.</b>	<b>Panchayath</b>
Kalpetta	Kalpetta	1	Pozhuthana
		2	Vythiri
		3	Meppady
		4	Meppady
		5	Muppainadu
		6	Muttill
		7	Muttill
		8	Kottathara
		9	Padinjarathara
		10	Thariyode
		11	Vengapally
	Panamaram	1	Kaniyambetta
		2	Kaniyambetta
	Kalpetta (M)	1	Kalpetta (M)
Mananthavady	Mananthavady	1	Thondernadu
		2	Thondernadu
		3	Vellamunda
		4	Vellamunda
		5	Edavaka
		6	Thirunelly
		7	Thirunelly
		8	Thavinhal
		9	Thavinhal
	Panamaram	7	Panamaram
		8	Panamaram
	Mananthavady(M)	1	Mananthavady(M)
Sulthan Bathery	Sulthan Bathery	1	Ambalavayal
		2	Nenmeni
		3	Nenmeni
		4	Noolpuzha

		5	Meenangady
	Panamaram	3	Poothady
		4	Poothady
		5	Pulpally
		6	Mullankolly
	Sulthan Bathery(M)	1	Sulthan Bathery(M)
<b>KANNUR</b>			
<b>Taluk Statistical Office</b>	<b>Name of Block</b>	<b>Zone No.</b>	<b>Panchayath</b>
Thaliparamba	Irikkur	1	Kuttiyattoor
		2	Mayyil
		3	Irikkur
			Malappattam
		4	Padiyoor
		5	Ulikkal
		6	Ulikkal
		7	Payyavoor
		8	Eruvessi
	Payyannur	2	Karivellur-Peralam
			Ramanthali
		3	Eramam-Kuttoor
		4	Eramam-Kuttoor
		5	Peringom
		6	Peringom
		7	Cherupuzha
		8	Kankol Alapadamba
	Thaliparamba	2	Pattuvam
		3	Kurumathur
		4	Chengalayi
		5	Naduvil
		6	Alakkode
		7	Udayagiri
		8	Chapparapadavu
		9	Pariyaram
	Edakkad	3	Kolacheri
	Anthoor(M)	1	Anthoor(M)
	Payyannur(M)	1	Payyannur(M)

	Sreekandapuram(M)	1	Sreekandapuram(M)
	Thaliparamba(M)	1	Thaliparamba(M)
Thalassery	Iritty	1	Aralam
		2	Aralam
		3	Ayyankunnu
		4	Ayyankunnu
		5	Payam
		6	Thillankeri
		7	Keezhallur
		8	Koodali
	Koothuparamba	1	Thrippangottur
		2	Kottayam
			Pattiam
		3	Kunnothuparamba
		4	Chittariparamba
		5	Mangattidam
	Panoor	1	Kathirur
			Mokeri
		2	Chokli
			Panniannoor
	Peravoor	1	Kottiyoor
		2	Kelakam
		3	Kanichar
		4	Peravoor
		5	Muzhakkunnu
		6	Malur
		7	Kolayad
	Thalassery	1	Eranholi
			New Mahe
			Pinarayi
		2	Dharmadam
			Vengad
	Kuthuparamba(M)	1	Kuthuparamba(M)
	Mattannur(M)	1	Mattannur(M)
	Panoor(M)	1	Panoor(M)
	Iritty(M)	1	Iritty(M)
	Thalassery(M)	1	Thalassery(M)

Kannur	Kalliasseri	1	Cheruthazham
		2	Ezhome
			Madayi
		3	Cherukunnu
			Kannapuram
			Mattool
		4	Kalliasseri
			Narath
	Edakkad	1	Chembilod
			Munderi
		2	Kadambur
			Peralasseri
	Kannur	1	Azhikkod
			Chirakkal
		2	Pappinisseri
			Valapattanam
Thalasseri	3	Anjarakandi	
		Muzhappilangad	
Payyannur	1	Kunhimangalam	
Thaliparamba	1	Kadannappali-Panappuzha	
Kannur(C)	1	Kannur(C)	
	2	Kannur(C)	
	3	Kannur(C)	
KASARGODE			
Taluk Statistical Office	Name of Block	Zone No.	Panchayath
Kasaragod	Kasaragod	1	Madhur
			Mogral puthur
		2	Chengala
		3	Chengala
		4	Chemnadu
		5	Badiyadukka
	6	Kumbala	
	Karadukka	1	Bedadukka
		2	Bedadukka
		3	Kuttikkol
4		Kuttikkol	
5		Muliyar	



		6	Karadka
		7	Delembady
		8	Delembady
		9	Bellur
			Kumbadaje
	Manjeswar	1	Manjeswar
		2	Vorkkady
		3	Meenja
		4	Mangalpady
		5	Paivelige
		6	Paivelige
		7	Puthige
		8	Enmakaje
		9	Enmakaje
	Kasargod (M)	1	Kasargod (M)
Hosdurg	Kanhangad	1	Ajannor
		2	Madikai
		3	Pallikkare
		4	Pullur - Peria
		5	Pullur - Peria
		6	Udma
	Parappa	1	Balal
		2	Balal
		3	Kodom Belur
		4	Kodom Belur
		5	Kallar
		6	Panathadi
		7	East Eleri
		8	East Eleri
		9	Kinanur Karithalam
		10	Kinanur Karithalam
		11	West Eleri
		12	West Eleri
	Neeleswar	1	Cheruvathur
			Padanna
		2	Kayyur - Chemeni
		3	Kayyur - Chemeni
		4	Pilicode
		5	Thrikkaripur
			Valiaparamba
	Kanjangad (M)	1	Kanjangad (M)
	Neeleswar (M)	1	Neeleswar (M)

**Appendix-X**  
**Statement showing the distribution of crop cutting experiments allotted to different Blocks,**  
**Municipalities and Corporation**

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Athiyannur #1	3	12	12	12	6	9	6	6	6	6	6	9	6
2	Chirayinkeezh #2	2	20	20	20	4	6	4	4	4	4	4	6	4
3	Kilimanoor	6	32	32	32	12	18	12	12	12	12	12	18	12
4	Nedumangadu	5	20	20	20	10	15	10	10	10	10	10	15	10
5	Nemom	5	28	28	28	10	15	10	10	10	10	10	15	10
6	Parassala	3	24	24	24	6	9	6	6	6	6	6	9	6
7	Perunkadavila	4	32	32	32	8	12	8	8	8	8	8	12	8
8	Pothenkode	5	20	20	20	10	15	10	10	10	10	10	15	10
9	Vamanapuram	5	32	32	32	10	15	10	10	10	10	10	15	10
10	Varkala	4	28	28	28	8	12	8	8	8	8	8	12	8
11	Vellanad	6	32	32	32	12	18	12	12	12	12	12	18	12
12	Neyyattinkara(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
13	Attingal (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
14	Nedumangad (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
15	Varkala (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
16	Thiruvananthapuram Corp	9	36	36	36	18	27	18	18	18	18	18	27	18
	<b>Thiruvananthapuram District</b>	<b>61</b>	<b>332</b>	<b>332</b>	<b>332</b>	<b>122</b>	<b>183</b>	<b>122</b>	<b>122</b>	<b>122</b>	<b>122</b>	<b>122</b>	<b>183</b>	<b>122</b>

#1 – No wet cluster in Kanjiramkulam and Karimkulam Panchayath      #2 - No wet cluster in Anchuthengu Panchayath

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Anchal	5	32	32	32	10	15	10	10	10	10	10	15	10
2	Chadayamangalam	5	32	32	32	10	15	10	10	10	10	10	15	10
3	Chavara #1	3	16	16	16	6	9	6	6	6	6	6	9	6
4	Chittumala	4	28	28	28	8	12	8	8	8	8	8	12	8
5	Ithikkara	3	20	20	20	6	9	6	6	6	6	6	9	6
6	Karunagappally(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
7	Kottarakkara	4	20	20	8	8	12	8	8	8	8	8	12	8
8	Mukhathala	3	20	20	20	6	9	6	6	6	6	6	9	6
9	Ochira	4	24	24	24	8	12	8	8	8	8	8	12	8
10	Pathanapuram	5	24	24	24	10	15	10	10	10	10	10	15	10
11	Sasthamkotta	4	28	28	28	8	12	8	8	8	8	8	12	8
12	Vettikkavala	5	24	24	24	10	15	10	10	10	10	10	15	10
13	Punalur (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
14	Kottarakkara(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
15	Paravoor (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
15	Kollam Corporation	3	12	12	12	6	9	6	6	6	6	6	9	6
	<b>Kollam District</b>	<b>52</b>	<b>296</b>	<b>296</b>	<b>296</b>	<b>104</b>	<b>156</b>	<b>104</b>	<b>104</b>	<b>104</b>	<b>104</b>	<b>104</b>	<b>156</b>	<b>104</b>

#1 - No wet cluster in Neendakara Panchayath

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Elanthur	4	28	28	28	8	12	8	8	8	8	8	12	8
2	Koipuram	5	24	24	24	10	15	10	10	10	10	10	15	10
3	Konni	5	28	28	28	10	15	10	10	10	10	10	15	10
4	Mallappally	4	28	28	28	8	12	8	8	8	8	8	12	8
5	Pandalam	3	20	20	20	6	9	6	6	6	6	6	9	6
6	Parakkode	5	28	28	28	10	15	10	10	10	10	10	15	10
7	Pulikeezhu	3	20	20	20	6	9	6	6	6	6	6	9	6
8	Ranni	5	36	36	36	10	15	10	10	10	10	10	15	10
9	Pathanamthitta (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
10	Thiruvalla (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
11	Adoor (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
12	Pandalam(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
	<b>Pathanamthitta District</b>	<b>38</b>	<b>228</b>	<b>228</b>	<b>228</b>	<b>76</b>	<b>114</b>	<b>76</b>	<b>76</b>	<b>76</b>	<b>76</b>	<b>76</b>	<b>114</b>	<b>76</b>

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Areca nut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Ambalappuzha	3	20	20	20	6	9	6	6	6	6	6	9	6
2	Aryad	3	16	16	16	6	9	6	6	6	6	6	9	6
3	Bharanikkavu	4	24	24	24	8	12	8	8	8	8	8	12	8
4	Chambakkulam	3	24	24	24	6	9	6	6	6	6	6	9	6
5	Chengannur	4	32	32	32	8	12	8	8	8	8	8	12	8
6	Harippad	3	28	28	28	4	6	4	4	4	4	4	6	4
7	Kanjikkuzhy	3	20	20	20	6	9	6	6	6	6	6	9	6
8	Mavelikkara	3	20	20	20	6	9	6	6	6	6	6	9	6
9	Muthukulam	4	32	32	32	8	12	8	8	8	8	8	12	8
10	Pattanakkad	3	28	28	28	6	9	6	6	6	6	6	9	6
11	Thykkattusserry	3	20	20	20	6	9	6	6	6	6	6	9	6
12	Veliyanad	3	24	24	24	6	9	6	6	6	6	6	9	6
13	Alappuzha (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
14	Chengannur (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
15	Kayamkulam (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
16	Mavelikkara (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
17	Cherthala (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
18	Harippad (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
	<b>Alappuzha District</b>	<b>44</b>	<b>312</b>	<b>312</b>	<b>312</b>	<b>88</b>	<b>132</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>132</b>	<b>88</b>

