

REPORT ON ESTIMATES OF AREA OF PRINCIPAL CROPS UNDER TIMELY REPORTING SCHEME IN KARNATAKA 2019-20

DIRECTORATE OF ECONOMICS AND STATISTICS BENGALURU

PREFACE

The centrally sponsored "Timely Reporting Scheme" is being implemented in

the State since 1969-70 which aims to arrive at quick and reliable estimates of area

under principal crops. District wise area under selected principal crops has been

estimated based on the data from sample villages for all the three seasons during

2019-20 which constitute 20 percent of total villages. This report is based on the

Fourth set of 20% villages selected among the five sets of villages commencing from

2016-17 to 2020-21 covering 15 crops. While estimating area, classification of crops

as traditional and high yielding variety and also status of irrigation are taken into

account.

This report is prepared in the Agricultural Statistics Division of the Directorate

of Economics and Statistics. Suggestions for improvement of this report are most

welcome.

Place: Bengaluru

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TIMELY REPORTING OF ESTIMATES OF AREA OF PRINCIPAL CROPS IN KARNATAKA 2019-20

1.1 Introduction

The "Timely Reporting Scheme" sponsored by Government of India is being implemented in the State since 1969-70, with an objective to arrive at quick, reliable and accurate estimates of area under selected principal crops soon after the end of each season. These estimates of area are worked out on the basis of the actual enumeration in 20% of total villages selected in the State every year. The area estimates under this scheme will help the Government in assessing agricultural prospects during the year and to take quick policy measures relating to agricultural output, imports, minimum support price and exports of the agricultural commodities etc.

1.2 Objective

The main objective of the scheme is to obtain reliable and statistically precise area estimates under selected principal crops soon after the end of each season. The area is estimated separately for irrigated and unirrigated category crops for both traditional and high yielding varieties.

1.3 Coverage

The time schedule of timely reporting scheme of the State covering the period from 1st April 2019 to 31th March 2020 is divided into three seasons viz., kharif, rabi and summer (see Para 1.4). Totally 15 major crops are covered under the scheme but the number of crop coverage varies from season to season. However, Paddy, Maize, Ragi and Sunflower crops are common for all the three seasons. Crop coverage in each season is as follows:-

- a) Kharif: 1. Paddy 2. Jowar 3. Maize 4. Ragi 5. Bajra 6. Tur
 - 7. Groundnut 8. Sesamum 9. Sunflower
- b) Rabi: 1. Paddy 2. Jowar 3. Maize 4. Ragi 5. Wheat 6. Cotton 7. Gram
 - 8. Sugarcane 9. Sunflower 10. Safflower 11. Linseed
- c) Summer: 1. Paddy 2. Maize 3. Ragi 4. Groundnut 5. Sunflower.

1.4 Time Schedule

The time schedule for crop area enumeration was as follows:

| Sl. No. | Agricultural Season | Sowing period | Crop enumeration period |
|------------|------------------------|---|--|
| 1 | Kharif - Early | 1 st April 2019 to 30 th June 2019 | 1st July 2019 to 9th July 2019 |
| | - Late | 1 st July 2019 to 31 st August 2019 | 1 st Sept 2019 to 9 th Sept 2019 |
| 2 | Rabi | 1st Sept 2019 to 30th Dec 2019 | 1 st Jan 2020 to 9 th Jan 2020 |
| 3 | Summer | 1 st Jan 2020 to 31 st March 2020 | 1st April 2020 to 9th April 2020 |

1.5 Sampling design

- 1) Linear systematic sampling method, suggested by the Directorate of Economics and Statistics, Government of India, New Delhi, is adopted, treating each taluk as a stratum. 20% of total villages in each taluk are selected every year. All the village accountant circles in each taluk and all the villages in each village accountant circle are arranged in random order for preparing a sample frame to select the sampling unit.
- 2) The selection of 20% sample villages in each taluk is done as per systematic sampling technique from the sampling frame stated above, with an interval of five sample units with a different random strata adopting non-overlapping sampling procedure.
- 3) Commencing the year 2016-17, 20% of villages are selected every year under the scheme, so that 100% villages are covered in five years i.e. by 2020-21. This report is based on the data collected from the fourth set of villages selected for the year 2019-20.

1.6 Organization of field work

1) The Directorate of Economics and Statistics was entrusted with the responsibility of implementation of the scheme and the field work was assigned to the Village Accountants of the Revenue Department.

- 2) To improve the quality of field work and to point out different kinds of mistakes committed by the Village Accountants in recording the crop area, supervision is essential. In Karnataka state from 2018-19 GIS mobile app based crop survey was started and conducted during kharif season only. From 2019-20 onwards crop survey was conducted in all three seasons. Since Kharif 2019 under crop survey Directorate of Economics and Statistics has been assigned the responsibility of 1% verification of the crop survey data capture through mobile app as 3rd party audit. For the 1% verification Directorate of Economics and Statistics was taken up verification in all the TRS villages (20% of total villages). The supervision of field work was entrusted to Agriculture, Horticulture and Statistics department. The District Statistical Officers and their staff from the Economics & Statistics Department were also involved in the supervision work.
- 3) The District Statistical Officers were assigned with the overall responsibility of implementation of the scheme in their jurisdiction.

1.7 Training

The District Statistical Officers impart training to the field staff with regard to the procedure to be followed in the area enumeration and in recording the crop area in the prescribed crop abstracts from the RTC. Supervisory staffs of the Revenue, Agriculture and Statistics Departments were also trained during kharif season, well before the commencement of the area enumeration work.

1.8 Sample size and receipt position of crop abstracts

During the year under review, in all 5826 villages were selected under the scheme. The details of number of villages selected and the number of the crop abstracts received in each season and other such particulars are given in Table-1.

Table-1 Seasonwise receipt position of crop abstracts

| Sl. No. | Particulars | Kharif | Rabi | Summer |
|------------|--|--------|-------|--------|
| 1 | 2 | 3 | 4 | 5 |
| 1 | No. of Villages selected | 5826 | 5826 | 5826 |
| 2 | No. of Villages from which crop abstracts received | 5747 | 5820 | 5702 |
| 3 | Percentage response | 98.64 | 99.89 | 97.87 |

1.9 Supervision

The details of supervision conducted by Statistics, Horticulture and Agriculture Departments respectively are given in Table- 2.

