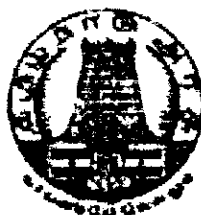
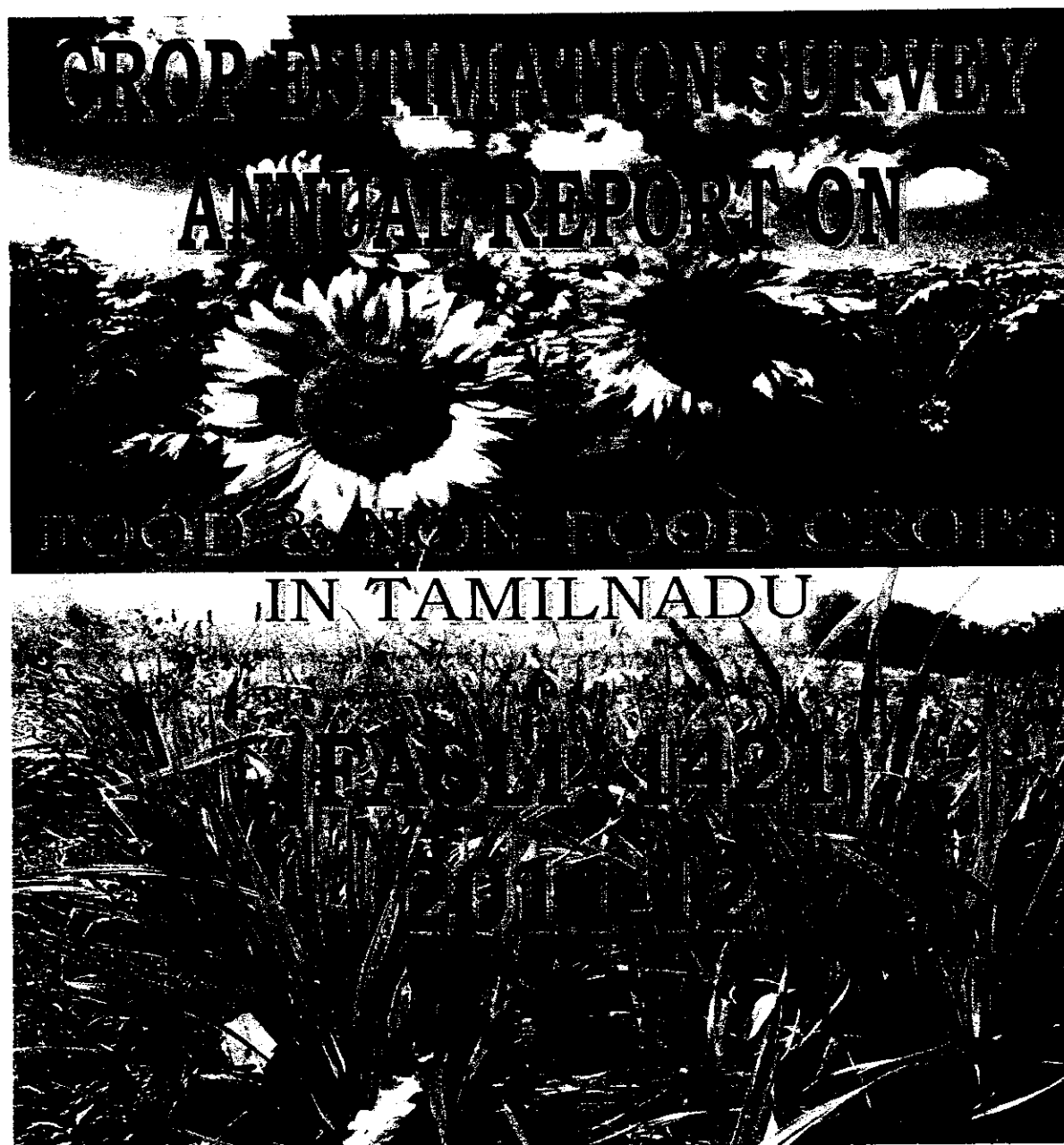


Report No. 1/2013



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DIRECTOR
DEPARTMENT OF ECONOMICS AND STATISTICS
CHENNAI-600 006

2011-12

PREFACE

Continuous improvements in agricultural productivity and output are a pre requisite for sustained growth, which would contribute substantially to the overall economy's development. The instrumental values of agriculture are factor contribution, product contribution, market contribution and foreign exchange contribution. Dynamic factors such as growing population, rising real per capita income and the income elasticity of demand for food do have a direct bearing on steady and sustainable food production. They exert heavy pressure on demand for wage goods. In the above backdrop variables such as area, production and yield rates for food and non food crops are seen through the prism of results of Crop Estimation Survey 2011-12. These data form the basis for estimating State Income originating in the agricultural sector.

The Annual Report on "General Crop Estimation Survey" contains the results of crop cutting experiments on important food and non-food crops conducted during 2011-12. The food crops covered are paddy, millets and pulses and non-food crops include cotton, sugarcane, gingelly, groundnut and sunflower.

Part-I of this report sets out the objectives, planning and organization, sampling design, coverage, sample size and selection of villages. Part-II deals with the Estimation procedure for arriving at yield rates and sampling error. Part -III and IV highlight the results of the survey on food and non-food crops including crop wise estimated average yield and production.. Vital information on the application of modern farm technology besides cotton ginning ratio and cane gur ratio is also provided.

The information presented in this report would be useful to planners, administrative departments, research Scholars and other users. The time-series data provided in this document are obviously the richest grazing land for researchers. The scholars can track the progress of the agricultural development over a period of time and see the problems confronting the agricultural sector in right prospective.

Chennai - 6
28.06.2013

T.K. PONNUSAMY
Director

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CHAPTER-I

SURVEY PROFILE

1. INTRODUCTION

Agriculture continues to be the kingpin of the State economy on account of its sizable contribution made to the State Income. Timely and reliable statistics on crop production is of vital importance for estimating at the State Income. Crop production estimates are arrived at on the basis of yield rates obtained from scientifically planned crop cutting experiments, conducted under General Crop Estimation Survey. Under the General series of Crop Estimation Survey (GCES), as many as sixteen important food and non-food crops are covered. The list of food and non-food crops covered, the year of initiation, the year of adoption of results and plot size for each experimental crop are furnished. (Table-1)

1.2. OBJECTIVE OF THE SURVEY

The main objective of the General Crop Estimation Survey is to estimate the average yield per hectare based on crop cutting experiments and to gauge at the total production of important crops covered under the survey both at district and state level on the basis of crop cutting experiments conducted by adopting stratified random sampling techniques. The survey also provides the basis for the collection of additional information such as improved agricultural practices and yield rates of various varieties of seeds under irrigated and unirrigated conditions.

1.3. PLANNING AND ORGANIZATION

The work relating to selection of sample villages, collection, scrutiny, tabulation and analysis of data are undertaken at the Headquarters of the Department of Economics and Statistics. The Assistant Directors of Statistics in the Districts are entrusted with the task of organisation on and supervision of field work at the District level. The field work is executed to by the Agricultural Officers / Deputy Agricultural Officers of the Department of Agriculture. The Block Statistical Inspectors and Divisional Statistical Officers provide necessary technical guidelines for the proper and successful conduct of the crop cutting experiments at the block level.

1.4. SAMPLING DESIGN

The stratified multi-stage random sampling technique is adopted with Block as strata and revenue village within the blocks forms I stage unit of sampling unit. Survey / Sub-division number / Field within each selected Village is the sampling unit of the II stage and experimental plot of a specified shape and size makes up the ultimate and III unit of sampling.

1.5. COVERAGE AND SAMPLE SIZE

The scale of experimentation was distributed among the various districts and blocks in proportion to the corresponding area of each crop. The number of experiments planned and analysed for each of the principal food and non-food crops during the year 2011-12 are presented (Tables 2 & 3.)

1.6. SELECTION OF SAMPLE VILLAGES

The required number of villages were selected randomly at the State Headquarters, from the list of 2011-12 Timely Reporting Scheme villages. The list of randomly selected villages along with a set of 4 digit random numbers each for selection of survey numbers in the selected village is sent to the Assistant Directors of Statistics in the districts and Department of Agriculture, Chennai. On receipt of the village list, Assistant Directors of the respective district allocate the village list to the field functionaries of different blocks (i.e. Agricultural Officers/Deputy Agricultural Officers). The Village Administrative Officer of the selected village renders assistance to the field workers in locating the fields, enlisting the co-operation of the cultivators and procuring the required labour at the time of harvest.

The selection of survey numbers, location of plot, substitution of villages in the case of non-availability of required crop in the selected village and other field operations are carried out by following suitable randomization procedure.

1.7. REFRESHER TRAINING TO THE FIELD STAFF

An intensive training covering the theoretical and practical aspects of the survey is being imparted to all the Field Officers (viz. Agricultural Officers/Deputy

Agricultural Officers) as well as the supervisors at the commencement of the Fasli year, so that they could equip themselves fully with the conduct of crop cutting experiments.

1.8. FIELD LEVEL SUPERVISION

In order to improve the quality and reliability of the data flowing through General Crop Estimation Survey, the field work carried out by the Agricultural Officers / Deputy Agricultural Officers is being supervised by the Assistant Directors of Agriculture Department, Regional Deputy Directors, Assistant Directors, Divisional Statistical Officers and Block Statistical Inspectors of the Department of Economics and Statistics and NSSO by pre-assigning certain number of villages.

The crop-wise number of experiments planned and number of experiments pre-assigned for inspection for both State (Statistical & Agricultural) and Central Agency (NSSO) and percentage to the total number of experiments planned and inspected for the year 2011-12 are furnished in Table 4

The number of experiments pre-assigned for supervision both for the Statistical and Agricultural agencies of the State Government and Central agency in 2011-12 is furnished in Table 5.