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Erattupetta	5	36	36	36	10	15	10	10	10	10	10	15	10
2	Ettumanoor	6	24	24	24	12	18	12	12	12	12	12	18	12
3	Kaduthuruthy	4	24	24	24	8	12	8	8	8	8	8	12	8
4	Lalam	5	24	24	24	10	15	10	10	10	10	10	15	10
5	Madappally	3	20	20	20	9	9	6	6	6	6	6	9	6
6	Pallom	4	20	20	20	8	12	8	8	8	8	8	12	8
7	Pampady	6	32	32	32	12	18	12	12	12	12	12	18	12
8	Uzhavoor	5	32	32	32	10	15	10	10	10	10	10	15	10
9	Vaikom	5	28	28	28	10	15	10	10	10	10	10	15	10
10	Vazhoor	6	24	24	24	12	18	12	12	12	12	12	18	12
11	Kanjirappally	5	28	28	28	10	15	10	10	10	10	10	15	10
12	Kottayam (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
13	Pala (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
14	Ettumanoor (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
15	Changanassery	1	4	4	4	2	3	2	2	2	2	2	3	2
	<b>Kottayam District</b>	<b>58</b>	<b>308</b>	<b>308</b>	<b>308</b>	<b>116</b>	<b>174</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>174</b>	<b>116</b>

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Adimaly	4	20	20	20	8	12	8	8	8	8	8	12	8
2	Azhutha	4	24	24	24	8	12	8	8	8	8	8	12	8
3	Devikulam	4	24	24	24	8	12	8	8	8	8	8	12	8
4	Elamdesam	5	28	28	28	10	15	10	10	10	10	10	15	10
5	Idukki	4	24	24	24	8	12	8	8	8	8	8	12	8
6	Kattappana	5	24	24	24	10	15	10	10	10	10	10	15	10
7	Nedumkandam	5	28	28	28	10	15	10	10	10	10	10	15	10
8	Thodupuzha	5	24	24	24	10	15	10	10	10	10	10	15	10
9	Thodupuzha (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
10	Kattappana(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
	<b>Idukki District</b>	<b>38</b>	<b>204</b>	<b>204</b>	<b>204</b>	<b>76</b>	<b>114</b>	<b>76</b>	<b>76</b>	<b>76</b>	<b>76</b>	<b>76</b>	<b>114</b>	<b>76</b>

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Alangad	2	20	20	20	4	6	4	4	4	4	4	6	4
2	Angamali	5	36	36	36	10	15	10	10	10	10	10	15	10
3	Edappally	2	16	16	16	4	6	4	4	4	4	4	6	4
4	Koovappady	5	24	24	24	10	15	10	10	10	10	10	15	10
5	Kothamangalam	6	44	44	44	12	18	12	12	12	12	12	18	12
6	Moovattupuzha	5	24	24	24	10	15	10	10	10	10	10	15	10
7	Mulanthuruthy	5	24	24	24	10	15	10	10	10	10	10	15	10
8	Palluruthy	2	12	12	12	4	6	4	4	4	4	4	6	4
9	Pampakuda	3	20	20	20	6	9	6	6	6	6	6	9	6
10	Parakkadavu	3	24	24	24	6	9	6	6	6	6	6	9	6
11	Paravur	3	24	24	24	6	9	6	6	6	6	6	9	6
12	Vadavukode	5	24	24	24	10	15	10	10	10	10	10	15	10
13	Vazhakkulam	5	28	28	28	10	15	10	10	10	10	10	15	10
14	Vypin	2	20	20	20	4	6	4	4	4	4	4	6	4
15	Kochi Corporation	3	12	12	12	6	9	6	6	6	6	6	9	6
16	Angamali (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
17	Kothamangalam (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
18	Moovattupuzha (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
19	Perumbavoor (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
20	Thripunithura (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
21	Kalamasery (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
22	Maradu(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
23	Piravom(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
24	Kooththaattukulam (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
25	Thrikkakkara (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
	<b>Ernakulam District</b>	<b>66</b>	<b>392</b>	<b>392</b>	<b>392</b>	<b>132</b>	<b>198</b>	<b>132</b>	<b>132</b>	<b>132</b>	<b>132</b>	<b>132</b>	<b>198</b>	<b>132</b>



Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Anthikkad	5	20	20	20	10	15	10	10	10	10	10	15	10
2	Chalakudy	5	24	24	24	10	15	10	10	10	10	10	15	10
3	Chavakkad	2	20	20	20	4	6	4	4	4	4	4	6	4
4	Cherpu	3	16	16	16	6	9	6	6	6	6	6	9	6
5	Chowannur	5	32	32	32	10	15	10	10	10	10	10	15	10
6	Irinjalakuda	2	16	16	16	4	6	4	4	4	4	4	6	4
7	Kodakara	5	28	28	28	10	15	10	10	10	10	10	15	10
8	Mala	5	20	20	20	10	15	10	10	10	10	10	15	10
9	Mathilakom	5	28	28	28	10	15	10	10	10	10	10	15	10
10	Mullesserry	3	16	16	16	6	9	6	6	6	6	6	9	6
11	Ollukkara	4	16	16	16	8	12	8	8	8	8	8	12	8
12	Pazhayannur	5	24	24	24	10	15	10	10	10	10	10	15	10
13	Puzhakkal	4	24	24	24	8	12	8	8	8	8	8	12	8
14	Thalikkulam	3	20	20	20	6	9	6	6	6	6	6	9	6
15	Vellangallur	4	20	20	20	8	12	8	8	8	8	8	12	8
16	Wadakkancherry	3	20	20	20	6	9	6	6	6	6	6	9	6
17	Chalakudy (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
18	Chavakkad (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
19	Irinjalakuda (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
20	Kodungallur (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
21	Wadakkancherry (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
22	Kunnamkulam (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
23	Guruvayur	1	4	4	4	2	3	2	2	2	2	2	3	2
24	Thrichur Corporation	3	12	12	12	6	9	6	6	6	6	6	9	6
	<b>Thrissur District</b>	<b>73</b>	<b>384</b>	<b>384</b>	<b>384</b>	<b>146</b>	<b>219</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>219</b>	<b>146</b>

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Alathur	7	36	36	36	14	21	14	14	14	14	14	21	14
2	Attappady	6	24	24	24	12	18	12	12	12	12	12	18	12
3	Chittur	7	28	28	28	14	21	14	14	14	14	14	21	14
4	Kollankode	6	32	32	32	12	18	12	12	12	12	12	18	12
5	Kuzhalmannam	6	28	28	28	12	18	12	12	12	12	12	18	12
6	Malampuzha	5	28	28	28	10	15	10	10	10	10	10	15	10
7	Mannarkkad	8	36	36	36	16	24	16	16	16	16	16	24	16
8	Nenmara	6	24	24	24	12	18	12	12	12	12	12	18	12
9	Ottappalam	8	32	32	32	16	24	16	16	16	16	16	24	16
10	Palakkad	4	28	28	28	8	12	8	8	8	8	8	12	8
11	Pattambi	5	28	28	28	10	15	10	10	10	10	10	15	10
12	Sreekrishnapuram	6	24	24	24	12	18	12	12	12	12	12	18	12
13	Thrithala	6	28	28	28	12	18	12	12	12	12	12	18	12
14	Chittur-Thathamangalam (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
15	Palakkad (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
16	Shornur (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
17	Ottappalam (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
18	Cherpulassery(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
19	Mannarkkad(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
20	Pattambi(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
	<b>Palakkad District</b>	<b>87</b>	<b>404</b>	<b>404</b>	<b>404</b>	<b>174</b>	<b>261</b>	<b>174</b>	<b>174</b>	<b>174</b>	<b>174</b>	<b>174</b>	<b>261</b>	<b>174</b>

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Areca nut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Areekode	5	32	32	32	10	15	10	10	10	10	10	15	10
2	Kondotty	4	28	28	28	8	12	8	8	8	8	8	12	8
3	Kuttippuram	5	24	24	24	10	15	10	10	10	10	10	15	10
4	Malappuram	5	24	24	24	10	15	10	10	10	10	10	15	10
5	Mankada	3	24	24	24	6	9	6	6	6	6	6	9	6
6	Nilamboor	4	24	24	24	8	12	8	8	8	8	8	12	8
7	Perinthalmanna	6	32	32	32	12	18	12	12	12	12	12	18	12
8	Perumpadappu	5	20	20	20	10	15	10	10	10	10	10	15	10
9	Ponnani	4	16	16	16	8	12	8	8	8	8	8	12	8
10	Thanur	4	28	28	28	8	12	8	8	8	8	8	12	8
11	Thiroorangadi	4	20	20	20	8	12	8	8	8	8	8	12	8
12	Thirur	4	24	24	24	8	12	8	8	8	8	8	12	8
13	Vengara	5	28	28	28	10	15	10	10	10	10	10	15	10
14	Wandoor	6	24	24	24	12	18	12	12	12	12	12	18	12
15	Kalikavu	5	28	28	28	10	15	10	10	10	10	10	15	10
16	Malappuram (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
17	Manjery (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
18	Perinthalmanna (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
19	Thirur (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
20	Nilamboor(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
21	Kottakkal(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
22	Kondotty(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
23	Tanur(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
24	Parappanangadi(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
25	Tirurangadi(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
26	Valanchery(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
27	Ponnani(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
	<b>Malappuram District</b>	<b>81</b>	<b>424</b>	<b>424</b>	<b>424</b>	<b>162</b>	<b>243</b>	<b>162</b>	<b>162</b>	<b>162</b>	<b>162</b>	<b>162</b>	<b>243</b>	<b>162</b>

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Balusserry	5	28	28	28	10	15	10	10	10	10	10	15	10
2	Chelannur	3	24	24	24	6	9	6	6	6	6	6	9	6
3	Koduvally	5	36	36	36	10	15	10	10	10	10	10	15	10
4	Kozhikkode	2	8	8	8	4	6	4	4	4	4	4	6	4
5	Kunnamangalam	4	32	32	32	8	12	8	8	8	8	8	12	8
6	Kunnummel	5	28	28	28	10	15	10	10	10	10	10	15	10
7	Melady	2	16	16	16	4	6	4	4	4	4	4	6	4
8	Panthalayani	3	20	20	20	6	9	6	6	6	6	6	9	6
9	Perambra	5	28	28	28	10	15	10	10	10	10	10	15	10
10	Thodannur	4	16	16	16	8	12	8	8	8	8	8	12	8
11	Thunery	5	28	28	28	10	15	10	10	10	10	10	15	10
12	Vadakara	3	16	16	16	6	9	6	6	6	6	6	9	6
13	Feroke - Ramanaattukara(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
14	Mukkam(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
15	Koduvally(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
16	Koyilandy(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
17	Payyoli(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
18	Vadakara (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
19	Kozhikkode Corporation	4	16	16	16	8	12	8	8	8	8	8	12	8
	<b>Kozhikode District</b>	<b>56</b>	<b>324</b>	<b>324</b>	<b>324</b>	<b>112</b>	<b>168</b>	<b>112</b>	<b>112</b>	<b>112</b>	<b>112</b>	<b>112</b>	<b>168</b>	<b>112</b>