Table-2
Number of villages Supervised

| | | No. of villages (Kharif + Rabi + Summer) | | | | | |
|------------|--------------|--|------------|---------------------------|---------|--|--|
| Sl. No. | Agency | Allotted | Supervised | Percentage of supervision | | | |
| | | | _ | 2019-20 | 2018-19 | | |
| 1 | 2 | 3 | 4 | 5 | 6 | | |
| 1 | Statistics | 8709 | 8660 | 99.44 | 100.00 | | |
| 2 | Agriculture | 1604 | 1560 | 97.26 | 98.25 | | |
| 3 | Horticulture | 1240 | 1203 | 97.02 | 98.75 | | |

1.10 Procedure for Estimating Area of Crops:

The formula adopted for estimating the area under selected crops and working out the sampling error of such estimates by the ratio method and compile the same with crop survey data.

A. Ratio Method:

- 1. Let k be the number of taluks in a district.
- 2. Yij be the area under a crop in the jth village of the ith taluk in the current year.
- 3. X_{ii} be the area under that crop in the j^{th} village of the j^{th} taluk during the previous year.
- 4. ni be the total number of villages selected in the ith taluk.
- 5. Ni be the total number of villages in the ith taluk.
- 6. Rc be the combined ratio estimates of the given crop in the district.
- 7. X is the area under that crop during previous ASCR report.
- 8. Y_{Rc} be the estimates of the area of the crop in the district.
 - a) Area Estimates by Ratio Method

$$Y_{Rc} = \begin{pmatrix} k & \\ \sum\limits_{i=1}^{K} & Ni\overline{Y}_i \\ \hline K & \\ \sum\limits_{i=1}^{K} & Ni\overline{X}_i \\ \hline i=1 \end{pmatrix} X$$

Where X= the total area under the crop in the district during the previous year.

CHAPTER – 2

2. Results of the scheme

Area estimates have been worked out by using ratio method, comparing the same with reconciled area. Crop wise details of the estimates are presented in the ensuing paragraphs.

2.1 Paddy

It is an important cereal crop grown in 12.45 lakh hectares of area during 2019-20. The area covered under the crop was more in Raichur followed by Bellary and Yadagiri districts. About 77.41 % of the area under the crop was covered in Kharif season alone.

Seasonwise estimates of area as per ratio method along with reconciled area under paddy are given below in Table-3.

Table – 3
Seasonwise Estimated and Reconciled area under Paddy crop

Area in hectares % variation Reconciled Estimated area area (as per over as per Ratio Season Crop Reconciled Method survey) area 1 2 3 4 Kharif 971023 964088 0.72 Rabi 26019 26742 -2.70Summer 253890 254522 -0.25 Total 1250932 1245352 0.45

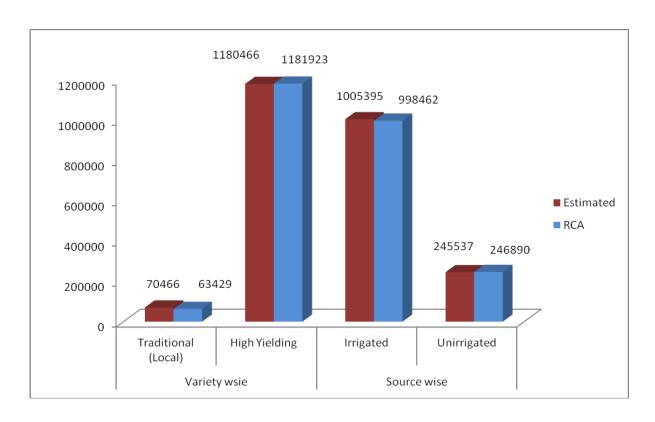
During Kharif season, the percentage of variation under ratio method was higher and lower in Rabi & Summer seasons, compared to reconciled total area of paddy crop.

Estimated area under irrigated/unirrigated category as per ratio method and the reconciled area are given in Table-4.

Table-4
Season and Varietywise area Estimated by Ratio method under Paddy crop

| | Invigated/ | Estimated area as per Ratio Method | | | | Reconciled | % variation |
|---------------------|---------------------------|------------------------------------|-------|--------|---------|---------------------------------|----------------------------|
| Variety | Irrigated/ Unirrigated | Kharif | Rabi | Summer | Total | area (as per Crop survey) | over Reconciled area |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | Irrigated | 13720 | 0 | 0 | 13720 | 12827 | 7.0 |
| Traditional (Local) | Unirrigated | 56746 | 0 | 0 | 56746 | 50602 | 12.1 |
| | Total | 70466 | 0 | 0 | 70466 | 63429 | 11.1 |
| | Irrigated | 711766 | 26019 | 253890 | 991675 | 985635 | 0.6 |
| High Yielding | Unirrigated | 188791 | 0 | 0 | 188791 | 196288 | -3.8 |
| | Total | 900557 | 26019 | 253890 | 1180466 | 1181923 | -0.1 |
| Total | Irrigated | 725486 | 26019 | 253890 | 1005395 | 998462 | 0.7 |
| | Unirrigated | 245537 | 0 | 0 | 245537 | 246890 | -0.5 |
| | Total | 971023 | 26019 | 253890 | 1250932 | 1245352 | 0.4 |

Estimated Area (Ratio Method) and Reconciled Area under Paddy Crop Varietywise and Sourcewise (in hectares)



As per the reconciled area, the irrigated area under paddy crop was 80.18% and unirrigated was 19.82%, whereas under ratio method it was 80.37% and 19.63% respectively. In case of high yielding and traditional varieties the percentage of area under reconciled area was 94.9% and 5.1% as against the estimated area of 94.4% and 5.6% respectively. The percentage variation of estimated area under ratio method over reconciled area was 0.7% under irrigated category, -0.5 % under unirrigated category and 0.4% to the total during 2019-20. Districtwise details are given in Appendix-2.1.