The programme of inspection was so arranged as to cover the various stages of fieldwork in order to ensure accuracy in the selection of fields, location of plots and recording of yield data.

The quantum of inspections carried out by the officials is furnished in Table 6 to Table 8. It is observed that the overall successful conduct of experiments for all Food and Non Food crops were 99.82 per cent .

Chapter –II

ESTIMATION PROCEDURE METHODOLOGY

2.1. BLOCK LEVEL AVERAGE YIELD

The Average yield of paddy, pulses, groundnut, sugarcane and millets at Block level is calculated as a simple mean of the individual plot yield. The simple mean thus arrived at is then converted to per hectare average yield.

2.2. DISTRICT LEVEL AVERAGE YIELD

The district level yield rates are arrived at by the following steps.

- For each block, the block wise average yield rate (plot yield) is multiplied by corresponding area under the crop in the block.
- The resultant product is added over to all the blocks with the specified crop in the district.
- The total is then divided by the area under crops in the district resulting in the district average Plot yield.
- Then the district average Plot yield is multiplied by 400 or 200 and drriage ratio/ grain conversion ratio as the case may be to get district level yield rate per ha.(Kg/ha) as follows:

Crop	Calculation of Yield	Drriage Ratio
Paddy – Seasonwise	Simple mean yield x 400 x 0.67x District drriage ratio	Total wt. of Dry Paddy is divided by Total wt. of Wet Paddy
Pulses / Cotton / Gingelly /Sunflower	Simple mean yield x 200	--- Nil ---
Groundnut / Millets	Simple mean yield x 400 x District drriage ratio	Total wt. of Dry (G.Nut /Millets) is divided by Total wt. of Wet (G.Nut/Millets)
Sugarcane	Simple mean yield x 400	--- Nil ---

2.3 STATE LEVEL AVERAGE YIELD

The State level average yield is arrived at by dividing the cumulative total of district average yield of the crop multiplied by corresponding area under the

crop in the district divided by the total area of under the crop in the State (Area as per Season and Crop Report).

2.4. PLOT SIZE

Crop	Plot Size
Paddy, Groundnut, Millet crops & Sugarcane	5m x 5m (1/400 th of one hectare)
Pulses, Cotton, Gingelly & Sunflower	10m x 5m (1/200 th of one hectare)

2.5. ESTIMATION PROCEDURE

The average yield of grains at block level is calculated as a simple mean of the individual plot yields.

$$Y_i = \frac{\sum_{r=1}^{m_i} \sum_{s=1}^2 Y_{rs}}{n_i}$$

Where Y_i the average yield for the block
 Y_{rs} is the yield of s^{th} experiment in r^{th} village.
 n_i is the number of experiments in i^{th} Block
 m_i is the number of selected villages in i^{th} Block.

The average yield for the district is calculated by combining the stratum means using the area under the respective crops in the stratum as weights.

$$\bar{Y}(d) = \frac{\sum_{i=1}^t \bar{Y}_i a_i}{\sum_{i=1}^t a_i}$$

" a_i " is the area in the i^{th} block &
" t " is the number of blocks in the district.

The estimates of average yield for each category of crop are then pooled to arrive at the estimated average yield for combined, for crop at state level by using the area under the respective category as weights.

The sampling error which gives an indication of the limits within which the estimated average yield is likely to vary, is worked out by using formula

$$SE = \sqrt{V(Y_d)} = \frac{\sqrt{\frac{F \sum_{i=1}^t (a_i^2/n_i) + (E - F) \sum_{i=1}^t [(a_i^2 \sum_{j=1}^{m_i} n_{ij}^2) / n_i^2]}{[\sum_{i=1}^t a_i]^2}}}{t}}$$

Where $Y(d)$ is the estimated district mean yield

n_{ij} is the number of fields in j^{th} village of the i^{th} block

n_i is the number of experiments conducted in the i^{th} block

t is the number of blocks in the district

a_i is the area of the crop in the i^{th} block

$E = SSBV / DF$ Estimate of the mean square between villages

$F = SSWV / DF$ Estimate of the mean square between fields within villages

The district average yield is worked out separately for each category viz., season-wise crops, irrigated and unirrigated categories of crops by making use of the above formula. The district average yield for the combined crop is arrived at by pooling the estimate for each category on the basis of the area reported under the respective category. The estimates for the state (i.e for all the districts covered by the survey) are obtained as a weighted average of the district estimates with the district-wise area figures under the crop as weights.

In case of mixed crop the field having more than 10 percent of a particular crop alone be considered for selection and the plot yield is estimated in proportion to the percentage of the crop in the experimental field.

CHAPTER-III

A BIRD'S – EYE VIEW OF RESULTS OF THE SURVEY

FOOD CROPS

Agriculture is very much weather dependent and as said is a gamble of monsoon. In the event of quantum of rainfall, there will be normal area coverage, production and yield rates if the rainfall is ideal. Rainfall having been deficient, the agricultural sector will be on the knife-edge. In view of this, what the agricultural sector needs is an ideal spatio-temporal distribution of rainfall and judicious use of water resources. Information on area, yield and production for 22 crops during 2011-12 are tabulated in Table 9.

Under General Crop Estimation Survey, some additional information like usage of local and high yield varieties hybrid seeds, application of chemical fertilizers and other manures and treatment of crops with pesticides/insecticides are also collected and presented in the relevant tables.

I) CEREALS

3.1. PADDY

Green revolution, which marks a landmark in agricultural sector, has made a tangible dent in both extensive and intensive cultivation in the State. The System of Rice Intensification has been producing salutary impact in productivity of paddy. Adoption of a package of inputs and improved technology is a causative factor.

Paddy is the staple crop, extensively cultivated in all the districts of the State. It accounted for 32.32 per cent of the gross cropped area during 2011-12. It is being raised in 3 seasons viz., Kar / Kuruvai / Sornavari, Samba / Thaladi / Pishanam and Navarai / Kodai.

Season wise Sowing / Planting and Harvesting periods

Season	Sowing/Planting	Harvesting
Kar / Kuruvai / Sornavari	April to July	Before Nov 15 th
Samba / Thaladi / Pishanam	August to November	Before April 15 th
Navarai / Kodai	December to March	Before June 15 th

Of the 1976 experiments planned during 2011-12, 1957 (99.49 per cent) experiments were conducted successfully.

The estimated average yield and production of rice increased by 28.92 per cent and 28.77 per cent respectively even though the estimated area decreased by 0.20 per cent compared to previous year. (Table 10)

Adoption of modern Farm Technology :

Technological diffusion is pervasive in cultivation of paddy. Crop yield is a function of many factors-use high yielding seeds, timely irrigation, application of organic and inorganic fertilizers, use of pesticides, adoption of SRI, etc. That is productivity is determined by physical capital, human capital and technological knowledge and application. The high yielding variety seeds were used by all the 1957 sample farmers during all seasons and there was a considerable usage of chemical fertilizers (58 per cent) and pesticides (76 per cent) which is shown in Table 11.

3.2. CHOLAM (JOWAR)

Jowar is an important food crop among millets covering 3.36 per cent of the total gross area sown in the State. Out of 468 experiments planned under Kharif and rabi Jowar during 2011-12, 468 (100 per cent) were conducted successfully.

Sowing and Harvesting periods

Crop	Sowing	Harvesting
Jowar – Kh	April to September	Before March 15th
Jowar - R	October to March	Before July 15th

The area of jowar crop dipped by 18.80 per cent whereas average yield and production of jowar rose by 25.94 per cent and 2.24 per cent respectively compared to the previous year is shown in Table 12.

Adoption of Modern Farm Technology

Out of a total sample of 468 farmers, 360 farmers used high yielding variety seeds i.e., 77 per cent. About 29 percent applied chemical fertilizers and only 5 percent treated Jowar with pesticides. (Table 13)

3.3. CUMBU (BAJRA)

Bajra is another food crop among the millets covering 0.79 per cent of the total cropped area in the State.

Sowing and harvesting periods

Crop	Sowing	Harvesting
Cumbu (Kh)	April to September	Before March 15th
Cumbu (R)	October to March	Before July 15th

Totally, 340 experiments were planned under Kharif and Rabi Cumbu crop for 2011-12, and 100 per cent of the experiments were conducted successfully.

The area of bajra came down by 5.70 per cent and its production increased by 47.93 per cent and an increase of 56.84 per cent in its average yield may be observed in Table 14 when compared with the previous year.

Adoption of Modern Farm Technology

Out of 340 sample farmers 269 farmers (79 per cent) use high yielding varieties seeds, 127 (37 per cent) applied chemical fertilizers and 16 (5 per cent) treated crop with pesticides. The application of only modern farm technology is significant from Table 15.

3.4. RAGI

Ragi is another important food crop among millets, which covered 1.41 per cent of the gross cropped area in Tamil Nadu in 2011-12.

Sowing and Harvesting periods

Crop	Sowing	Harvesting
Ragi (Kh)	April to September	Before March 15th
Ragi (R)	October to March	Before July 15th

Ragi is cultivated mostly as an unirrigated crop. A total of 360 experiments were planned for both Kharif and Rabi season during 2011-12 and all the experiments were conducted successfully.

The area, average yield and production of ragi witnessed an increase by 9.46, 19.98 and 31.43 per cent respectively over the previous year. (Table 16)

Adoption of Modern Farm Technology

Out of 360 fields under crop cutting experiments conducted high yielding varieties seeds were used by 350 sample farmers (97%) . 166 sample farmers used chemical fertilizers (46%) and only in 29 cases (8%) the crops were treated with pesticides. (Table 17)

3.5. MAIZE

Maize is another important food crop among millets covering 4.77 per cent of the gross cropped area in Tamil Nadu.

Sowing and Harvesting periods

Crop	Sowing	Harvesting
Maize (K)	April to September	Before March 15th
Maize (R)	October to March	Before July 15th

Maize is cultivated mostly as an unirrigated crop. Of total 428 experiments planned during 2011-12, 412 experiments (96%) were conducted successfully.