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Areca nut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Kalpatta	11	44	44	44	22	33	22	22	22	22	22	33	22
2	Mananthavady	9	36	36	36	18	27	18	18	18	18	18	27	18
3	Sulthan Bathery	5	20	20	20	10	15	10	10	10	10	10	15	10
4	Panamaram	8	32	32	32	16	24	16	16	16	16	16	24	16
5	Kalpatta (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
6	Mananthavady(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
7	Sulthanbathery	1	4	4	4	2	3	2	2	2	2	2	3	2
	<b>Wayanad District</b>	<b>36</b>	<b>144</b>	<b>144</b>	<b>144</b>	<b>72</b>	<b>108</b>	<b>72</b>	<b>72</b>	<b>72</b>	<b>72</b>	<b>72</b>	<b>108</b>	<b>72</b>

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Edakkad	3	20	20	20	6	9	6	6	6	6	6	9	6
2	Irikkur	8	36	36	36	16	24	16	16	16	16	16	24	16
3	Iritty #1	8	24	24	24	16	24	16	16	16	16	16	24	16
4	Kannur	2	16	16	16	4	6	4	4	4	4	4	6	4
5	Koothuparambu	5	24	24	24	10	15	10	10	10	10	10	15	10
6	Payyannur	8	36	36	36	16	24	16	16	16	16	16	24	16
7	Peravoor	7	28	28	28	14	21	14	14	14	14	14	21	14
8	Thalassery	3	28	28	28	6	9	6	6	6	6	6	9	6
9	Thalipparamba #2	9	32	32	32	18	27	18	18	18	18	18	27	18
10	Kalliassery	4	32	32	32	8	12	8	8	8	8	8	12	8
11	Panoor	2	16	16	16	4	6	4	4	4	4	4	6	4
10	Koothuparamba(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
11	Thalassery(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
12	Mattannur (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
13	Panoor(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
14	Iritty(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
13	Payyannur (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
14	Talipparamba (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
15	Anthoor(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
16	Sreekandapuram(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
17	Kannur Corporation	3	12	12	12	6	9	6	6	6	6	6	9	6
	<b>Kannur District</b>	<b>71</b>	<b>340</b>	<b>340</b>	<b>340</b>	<b>142</b>	<b>213</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>213</b>	<b>142</b>

#1 – No wet cluster in Ayyankunnu (2 Zones) Panchayath.

#2 – No wet cluster in Udayagiri Panchayath

Sl. No.	Block	No. of investigator unit	Paddy			Tapioca	Coconut	Arecanut	Cashew	Pepper	Cocoa	Jack	Banana	Plantain
			A	W	S									
1	2	3	4	5	7	8	9	10	11	12	13	14	15	16
1	Kanjangad	6	24	24	24	12	18	12	12	12	12	12	18	12
2	Nileshwaram	5	28	28	28	10	15	10	10	10	10	10	15	10
3	Parappa	12	48	48	48	24	36	24	24	24	24	24	36	24
3	Manjeswaram	9	36	36	36	18	27	18	18	18	18	18	27	18
4	Kasargod	6	28	28	28	12	18	12	12	12	12	12	18	12
5	Karadukka	9	40	40	40	18	27	18	18	18	18	18	27	18
5	Kanjangad (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
6	Kasargod (M)	1	4	4	4	2	3	2	2	2	2	2	3	2
7	Nileshwaram(M)	1	4	4	4	2	3	2	2	2	2	2	3	2
	<b>Kasaragod District</b>	<b>50</b>	<b>216</b>	<b>216</b>	<b>216</b>	<b>100</b>	<b>150</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>150</b>	<b>100</b>
	<b>KERALA</b>	<b>811</b>	<b>4308</b>	<b>4308</b>	<b>4308</b>	<b>1622</b>	<b>2433</b>	<b>1622</b>	<b>1622</b>	<b>1622</b>	<b>1622</b>	<b>1622</b>	<b>2433</b>	<b>1622</b>

**ECONOMICS AND STATISTICS DEPARTMENT, KERALA**  
**AGRICULTURE STATISTICS**  
**FORM I – FIELD DIARY OF INVESTIGATOR (.....)**  
**20.....-20.....**

District :  
 Taluk :  
 Block / Municipality / Corporation :  
 Investigator Zone :  
 Panchayat (s) :  
 Geographical Area of Panchayat sq.km  
 (As per panchayat records) :  
 (If there are more than one panchayat  
 separate information may be given)  
 Village (s) :

**Details of Investigator Zone (Panchayat Wise)**

Name of Panchayat	Total Land Area (as per BTR)			No. of Cluster formed			Area of Cluster		
	Wet	Dry	Total	Wet	Dry	Total	Wet	Dry	Total
Total									

**Name and Signature of the Investigator**

**Note :** If there are more than one panchayat/village write the name of village/panchayat. Full - F, Part - P



1. Panchayat..... 2. Ward No./Name.....3. Wet/Dry.....

4. Cluster No..... 5. Visiting Date I.....II.....III.....

Particulars				Unit	1	2	3	4	5	Total
A. Land Utilization	Survey No.									
	Area (Enumerated)			Cent						
	Building and courtyard			”						
	Other Non agricultural use			”						
	Barren and Uncultivable land			”						
	Miscellaneous tree crop			”						
	Permanent pastures and other grassing land			”						
	Cultivable waste			”						
	Current fallow			”						
	Other fallow			”						
	Social Forestry			”						
	Water logged area			”						
	Still Water Land (Water bodies)			”						
	Marshy land			”						
	Net area sown			”						
	Wet Land (*Original)			”						
B. Seasonal Crop	Autumn	Paddy	High Yield	I	”					
				UI	”					
			Others	I	”					
				UI	”					
					”					
					”					
					”					
					”					
					”					
					”					
	Winter	Paddy	High Yield	I	”					
				UI	”					
			Others	I	”					
				UI	”					
					”					
					”					
					”					
					”					
					”					
					”					
					”					

\*Actual wet land area-Area not converted permanently

Particulars				Unit	1	2	3	4	5	Total
B.Seasonal Crop                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     										

Particulars				Unit	1	2	3	4	5	Total
Perennial Crops	Coconut	B	I	Number						
			UI	”						
		Y	I	”						
			UI	”						
	Arecanut	B	I	”						
			UI	”						
		Y	I	”						
			UI	”						
	Cashew	B		”						
		Y		”						

	Pepper	B	”						
		Y	”						
	Jack	B/Y	”						
	Mango	B/Y	”						
	Palm		”						
	Tamarind	B/Y	”						
	Rubber		Cent						
	Coffee		”						
	Clove		Number						
	Nutmug	B/Y	”						
	Coco	B/Y	”						
	Pappaya	B/Y	”						
	Drumstick	B/Y	”						
	Fodder grass		Cent						
	Manure		”						
	Green Mannure		”						
	Other Oil seeds		”						
	Lemon (Big)		”						
	Lemon (small)		”						
	Other Fruits		Cent						
	Vanila		”						
	Mulberry		”						
	Teak		”						
	Curry leaves		”						
	Mahagony		”						
	Anjili		”						
	Neem		”						
	Thulasi		”						
	Rumbootan		”						
	Kudampuli		”						
	Accasia		”						
	Pathymugham		”						
	Ramacham		”						
			”						
		”							
Others		Cent							
E. Area Irrigated	Source of Irrigation	Code							
		Number							
		Net Area	Cent						
		Gross Area	”						

Address of Keyplot Owner .....

Signature : ..... Signature : ..... Signature : .....  
Name : ..... Name : ..... Name:.....

Statistical Investigator

Statistical Inspector

Taluk Statistical Officer

Note: If the irrigation status of a crop is not recorded separately, the area/number of the irrigated crop may be circle.

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**

**Form – II Irrigation and usage of field**

**Dry/Wet .....**

**Year .....**

1.District				2.Taulk		3.Block/Municipality/Corporation											4.Panchayat				5. Investigator Zone										
Sl No	Cluster No	Area enumerated (cent)	Wet Land (Original)	Vareity of land (Cent)													Area of land irrigated according to source of irrigation (Cent)														
				Building & Courtyard	Other Non-agricultural use	Barren & Cultivable waste	Miscellaneous tree crops	Permanent pastures & gracing land	Cultivable waste	Current Fallow	Other Fallow	Area under Social forestry	Water logged area	Still water land (water bodies)	Marshy land	Net Area Zone	Canal		Ponds		Wells		Tube wells	Other Lift & Minor Irrigation Schemes	From Rivers & Lakes			Others	(In No)		
																	Government	Private	Government	Private	Government	Private					By pumps		By country Wheel	By other means	Pond
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Name & Signature of Investigator

Signature of Statistical Inspector

Name and Signature of Taluk Statistical Officer

### Form-III A – AREA OF SEASONAL CROPS

Year.....

Wet/Dry:

Season: Autumn / Winter/ Summer

1.District	2.Taluk	3.Block/Municipality/Corporation	4.Panchayat	5. Investigator Zone

SI No	Cluster No.	Enumerated Area (Cent)	Paddy						Tapioca			Vegetables																						
			High yielding		others		Total	Tapioca-A	Tapioca-B	Tapioca-C	Amaranthus	Vazhuthana	Brinjal	Ladies finger	Bitter Guard	Snake Guard	Koval	Ash Guard	Payar	Pumpkin	Cucumber	Churakka	Green Chilly	Potato	Carrot	Beetroot	Cabbage	Tomato	Cauliflower	Garlic	Beans	Others		
			I	II	I	II																												
			1	2	3	4																											5	6
																							</											

**FORM-III A**  
**AREA OF SEASONAL CROPS**

Year.....

Wet/Dry:

Season: Autumn/Winter/Summer

SI No	Cluster No	Tuber Crops								Pulses					Cereals	Ginger	Turmeric	Groundnut	soyabean	Aster seed	seasumam	Tur	Watermelon	kacchola m						Not under cultivation	Current fallow	Crop for other seasons	Other crops		
		Elephant foot Yam	Colocasia	Yam	Chinese potato (Kurkka)	Sweet Potato	Nanakizhangu	Others	Long Beans	Black gram	Horse gram	Green gram	others	jowar																				Ragi	Others
1	2	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67

Name & Signature of Investigator      Signature of Statistical Inspector      Name and Signature of Taluk Statistical Officer

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**AGRICULTURAL STATISTICS**  
**Form-III B – CROPPED AREA OF ANNUAL AND PERENNIAL CROP**

Year.....

Wet/Dry

1.District	2.Taulk	3.Block/Municipality/Corporation	4.Panchayat	5. Investigator Zone

[illegible]

**Form-III B – CROPPED AREA OF ANNUAL AND PERENNIAL CROP**

Year.....