2.2 Jowar

Jowar is another important cereal crop with 8.3 lakh hectares of area in the State of which 78.61 % of area was cultivated during Rabi season alone. Belagavi stands first in the area coverage i.e., 17.1 % followed by Bagalakote (9.2%) and Vijayapura (8.9%). Seasonwise information is given in Table–5.

Table – 5
Seasonwise Estimated and Reconciled area under Jowar crop

Area in hectares

| Season | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area | |
|--------|--|--|---|--|
| 1 | 2 | 3 | 4 | |
| Kharif | 182061 | 178587 | 1.95 | |
| Rabi | 645940 | 656335 | -1.58 | |
| Total | 828001 | 834922 | -0.83 | |

From the above table that the variation of area under ratio method compared to reconciled area was 1.95% and -1.6% during kharif and Rabi seasons respectively.

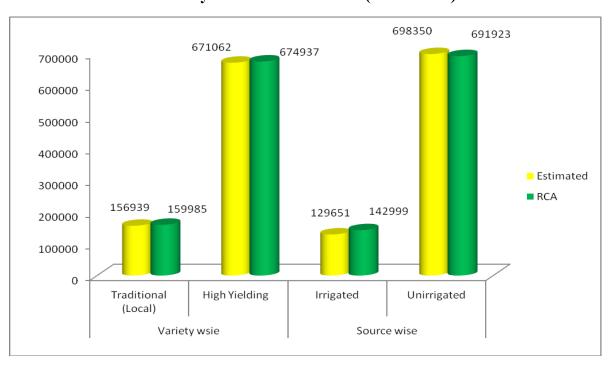
Area by varieties and status of irrigation worked out by ratio method and the reconciled area are given in Table-6.

 $\label{eq:Table-6} Table-6$ Season and Varietywise area Estimated by Ratio method under Jowar crop

| X 7 • 4 | Irrigated/ | Estimate | d area as p Method | er Ratio | Reconciled area (as per | % variation over |
|---------------------|-------------|----------|-----------------------|----------|-------------------------|------------------|
| Variety | Unirrigated | Kharif | Rabi | Total | Crop survey) | Reconciled area |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | Irrigated | 308 | 7626 | 7934 | 10435 | -24.0 |
| Traditional (Local) | Unirrigated | 39458 | 109547 | 149005 | 149550 | -0.4 |
| | Total | 39766 | 117173 | 156939 | 159985 | -1.9 |
| | Irrigated | 27434 | 94283 | 121717 | 132564 | -8.2 |
| High Yielding | Unirrigated | 114861 | 434484 | 549345 | 542373 | 1.3 |
| | Total | 142295 | 528767 | 671062 | 674937 | -0.6 |
| Total | Irrigated | 27742 | 101909 | 129651 | 142999 | -9.3 |
| | Unirrigated | 154319 | 544031 | 698350 | 691923 | 0.9 |
| | Total | 182061 | 645940 | 828001 | 834922 | -0.8 |

The estimated jowar area was 19 % under traditional variety and the remaining 81% under hybrid variety as against 19.2 % and 80.8 % of reconciled area respectively. District-wise details are given in Appendix -2.2.

Estimated Area (Ratio Method) and Reconciled Area under Jowar Crop Varietywise and Sourcewise (in hectares)



2.3 Ragi

Ragi is the third most important cereal crop largely grown in southern districts with 6.7 lakh hectares of area during 2019-20. The major Ragi growing districts are Tumkuru (21.4%), Hassan (11.3%), Kolar (9%), Ramanagara (8.6%) and Mysuru (8.5%) which account for 58.8 % of the total Ragi area of the State. About 92.9 % of the area was covered under kharif season itself. Season wise area estimated as per ratio method is given in Table-7.

Table – 7
Seasonwise Estimated and Reconciled area under Ragi crop

Area in hectares

| Season | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area |
|--------|--|--|----------------------------------|
| 1 | 2 | 3 | 4 |
| Kharif | 613940 | 625796 | -1.89 |
| Rabi | 40238 | 41862 | -3.88 |
| Summer | Summer 5919 | | -2.26 |
| Total | Total 660097 | | -2.02 |

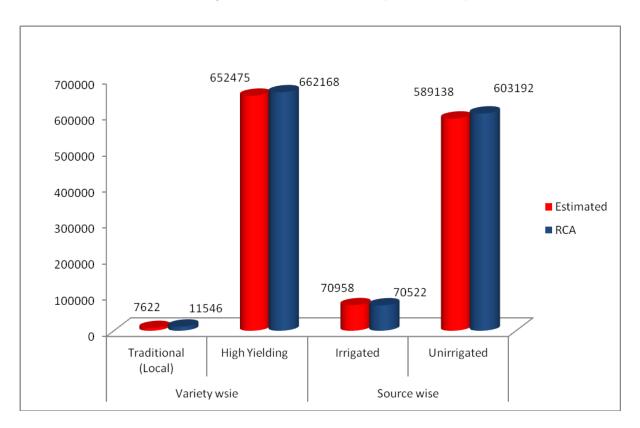
The percentage variation of area estimated by ratio method over reconciled area was -2.0. Compared to reconciled area, estimated area under Ratio method was lower in all the three seasons.

Table-8 depicts estimated area by status of irrigation.

Table – 8
Season and Varietywise area Estimated under Ratio method under Ragi crop

| | Irrigated/ | Estimated area as per Ratio Method | | | | Reconciled area (as | % variation over |
|---------------------|-------------|---------------------------------------|-------|--------|--------|---------------------|------------------|
| Variety | Unirrigated | Kharif | Rabi | Summer | Total | per Crop survey) | Reconciled area |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | Irrigated | 20 | 0 | 0 | 20 | 1336 | -98.5 |
| Traditional (Local) | Unirrigated | 7602 | 0 | 0 | 7602 | 10210 | -25.5 |
| (=====) | Total | 7622 | 0 | 0 | 7622 | 11546 | -34.0 |
| | Irrigated | 42598 | 22421 | 5919 | 70938 | 69186 | 2.5 |
| High Yielding | Unirrigated | 563720 | 17817 | 0 | 581537 | 592982 | -1.9 |
| | Total | 606318 | 40238 | 5919 | 652475 | 662168 | -1.5 |
| Total | Irrigated | 42618 | 22421 | 5919 | 70958 | 70522 | 0.6 |
| | Unirrigated | 571321 | 17817 | 0 | 589138 | 603192 | -2.3 |
| | Total | 613940 | 40238 | 5919 | 660097 | 673714 | -2.0 |

Estimated Area (Ratio Method) and Reconciled Area under Ragi Crop Varietywise and Sourcewise (in hectares)



Out of total estimated area 98.3% was covered by High Yield variety and remaining under local variety. The percentage of variation under Irrigated and Unirrigated was 0.6 and -2.3 respectively. District wise details are given in Appendix- 2.3

2.4 Maize

Maize is yet another cereal crop grown in more than 15 lakh hectares in the State. Maize growing Major districts are Haveri (15 %), Ballary (12.8 %) and Belagavi (12.2 %). 90.3 % of the area was covered under kharif season alone.