The area, average yield and production of maize increased by 21.75, 35.53 and 65 per cent respectively when compared with the previous year. (Table 18)

Adoption of Modern Farm Technology

Of the 412 experiments conducted, high yielding varieties seeds were fully used by all 412 sample farmers covered. In 151 cases (37%) chemical fertilizers were applied and in 63 cases (15%) crops were treated with pesticides. (Table 19)

3.6. SAMAI

Samai is a small millet crop grown in the State as an unirrigated crop only. Out of 100 experiments planned, 100 experiments were analysed successfully.

There was an overall increase in area, average yield and production of samai by 13.51 per cent, 27.99 per cent and 45.28 per cent respectively compared to the previous year. (Table 20)

Sowing and Harvesting Period for Samai

Crop	Sowing	Harvesting
Samai (K)	April to September	Before March 15th

3.7. VARAGU

Varagu is yet another small millet crop grown in Tamil Nadu as an un-irrigated crop only. All the planned 112 experiments were conducted successfully and considered for analysis.

There was a decrease in area by 48.3% and production of varagu by 35.41%. From Table 21 it could be observed that the yield rate has increased by 24.97% when compared with previous year.

Sowing and Harvesting Period for Varagu

Crop	Sowing	Harvesting
Varagu (KH)	April to September	Before March 15 th

(ii) PULSES

Redgram, Blackgram, Greengram and Horsegram are the four important pulses crops grown in the State. They are mainly grown as an unirrigated crop. The sowing and harvesting seasons of these crops are given below:

Sowing and Harvesting periods

Crop	Sowing	Harvesting
Redgram (KH)	April to September	Before March 15 th
Blackgram (KH)	April to September	Before March 15 th
Blackgram (R)	October to March	Before July 15 th
Greengram (KH)	April to September	Before March 15 th
Greengram (R)	October to March	Before July 15 th
Horsegram (R)	October to March	Before July 15 th

3.8. REDGRAM

Redgram is an important pulses crop grown as an unirrigated crop. All the 268 experiments planned were conducted successfully and considered for analysis.

The area, average yield and production of redgram crop increased by 0.61%, 31.42% and 32.20% respectively when compared to the previous year as shown in Table 22.

Adoption of Modern Farm Technology

As shown in table 23, of the 268 cases, high yielding varieties seeds were used in 263 samples i.e, 98 percent of the cases . In 37 percent of the case, chemical fertilizers were used and in 58 percent of the case crops were treated with pesticides.

3.9 BLACK GRAM

Blackgram is another important pulses crop grown largely as an unirrigated crop. All the 332 experiments planned under this crop were conducted successfully and considered for analysis.

The area under blackgram increased by 1.26 per cent, production increased by 45.37 per cent, which is made possible as there is increase in yield rate by 43.56 per cent over the previous year as shown in Table 24.

Adoption of Modern Farm Technology

In all the 332 sample, farmers using high yielding varieties seeds were 329, chemical fertilizers were applied by 170 sample (51 percent) and 38 percent of the crops were treated with pesticides. (Table 25)

3.10 GREENGRAM

Greengram is yet another important pulses crop grown largely as an unirrigated crop. Out of 364 experiments planned 364 experiments were conducted successfully and considered for analysis.

The average yield rate and the production of greengram crop rose by 54.46 per cent and 47.56 per cent respectively and the area of greengram decreased by 4.43 per cent when compared to the previous year. (Table 26)

Adoption of Modern Farm Technology

Out of 364 experiments conducted in 95 percent of the cases high yielding varieties seeds were used. In 45 percent of the cases chemical fertilizers were used and in 55 percent of cases crops were treated with pesticides (Table 27)

3.11 HORSEGRAM

Horsegram is yet another important pulses crop grown as an unirrigated crop. All the 188 experiments planned were conducted successfully and considered for analysis.

The Area, Average yield and Production of horsegram increased by 45.75 percent, 17.43 percent and 71.12 percent respectively when compared to the previous year. (Table 28)

3.12 COTTON

Cotton is an important commercial crop among the nonfood crops cultivated in the State. It accounted for 2.31 per cent of the gross cropped area in the State during 2011-12.

Sowing and Harvesting

Crop	Sowing	Harvesting
Cotton (KH)	April to September	Before March 15 th
Cotton (R)	October to March	Before July 15 th

Out of 740 experiments planned under khariff and rabi cotton 740 experiments were successfully conducted.

The area, average yield and production of cotton rose by 11.63, 37.82 and 53.98 per cent respectively when compared to the previous year. (Table 30)

Adoption of Modern Farm Technology

The high yielding varieties were predominantly used by 99 per cent of 740 samples in both irrigated and unirrigated conditions. Application of chemical fertilizer and pesticides is 34% and 48% respectively. (Table 31).

3.13 SUGARCANE

Sugarcane is an important cash crop which is extensively cultivated in the State. It accounted for 5.88 per cent of the gross cropped area in the State.

Planting / Ratoon

Season	Planting	Harvesting
Annual	July to June	July to June

Out of 468 experiments planned, 461 were conducted successfully and considered for analysis.

Area, average yield and production of Sugarcane increased by 9.62 per cent, 4.63 per cent and 13.79 per cent respectively compared to the previous year. (Table 32)

Adoption of Modern Farm Technology

With regard to 468 sample farmers, the cent percent usage of high yielding varieties led to intensive application of chemical fertilizers and widespread usage of pesticides / insecticides in cultivation of sugarcane. (Table 33)

3.14 GINGELLY

Gingelly is one of the important non-food crops among oil seeds covering 0.73 per cent of the total area sown in the State. Gingelly is sown both under Irrigated and Unirrigated conditions in the State.

Sowing and Harvesting

Crop	Sowing Period	Harvest Season
Gingelly (KH)	April to September	Before March 15 th
Gingelly (R)	October to March	Before July 15 th

Out of 416 experiments planned, 412 experiments were successfully conducted and considered for analysis.

Area of gingelly came down by 10.40 per cent, whereas the average yield and production of gingelly rose by 16.32 per cent and 4.17 per cent respectively, compared to the previous year. (Table 34)

Adoption of Modern Farm Technology

All the 412 sample farmers used high yielding varieties seeds, and the application of chemical fertilizers was 46% and pesticides application was 33%. (Table 35). The high yielding varieties were predominantly used in the cultivation of Gingelly in irrigated and unirrigated conditions.

3.15 GROUNDNUT

Groundnut is the most important crop among oil seeds grown in the State. It accounted for 6.55 per cent of gross cropped area in the state during 2011-12. Groundnut is grown mostly as an unirrigated crop during the kharif season and as an irrigated crop during Rabi.

Sowing and Harvesting

Crop	Sowing	Harvesting
Groundnut (KH)	April to September	Before March 15 th
Groundnut (R)	October to March	Before July 15 th

A total of 1160 experiments were planned under the groundnut crop and 1160 experiments were successfully conducted and considered for analysis.

The area of groundnut crop had a marginal increase by 0.03 per cent. Production and yield rate increased by 18.42 per cent respectively when compared to the previous year. (Table 36)

Adoption of Modern Farm Technology

With respect to 1160 sample farmers, high yielding varieties were predominantly used in the cultivation of groundnut in irrigated and unirrigated conditions whereas the application of chemical fertilizers and pesticides was not encouraging. (Table 37)

3.16 SUNFLOWER

Sunflower is another important crop among oil seeds. All the planned 224 experiments were conducted successfully during the year 2011 -12.

Sowing and Harvesting period

Crop	Sowing	Harvesting
Sunflower (KH)	April to September	Before March 15 th
Sunflower (R)	October to March	Before July 15 th

There is vast improvement in area, average yield and production of sunflower by 56.11 per cent, 57.17 per cent and 145.34 per cent respectively as compared to the previous year. (Table 40)

Adoption of Modern Farm Technology

It can be seen that the cent percent usage of high yielding varieties in the cultivation of Sunflower had resulted in the increase in yield and production. (Table 41)

Chapter IV – Driage of results food crops

4.1. The crop-wise driage ratios (percent) for paddy and other millets based on the experiments conducted during 2011-12. (Table 42)

4.2 . Among non – food crops covered under General Series of Crop Estimation Survey, driage operations are conducted for groundnut crop only. (Table 39)

More details about crops ie crop wise percentage of Area under different agricultural practices for Food and Non food crops, Ginning Ratio of Cotton, Cane to Gur ratio Estimates are furnished in relevant tables.

ANNEXURE - I

LIST OF TABLES

Table – 1

Year of commencement ,Yield Data Considered for Estimation and Plot Size

Crop		Commence ment of the Survey	Result considered for estimation	Plot Size (m X m)
I. Food Crops- (a) Cereals				
1.	Paddy K/K/S	1944-45	1955-56	5 X 5
	Paddy S/T/P	1944-45	1955-56	5 X 5
	Paddy N/K	1985-86	1985-86	5 X 5
2.	Cholam(I&UI)	1950-51	1955-56	5 X 5
3.	Cumbu (I&UI) (Baira)	1950-51	1955-56	5 X 5
4.	Ragi (I&UI)	1950-51	1955-56	5 X 5
5.	Maize (I&UI)	2006-07	2006-07	5 X 5
6.	Samai	1986-87	1986-87	5 X 5
7.	Varagu	1986-87	1986-87	5 X 5
	(b) Pulses			
8.	Redgram	1976-77	1976-77	10 X 5
9.	Blackgram	1976-77	1976-77	10 X 5
10.	Greengram	1977-78	1977-78	10 X 5
11.	Horsegram	1986-87	1986-87	10 X 5
II. Non-Food Crops-(a) Oil Seeds				
12.	Groundnut (I& UI)	1959-60	1973-74	5 X 5
13.	Gingelly (I & UI)	1973-74	1973-74	10 X 5
14.	Sunflower	1983-84	1983-84	10 X 5
	(b) Commercial Crops			
15.	Sugarcane	1954-55	1964-65	5 X 5
16.	Cotton (I&UI)	1959-60	1964-65	10 X 5