Wet/Dry

[illegible]

Name &amp; Signature of Investigator

Signature of Statistical Inspector

Name and Signature of Taluk  
Statistical Officer



**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
AGRICULTURAL STATISTICS

**FORM-III B – CROPPED AREA OF ANNUAL AND PERENNIAL CROP (TABULATION FORM)**

1.District:

2.Taluk:

3. Year:

Wet/Dry

Sl. No.	Block	Panchayat/Municipality/ Corporation	Enumerated Area in Cents																			
				Coconut				Arecanut				Cashew		Pepper		Jack		Mango		Palm	Tamarind	
				B(I)	B(UI)	Y(I)	Y(UI)	B(I)	B(UI)	Y(I)	Y(UI)	Bearing	Young	Bearing	Young	Bearing	Young	Bearing	Young		Bearing	Young
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23

B- Bearing, Y-Young

Contd...../-

**AGRICULTURAL STATISTICS**  
**FORM-III B – CROPPED AREA OF ANNUAL AND PERENNIAL CROP (TABULATION FORM)**

1.District:		2.Taluk:				3. Year:				Wet/Dry									
		Cents				No.										Cents			
	Sl No	Rubber	Tea	Coffee	Cardamom	Clove	Nutmeg		K ar	Cocoa		Pappaya		Drumstick		Le m on	Fo dd	Gr ee n	Ot he r
							Beari ng	Youn g		Beari ng	Youn g	Beari ng	Youn g	Beari ng	Youn g				
	1	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41

**AGRICULTURAL STATISTICS**  
**FORM-III B – CROPPED AREA OF ANNUAL AND PERENNIAL CROP (TABULATION FORM)**

1.District:

2.Taluk:

3. Year:

Wet/Dry

Sl No	No.			Cents															
	Orange	Lemon	Lemon small	Other fruits	Vanila	Mulberry	Eucalyptus	Kuttimulla	Teak	Manjiyam	Acacia	Other Trees	Sappu Wood	Neem Tree	Sarvasugandhi	Kurumthotti	adalodakam	Tulasi	Ramacham
1	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	59

### FORM-III B - TABULATION

Wet/Dry

[illegible]

Taluk Statistical Officer / Deputy Director

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**AGRICULTURAL STATISTICS**  
**Form-IV CROP ABSTRACT**

1.District:

## 2.Taluk:

Year:

Season:

Autumn/Winter/Summer

Wet/Dry

[illegible]

Contd...../-

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**AGRICULTURAL STATISTICS**  
**Form-IV CROP ABSTRACT**

1.District:

2.Taluk:

Year:  
Autumn/Winter/Summer

Season:

Wet/Dry

Sl. No	Block	Panchayat/Municipality/Corporation	Tubers							Pulses					Cereals			Ginger	Turmeric	Ground nut	soyabean	Aster seed	seasumam	Tur	Water melon	Kacholam			not under cultivation	Current fallow	Crop for other season	Other crops
			Elephant foot Yam	Colocasia	Yam	Chinese potato (Kurkka)	Sweet Potato	Nanakizhangu	Others	Long Beans	Black gram	Horse gram	Green gram	others	jowar	Ragi	Others															
1	2	3	5	6	7	8	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60				

## DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA

### FORM V – DETAILS OF PLOTS SELECTED FOR CROP CUTTING EXPERIMENT

Year:

1. District :
2. Taluk :
3. Block :
4. Panchayat/Municipality/Corporation :
5. Investigator Zone :
6. Name of the Investigator :

Sl. No.	Name of Crop	Cluster No.	No. of plots in the frame	Order of Selection	Selected Random No.	Selected Survey No.	Area (Cent)	Name and Address of the Farmer	Panchayat / Ward No. / Division No.	Remarks
1	2	3	4	5	6	7	8	9	10	11
1	Autumn			1						
				2						
				3						
				4						
				5						
				6						
				7						
				8						
2	Winter			1						
				2						
				3						
				4						
				5						
				6						
				7						
				8						

Contd...../-

Sl No	Name ofCrop	Cluster No	No. of plots in frame	Order of Selection	Selected Random No	Selected Survey No	Area (Cent)	Name and Address of Farmer	Panchayat / Ward No / Division No	Remarks
1	2	3	4	5	6	7	8	9	10	11
3	Summer			1						
				2						
				3						
				4						
				5						
				6						
				7						
				8						
4	Tapioca			1						
				2						
5	Banana			1						
				2						
				3						
6	Coconut			1						
				2						
				3						
7	Arecanut			1						
				2						
8	Cashew			1						
				2						



Sl No	Name of Crop	Cluster No	No. of plots in frame	Order of Selection	Selected Random No	Selected Survey No	Area (Cent)	Name and Address of the Farmer	Panchayat / Ward No / Division No	Remarks
1	2	3	4	5	6	7	8	9	10	11
9	Pepper			1						
				2						
10	Cocoa			1						
				2						
11	Plantain			1						
				2						
12	Seasamum			1						
				2						
13	Jack			1						
				2						
14										
15										
16										
17										
18										

Sl No	Name of Crop	Cluster No	No. of plots in frame	Order of Selection	Selected Random No	Selected Survey No	Area (Cent)	Name and Address of Farmer	Panchayat / Ward No / Division No	Remarks
1	2	3	4	5	6	7	8	9	10	11
19										
20										
21										
22										
23										
24										
25										

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
Inspecting Officer in the District Office

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM VI A - CROP CUTTING EXPERIMENT - PADDY**  
**BLOCK 1 - IDENTIFICATION PARTICULARS**

- |                                   |                              |
|-----------------------------------|------------------------------|
| 1. District                       | 4. Zone                      |
| 2. Taluk                          | 5. Season & Agriculture Year |
| 3. Block/Municipality/Corporation | 6. Name of Investigator      |

<b>7. Details of Plot Selected</b>					
		Experiments			
		One	Two	Three	Four
A.	Cluster No.				
B.	Survey No. selected				
B(1).	Area ( in Cents)				
B(2).	Area of paddy in selected survey No.				
B(3).	Name & Address of Cultivator				
C.	Panchayat/Ward No./Division No.				
<b>8. Name of Officer Inspected and Date of Inspection</b>					
A.	Pre Harvest Stage				
B.	Harvest Stage				
C.	Post Harvest Stage				
9	Signature of Officer Inspected				
<b>BLOCK 2- DETAILS OF KANDOM(SUB PLOT) SELECTION AND CULTIVATION</b>					
1	No. of Kandoms in the selected plot				
2	Selected Random No.				
3	Area of Kandom (in cents)				

Sl. No. & Item			Experiments					
			One	Two	Three	Four		
4	A.	Whether Irrigated, if yes source (code No)						
	B 1.	Whether irrigation is adequate	Yes/No	Yes/No	Yes/No	Yes/No		
	B 2.	If yes, How many times						
	C.	Whether drainage exists	Yes/No	Yes/No	Yes/No	Yes/No		
5	Variety of Seed (HY/Local)		HY/L	HY/L	HY/L	HY/L		
6	If HY, name of variety							
7	If HY, source of Seed (Code)							
8	Method of Cultivation (Code)							
9	Seed Rate (Kg/Acre)							
10	A. Whether Pesticides used		Yes/No	Yes/No	Yes/No	Yes/No		
	B. If Yes, whether for prevention or control		Prevention/control	Prevention/control	Prevention/control	Prevention/control		
	C. If used, whether controlled or not, Yes/No							
4 A. Irrigation Source			Code No	B. If yes, How many times		Code No	Mode of Cultivation	Code No
Govt. Canal			1	One time		1	sowing	1
Pvt. Canal			2	Two times		2		
Govt. tank			3	Three times		3		
Pvt. tank			4	Four times		4		
Govt. Well			5	More than Five times		5	Dibbing	2
Pvt. Well			6	Source of Seed		Code No.		
Bore Well			7					
Lift Irrigation			8	Self cultivated		1	Transplanting	3
Pump Set(River, Lake, Stream etc)			9					
Country Wheel (River, Lake, Stream etc)			10	Collected from Block or Agriculture Dept		2		
Other source (River, Lake, Stream etc)			11					
Others			12	From other Farmers		3		
Not Irrigated			13	Other Sources		4	Others	4

**BLOCK 3 – DETAILS OF CHEMICAL FERTILIZERS AND OTHER MANURES  
USED IN SELECTED KANDOM**

1. Chemical Fertilizers					1. Chemical Fertilizers			
Item	<b>Experiment-1</b>				<b>Experiment-2</b>			
	Trade Name	Content (in %)	Total quantity applied (Kg)	Quantity of Nutrients (Kg)	Trade Name	Content (in %)	Total quantity applied (Kg)	Quantity of Nutrients (Kg)
1	2	3	4	5(3X4)	6	7	8	9(7X8)
N								
P								
K								
NP		N- P-		N- P-		N- P-		N- P-
NK		N- K-		N- K-		N- K-		N- K-
PK		P- K-		P- K-		P- K-		P- K-
NPK		N- P- K-		N- P- K-		N- P- K-		N- P- K-
2. Other Manures used and quantity			Code Qty (Kg)		2. Other Manures used and quantity		Code Qty (Kg)	

1.Fertilizers					1.Fertilizers			
Item	<b>Experiment-3</b>				<b>Experiment-4</b>			
	Trade Name	Content (in %)	Total quantity applied (Kg)	Quantity of Nutrients (Kg)	Trade Name	Content (in %)	Total quantity applied (Kg)	Quantity of Nutrients (Kg)
1	2	3	4	5(3X4)	6	7	8	9(7X8)
N								
P								
K								
NP		N- P-		N- P-		N- P-		N- P-
NK		N- K-		N- K-		N- K-		N- K-
PK		P- K-		P- K-		P- K-		P- K-
NPK		N- P- K-		N- P- K-		N- P- K-		N- P- K-
2. Other Manures used and quantity			Code Qty (Kg)		2. Other Manures used and quantity		Code Qty (Kg)	
	Market Name / Trade Manure / Content (%)			N	P	K		
	Urea			46%	-	-		
	Factomphos			20%	20%	-		
	Potash			-	-	60%		

### BLOCK 4- RESULTS OF CROP CUTTING EXPERIMENTS

Sl. No. & Item		Experiments			
		One	Two	Three	Four
1. Length of Sides (in steps) of the selected Kandom	X				
	y				
2. Random Number chosen	X				
	y				
3. Date of Harvest					
4. Weight of winnowed paddy (Kg)					
5. Cause of crop damage or poor yield (Code)					
6. Weight of straw (Kg / acre)					

Other Manures	Code No	Damage	Code No
Improved green manure	1	Normal	0
Oil cake	2	Flood	1
Bone meal	3	Drought	2
Compost Scientifically prepared	4	Pest attack	3
Cow dung	5	No irrigation	4
Others	6	Lack of manure	5
Not manured	7	Others	6

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
Inspecting Officer in the District Office

Place :

Date :