Seasonwise estimated area as per ratio method is given in Table – 9

Table – 9
Seasonwise Estimated and Reconciled area under Maize crop

Area in hectares

| Season | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area |
|--------|--|--|----------------------------------|
| 1 | 2 | 3 | 4 |
| Kharif | 1365461 | 1355322 | 0.75 |
| Rabi | 103676 | 114067 | -9.11 |
| Summer | 30099 | 30861 | -2.47 |
| Total | 1499236 | 1500250 | -0.07 |

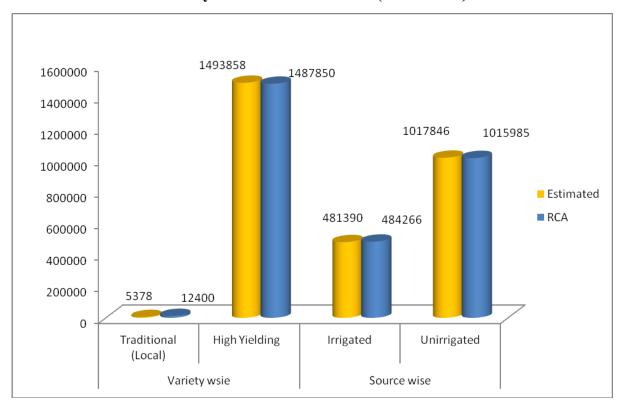
Variation of area under ratio method over reconciled area was 0.7 % in kharif season, -9.1% in Rabi season and -2.5 % in summer season. The total estimated area was lower under ratio method when compared to the reconciled area.

Estimated area by variety and irrigated / unirrigated as per ratio method and the reconciled area are given in Table -10.

Table-10 Season and Varietywise Estimated area under Ratio method – Maize crop

| • | Irrigated/ | Estimated area as per Ratio Method | | | | Reconciled area (as | % variation over |
|---------------------|-------------|------------------------------------|--------|--------|---------|---------------------|------------------|
| Variety | Unirrigated | Kharif | Rabi | Summer | Total | per Crop survey) | Reconciled area |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | Irrigated | 1467 | 0 | 0 | 1467 | 5234 | -72.0 |
| Traditional (Local) | Unirrigated | 3911 | 0 | 0 | 3911 | 7166 | -45.4 |
| | Total | 5378 | 0 | 0 | 5378 | 12400 | -56.6 |
| | Irrigated | 356565 | 93357 | 30001 | 479923 | 479032 | 0.2 |
| High Yielding | Unirrigated | 1003518 | 10319 | 98 | 1013935 | 1008818 | 0.5 |
| | Total | 1360083 | 103676 | 30099 | 1493858 | 1487850 | 0.4 |
| Total | Irrigated | 358032 | 93357 | 30001 | 481390 | 484266 | -0.6 |
| | Unirrigated | 1007429 | 10319 | 98 | 1017846 | 1015985 | 0.2 |
| | Total | 1365461 | 103676 | 30099 | 1499236 | 1500250 | -0.1 |

Estimated Area (Ratio Method) and Reconciled Area under Maize Crop Variety wise and Source wise (in hectares)



It is observe from the above table that, under ratio method, the total estimated irrigated area was 32.1% out of which 99.7% of area sown with hybrid variety. As per reconciled area, 32.3% of area was irrigated of which the area sown with hybrid variety was 98.9%. Under ratio method the variation of irrigated area was low and unirrigated area was high, i.e. -0.6% and 0.2% respectively, compared to reconciled area. Districtwise details are given in Appendix-2.4

2.5 Bajra

Bajra crop was grown in 3.3 lakh hectares in the State during the year. It is largely grown in Koppal (32.2%), Raichuru (16.7%), Vijayapura (15.2%), Bagalakote (12.7%) and Ballari (9.6%) districts in the State. These 5 districts alone contribute 86.4% of the total cropped area of the crop in the State. Area estimated under the crop by ratio method was lower compared to the reconciled area. Only 1% of area estimated had traditional variety and the remaining 99% of the area was sown with high yielding variety as per ratio estimates whereas, under reconciled area 2.7 % area was covered under traditional variety and 97.3 % under hybrid variety.

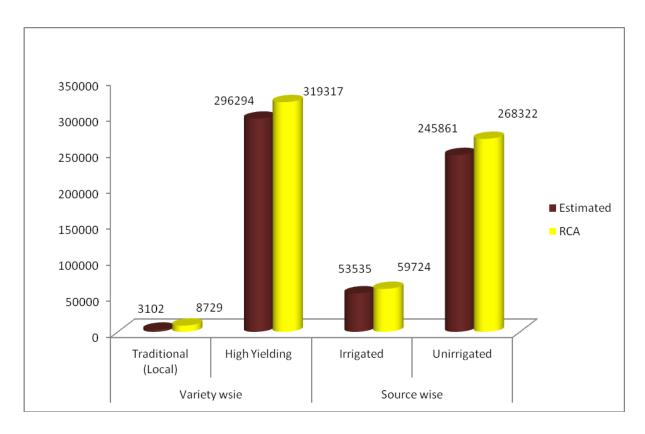
Estimates of area of Bajra crop varietywise and irrigated / unirrigated category by ratio method and reconciled area are given in Table-11.