Table - 2

Number of Experiments Planned and Analysed under Food Crops-2011-12

Crop		No. of Experiments		
		Planned	Analysed	% Analysed
I. Food Crops- (a) Cereals				
1.	Paddy K/K/S	420	420	100.00
	Paddy S/T/P	1256	1237	98.49
	Paddy N/K	300	300	100.00
2.	Cholam (Kh)	300	300	100.00
	Cholam (R)	168	168	100.00
3.	Cumbu (Kh)	240	240	100.00
	Cumbu (R)	100	100	100.00
4.	Ragi (Kh)	160	160	100.00
	Ragi (R)	200	200	100.00
5.	Maize (Kh)	256	240	94.00
	Maize (R)	172	172	100.00
6.	Samai	100	100	100.00
7.	Varagu	112	112	100.00
(b) Pulses				
8.	Redgram	268	268	100.00
9.	Blackgram (Kh)	44	44	100.00
	Blackgram (R)	288	288	100.00
10.	Greengram (Kh)	56	56	100.00
	Greengram (R)	308	308	100.00
11.	Horsegram (R)	188	188	100.00
FOOD CROPS		4936	4901	99.29

Table - 3
Number of Experiments Planned and Analysed under Non-Food Crops-2011-12

Crop		No. of Experiments		
		Planned	Analysed	% Analysed
II. Non-Food Crops				
12.	Groundnut (Kh)	700	700	100.00
	Groundnut (R)	460	460	100.00
13.	Gingelly (Kh)	196	192	97.96
	Gingelly (R)	220	220	100.00
14.	Sunflower (Kh)	60	60	100.00
	Sunflower (R)	164	164	100.00
15.	Sugarcane	468	461	98.50
16.	Cotton (Kh)	564	560	99.00
	Cotton (R)	180	180	100.00
NON-FOOD CROPS TOTAL		3012	2997	99.50

Table 4
Cropwise Experiments Planned and Pre-assigned

Crop		Experiments Planned	Experiments pre-assigned	per cent of pre-assigned
Food Crops				
1.	Paddy K/K/S	420	380	90.48
	Paddy S/T/P	1256	1088	86.62
	Paddy N/K	300	258	86.00
2.	Cholam (Kh)	300	268	89.33
	Cholam (R)	168	142	84.52
3.	Cumbu (Kh)	240	208	86.67
	Cumbu (R)	100	84	84.00
4.	Ragi (Kh)	160	140	87.50
	Ragi (R)	200	178	89.00
5.	Maize (Kh)	256	184	71.88
	Maize (R)	172	120	69.77
6.	Samai	100	68	68.00
7.	Varagu	112	74	66.07
8.	Redgram	268	196	73.13
9.	Blackgram (Kh)	44	34	77.27
10.	Blackgram (R)	288	206	71.53
11.	Greengram(Kh)	56	44	78.57
12.	Greengram (R)	308	200	64.94
13.	Horsegram (R)	188	134	71.28
	Sub Total	4936	4006	81.16
Non-Food Crops				
12.	Groundnut (Kh)	700	560	80.00
	Groundnut (R)	460	350	76.09
13.	Gingelly (Kh)	196	148	75.51
	Gingelly (R)	220	168	76.36
14.	Sunflower (Kh)	60	46	76.67
	Sunflower (R)	164	104	63.41
15.	Sugarcane	468	354	75.64
16.	Cotton (Kh)	564	450	79.79
	Cotton (R)	180	146	81.11
	Sub Total	3012	2326	77.22
All Crops		7948	6332	79.67

Table – 5
Number of Experiments Pre-assigned for Inspection

Sl. No	CROP	STATISTICAL AGENCY	AGRICUL TURAL AGENCY	NSSO
I. Food Crops- (a) Cereals				
1.	Paddy K/K/S	274	46	60
	Paddy S/T/P	784	164	140
	Paddy N/K	144	74	40
2.	Cholam (Kh)	198	32	38
	Cholam (R)	98	22	22
3.	Cumbu (Kh)	132	42	34
	Cumbu (R)	58	10	16
4.	Ragi (Kh)	92	26	22
	Ragi (R)	124	26	28
5.	Maize (Kh)	140	44	
	Maize (R)	92	28	
6.	Samai	54	14	
7.	Varagu	60	14	
8.	Redgram	152	44	
9.	Blackgram (Kh)	28	6	
10.	Blackgram (R)	160	46	
11.	Greengram(Kh)	34	10	
12.	Greengram (R)	158	42	
13.	Horsegram (R)	94	40	
	Sub-Total	2876	730	400
NON FOODCROPS				
12.	Groundnut (Kh)	372	104	84
	Groundnut (R)	212	82	56
13.	Gingelly (Kh)	102	16	30
	Gingelly (R)	106	32	30
14.	Sunflower (Kh)	26	20	0
	Sunflower (R)	74	30	0
15.	Sugarcane	214	80	60
16.	Cotton (Kh)	278	82	90
	Cotton (R)	90	26	30
	Sub-Total	1474	472	380
	TOTAL	4350	1202	780

Table – 6

Number of Experiments Inspected by Agricultural Agency

Crop		Pre-assigned	Inspected	% Inspected
1	Paddy	284	284	100.00
2	Jowar	54	54	100.00
3	Bajra	52	52	100.00
4	Ragi	52	52	100.00
5	Maize	72	72	100.00
6	Redgram	44	44	100.00
7	Blackgram	52	52	100.00
8	Greengram	52	52	100.00
9	Horsegram	40	40	100.00
10	Samai	14	14	100.00
11	Varagu	14	14	100.00
Food crops		730	730	100.00
12	Cotton	108	108	100.00
13	Sugarcane	80	80	100.00
14	Gingelly	48	48	100.00
15	Groundnut	186	186	100.00
16	Sunflower	50	48	96.00
Non-Food crops		472	470	99.58
All Crops		1202	1200	99.84

Table - 7

Number of Experiments Inspected by Statistical Agency

Sl No	Crop	Pre assigned	Inspected	% Inspected
1	Paddy	1202	1202	100.00
2	Jowar	296	296	100.00
3	Cumbu	190	190	100.00
4	Ragi	216	216	100.00
5	Maize	232	232	100.00
6	Redgram	152	152	100.00
7	Blackgram	188	188	100.00
8	Greengram	192	192	100.00
9	Horsegram	94	94	100.00
10	Samai	54	54	100.00
11	Varagu	60	60	100.00
Food crops		2876	2876	100.00
12	Cotton	368	364	98.91
13	Sugarcane	214	214	100.00
14	Gingelly	208	204	98.08
15	Groundnut	584	584	100.00
16	Sunflower	100	100	100.00
Non-food crops		1474	1466	99.46
All Crops		4350	4342	99.82

Table - 8

Number of Experiments Inspected by N.S.S.O

Crop		Pre-assigned	Inspected	Per cent Inspected
1	Paddy	240	240	100.00
2	Jowar	60	60	100.00
3	Bajra	50	50	100.00
4	Ragi	50	50	100.00
Food crops		400	400	100.00
5	Cotton	120	120	100.00
6	Sugarcane	60	58	96.67
7	Groundnut	140	140	100.00
8	Gingelly	60	60	100.00
Non - food crops		380	378	99.47
All Crops		780	778	99.74

Table - 9**Cropwise Area, Average yield and Production**

Sl. No	Crop	2011-12			2010-11		
		Area (ha)	Average Yield Kg/ha.	Production (in Tonnes)	Area (ha)	Average Yield (Kg/ha)	Production (in Tonnes)
1	Paddy K/K/S	335715	4125	1384666	293030	3573	1046910
2	Paddy S/T/P	144427	3872	5592375	148053	2887	4273700
3	Paddy N/K	123786	3891	481615	132165	3570	471805
4	Paddy (C)	190377	3918	7458657	190752	3039	5792415
5	Cholam (Kh)	134231	1096	147052	179550	804	144285
6	Cholam (R)	63464	1662	105471	63915	1607	102696
7	Cholam (C)	197695	1277	252522	243465	1014	246981
8	Cumbu (Kh)	30837	2211	68165	33118	1262	41808
9	Cumbu (R)	15827	2924	46282	16364	2173	35560
10	Cumbu (C)	46664	2453	114447	49482	1564	77367
11	Ragi (Kh)	68835	2637	181491	66176	2091	138375
12	Ragi (R)	13970	3105	43371	9474	3454	32720
13	Ragi (C)	82805	2714	224862	75650	2262	171095
14	Maize (Kh)	176287	5682	1001667	143801	3858	554835
15	Maize (R)	104342	6649	693800	86688	5453	472701
16	Maize (C)	280629	6042	1695467	230489	4458	1027536
17	Samai	20378	1230	25060	17953	961	17250
18	Varagu	4156	2012	8362	8039	1610	12946
19	Redgram	35968	870	31292	35751	662	23671
20	Blackgram	308263	580	178816	304432	404	123009
21	Greengram	164069	519	85118	171666	336	57683
22	Horsegram	68969	539	37182	47320	459	21729

Note: K/K/S - Kar / Kuruvai / Samba Kh - Kharif
S/T/P - Samba / Thaladi / Pishanam R - Rabi
N/K - Navarai / Kodai. C - Combined

Table-10
Season wise Area, Average Yield and Production of Paddy

Season	2011-12			2010-11		
	Area (ha)	Average Yield (Kg/ha)	Production (Tonnes)	Area (ha)	Average Yield (Kg/ha)	Production (Tonnes)
K/K/S	335715	4125	1384666	293030	3573	1046910
S/T/P	1444271	3872	5592375	1480531	2887	4273700
Navarai /Kodai	123786	3891	481615	132165	3570	471805
All Seasons	1903772	3918	7458657	1907526	3039	5792415
% Variation Over the previous year	- 0.20	28.92	28.77			

Table-11
Extent of Application of High Yielding Variety Seeds, Fertilisers and Pesticides