# DIRECTORATE OF ECONOMICS AND STATISTICS, GOVERNMENT OF KERALA

## FORM VI B Crop Cutting Experiment on Tapioca

### BLOCK 1- IDENTIFICATION PARTICULARS

- |                                   |                         |
|-----------------------------------|-------------------------|
| 1. District                       | 4. Year                 |
| 2. Block/Municipality/Corporation | 5. Name of Investigator |
| 3. Zone                           |                         |

		Experiment-1	Experiment-2
1.	Name of survey for which the experiment is selected(Code)*		
2.	Panchayat / Ward No. / Division No.		
3	Cluster No.		
4	Survey No.		
5	Area (Cent)		
6	Address of Farmer		
7	Chemical Fertilizer used (Code)*		
8	Other Manure		
9	Source of Irrigation (Code) *		
10	Variety of Tapioca	HY/Local	HY/Local
11	Month and Year of planting		
12	No. of patches and random selected		
13	Area of Patch		
14	No. of plants in selected patch		
15	Length of sides	X	
		Y	
16	Random Number	X	
		Y	
17.	Date of harvest		
18	No. of plants in the selected plot( 2 x 2 m or 1x4 m)		
19	Weight of raw tapioca (kg)		
20	Whether the experiment inspected by SI/TSO/DLO at harvest stage		
21	Remarks (If abnormal yield, reason)		
22	Pair of Random Nos. rejected		

\*Weight may be rounded to nearest 50 gms

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Inspecting Officer

Signature, Name & Designation of the Taluk Statistical Officer

Place:

Date:

#### Code No. to be used:

- |                     |                                                                                                                                                                                                                                                                                                                                        |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *Survey             | : GCES-1, PMFBY-2, GCES & PMFBY-3                                                                                                                                                                                                                                                                                                      |
| Chemical Fertilizer | : Ammonium Sulphate-1, Muriate of Potash-2, Super Sulphate-3, Urea-4, Tapioca Mixture-5, Other fertilizers-6, Not fertilized-7                                                                                                                                                                                                         |
| Irrigation Source   | : Govt. Canal-1, Pvt. Canal-2, Govt. Tank-3, Pvt. Tank-4, Govt. Well-5, Pvt. Well-6, Tube well-7, Other minor & lift Irrigation scheme-8, By pumps, rivers, lakes, rivulets etc-9, By country wheels from rivers lakes, rivulets and springs-10, By other means from rivers, lakes, rivulets, springs-11, Others-12, No Irrigation-13. |

**DIRECTORATE OF ECONOMICS AND STATISTICS DEPARTMENT,  
GOVERNMENT OF KERALA**

**FORM VII A CROP CUTTING EXPERIMENT ON COCONUT**

**BLOCK 1 - IDENTIFICATION PARTICULARS**

YEAR :

- |                                      |                                  |
|--------------------------------------|----------------------------------|
| 1. District                          | 2. Taluk                         |
| 3. Block/Municipality/Corporation    | 4. Panchayat/Ward No/Division No |
| 5. Zone                              | 6. Cluster No.                   |
| 7. Survey No and Area (in cents)     | 8. Pure / Mixed crops            |
| 9. No. of patches                    | 10. Random No. of selected patch |
| 11. No. of Trees B.....              | Y. .... Total .....              |
| 12. Name of Investigator :           |                                  |
| 13. Name and Address of Cultivator : |                                  |

**BLOCK II - DETAILS OF SELECTION OF TREES**

		Order of Selection				
		1	2	3	4	5
1.	Random No.					
2.	Source of Irrigation(Code)					
3.	Chemical Fertilizers used (Code)					
4.	Other Manures used (Code)					
5.	Whether affected by disease (Yes-1, No -0)					
6.	If yes, Name of disease					
7.	Whether Pesticides used (yes-1, No-0)					

**Code No. to be used:**

- Irrigation Source :** Govt. Canal-1, Pvt.Canal-2, Govt. Tank-3, Pvt. Tank-4, Govt. Well-5, Pvt. Well-6, Tube well-7, Other minor & lift Irrigation scheme-8, By pumps, rivers, lakes, rivulets etc-9, By country wheels from rivers lakes, rivulets and springs-10, By other means from rivers, lakes, rivulets, springs-11, Others-12, No Irrigation-13.
- Chemical Fertilizer :** Ammonium Sulphate-1,Muriate of Potash-2, Super Sulphate-3, Urea-4, Coconut Mixture -5, Other Chemical Fertilizers-6, No chemicalfertilizers -7.
- Other manures :** Improved green manure-1, Oil cake-2, Bone meal-3, Compost scientifically prepared-4, Cow dung-5, Others-6, Not manured-7
- Disease :** Butrot-1, Yellowing-2,Mite-3, Rootwilt-4, Others-5



**BLOCK III – DETAILS OF HARVEST**

Sl. No.	Date of Harvest	Type of Fruit	Order of Selection of trees					Total	Sl. No. of selected tree	No. of nuts in bunches (future harvest)		
			1	2	3	4	5			I	II	III
I		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										
II		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										
III		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										
IV		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										

### BLOCK III – DETAILS OF HARVEST

Sl. No.	Date of Harvest	Type of Fruit	Order of Selection of trees					Total	Sl. No. of selected tree	No. of nuts in bunches (future harvest)		
			1	2	3	4	5	6	7	I	II	III
V		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										
VI		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										
VII		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										
VIII		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										

### BLOCK III – DETAILS OF HARVEST

Sl. No.	Date of Harvest	Type of Fruit	Order of Selection of trees					Total	Sl. No. of selected tree	No. of nuts in bunches (future harvest)		
			1	2	3	4	5	6	7	I	II	III
IX		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										
X		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										
GRAND TOTAL		Tender							1			
		Ripe							2			
		Barren							3			
	Fell Down	Dry							4			
		Tender							5			
		<b>Total</b>										

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
the Taluk Statistical Officer

Signature, Name & Designation of  
the Inspecting Officer in the District Office

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS KERALA**  
**FORM VII B - CROP CUTTING EXPERIMENT ON ARECANUT**  
**BLOCK 1- IDENTIFICATION PARTICULARS**

- |                                                                                                                                                    |                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. District<br>2. Taluk<br>3. Block/Municipality/Corporation<br>4. Panchayat/Ward No/Division No<br>5. Zone<br>6. Cluster No.<br><br>7. Survey No. | Year :<br>8. Area ( cents)<br>9. Pure / Mixed plot<br>10. No. of patches<br>11. Random No. of selected patch<br>12. No. of Trees<br>B*                  Y*                  Total<br><br>13. Name of Investigator<br><br>14. Name and Address of Cultivator |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**BLOCK II - DETAILS OF SELECTED TREES**

		Order of Selection				
		1	2	3	4	5
1.	Random No					
2.	Age of the tree (year)					
3.	Variety (HY/Local)					
4.	Source of Irrigation (Code)					
5.	Chemical Fertilizers used (Code)					
6.	Other Manures used (Code)					
7.	Whether affected by disease(Yes/No)					
8.	If yes, any protection measures taken(Yes/No)					

**Code No. to be used:**

Irrigation Source : Govt. Canal-1, Pvt.Canal-2, Govt. Tank-3, Pvt. Tank-4, Govt. Well-5, Pvt. Well-6, Tube well-7, Other minor & lift Irrigation scheme-8, By pumps, rivers, lakes, rivulets etc-9, By country wheels from rivers lakes, rivulets and springs-10, By other means from rivers, lakes, rivulets, springs-11, Others-12, No Irrigation-13.

Chemical Fertilizer : Ammonium Sulphate-1, Muriate of Potash-2, Super phosphate-3, Urea-4, Tapioca Mixture-5, Other chemical manure-6, No Chemical Fertilizer-7

Other Fertilizers : Improved green manure-1, oil cake-2, Bone Meal-3, Compost scientifically prepared-4, cow dung-5, others-6, not manured -7.

\*B- Bearing, Y -Young

**BLOCK III - DETAILS OF HARVEST**

Sl. No.	Date of Harvest	Type of nuts	Number and Weight of Arecanuts											
			Palm-I		Palm-II		Palm-III		Palm-IV		Palm-V		Total	
			Number	Weight (kg)	Number	Weight (kg)	Number	Weight (kg)	Number	Weight (kg)	Number	Weight (kg)	Number	Weight (kg)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I		A												
		B												
II		A												
		B												
III		A												
		B												
IV		A												
		B												
V		A												
		B												
VI		A												
		B												
Total														

\* A – Ripe, B – Tender

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Place :

Date :

Signature, Name & Designation of the  
inspecting officer in the District Office

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM VII C –CROP CUTTING EXPERIMENT ON CASHEW**

**BLOCK 1- IDENTIFICATION PARTICULARS YEAR :**

- |                                    |                                |
|------------------------------------|--------------------------------|
| 1. District                        | 8. Area (cents)                |
| 2. Taluk                           | 9. No. of patches              |
| 3. Block/Municipality/Corporation  | Random No. of selected patch   |
| 4. Panchayat/Ward No./Division No. |                                |
| 5. Zone                            | 10. No. of Trees               |
| 6. Cluster No.                     | B* Y* Total                    |
| 7. Survey No.                      | 11. Name of Investigator       |
|                                    | 12. Name and Address of Farmer |

			Tree I		Tree II		Tree III		Tree IV		Tree V		Total	
A. Random No.														
B. Age of tree														
No. and date of Harvest			No. of nuts	Weight in Kg	No. of nuts	Weight in Kg	No. of nuts	Weight in Kg	No. of nuts	Weight in Kg	No. of nuts	Weight in Kg	No. of nuts	Weight in Kg
I		A												
		B												
II		B												
		C												
III		B												
		C												
IV		B												
		C												
V		B												
		C												
VI		B												
		C												
VII		B												
		C												
VIII		B												
		C												
IX		B												
		C												
X		B												
		C												
Total														

\* A- Yield collected before 1<sup>st</sup> visit B- Yield on the day of visit

C- Yield collected between two visits

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
Inspecting Officer in the District Office

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM VII D-CROP CUTTING EXPERIMENT ON PEPPER**  
**BLOCK 1- IDENTIFICATION PARTICULARS**

- |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. District<br>2. Taluk<br>3. Block/Municipality/Corporation<br>4. Panchayat/Ward No/Division No<br>5. Zone<br>6. Cluster No.<br>7. Survey No.<br>8. Area (cents) | Year :<br>9. No. of patches<br>10. Random No. of selected patch<br>11. No. of pepper plants in the Patch<br><div style="display: flex; justify-content: space-between; margin-top: 10px;"> <span>B*</span> <span>Y*</span> <span>Total</span> </div> 12. Name of Investigator<br>13. Name and Address of Cultivator |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**BLOCK II – DETAILS OF SELECTION OF PEPPER PLANTS**

Item		Order of Selection				
		1	2	3	4	5
1.	Random No. Selected					
2.	Age of plants in years					
3.	Variety (HY / Local)					
4.	Source of irrigation(Code)*					
5.	Chemical fertilizers used(Code)*					
6.	Other manures (Code)*					
7.	Whether affected by disease(Yes/No)					

Code No. to be used

**Irrigation Source** : Govt. Canal-1, Pvt. Canal-2, Govt. Tank-3, Pvt. Tank-4, Govt. Well-5, Pvt. Well-6, Tube well-7, Other minor & lift Irrigation scheme-8, By pumps, rivers, lakes, rivulets etc-9, By country wheels from rivers lakes, rivulets and springs-10, By other means from rivers, lakes, rivulets, springs-11, Others-12, No Irrigation-13.