Table – 11
Varietywise Estimated and Reconciled area under Bajra crop

Area in hectares

| Variety | Irrigated/ Unirrigated | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area |
|---------------------|---------------------------|---|--|----------------------------------|
| 1 | 2 | 3 | 4 | 5 |
| | Irrigated | 44 | 609 | -92.8 |
| Traditional (Local) | Unirrigated | 3058 | 8120 | -62.3 |
| (====) | Total | 3102 | 8729 | -64.5 |
| | Irrigated | 53491 | 59116 | -9.5 |
| High Yielding | Unirrigated | 242803 | 260201 | -6.7 |
| | Total | 296294 | 319317 | -7.2 |
| | Irrigated | 53535 | 59724 | -10.4 |
| Total | Unirrigated | 245861 | 268322 | -8.4 |
| | Total | 299396 | 328046 | -8.7 |

Estimated Area (Ratio Method) and Reconciled Area under Bajra Crop Varietywise and Sourcewise (in hectares)



It is observed from the above table that, under ratio method there was variation of -10.4% under irrigated area and -8.4% under unirrigated area when compared to reconciled area. Under ratio method the variation under hybrid and traditional variety is -7.2% and -64.5% respectively when compared to reconciled area.

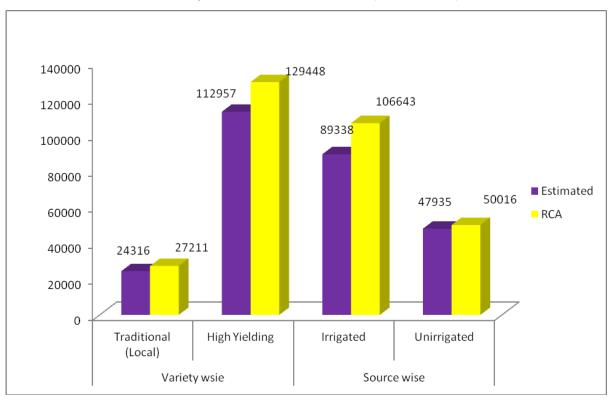
2.6 Wheat

Wheat crop is grown only Rabi season nearly in 1.6 lakh hectares. About 49523 hectares of area is covered by Belagavi district (31.6%) followed by Vijayapura 28156 hectares (18%). As per Ratio Method the total estimated area was low when compared to reconciled area. Details are given in Table -12.

Table-12 Varietywise Estimated and Reconciled area under Wheat crop

| Variety | Irrigated/ Unirrigated | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area |
|---------------------|---------------------------|--|--|----------------------------------|
| 1 | 2 | 3 | 4 | 5 |
| | Irrigated | 4113 | 5184 | -20.7 |
| Traditional (Local) | Unirrigated | 20203 | 22027 | -8.3 |
| | Total | 24316 | 27211 | -10.6 |
| | Irrigated | 85225 | 101459 | -16.0 |
| High Yielding | Unirrigated | 27732 | 27989 | -0.9 |
| | Total | 112957 | 129448 | -12.7 |
| | Irrigated | 89338 | 106643 | -16.2 |
| Total | Unirrigated | 47935 | 50016 | -4.2 |
| | Total | 137273 | 156659 | -12.4 |

Estimated Area (Ratio Method) and Reconciled Area under Wheat Crop Variety wise and Source wise (in hectares)



It can be seen from the above table that, under Ratio Method the total estimated area was 137273 of which Irrigated was 65% and Unirrigated was 35% and High Yield Variety was 82% and Traditional (Local) was 18% respectively. Under reconciled area, the area under irrigation was (68%) and Unirrigated was 32% and High Yield Variety was 83% and Traditional (Local) was 17% respectively. The estimated total area was less in Ratio method when compared to the reconciled area. Districtwise details are given in Appendix- 2.5

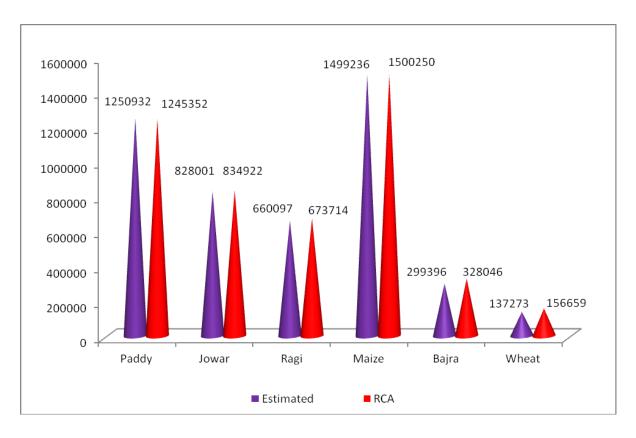
Estimated area for cereal crops under ratio method and reconciled area is graphically presented below.

Table – 13
Estimated and Reconciled area (as per crop survey) under Cereals

Area in hectares

| Crop Name | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area |
|-----------|------------------------------------|--------------------------------------|----------------------------------|
| 1 | 2 | 3 | 4 |
| Paddy | 1250932 | 1245352 | 0.45 |
| Jowar | 828001 | 834922 | -0.83 |
| Ragi | 660097 | 673714 | -2.02 |
| Maize | 1499236 | 1500250 | -0.07 |
| Bajra | 299396 | 328046 | -8.73 |
| Wheat | 137273 | 156659 | -12.37 |

Estimated (Ratio Method) and Reconciled Area (as per crop survey) under Cereals (in hectares)



2.7 Tur

Tur crop is one of the important long duration pulse crops grown only in kharif season. About 16.3 lakh hectares of area was under this crop during 2019-20 of which, 6.1 lakh hectares grown in Kulburgi and 5 lakh hectares in Vijayapura districts which constitutes 67.9% of the total area of the crop in the state. It is observed that the estimated area by ratio method was lower to the extent of -0.2% when compared to the reconciled area. Details of estimated area given in table-14 and districtwise details are given in Appendix-2.5.

2.8 Bengalgram

Bengalgram is also an important pulse crop of the State grown in nearly 6.3 lakh hectares in Rabi season. Gadaga district is covered with 1.2 lakh hectares of area which works out to 18.2% of the total State area. The estimated area by ratio method was higher to the extent of 2.5% when compared the reconciled area.