Season	Fertilizer					Pesticides		
	Local Seed	HYV Seed	Chemical Fertilizer	Other Manures	Un-manured	Treated with Pesticides/ Insecticides	Not Treated	Sample size
K/K/S	**	420	239	152	29	294	126	420
S/T/P	**	1237	742	495	0	990	247	1237
Navarai/ Kodai	**	300	162	108	30	207	93	300
Total	**	1957	1143	755	59	1491	466	1957
Percent	**	100	58	39	3	76	24	100

Table-12**Area Average Yield and Production – CHOLAM (JOWAR)**

Crop	2011-12			2010-11		
	Area (ha)	Average Yield (Kg/ha)	Production Tonnes)	Area (ha)	Average Yield (Kg/ha)	Production (Tonnes)
Jowar (Kh)	134231	1096	147052	179550	804	144285
Jowar (R)	63464	1662	105471	63915	1607	102696
Combined	197695	1277	252522	243465	1014	246981
% Variation Over the previous year	-18.80	25.94	2.24			

Table-13**Extent of application of High Yielding Varieties of Seeds, Fertilizers and Pesticides.**

Crop	Seed		Fertilizer			Pesticides		Sample size
	Local Seed	HYV Seed	Chemical Fertilizer	Other Manures	Unmanured	Treated With Pesticides/ Insecticides	Not Treated	
Jowar (Kh)	27	141	60	47	60	7	161	168
Jowar (R)	81	219	75	174	51	18	282	300
Total	108	360	135	221	111	25	443	468
Per cent	23.08	76.92	28.85	47.22	23.72	5.34	94.66	100

Table-14**Area Average Yield and Production - BAJRA**

Crop	2011-12			2010-11			
	Area (ha)	Average Yield (Kg/ha)	Production (Tonnes)	Area (ha)	Average Yield (Kg/ha)	Production (Tonnes)	Sample size
Bajra (Kh)	30837	2211	68165	33118	1262	41808	100
Bajra (R)	15827	2924	46282	16364	2173	35560	240
Combined	46664	2453	114447	49482	1564	77367	340
per cent Variation	-5.70	56.84	47.93				

Table -15**Extent of Application of High Yielding Varieties Seeds, Fertilizers and Pesticides**

Crop	Seed		Fertilizer			Pesticides		Sample size
	Local Seed	HYV Seed	Chemical Fertilizer	Other Manures	Unmanured	Treated With Pesticides/ Insecticides	Not Treated	
Bajra (Kh)	4	96	57	22	21	6	94	100
Bajra (R)	67	173	70	137	33	10	230	240
Total	71	269	127	159	54	16	324	340
Per cent	20.88	79.12	37.35	46.76	15.88	4.71	95.29	100

Table -16**Area, Average Yield and Production - RAGI**

Crop	Area (ha)	Average Yield (Kg/ha)	Production (in Tonnes)	Area (ha)	Average Yield (Kg/ha)	Production (in Tonnes)
Ragi (Kh)	68835	2637	181491	66176	2091	138375
Ragi (R)	13970	3105	43371	9474	3454	32720
Combined	82805	2714	224862	75650	2262	171095
per cent Variation	9.46	19.98	31.43			

Table -17**Extent of Application of High Yielding Varieties Seeds, Fertilizers and Pesticides**

Crop	Fertilizer			Pesticides				Total sample farmers
	Local Seed	HYV Seed	Chemical Fertilizer	Other manures	Unmanured	Treated With Pesticides/ Insecticides	Not Treated	
Ragi (Kh)	4	196	102	92	6	24	176	200
Ragi (R)	6	154	64	75	21	5	155	160
Total	10	350	166	167	27	29	331	360
Per cent	2.78	97.22	46.11	46.39	7.5	8.06	91.94	

Table -18**Area, Average Yield and Production – MAIZE**

Crop	2011-12			2010-11		
	Area (ha)	Average Yield (Kg/ha)	Production (Tonnes)	Area (ha)	Average Yield (Kg/ha)	Production (Tonnes)
Maize (Kh)	176287	5682	1001667	143801	3858	554835
Maize (R)	104342	6649	693800	86688	5453	472701
Combined	280629	6042	1695467	230489	4458	1027536
per cent Variation	21.75	35.53	65.00			

Table -19**Extent of Application of High Yielding Varieties Seeds, Fertilizers and Pesticides**

Crop	Seed		Fertilizer			Pesticides		Sample size
	Local Seed	HYV Seed	Chemical Fertilizer	Other manures	Unmanured	Treated With Pesticides/ Insecticides	Not Treated	
Maize (Kh)	0	240	130	108	2	53	187	240
Maize (R)	0	172	21	12	139	10	162	172
Total	0	412	151	120	141	63	349	412
Per cent	0	100	36.65	29.13	34.22	15.30	84.70	100

Table - 20

Area, Average Yield and Production - SAMAI

Year	Area (ha)	Yield rate (Kg/ha)	Production (tonnes)
2011-12	20378	1230	25060
2010-11	17953	961	17250
per cent Variation	13.51	27.99	45.28

Table - 21

Area, Average Yield and Production - VARAGU

Year	Area (ha)	Yield rate (Kg/ha)	Production (Tonnes)
2011-12	4156	2012	8362
2010-11	8039	1610	12946
per cent Variation	-48.30	24.97	-35.41

Table - 22**Area, Average Yield and Production - REDGRAM**

Year	Area (ha)	Yield rate (Kg/ha)	Production (in Tonnes)
2011-12	35968	870	31292
2010-11	35751	662	23671
per cent Variation	0.61	31.42	32.20

Table -23 – REDGRAM (KHARIF ONLY)

Extent of Application of High Yielding Varieties Seeds, Fertilizers and Pesticides

Crop	Seed		Fertilizer			Pesticides		Sample size
	Local Seed	HYV Seed	Chemical Fertilizer	Other manures	Unmanured	Treated With Pesticides/ Insecticides	Not Treated	
Redgram (KH)	5	263	99	139	40	155	113	268
Per cent	2	98	37	52	11	58	42	100

Table -24

Area, Average Yield and Production - BLACKGRAM

Year	Area (ha)	Yield rate (Kg/ha)	Production (in Tonnes)
2011-12	308263	580	178816
2010-11	304432	404	123009
per cent Variation	1.26	43.56	45.37

Table -25

Extent of Application of High Yielding Varieties, Seeds, Fertilizers and Pesticides.

Crop	Fertilizer			Pesticides				
	Local Seed	HYV Seed	Chemical Fertilizer	Other Manures	UnManured	Treated With Pesticides/ Insecticides	Not Treated	Sample size
Blackgram (KH)	0	44	15	14	15	7	37	44
Blackgram (R)	3	285	155	29	104	118	170	288
COMBINED	3	329	170	43	119	125	207	332
Per cent	0.9	99	51.2	12.95	35.84	37.65	62.35	

Table-26

Area, Average Yield and Production - GREEN GRAM

Year	Area (ha)	Yield rate (Kg/ha)	Production (in Tonnes)
2011-12	164069	519	85118
2010-11	171666	336	57683
per cent Variation	- 4.43	54.46	47.56

Table-27

**Extent of Application of High Yielding Varieties, Seeds, Fertilizers and
Pesticides.**

Crop	Fertilizer			Pesticides				
	Local Seed	HYV Seed	Chemical Fertilizer	Other manures	Unmanured	Treated With Pesticides/ Insecticides	Not Treated	Sample size
Greengram (KH)	0	56	34	20	2	35	21	56
Greengram (R)	18	290	129	52	127	166	142	308
COMBINED	18	346	163	72	129	201	163	364
Percent	5	95	45	20	35	55	45	100

Table-28
Area, Average Yield and Production - HORSE GRAM

Year	Area (ha)	Yield rate (Kg/ha)	Production (in Tonnes)
2011-12	68969	539	37182
2010-11	47320	459	21729
per cent Variation	45.75	17.43	71.12

Table-29
Extent of Application of High Yielding Varieties, Seeds, Fertilizers and Pesticides

Crop	Fertilizer			Pesticides				Sample size
	Local Seed	HYV Seed	Chemical Fertilizer	Other manures	Unmanured	Treated With Pesticides/ Insecticides	Not Treated	
Horsegram	86	102	17	86	85	0	188	188
Percent	46	54	9	46	45	0	100	100

Table - 30**Area, Average Yield and Production for Non food crops – At a Glance**

Crop		2011-12			2010-11		
		Area in ha.	Average Yield (Kg/ha)	Production (in 000 Tonnes)	Area (ha)	Average Yield (Kg/ha)	Production (in 000 Tonnes)
1	Cotton (K)	106036	485	302611	96843	317	180346
2	Cotton (R)	28769	467	79158	23922	480	67589
3	Cotton (C) *	134805	481	381769	120765	349	247935
4	Sugarcane *	346350	113	38974842	315961	108	34251796
5	Gingelly (K)	19513	706	13784	20226	528	10689
6	Gingelly (R)	23662	535	12663	27963	526	14700
7	Gingelly (C)	43175	613	26447	48189	527	25389
8	Groundnut (K)	249079	2202	548503	268159	1882	504559
9	Groundnut (R)	136533	3751	512151	117350	3333	391079
10	Groundnut (C)	385612	2751	1060654	385509	2323	895638
11	Sunflower	13610	1809	24622	8718	1151	10036

Note:

For cotton the production is given in bales of 170 kgs. lint each.

Sugarcane – Average yield furnished in tonnes per hect.