**Chemical Fertilizer** : Ammonium Sulphate-1, Muriate of Potash-2, Super Phosphate-3, Urea-4, mixture-5, Other chemical manure-6, no chemical fertilizers-7

**Other Manures** : Improve green manure-1, Oil Cake-2, Bone Meal-3, Compost scientifically prepared-4, cow dung-5, others-6, no manures-7

\*B- Bearing, Y- Young

**BLOCK III – DETAILS OF HARVEST**

Block II - Details of Harvest								
No.	Date		1	2	3	4	5	Total
1		Weight of pepper with spikes (kg)						
		Weight without spikes (Kg)						
2		Weight of pepper with spikes (kg)						
		Weight without spikes (Kg)						
Total weight of pepper		With spikes						
		Without Spikes						

Signature of Investigator  
Inspector

Name & Signature of Statistical

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of  
inspecting Officer in the District Office

Place :  
Date :



**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM VII E -CROP CUTTING EXPERIMENT ON COCOA**  
**BLOCK 1- IDENTIFICATION PARTICULARS**

- Year :
- |                                   |                                                       |
|-----------------------------------|-------------------------------------------------------|
| 1. District                       | 8. Area (cents)                                       |
| 2. Taluk                          | 9. No. of patches                                     |
| 3. Block/Municipality/Corporation | 10. Random No. of selected patch                      |
| 4. Panchayat/Ward No/Division No  | 11. Cocoa only / mixed crops                          |
| 5. Zone                           | 12. No. of Trees                                      |
| 6. Cluster No.                    | B*                      Y*                      Total |
| 7. Survey No.                     | 13. Name of Investigator                              |
|                                   | 14. Name and Address of Farmer                        |

**BLOCK II – DETAILS OF SELECTION**

Item		Order of Selection				
		1	2	3	4	5
1.	Random No. Selected					
2.	Age of trees ( years)					
3.	Variety (HY/ Local)					
4.	Source of irrigation(Code)*					
5.	Chemical fertilizers used(Code)*					
6.	Other manures(Code)*					
7.	Whether affected by disease(Yes/No)					
8.	If affected any precaution opted (Yes/No)					

Code No. to be used:

Source of irrigation : Govt. Canal-1, Pvt.Canal-2, Govt. Tank-3, Pvt. Tank-4, Govt. Well-5, Pvt. Well-6, Tube well-7, Other minor & lift Irrigation scheme-8, By pumps, rivers, lakes, rivulets etc-9, By country wheels from rivers lakes, rivulets and springs-10, By other means from rivers, lakes, rivulets, springs-11, Others-12, No Irrigation-13.

Chemical Fertilizer : Ammonium Sulphate-1,Muriate of Potash-2, Super Phosphate-3, Urea-4, Mixture-5, Other chemical fertilizers-6, no chemical fertilizer -7

Other Manures : Improved green manure-1, Oil Cake-2, Bone Meal-3, Compost scientifically prepared-4, cow dung-5, others-6, nomanure-7

\* B- Bearing, Y- Young

**BLOCK III – DETAILS OF HARVEST**

Sl No	Date of Harvest		The number and weight of nuts											
			Tree-1		Tree-2		Tree-3		Tree-4		Tree-5		Total	
			No.	Weight (kg)	No.	Weight (kg)	No.	Weight (kg)	No.	Weight (kg)	No.	Weight (kg)	No.	Weight (kg)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I		A												
		B												
		C												
II		B												
		C												
III		B												
		C												
IV		B												
		C												
V		B												
		C												
VI		B												
		C												
VII		B												
		C												
VIII		B												
		C												
Total														

A-Harvest before 1<sup>st</sup> visit, B- Harvest on the date of visit, C- Harvest between two visits

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
inspecting officer in the District Office

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM VIII A –CROP CUTTING EXPERIMENT ON BANANA**

**BLOCK 1- IDENTIFICATION PARTICULARS**

Year :

- |                                   |                                                         |
|-----------------------------------|---------------------------------------------------------|
| 1. District                       | 8. Area (cents)                                         |
| 2. Taluk                          | 9. No. of patches                                       |
| 3. Block/Municipality/Corporation | 10. Random No. of selected patch                        |
| 4. Panchayat/Ward No/Division No  | 11. No. of plants in the patch                          |
| 5. Zone                           | 12. Name of Investigator                                |
| 6. Cluster No.                    | 13. Name and Address of Farmer                          |
| 7. Survey No.                     | 14. For which survey the experiment is selected (code)* |

**BLOCK II – PARTICULARS OF KANDOM AND RESULTS OF EXPERIMENTS**

				No. of Plants			Total
				1	2	3	4
1	Random No. of selected plant						
2	Variety (HY/Local)						
3	Date of Harvest						
4	No. of Bananas						
5	Weight of bunch (Kg)						
6	Approximate Weight of the stalk (kg)						
7	Chemical Fertilizer used						
	A	Name	1				
			2				
			3				
	B	Qty (Kg)	1				
			2				
3							
8	Other fertilizer used (kg)						

\*Code No. to be used : Survey : GCES-1, PMFBY-2, GCES &PMFBY-3

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
inspecting Officer in the District Office

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM VIII B –CROP CUTTING EXPERIMENT ON PLANTAIN**

**BLOCK 1- IDENTIFICATION PARTICULARS**

Year :

- |                                   |                                                                     |
|-----------------------------------|---------------------------------------------------------------------|
| 1. District                       | 9. No. of patches                                                   |
| 2. Taluk                          | 10. Random No. of selected patch                                    |
| 3. Block/Municipality/Corporation | 11. No. of plants in selected patch <b>(A+C)</b>                    |
| 4. Panchayat/Ward No/Division No. | <b>A.</b> No. of plantain available for harvest in the current year |
|                                   | <b>C.</b> No. of pits of young plants                               |
| 5. Zone                           | 12. Name of Investigator                                            |
| 6. Cluster No.                    | 13. Name and Address of Farmer                                      |
| 7. Survey No.                     | 14. For which survey the experiment is selected (code)*             |
| 8. Area (cents)                   |                                                                     |

**BLOCK II – PARTICULARS OF KANDOM AND RESULTS OF THE EXPERIMENT**

BLOCK II – PARTICULARS OF RANDOM AND RESULTS OF THE EXPERIMENT							
				No. of Plants			Total
				1	2	3	4
1	Random No. of selected plants						
2	Variety						
3	Date of Harvest						
4	No. of Plantain fruits						
5	Weight of bunch (Kg)						
6	Approximate weight of the stalk (kg)						
7	Chemical Fertilizer used						
	A	Name	1				
			2				
			3				
	B	Qty (Kg)	1				
			2				
			3				
8	Other fertilizer used (kg)						
9	Whether affected by any disease (Yes/No)						

**\*Code No. to be used :**

Survey :GCES-1, PMFBY-2, GCES &PMFBY-3

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
Inspecting Officer of District Office

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM VIII C –CROP CUTTING EXPERIMENT ON SESAMUM 20. . . 20. . .**

**BLOCK 1- IDENTIFICATION PARTICULARS**

- |                                   |                         |
|-----------------------------------|-------------------------|
| 1. District                       | 4. Zone                 |
| 2. Taluk                          | 5. Cluster No.          |
| 3. Block/Municipality/Corporation | 6. Name of Investigator |

**BLOCK II – DETAILS OF SELECTED KANDOM**

Details		Experiment-1	Experiment-2				
1.	Panchayat /Ward No. /Division No.						
2.	Survey No.						
3	Area (Cent)						
4	Variety (HY /Local)						
5	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Fertilizer used</td> <td>Chemical</td> </tr> <tr> <td></td> <td>Local</td> </tr> </table>	Fertilizer used	Chemical		Local		
Fertilizer used	Chemical						
	Local						
6	Month & Year of sowing						
7	No. of Kandoms and random no. of selected kandom						
8	Area of selected Kandom (cent)						
9	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Length of sides</td> <td>X</td> </tr> <tr> <td></td> <td>Y</td> </tr> </table>	Length of sides	X		Y		
Length of sides	X						
	Y						
10	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Random Number</td> <td>X</td> </tr> <tr> <td></td> <td>Y</td> </tr> </table>	Random Number	X		Y		
Random Number	X						
	Y						
11	Irrigated (Yes,No)						
12	Insecticides used (Yes-1, No-0)						
13	Date of harvest						
14	Weight of yield (kg)						
15	Name and Address of Cultivator						

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
Inspecting Officer in the District Office

Place :  
Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM VIII D –CROP CUTTING EXPERIMENT ON JACK 20. . . 20. . .**

1. District :
2. Taluk :
3. Block / Municipality / Corporation :
4. Panchayat / Ward No / Division No. :
5. Zone :
6. Cluster No. :
7. Survey No. :
8. Area (Cent) :
9. No. of Patches :
10. Random No. of selected patch :
11. No of trees : B..... Y..... Total.....
12. Name of Investigator :
13. Name & Address of Cultivator :

**Tree - 1**

**Tree – 2**

Selected Random No.

Date of enumeration of nuts

Total No. of Jack fruit

Signature of Investigator  
Inspector

Name & Signature of Statistical

Name and Signature of  
the  
Taluk Statistical Officer

Signature, Name & Designation of  
Inspecting Officer in the District Office

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM VIII F –CROP CUTTING EXPERIMENT ON SUGARCANE 20. . . 20. . .**

1. District :
2. Taluk :
3. Block/Municipality/Corporation :
4. Zone :
5. Name of Investigator :

Details			Experiment-1	Experiment-2
1.	Panchayat /Ward No /Division No			
2.	Cluster No.			
3	Survey No			
4	Area of selected field (cent)			
5	Variety (HY /Local)			
6	Month & Year of planting			
7	Fertilizer used	Chemical		
		Local		
8	Area of plot /Patch			
9	Length of sides	X		
		Y		
10	Random Number	X		
		Y		
11	Whether Irrigated or not			
12	Insecticides used or not			
13	Date of harvest			
14	Weight of Yield (kg)			
15	Weight of Jaggery (%)			
16	Name and Address of Cultivator			
17	Remarks			

Signature of Investigator  
Inspector

Name & Signature of Statistical

Name and Signature of  
the Taluk Statistical Officer

Signature, Name & Designation of  
Inspecting Officer in the District Office

Place :  
Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM IX A - CROP CUTTING EXPERIMENT ON GINGER 20. . . 20. . .**  
**BLOCK 1- IDENTIFICATION PARTICULARS**

- |                                   |                         |
|-----------------------------------|-------------------------|
| 1. District                       | 4. Zone                 |
| 2. Taluk                          | 5. Name of Investigator |
| 3. Block/Municipality/Corporation |                         |