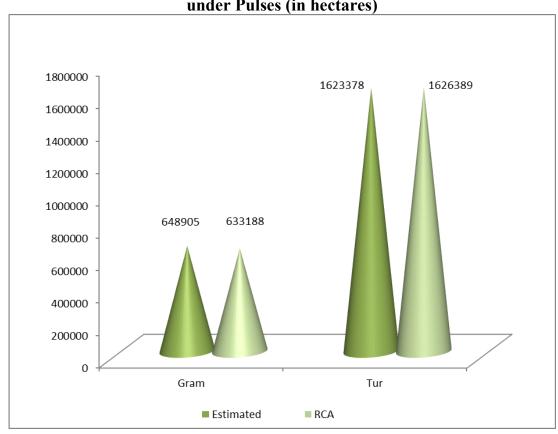
Estimated area under Tur crop and Bengal gram is given in Table–14 and districtwise details are given in Appendix-2.5.

Table – 14
Estimated and Reconciled area under Tur and Bengal gram crops

Area in hectares % variation **Estimated** area Reconciled area over (as per Crop as per Ratio Crop Reconciled Method survey) area 1 2 3 4 1626389 -0.19 Tur 1623378 Bengal gram 648905 633188 2.48

Estimated area for pulse crops under ratio method and reconciled area is graphically presented below.

Estimated (Ratio Method) and Reconciled Area under Pulses (in hectares)



2.9 Groundnut

Groundnut is an important oilseed crop grown in about 4.8 lakh hectares in the State. Though it is grown in Kharif and Summer seasons, about 85.8% of the area is cultivated during kharif season alone. Predominant groundnut growing districts are Chitradurga (1.2 lakh hectares) and Ballary (0.62 lakh hectares), which accounted for 37.2% of the total area of the State. Seasonwise estimates of area are given in Table-15.

Table – 15
Seasonwise Estimated and Reconciled area under Groundnut crop

Area in hectares

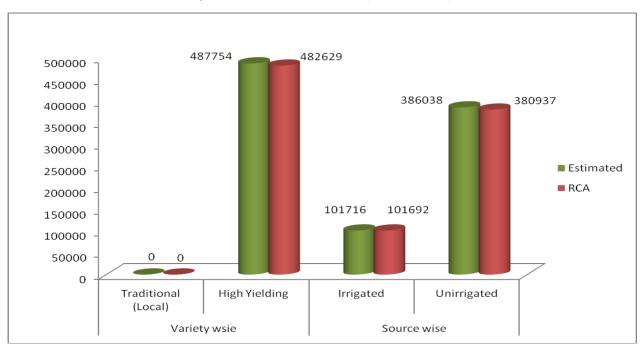
| Season | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area | |
|--------|--|--|----------------------------------|--|
| 1 | 2 | 3 | 4 | |
| Kharif | 419798 | 419798 413855 | | |
| Summer | 67956 | 68774 | -1. 19 | |
| Total | 487754 | 482629 | 1.06 | |

The estimated area under ratio method was higher side to the extent of 1.1% when compared with Reconciliation area. Variety wise and irrigated / un irrigated details are given in Table–16.

Table – 16
Season and Varietywise estimated area under Ratio method under Groundnut crop

| Variety | Irrigated/ | Estimated area as per Ratio Method | | | Reconciled area (as per Crop survey) | | | % variation |
|---------------------|-------------|------------------------------------|--------|--------|--------------------------------------|--------|--------|----------------------------|
| Variety | Unirrigated | Kharif | Summer | Total | Kharif | Summer | Total | over Reconciled area |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | Irrigated | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Traditional (Local) | Unirrigated | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Irrigated | 33760 | 67956 | 101716 | 33173 | 68519 | 101692 | 0.0 |
| High Yielding | Unirrigated | 386038 | 0 | 386038 | 380682 | 255 | 380937 | 1.3 |
| | Total | 419798 | 67956 | 487754 | 413855 | 68774 | 482629 | 1.1 |
| | Irrigated | 33760 | 67956 | 101716 | 33173 | 68519 | 101692 | 0.0 |
| Total | Unirrigated | 386038 | 0 | 386038 | 380682 | 255 | 380937 | 1.3 |
| | Total | 419798 | 67956 | 487754 | 413855 | 68774 | 482629 | 1.1 |

Estimated Area (Ratio Method) and Reconciled Area under Groundnut Crop Varietywise and Sourcewise (in hectares)



It is seen from the above table that, the estimated area under irrigation and Unirrigation as per ratio method was on higher side to the extent of 0.02% and 1.3% respectively. The total area under high yielding variety was also on higher side to the extent of 1.1% when compared with reconciled area. The entire area under the crop was grown as high yield variety. Districtwise details are given in Appendix -2.6

2.10 Sunflower

Sunflower is another important oilseed crop grown in about 1.4 lakh hectares in the State. Gadaga had the largest area (0.25 lakh hectares) followed by Bagalkote (0.20 lakh hectares), Koppal (0.18 lakh hectares) and Chamarajanagara (0.17 lakh hectares). Total area in these four districts alone contributes 59.4% of sunflower area of the State.

Seasonwise estimated area under ratio method is given in Table -17

Table – 17
Seasonwise Estimated and Reconciled area under Sunflower crop

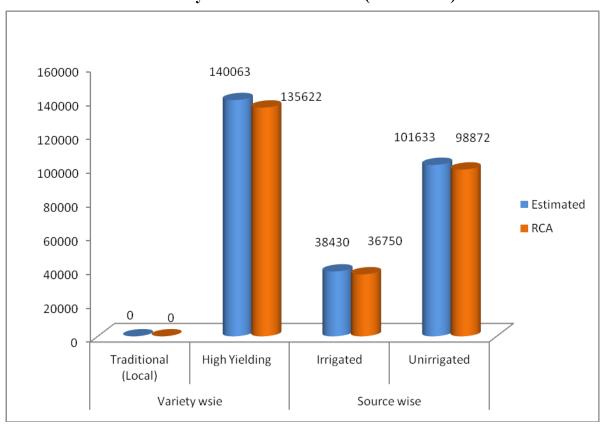
Area in hectares **Estimated** Reconciled area % variation over Season area as per (as per Crop Reconciled area Ratio Method survey) 4 Kharif 107647 105941 1.61 28174 25164 11.96 Rabi Summer 4242 4517 -6.09 140063 **Total** 135622 3.28

It is seen from the above table that, the area estimated under ratio method was higher side when compared with reconciled area. Comparative information showing the season wise and variety wise estimates of area irrigated and high yielding variety by ratio method and reconciled area are given in Table -18.