Table - 31
Area, Average Yield and Production - COTTON

Crop	2011-12			2010-11		
	Area (Ha)	Average yield Kg/ ha. (Lint)	Production (bales of 170 kg. lint each)	Area (Ha)	Average yield (Kg/ ha)	Production (bales of 170 kg. of lint each)
Cotton (K)	106036	485	302611	96843	317	180346
Cotton (R)	28769	467	79158	23922	480	67589
COMBINED	134805	481	381769	120765	349	247935
per cent Variation	11.63	37.82	53.98			

Table - 32

Extent of Application of High Yielding Varieties Seeds, Fertilizers and Pesticides

Crop	Seed		Fertilizer			Pesticides		Sample size
	Local seed	HYV seed	Chemical fertilizers	Other Manu- red	Unmanured	Treated with pesticides/ insecticides	Not treated	
Cotton (K)	0	560	129	173	258	207	353	560
Cotton (R)	2	178	124	56	0	151	29	180
COMBINED	2	738	253	229	258	358	382	740
Percent	1	99	34	31	35	48	52	100

Table - 33**Area, Average Yield and Production - SUGARCANE**

Crop	2011-12			2010-11		
	Area in ha	Average yield in TON/HEC	Production (in Tonnes)	Area in ha	Average yield	Production (in Tonnes)
Sugarcane	346350	113	38974842	315961	108	34251796
% Variation	9.62	4.63	13.79			

Table - 34**Extent of Application of High Yielding Varieties Seeds, Fertilizers and Pesticides**

Crop	Seed		Fertilizers			Pesticides		Sample size
	Local seed	HYV seed	Chemical fertili-zers	Manured	Unmanured	Treated with pesticides / Insecticides	Not treated	
Sugarcane	0	461	230.50	115.25	115.25	110.64	350.36	461
Percent	0	100	50	25	25	24	76	100

Table - 35
Area, Average Yield and Production - GINGELLY

Crop	2011-12			2010-11		
	Area (ha)	Average yield (Kg/ha)	Production (in 000 Tonnes)	Area (ha)	Average yield (Kg/ha)	Production (in Tonnes)
Gingelly (K)	19513	706	13784	20226	528	10689
Gingelly (R)	23662	535	12663	27963	526	14700
Combined	43175	613	26447	48189	527	25389
per cent Variation	-10.40	16.32	4.17			

Table - 36
Extent of Application of High Yielding Varieties Seeds, Fertilizers and Pesticides

Crop	Seed		Fertilizers			Pesticides		Sample size
	Local seed	HYV Seed	Chemical fertilizers	Manured	Unmanured	Treated with Pesticides/ insecticides	Not treated	
Gingelly (K)	4	188	77	107	8	50	142	192
Gingelly (R)	13	207	114	44	62	86	134	220
Total	17	395	191	152	70	136	276	412
Percent	4.13	95.87	46.36	36.89	16.99	33.01	66.99	100

Table - 37**Area, Average Yield and Production**

CROP	2011-12			2010-11		
	Area (ha)	Average Yield (Kg/ha)	Production (in 000 Tonnes)	Area (ha)	Average Yield (Kg/ha)	Production (in Tonnes)
Groundnut (K)	249079	2202	548503	268159	1882	504559
Groundnut (R)	136533	3751	512151	117350	3333	391079
COMBINED	385612	2751	1060654	385509	2323	895638
per cent Variation	0.03	18.42	18.42			

Table - 38**Extent of Application of High Yielding Varieties Seeds, Fertilizers and Pesticides**

Crop	Seed		Fertilizers			Pesticides		
	Local seed	HYV Seed	Chemical fertilizers	Manured	Unmanured	Treated with Pesticides/ insecticides	Not treated	Sample size
Groundnut (K)	14	688	266	350	84	476	224	700
Groundnut (R)	0	460	240	175	46	313	147	460
Total	14	1146	506	525	130	789	371	1160
Percent	1.21	98.79	43.62	45.26	11.21	68.02	31.98	100

Table-39**Driage ratio for Groundnut based on Crop Estimation Survey 2011-12**

Crop	No. of experiments planned for driage	No. of experiments Considered	Driage Ratio (per cent) (from wet to dry pods)
1. Groundnut (K)	350	350	0.7322
2. Groundnut (R)	230	230	0.8345

Table-40**Area, Average Yield and Production**

Crop	Year	Area Sown (ha)	Yield rate (Kg/ha)	Production (Tonnes)
Sun Flower	2011-12	13610	1809	24622
	2010-11	8718	1151	10036
per cent Variation		56.11	57.17	145.34

Table – 41 - SUNFLOWER**Extent of Application of High Yielding Varieties Seeds, Fertilizers and Pesticides**

Year	Seed		Fertilizers			Pesticides		Sample size
	Local seed	HYV Seed	Chemical fertilizers	Manured	Unmanured	Treated with pesticides/ Insecticides	Not treated	
Sunflower (Kh)	0	60	32.4	22.2	5.4	13.2	46.8	60
Sunflower (R)	0	164	86.92	55.76	21.32	24.6	139.4	164
Total	0	224	119.32	77.96	26.72	37.8	186.2	224
Per cent	0	100	53	35	12	17	83	100

Table - 42
Crop-wise Driage Ratio - 2011-12

	Crop	No. of experiments Planned for Driage	No. of experiments Considered	Driage Ratio (from wet cobs/grains to dry grains)
1	Paddy K/K/S	210	210	0.9085
2	Paddy S/T/P	621	618	0.9067
3	Paddy N/K	150	150	0.8938
4	Jowar (K)	150	150	0.4821
5	Jowar (R)	84	84	0.4798
6	Bajra (K)	120	120	0.5834
7	Bajra (R)	50	50	0.6662
8	Ragi (K)	80	80	0.5317
9	Ragi (R)	100	100	0.5095
10	Maize (K)	256	240	0.6666
11	Maize (R)	172	172	0.6813
12	Samai	50	50	0.8423
13	Varagu	56	56	0.8925

Note: K/K/S - Kar/Kuruvai/Sornawari
S/T/P - Samba/Thaladi/Pishanam
N/K - Navarai/Kodai

K - Kharif
R - Rabi

Table – 43
CROP ESTIMATION SURVEY
Training Imparted to Primary Workers

District		No. of centers chosen for imparting training	No. of Officers who imparted training State/Central Govt	Details of Field Staff (A.O/H.O)		
				Total	Total called for	Number attended
1	Kancheepuram	1	4	38	38	35
2	Thiruvallur	3	4	26	26	24
3	Cuddalore	3	3	35	35	35
4	Villupuram	2	4	38	36	32
5	Vellore	4	2	30	30	30
6	Thiruvannamalai	3	3	26	26	22
7	Salem	2	2	36	36	34
8	Namakkal	2	3	22	22	18
9	Dharmapuri	8	8	21	21	21
10	Coimbatore	3	3	38	38	38
11	Erode	3	3	27	27	27
12	Tiruchirapalli	3	3	29	29	23
13	Karur	2	2	15	15	15
14	Perambalur	2	2	14	14	11
15	Thanjavur	3	3	48	48	48
16	Thiruvavarur	2	2	18	18	18
17	Nagapatinam	2	2	20	20	20
18	Pudukkottai	2	3	33	33	33
19	Madurai	2	2	36	36	33
20	Theni	2	2	14	14	14
21	Dindigul	4	2	25	25	25
22	Ramanathapuram	2	2	22	22	22
23	Virudhunagar	3	2	24	24	21
24	Sivagangai	2	2	23	23	20
25	Thirunelveli	3	3	35	35	33
26	Thoothukudi	1	3	43	43	36
27	Kanniyakumari	3	3	22	22	20
28	The Nilgiris	4	4	25	25	24
29	Krishnagiri	1	1	24	24	24
30	Ariyalur	2	2	14	14	14
31	Tiruppur	2	3	15	15	15
TOTAL		81	87	836	834	785

Table – 44

GENERAL CROP ESTIMATION SURVEY

Cropwise Percentage of Area under different Agricultural Practices – 2011-12

Crop	Local Seeds	High Yielding Seeds	Chemical Fertilizers	Other Manures	Un-Manured	Treatment of Pesticides/Insecticides	Not treated with Pesticides/Insecticides
Paddy K/K/S	0	100	58	42	0	69	31
Paddy S/T/P	2	98	55	23	22	61	39
Paddy N/K	0	100	46	33	21	67	33
Cholam (KH)	27	73	25	58	17	6	94
Cholam (R)	16	84	36	28	36	4	96
Cumbu (KH)	28	72	29	57	14	4	96
Cumbu (R)	4	96	57	22	21	6	94
Ragi (KH)	4	96	40	47	16	3	97
Ragi (R)	2	98	51	46	3	12	88
Redgram	2	98	37	62	11	58	42
Blackgram (KH)	0	100	34	31	35	15	85
Blackgram (R)	1	99	54	10	36	41	59
Greengram (KH)	0	100	9	62	29	62	38
Greengram (R)	11	89	33	12	55	39	61
Horsegram	46	54	9	46	45	0	100
Samai	60	40	29	67	4	2	98
Varagu	47	53	0	3	97	0	100
Maize (KH)	0	100	54	45	1	22	78
Maize (R)	0	100	12	7	81	6	94

KH : KHARIF

R : RABI

Table – 45

GENERAL CROP ESTIMATION SURVEY

Crop wise Average Yield in Kg/Ha. for Local and High Yielding Varieties – 2011-12

	Local				High Yielding				Local Total		High Yielding Total	
	Kharif		Rabi		Kharif		Rabi		Experiments analysed	Average Yield	Experiments analysed	Average Yield
	Experiments analysed	Average Yield	Experiments analysed	Average Yield	Experiments analysed	Average Yield	Experiments analysed	Average Yield				
Food Crops												
1 Paddy-K/K/S	0	0	0	0	Expt = 420	Avg Yield = 4125			0	0	420	4125
2 Paddy-S/T/P	Expt = 12	Avg Yield = 2827	Expt = 12	Avg Yield = 2827	Expt = 1225	Avg Yield = 3949			12	2827	1225	3949
3 Paddy-N/K	0	0	0	0	Expt = 300	Avg Yield = 3891			0	0	300	3891
4 Cholan	97	925	40	1026	203	1088	128	1731	137	955	331	1337
5 Cumbu	75	2835	4	25	165	3899	96	3048	79	2809	261	3586
6 Ragi	5	2466	10	2746	155	2600	190	2884	15	2653	345	2757
7 Redgram	4	752	0	0	264	890	0	0	4	752	264	890
8 Blackgram	0	0	2	413	44	819	286	514	2	413	330	554
9 Greengram	0	0	19	419	56	716	289	482	19	419	345	520
10 Horsegram	0	0	80	507	0	0	108	513	80	507	108	513
11 Samai	54	1431	0	0	46	1581	0	0	54	1431	46	1581
12 Varagu	30	2367	0	0	68	2241	0	0	30	2367	68	2241
13 Maize	0	0	0	0	240	5753	172	6691	0	0	412	6144