**BLOCK II - DETAILS OF SELECTED FIELD**

Details		Experiment-1	Experiment-2
1.	For which survey the experiment is selected(code)*		
2.	Panchayat/Ward No./Division No.		
3	Cluster No.		
4	Survey No.		
5	Area (Cent)		
6	Area of selected kandom(cent)		
7	Variety (HY /Local)		
8	Month & Year of planting		
9	Fertilizer used      Chemical		
	Local		
10	No. of patches		
11	Random No. of selected patch		
12	Area of Patch		
13	Length of sides      X		
	Y		
14	Random Number      X		
	y		
15	Whether Irrigated or not		
16.	Whether Insecticides used or not		
17.	Date of harvest		
18	Weight of Yield (kg)		
19	Name and Address of Cultivator		
20	Random Numbers rejected		

**\*Code No. to be used :** Survey : GCES-1, PMFBY-2, GCES &PMFBY-3

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
Inspecting Officer in the District Office

Place :

Date :



**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM IX B - CROP CUTTING EXPERIMENT ON TURMERIC 20. . . 20. . .**

**BLOCK 1- IDENTIFICATION PARTICULARS**

- |                                   |                         |
|-----------------------------------|-------------------------|
| 1. District                       | 4. Zone                 |
| 2. Taluk                          | 5. Name of Investigator |
| 3. Block/Municipality/Corporation |                         |

**BLOCK II - DETAILS OF SELECTED FIELD**

Details		Experiment-1	Experiment-2
1.	For which survey the experiment is selected (code)*		
2.	Panchayat/ Ward No./Division No.		
3	Cluster No.		
4	Survey No.		
5	Area (Cent)		
6	Area of selected field(cent)		
7	Variety (HY /Local)		
8	Month & Year of planting		
9	Fertilizer used		
	Chemical		
	Local		
10	No. of patches		
11	Random No. of the selected patch		
12	Area of the Patch		
13	Length of sides	X	
		Y	
14	Random Number	X	
		y	
15	Whether Irrigated or not		
16.	Whether Insecticides used or not		
17.	Date of harvest		
18	Weight of Yield (kg)		
19	Name and Address of Cultivator		
20	Random Numbers rejected		

**\*Code No.** to be used : Survey : GCES-1, PMFBY-2, GCES & PMFBY-3

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
Inspecting Officer in the District Office

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM IX C - CROP CUTTING EXPERIMENT ON PINEAPPLE 20. . . 20. . .**  
**BLOCK 1- IDENTIFICATION PARTICULARS**

- |                                    |                                        |
|------------------------------------|----------------------------------------|
| 1. District                        | 2. Taluk                               |
| 3. Block/Municipality/Corporation  | 4. Panchayat/Ward No/Division No       |
| 5. Zone                            | 6. Cluster No.                         |
| 7. Survey No.                      | 8. Area (Cents)                        |
| 9. No. of Patches                  | 10. Random No. of selected patch       |
| 11. No. of Trees in selected patch | 12. Name and Address of the Cultivator |

B\*                      Y\*                      Total

13. Name of Investigator

**BLOCK II - DETAILS OF SELECTED FIELD**

Details		Quantity				
1.	For which survey the experiment is selected (code)*					
2.	Fertilizer used (Code)*					
3	No of selected trees	1	2	3	4	5
4	Random Number					
5	Date of Harvest					
6	Whether Irrigated or not					
7	Weight of yield (kg)					
8	Total Weight (kg) (1+2+3+4+5)					
9	Note : (Reason for variation in yield)					

**Code No. to be used :** Survey : GCES-1, PMFBY-2, GCES &PMFBY-3

Chemical : Ammonium Sulphate-1, Muriate of Potash-2, Super  
Fertilizer Phosphate-3, Urea-4, Other chemical Fertilizer-5, Chemical  
Fertilizer not used-6

Signature of Investigator  
Inspector

Name & Signature of Statistical

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
Inspecting Officer in the District Office

Place :  
Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM X A –CROP CUTTING EXPERIMENT ON MANGO 20. . . 20. . .**

**BLOCK 1- IDENTIFICATION PARTICULARS**

- |                                   |                                                       |
|-----------------------------------|-------------------------------------------------------|
| 1. District                       | 8. Survey No.                                         |
| 2. Taluk                          | 9. Area                                               |
| 3. Block/Municipality/Corporation | 10. No. of Patches                                    |
| 4. Panchayat/Ward No/Division No  | 11. Random No. of selected Patch                      |
| 5. Zone                           | 12. No. of Trees                                      |
| 6. Name of Investigator           | B*                      Y*                      Total |
| 7. Cluster No.                    | 13. Name and Address of Cultivator                    |

Sl No	Date	Item	Tree-1		Tree-2		Total No.	Total Weight (kg)
			Random No.		Random No.			
			Variety (HY/Local)		Variety (HY/Local)			
			No. of Mangoes	Weight (Kg)	No. of Mangoes	Weight (Kg)		
		Tender						
		Ripe						
		Ripe						
		Ripe						
		Ripe						
Total								

Signature of Investigator  
Inspector

Name & Signature of Statistical

Name and Signature of  
the Taluk Statistical Officer

Signature, Name & Designation of  
Inspecting Officer in the District Office

Place :  
Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM X (D) CROP CUTTING EXPERIMENT ON NUTMEG 20. . . 20. . .**

- |                                   |                                                       |
|-----------------------------------|-------------------------------------------------------|
| 1. District                       | 8. Survey No.                                         |
| 2. Taluk                          | 9. Area                                               |
| 3. Block/Municipality/Corporation | 10. No. of patches                                    |
| 4. Panchayat/Ward No/Division No. | 11. Random No. of selected patch                      |
| 5. Investigator Zone              | 12. No. of Trees                                      |
| 6. Name of Investigator           | B*                      Y*                      Total |
- 
- |                |                                    |
|----------------|------------------------------------|
| 7. Cluster No. | 13. Name and Address of Cultivator |
|----------------|------------------------------------|

Harvest No.	Date	Tree-1 Random No.		Tree-2 Random No.		Total	
		No. of Nuts	Weight (kg)	No. of Nuts	Weight (kg)	Number	Weight
1	A						
	B						
2	B						
	C						
3	B						
	C						
4	B						
	C						
5	B						
	C						
6	B						
	C						
7	B						
	C						
8	B						
	C						

A- Harvest before 1<sup>st</sup> visit, B- Harvest on the date of visit, C- Harvest between two visits

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
the Taluk Statistical Officer  
Office

Signature, Name & Designation of  
Inspecting Officer in the District

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**FORM X (E) CROP CUTTING EXPERIMENT ON TAMARIND 20....20...**

- |                                   |                                                       |
|-----------------------------------|-------------------------------------------------------|
| 1. District                       | 8. Survey No                                          |
| 2. Taluk                          | 9. Area                                               |
| 3. Block/Municipality/Corporation | 10. No. of patches                                    |
| 4. Panchayat/War No/Division No   | 11. Random No. of selected patch                      |
| 5. Investigator Zone              | 12. Area of selected patch                            |
| 6. Name of Investigator           | 13. No. of Trees in selected patch                    |
|                                   | B*                      Y*                      Total |
| 7. Cluster No                     |                                                       |
|                                   | 14. Name and Address of Cultivator                    |

		Tree-1 Random		Tree-2 Random No.		Total	
		No.					
A.Random No							
B. Age of Tree							
Date of Harvest		Weight (kg)	Approximate Weight of outer shell (kg)	Weigh t (kg)*	Approximate Weight of outer shell (kg)	Weight (kg)	Approximate Weight of outer shell (kg)
I	A						
	B						
II	B						
	C						
III	B						
	C						
Total							

A- Harvest before 1<sup>st</sup> visit      B- Harvest on the date of visit      C- Harvest between two visits

*\*Weight should be taken after removing the shell*

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
Taluk Statistical Officer

Signature, Name & Designation of the  
Inspecting Officer of District Office

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**

**FORM X (F) CROP CUTTING EXPERIMENT ON BETEL LEAVES 20....20...**

**BLOCK 1- IDENTIFICATION PARTICULARS**

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| 1. District                       | 5. Zone                         |
| 2. Taluk                          | 6. Cluster No.                  |
| 3. Block/Municipality/Corporation | 7. Name of Investigator         |
| 4. Panchayat/Ward No/Division No. | 8. Name & Address of Cultivator |

**BLOCK II – DETAILS OF SELECTED FIELD**

1	Survey No.& Area(cent)	
2	Planted area of betel leaves	
3	No. of Patches	
4	Random No. of selected patch	
5	No. of betel leaf wines in selected patch	
6	Variety (HY/Local)	
7	Year & Month of planting	
8	Fertilizer used (Chemical/Organic)	
9	Fertilizer used – Quantity & code*	
10	Irrigation Source Code**	
11	Whether Insecticides used or not	

Code No. to be used:

Chemical : Ammonium Sulphate-1, Muriate of Potash-2, Super  
\*Fertilizer Phosphate-3, Urea-4, Other chemical Fertilizer-6, Chemical  
fertilizer not used-7

\*\*Irrigation : Govt. Canal-1, Pvt. Canal-2, Govt. Tank-3, Pvt. Tank-4, Govt. Well-5,  
Source Pvt. Well-6, Tube well-7, Other minor & lift Irrigation scheme-8, By  
pumps, rivers, lakes, rivulets etc-9, By country wheels from rivers  
lakes, rivulets and springs-10, By other means from rivers, lakes,  
rivulets, springs-11, Others-12, No Irrigation-13.

**BLOCK – III**

Harvest Sl. No		Sl. No	1		2		3		4		5		Total	
		Random No												
		Date of Harvest	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
1	A													
	B													
2	B													
	C													
3	B													
	C													
4	B													
	C													
5	B													
	C													
6	B													
	C													
7	B													
	C													
8	B													
	C													
9	B													
	C													
10	B													
	C													
11	B													
	C													
12	B													
	C													
Total														

A- Yield Before 1<sup>st</sup> visit    B- Yield on the date of visit    C- Yield between two visits

Signature of Investigator

Name & Signature of Statistical Inspector

Name and Signature of  
the Taluk Statistical Officer  
Office

Signature, Name & Designation of  
Inspecting Officer in the District

Place :

Date :

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**PREHARVEST REPORT ON PADDY**

- |                                   |                         |
|-----------------------------------|-------------------------|
| 1. District                       | 4. Investigator Zone    |
| 2. Taluk                          | 5. Season & Year        |
| 3. Block/Municipality/Corporation | 6. Name of Investigator |

Sl No	Panchayat	Survey No.	Area of Kandom (Cent)	Cropped Area (cent)		Yield Rate (Kg/Htr)		Remarks	
				Current year	Previous Year	Current year	Previous Year	Wide variation if any (from Previous Year)	
	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									

Date of enumeration

Signature and Name of Inspector

Signature of Investigator

Date of dispatching

Sl No.	Survey No.	Name and Address of Selected cultivator	Sketch of selected field	Probable date of Harvest
1	2	3	4	5
1				
2				
3				
4				

Signature of Investigator

Signature of Inspector



**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**HIGH YIELDING VARIETY OF PADDY (Item Wise)**

District:                      Block/Municipality/Corporation:                      Season & Year:  
 Taluk:                      Zone:

Sl. No	Selected Survey No. for crop cutting experiment	Total paddy area of selected Cultivator in Taluk (Cent)	Total area of land in which high yielding variety of seeds cultivated in the Taluk by the selected cultivator									Remarks
											Total	
1	2	3	4	5	6	7	8	9	10	11	12	13
1												
2												
3												
4												
Total												

Signature and Name of Investigator :

Name, Designation & Signature of  
Inspector in the district office

Date:

Note : 1) Column 3:Paddy area of the selected cultivator in this Taluk may be given in cents.