Table – 18
Season and Varietywise area Estimated under Ratio method under Sunflower crop

| Variety | Irrigated/ | Esti | | ea as per R thod | Reconciled area (as | % variation | |
|---------------------|-------------|--------|-------|---------------------|---------------------|---------------------|----------------------------|
| | Unirrigated | Kharif | Rabi | Summer | Total | per Crop survey) | over Reconciled area |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | Irrigated | 0 | 0 | 0 | 0 | 0 | 0 |
| Traditional (Local) | Unirrigated | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 0 | 0 | 0 | 0 |
| | Irrigated | 21994 | 12194 | 4242 | 38430 | 36750 | 4.6 |
| High Yielding | Unirrigated | 85653 | 15980 | 0 | 101633 | 98872 | 2.8 |
| | Total | 107647 | 28174 | 4242 | 140063 | 135622 | 3.3 |
| | Irrigated | 21994 | 12194 | 4242 | 38430 | 36750 | 4.6 |
| Total | Unirrigated | 85653 | 15980 | 0 | 101633 | 98872 | 2.8 |
| | Total | 107647 | 28174 | 4242 | 140063 | 135622 | 3.3 |

Estimated Area (Ratio Method) and Reconciled Area under Sunflower Crop Varietywise and Sourcewise (in hectares)



23

It is clear from the above table that, in the ratio method the estimated area under hybrid variety was higher when compared to the reconciled area. The percentage variation of area estimated under ratio method over reconciled area was 3.3. The entire area under the crop was high yield variety. Districtwise details are given in Appendix –2.7

2.11 Sesamum

Sesamum crop is grown in 0.31 lakh hectares, mainly in rain fed areas during kharif season only. It is largely grown in Kulburgi 0.13 lakh hectares, Koppala 0.07 lakh hectares and Chamarajanagara 0.04 lakh hectares. Percentage variation of estimated area under ratio method over reconciled area was lower to the extent of -13.9 %. The entire area under the crop was grown as high yield variety. Districtwise area details are given in Appendix -2.8

2.12 Safflower

Safflower is an important oilseed crop grown about 0.23 lakh hectares of area in Rabi season during 2019-20. It is largely grown in Bidar district (0.09 lakh hectares) followed by Dharwad (0.04 lakh hectares) and Gadaga (0.03 lakh hectares). Estimated area by ratio method was lower to the extent of -28.2% when compared to reconciled area. The entire area under the crop was grown as high yield variety. Districtwise area details are given in Appendix - 2.8.

2.13 Linseed

Linseed is another oilseed crop grown in the State during Rabi season only. Out of 193 hectares of area about 53.9 % of area was sown in Belagavi district. Estimated area by ratio method was lower to the extent of -55.4% when compared with reconciled area. Estimated area under Sesamum, Safflower and Linseed is given in Table-19. District wise area sown details are given in Appendix – 2.8.

Table – 19
Estimated and Reconciled area under Sesamum, Safflower and Linseed crops

Area in hectares

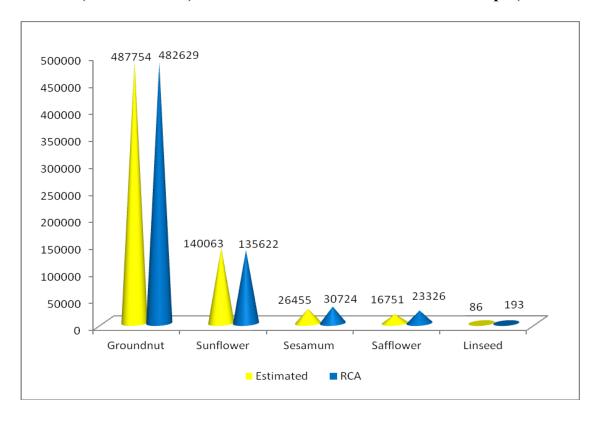
| Crop | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area | | |
|-----------|------------------------------------|--------------------------------------|----------------------------------|--|--|
| 1 | 2 | 3 | 4 | | |
| Sesamum | 26455 | 30724 | -13.89 | | |
| Safflower | 16751 | 23326 | -28.19 | | |
| Linseed | 86 | 193 | -55.39 | | |

Table-20 Estimated and Reconciled area (as per crop survey) under Oilseed Crops

| Crop Name | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area |
|-----------|---------------------------------------|---|-------------------------------------|
| 1 | 2 | 3 | 4 |
| Groundnut | 487754 | 482629 | 1.06 |
| Sunflower | 140063 | 135622 | 3.27 |
| Sesamum | 26455 | 30724 | -13.89 |
| Safflower | 16751 | 23326 | -28.18 |
| Linseed | 86 | 193 | -55.44 |

Estimated area for oilseed crops under ratio method and reconciled area is graphically presented below.

Estimated (Ratio Method) and Reconciled Area under Oilseed Crops (in hectares)



25

2.14 *Cotton*

Cotton is an important cash crop largely grown in Gadaga, Dharwad, Raichuru and Belagavi districts. 0.13 lakh hectares of area was covered under the crop during 2019-20. The variation of estimated area over reconciled area as per ratio method was -6.8%. Variety wise and irrigated/unirrigated details are given in Table-21. The district wise area details are given in Appendix-2.9.