Table – 46

GENERAL CROP ESTIMATION SURVEY

Crop wise Average Yield in Kg / Ha. for Local and High Yielding Varieties – 2011 - 12

Non-Food Crops		Local				High Yielding				Local Total		High Yielding	
		Kharif		Rabi		Kharif		Rabi		Experiments analysed	Average Yield	Experiments analysed	Average Yield
1	Cotton	0	0	2	105.377	560	480.333	178	478.572	2	105.377	738	479.908
2	Gingelly	6	527.490	14	522.540	186	672.839	206	477.952	20	524.025	392	570.424
3	Groundnut	6	2077	0	0	694	2202	460	3751	6	2077	1154	2977
4	Sunflower	0	0	0	0	60	3577	164	1714	0	0	224	2219
5	Sugarcane	0	0	0	0	286	107	175	117	0	0	461	113

Table – 47

GENERAL CROP ESTIMATION SURVEY

**Cropwise Percentage of Area under different Agricultural Practices for
Non food crops**

Crop	Local Seeds	High Yielding Seeds	Chemical Fertilizers	Other Manures	Un0Manured	Treatment of Pesticides/ Insecticides	Not treated with Pesticides/ Insecticides
Groundnut (KH)	1	99	38	50	12	32	68
Groundnut (R)	1	99	52	38	9	68	32
Sunflower (KH)	0	100	54	37	9	22	78
Sunflower (R)	0	100	53	34	13	15	85
Gingelly (KH)	2	98	40	56	4	26	74
Gingelly (R)	6	94	52	20	28	39	61
Sugarcane	0	100	43	33	25	24	76
Cotton (KH)	0	100	23	22	55	37	63
Cotton (R)	0	100	69	31	0	84	16

KH : KHARIF

R : RABI

Table – 48

GENERAL CROP ESTIMATION SURVEY

Cotton Ginning Ratio – 2011 - 12

Sl. No.	District	Ginning Ratio (per cent)
1	Cuddalore	31.67
2	Villupuram	33.83
3	Salem	31.57
4	Krishnagiri	31.08
5	Dindigul	31.83
6	Thirunelveli	36.67
7	Virudhunagar	31.90
8	Coimbatore	29.79
9	Madurai	33.00
STATE		32.26

Table – 49

ESTIMATES OF CANE GUR RATIO FOR THE YEAR 2011-12

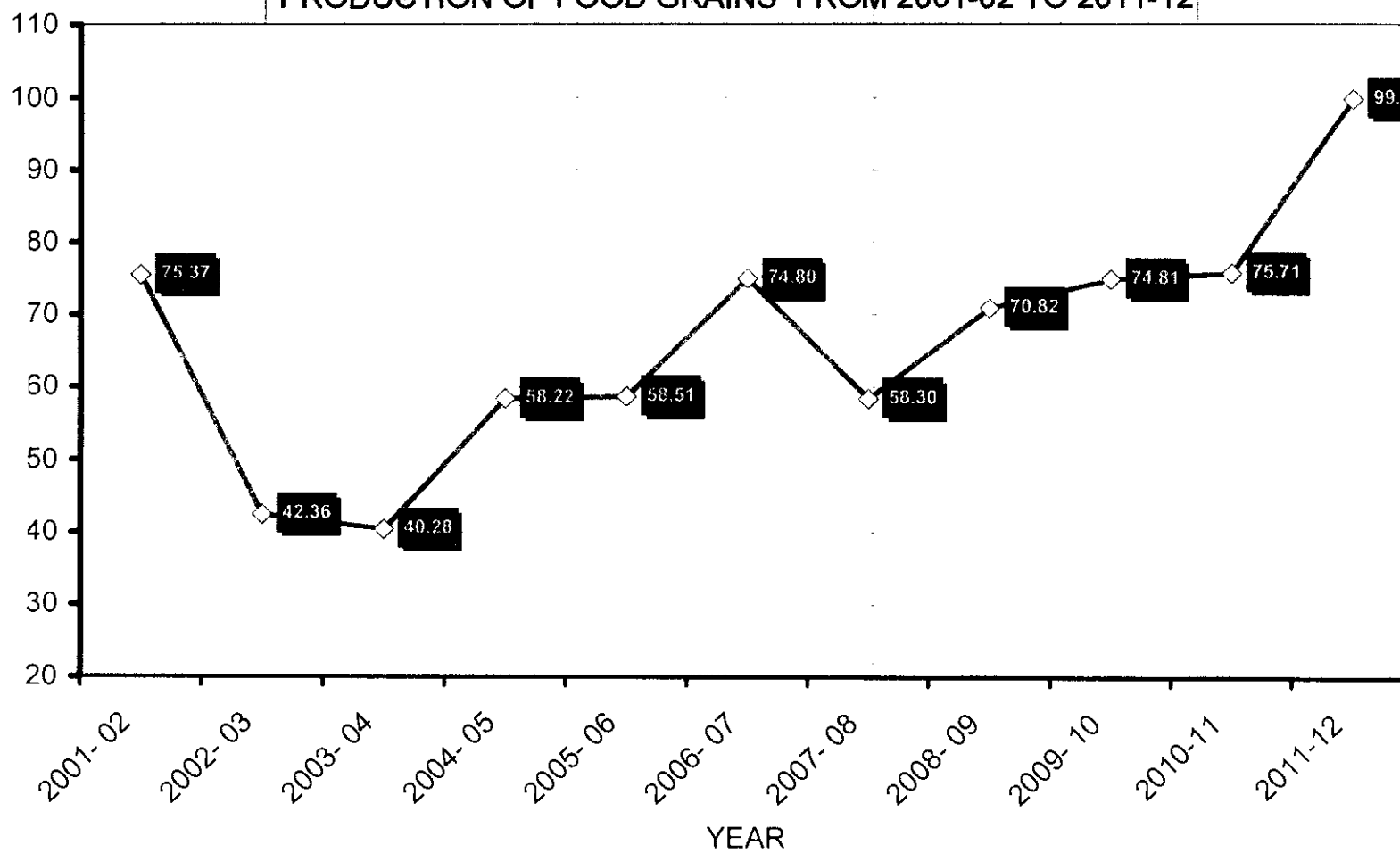
Sl. No.	District	Cane Gur Ratio
1	Vellore	10.66
2	Erode	9.72
3	Madurai	18.43
4	Theni	8.75
5	Dindugul	6.73
6	Virudhunagar	11.60
STATE		9.15

ANNEXURE-II

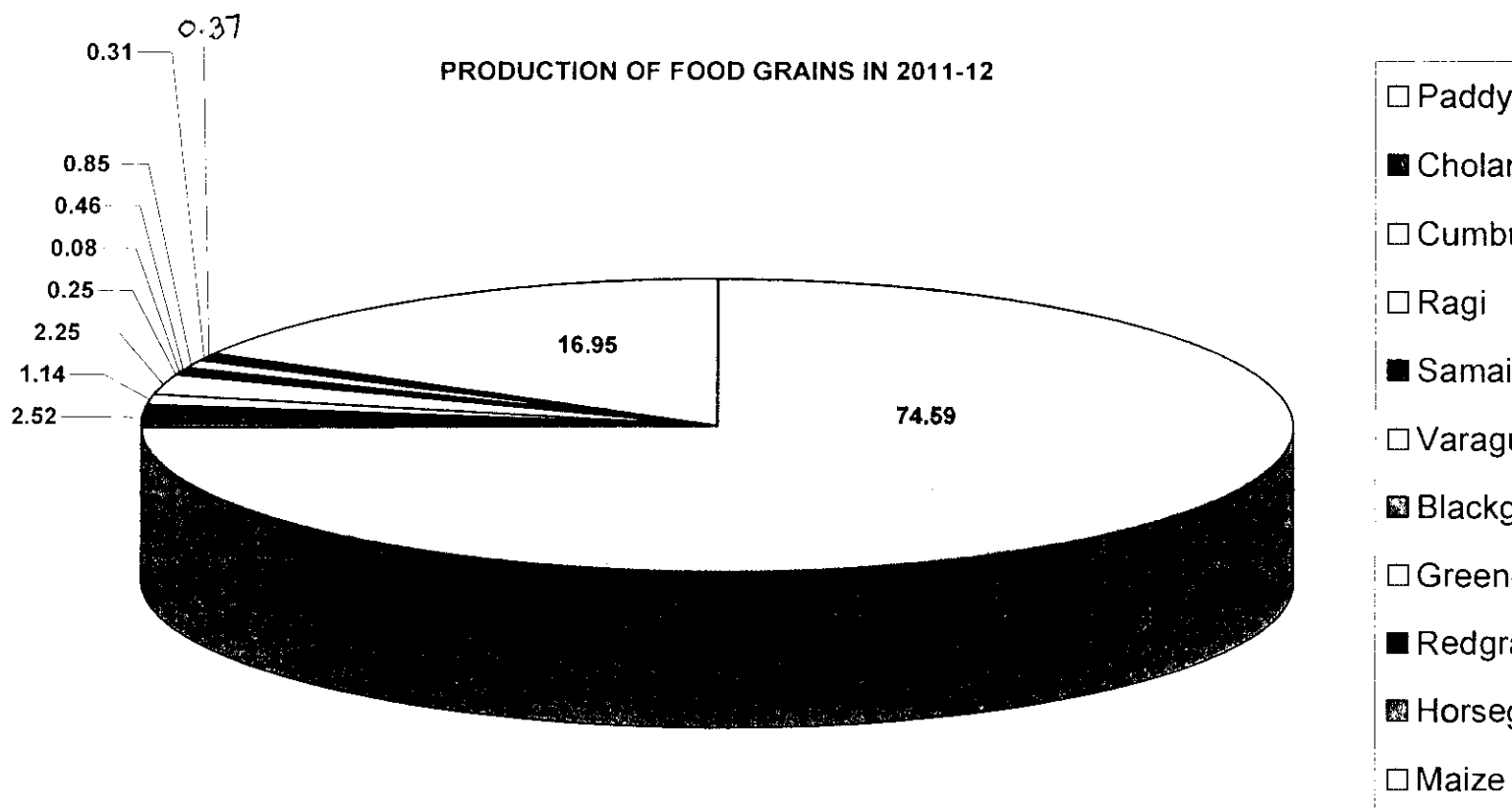
PRODUCTION OF FOOD GRAINS FROM 2001- 02 TO 2011-12 (IN LAKH TONNES)