2) Col(4 - 11) The high yielding paddy area of selected cultivator in this Taluk which is given in column no. 3 may be filled item wise in cents.

3) Col-12 = Sum of 4 to 11

4) Sum of the each column may be tallied and written in the last row

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**Inspection Report of crop cutting Experiment on Tapioca**

- |                                       |                                                |
|---------------------------------------|------------------------------------------------|
| 1. District                           | 2. Taluk                                       |
| 3. Year                               | 4. Name & Designation of<br>Inspecting Officer |
| 5. Panchayat/Municipality/Corporation | 6. Cluster No.                                 |

**BLOCK I- IDENTIFICATION PARTICULARS OF INSTPECTED FIELD**

Cluster No. and Zone No. Name of Block		1	2	3
A At the time of harvest	B After harvest	Survey Sub Division No.	Improved area or not	Remarks

**BLOCK II – DESCRIPTION OF INSPECTION AT THE TIME OF HARVEST**

		Inspection 1	Inspection 2	Inspection 3
1	Name of Village and Panchayat			
2	Survey No. originally selected for crop cutting experiment			
3	Actual survey No. of inspected field			
4	Reason for changing			
5	Whether High yielding variety is used in the plot(Yes/No)			
6	Chemical Fertilizer used (code)*			
7	Date of Harvest			
8	Weighing date			
9	Weight of yield (kg 0.00)			

Contd...../-

		Inspection 1	Inspection 2	Inspection 3
10	(i)Whether standardized equipment is supplied (ii)The same has been actually used or not.			
11	Opinion of the Inspection Officer about crop cutting experiment			
12	Remarks, if the yield is abnormal			

**BLOCK III - DETAILS OF INSPECTION AFTER HARVEST**

		Inspection -1	Inspection-2	Inspection-3
1	Name of Panchayat			
2	Survey No. selected			
3	Error findings			
	a) Selection of survey No.			
	b) Identified Survey No.			
	c) Identified kandom			
4	Details of selected kandom			
	a) 'X' Axis			
	1. Marked by Investigator			
	2. Measured in presence of Inspector			
	b) 'Y' Axis			
	1. Marked by Investigator			
	2. Measured in presence of Inspector			
5	Random No. taken			
6	Remarks			
7	Date of Inspection			

Place :

Date :

Signature of the Inspecting Officer

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**Inspection Report of crop cutting Experiment on Paddy**

1 District :

2 Taluk :

3 Block/Municipality/Corporation :

#### 4 Year & Season

5 Name and Designation  
of Inspecting Officer

BLOCK - I - IDENTIFICATION PARTICULARS OF INSPECTED FIELD					
Name of Zone, Cluster No.			1	2	3
A	B	C			
Pre Harvest	Harvest stage	Post-Harvest	Survey No.	In IPD unit or not	Remarks

BLOCK - II - DETAILS OF PRE-HARVEST INSPECTION				
		1	2	3
1	Name of Panchayat			
2	Survey No.			
3	Identified Errors			
	a) Selection of Survey No.			
	b) Identification of Survey No.			
	c) Selection of Kandom			
4.	Probable date of Harvest			
	a) Recorded by Investigator			
	b) Found at the time of Inspection			
5.	Yield ascertained			
	a) Recorded by the Investigator			
	b) Found at the time of Inspection			
6.	Did the Investigator visit the cultivator and arranged for CCE			
7.	Remarks			
8.	Date of Inspection			

<b>BLOCK – III – DETAILS OF INSPECTION AT HARVEST</b>				
		1	2	3
1	Name of Panchayat			
2	Survey No. originally selected for crop cutting experiment			
3	Survey No. actually inspected			
4	Reason for substitution, if any			
5	Whether the plots are			
	a) Irrigated or not			
	b) HY Variety seed used or not			
6	Chemical fertilizers used			
7	Manures used			
8	Date of harvest			
9	Date of threshing and weighing			
10	Weight of yield (Kg)			
11	(i)Whether standardized equipment is supplied (ii)The same has been actually used or not.			
12	General opinion of the Inspecting Officer regarding the CCE			
13	Reason, if the yield is abnormal.			

<b>BLOCK – IV – INSPECTION AT POST HARVEST STAGE</b>				
		1	2	3
1	Name of Panchayat			
2	Survey No. selected			
3	Mistakes noted in			
	a) Selection of Survey No.			
	b) Identification of Survey No.			
	c) Identification of Kandom			
4	Details of selected Kandom			
	a) 'X' Coordinate			
	1) As entered by Investigator			
	2) As measured in the presence of Inspecting Officer			
	b) 'Y' Coordinate			
	1) As entered by Investigator			
	2) As measured in the presence of Inspecting Officer			

5	Random No. Chosen			
	a)X-7 (1) as entered by Investigator			
	(2)as observed at the time of Inspection			
	b)Y-7 (1) as entered by Investigator			
	(2) as observed at the time of Inspection			
6	Remarks			
7	Date of Inspection			

Place :  
Date :

Signature of Inspecting Officer

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**CONSOLIDATION FORM OF CROP CUTTING EXPERIMENTS ON PADDY**

3 Block/Municipality/Corporation :

5 Zone :

## 4 Panchayat

6 Year & Season:

### A.HIGH YIELDING SEEDS

[illegible]

\*Code No- 0- Common, 1- Flood, 2- Drought, 3- attack by pests, 4-Un irrigated, 5-Less Manure, 6- Other reasons

**A. OTHER ITEMS**

Cluster No.	Yield in the plot	Irrigated			Unirrigated			tici des use	des not	Name of Panchayat	ma rks
		Fertilizer used	Other Manure used	Without Manure	Fertilizer used	Other Manure used	Without Manure				
1	20	21	22	23	24	25	26	27	28	29	30
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
Total											

Signature and Name of Research Assistant



**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**E.A.R.A.S PROGRESS REPORT 20.....20.....**

**A. AREA ENUMERATION**

District/Taluk:

Month & year:

Dry/Wet:

Visit : I/II/III

Sl. No	Block Municipality Corporation	Total Zone	Total No. of clusters	No of clusters enumerated during the month		No of clusters enumerated upto the end of the month		Progress (%)	Number of Inspection						Remarks
				No.	Area (Cent)	No.	Area (Cent)		TSO		SI		DLO		
1	2	3	4	5	6	7	8	9	10		11		12		13
									A	B	A	B	A	B	

A. During the month

B. Up to the end of the month

Place :

Date:

Taluk Statistical officer/Deputy Director

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**E.A.R.A.S PROGRESS REPORT 20.....20.....**

**B. CROP CUTTING EXPERIMENT OF OTHER CROPS**

District/Taluk:

Month & year:

Sl No.	Block/ Municipality/corporation	Zone	Crops																											
			A	B	C	D	E	F	G	A	B	C	D	E	F	G	A	B	C	D	E	F	G	A	B	C	D	E	F	G

A. Allotted, B. Selected, C. During the month, D. Up to the end of the month, E. TSO inspected, F. SI Inspected, G. Inspected by District Level Officer

Place :  
Date:

Taluk Statistical officer/Deputy Director

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**E.A.R.A.S PROGRESS REPORT 20.....20.....**

**A.CROP CUTTING EXPERIMENT ON TAPIOCA**

District/Taluk:

Month & year:

District Forum		Annual Report							Financial year						
Sl. No	Block Municipality Corporation	Total Zone	No. of Experiments					Balance	Inspection						Remarks
			Allotted	Selected	During the month	Up to the end of the month	Loss		TSO		SI		DLO		
1	2	3	4	5	6	7	8	9	10		11		12		13
									A	B	A	B	A	B	

A. During the month

B. Up to the end of the month

Taluk Statistical officer/

Place :

Date:

Deputy Director

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**

**PADDY STRAW**

**YEAR : 20.....20.....**

District :

Taluk :

(Autumn/Winter/Summer)

Sl. No	Block	Experiment No	Weight of Straw	Panchayat	Remarks
			Kg/Acre		
1	2	3	4	5	6

Taluk Statistical Officer/Deputy Director

**DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**  
**CROP CUTTING EXPERIMENT ON BITTER GUARD/COWPEA 2020...20...**  
**BLOCK-I IDENTIFICATIN PARTICULARS**

- 1 District : 3 Zone :  
 2 Block / Municipality / Corporation : 4 Year :

**BLOCK - II DETAILS OF SELECTED KANDOMS**

		Experiment 1	Experiment 2	Experiment 3
1	Panchayat/Ward No./Division No.			
2	Cluster No.			
3	Survey No.			
4	Area			
5	Address of the Cultivator			
6	Area of the selected crop (Bitter guard /Cowpea)			
7	No. of patches			
8	Random No. of selected Patch, Area			
9	Item (High yield/Local /improved)			
10	Organic Fertilizers used	1.		
		2.		
		3.		
11	Chemical Fertilizers used	Qty:		
		Code*:		
12	Source of Irrigation (code)			
13	Pesticides used (Yes-1, No-2)	Organic Method		
		Chemical Method		
14	Whether organic cultivation or not(Yes-1, No-2)			

**Code No. used :**

Chemical Fertilizers : Ammonium Sulphate -1, Muriate of Potash-2, Super Sulphate-3, Urea-4, Other Chemical Fertilisers-5, Non use of chemical fertilizers-7

Irrigation : Govt. Canal-1, Private Canal-2, Govt. Pond-3, private Pond-4, Govt. Well-5, Private Well-6, Tube Well-7, Lift Irrigation-8, Pump set (from River, Lake, Thodu, Stream)-9, Country wheel (from River, Lake, Thodu, Stream) -10, Others(from River, Lake, Thodu, Stream)-11, Others-12

**ECONOMICS & STATISTICS DEPARTMENT, KERALA**  
**PROFORMA C**  
**20...-20....**

**CROP CUTTING EXPERIMENT ON ARECANUT FOR THE MONTH OF .....**

District ..... Taluk.....

Sl. No.	Block / Municipality / Corporation	Investigator	Arecanut collected from														Remarks
			Zone	Survey Number of selected Kandom	Date of Harvest	Ripen / Tender	Number	Weight (Kg)	Number	Weight (Kg)	Number	Weight (Kg)	Number	Weight (Kg)	Number	Weight (Kg)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18



**ECONOMICS & STATISTICS DEPARTMENT, KERALA**

## LIST OF PLOTS

District .....	Block / Municipality /Corporation .....	
Taluk .....	Village Zone.....	Panchayat .....

[illegible]