Sl. No.	Crop	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06	2006- 07	2007- 08	2008- 09	2009- 10	2010-11	2011-12
1	Paddy	65.83	35.77	32.22	50.6	52.08	66.09	50.39	51.83	56.65	57.92	70.1
2	Cholam	2.75	2.11	2.46	2.52	2.31	2.94	2.48	2.13	2.21	2.47	2.5
3	Cumbu	1.53	0.89	1.72	1.25	0.95	0.99	0.86	0.84	0.83	0.77	0.8
4	Ragi	2.36	1.40	1.76	1.53	1.31	1.48	1.76	1.70	1.61	1.71	1.8
5	Samai	0.33	0.31	0.28	0.28	0.20	0.26	0.24	0.16	0.19	0.10	0.1
6	Varagu	0.16	0.16	0.10	0.10	0.07	0.31	0.08	0.06	0.08	0.12	0.1
7	Blackgram	1.04	0.79	0.76	0.83	0.71	1.43	0.8	0.83	0.98	0.20	0.2
8	Greengram	0.53	0.48	0.53	0.62	0.46	0.77	0.46	0.31	0.47	0.58	0.6
9	Redgram	0.41	0.24	0.27	0.29	0.2	0.21	0.21	0.17	0.20	0.24	0.2
10	Horsegram	0.43	0.21	0.18	0.20	0.22	0.32	0.21	0.21	0.21	0.22	0.2
11	Maize							0.81	12.58	11.38	11.38	11.3
Total		75.37	42.36	40.28	58.22	58.51	74.8	58.3	70.82	74.81	75.71	90.1

PRODUCTION OF FOOD GRAINS FROM 2001-02 TO 2011-12



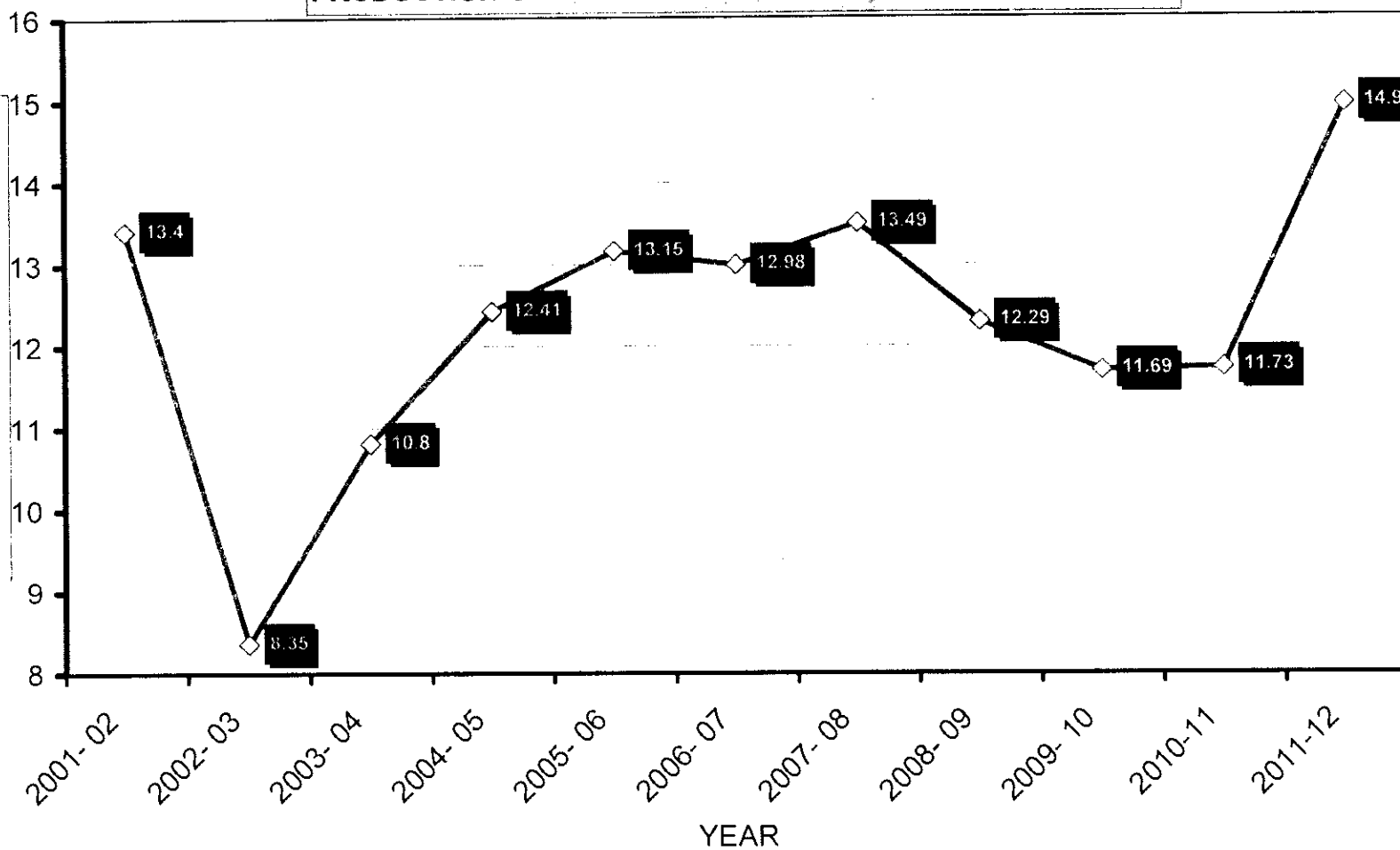
PRODUCTION OF FOOD GRAINS IN 2011-12



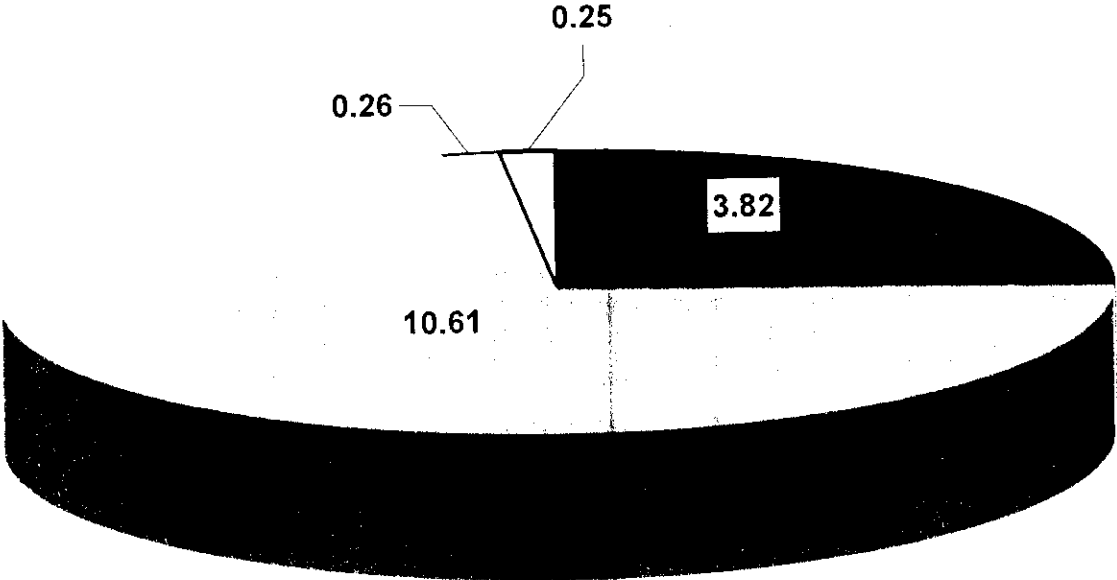
PRODUCTION OF NON-FOOD CROPS FROM 2001-02 TO 2011-12 (IN LAKH TONNES)

Sl. No.	Crop	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06	2006- 07	2007- 08	2008- 09	2009- 10	2010-11	2011-12
1	Cotton	0.38	0.83	1.22	1.85	1.67	2.19	2	1.88	2.25	2.45	3.8
2	Groundnut	12.49	7.17	9.17	10.04	10.97	10.05	10.47	9.75	8.96	8.93	10.6
3	Gingelly	0.45	0.27	0.28	0.33	0.3	0.27	0.32	0.32	0.29	0.25	0.2
4	Sunflower	0.08	0.08	0.13	0.19	0.21	0.47	0.7	0.34	0.19	0.10	0.2
	Total	13.40	8.35	10.80	12.41	13.15	12.98	13.49	12.29	11.69	11.73	14.9
	Sugarcane	372.48	277.71	195.29	244.57	351.13	480.37	380.71	327.99	297.58	342.52	389

PRODUCTION OF NON FOOD CROPS FROM 2001-02 TO 2011-12



PRODUCTION OF NON FOOD CROPS IN 2011-12



■ Cotton	Groundnut	□ Gingelly	□ Sunflower
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