Table – 21
Varietywise Estimated and Reconciled area under Cotton crop

Area in hectares

| Variety | Irrigated/ Unirrigated | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area |
|---------------------|---------------------------|--|--|---|
| 1 | 2 | 3 | 4 | 5 |
| | Irrigated | 186 | 328 | -43.2 |
| Traditional (Local) | Unirrigated | 5564 | 4923 | 13.0 |
| | Total | 5750 | 5252 | 9.4 |
| | Irrigated | 2690 | 3206 | -16.0 |
| High Yielding | Unirrigated | 4090 | 4981 | -17.9 |
| | Total | 6780 | 8187 | -17.1 |
| | Irrigated | 2876 | 3535 | -18.7 |
| Total | Unirrigated | 9654 | 9904 | -2.5 |
| | Total | 12530 | 13438 | -6.8 |

2.15 Sugarcane

Sugarcane is an irrigated crop, which is grown in all the seasons. Out of 2 lakh hectares of area under the crop, 47.2 % of cropped area is found in Belagavi district alone followed by, Bagalakote (21.1%), Vijayapura (9%) and Mandya (4.4%). Estimated area by Ratio method was lower to the extent of -17% when compared to reconciled area. Variety wise and irrigated/unirrigated details are given in Table-22. District wise details of estimates are given in Appendix – 2.9.

Table-22 Varietywise Estimated and Reconciled area under Sugarcane crop

| Variety | Irrigated/ Unirrigated | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area |
|---------------------|---------------------------|--|--|----------------------------------|
| 1 | 2 | 3 | 4 | 5 |
| | Irrigated | 507 | 151632 | -99.7 |
| Traditional (Local) | Unirrigated | 0 | 176 | -100.0 |
| | Total | 507 | 151808 | -99.7 |
| | Irrigated | 163599 | 48911 | 234.4 |
| High Yielding | Unirrigated | 4255 | 2118 | 100.9 |
| | Total | 167854 | 51029 | 220.9 |
| | Irrigated | 164106 | 200543 | -18.1 |
| Total | Unirrigated | 4255 | 2294 | 85.4 |
| | Total | 168361 | 202837 | -17.0 |

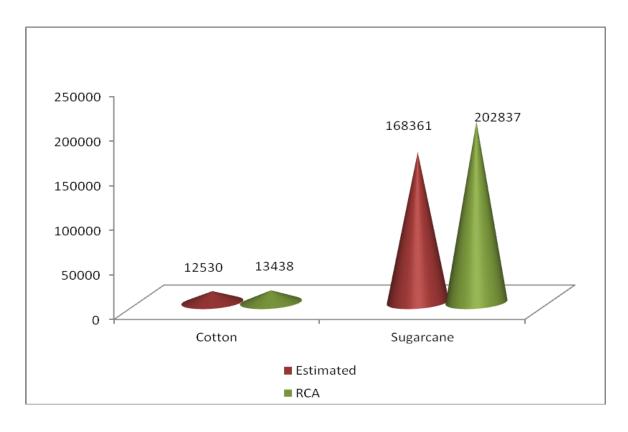
Estimated area under Cotton and Sugarcane is given in Table-23

Table - 23
Estimated and Reconciled area under Cotton and Sugarcane crops

| | | | Area in hectares |
|-----------|------------------------------------|--------------------------------------|----------------------------------|
| Crop | Estimated area as per Ratio Method | Reconciled area (as per Crop survey) | % variation over Reconciled area |
| 1 | 2 | 3 | 4 |
| Cotton | 12530 | 13438 | -6.76 |
| Sugarcane | 168361 | 202837 | -17.00 |

Graphical representation of estimated area under ratio method and reconciled area under cotton and Sugarcane crops are presented below.

Estimated Area (Ratio Method) and Reconciled Area Cotton and Sugarcane Crops (in hectares)



3. SUMMARY OF THE FINDINGS:

- 3.1 The area estimated under ratio method on the basis of the 20% of villages selected is almost nearer to the reconciled area figures, which helps to frame some important agriculture policies at national and state level.
- 3.2 The Timely Reporting Scheme was implemented in 5773 villages out of 5826 villages remaining 53 villages was NA villages of the State during 2019-20, which belong to the fourth set of villages selected under the scheme for the years 2016-17 to 2020-21.
- 3.3 During the year the crop abstracts were received from all the villages in respect of Kharif, Rabi and Summer seasons.
- 3.4 During the year 2019-20 percentage of supervision by Statistics, Agriculture and Horticulture Departments personnel was 99.44%, 97.26% and 97.02% respectively.
- 3.5 The estimated area under ratio method was high in respect of Paddy, Groundnut, Bengal gram and Sunflower crops and was low in case of Jowar, Maize, Tur, Ragi, Bajra, Wheat, Cotton, Sugarcane, Sesamum, Safflower and Linseed crops when compared to the reconciled area.

APPENDIX - 1
Districtwise, Seasonwise receipt position of village crop abstracts during 2019-20

| | No. of villages from which crop abstracts received | | | | | | | | | |
|------------|--|--------------------------------|---|--------|--------------------------------|---|------------|--------------------------------|---|--------|
| | | Kharif * Rabi ** | | | | | Summer *** | | | |
| Sl. No. | District | No. of villages selected | No. of Crop Abstracts Received | % | No. of villages selected | No. of Crop Abstracts Received | % | No. of villages selected | No. of Crop Abstracts Received | % |
| 1 | Bagalkote | 119 | 118 | 99.16 | 119 | 117 | 98.32 | 119 | 117 | 98.32 |
| 2 | Bengaluru Rural | 112 | 112 | 100.00 | 112 | 112 | 100.00 | 112 | 112 | 100.00 |
| 3 | Bengaluru Urban | 212 | 212 | 100.00 | 212 | 211 | 99.53 | 212 | 209 | 98.58 |
| 4 | Belagavi | 233 | 231 | 99.14 | 233 | 233 | 100.00 | 233 | 233 | 100.00 |
| 5 | Bellary | 127 | 125 | 98.43 | 127 | 127 | 100.00 | 127 | 125 | 98.43 |
| 6 | Bidar | 125 | 123 | 98.40 | 125 | 125 | 100.00 | 125 | 125 | 100.00 |
| 7 | Vijayapura | 127 | 127 | 100.00 | 127 | 127 | 100.00 | 127 | 127 | 100.00 |
| 8 | Chamarajanagar | 91 | 90 | 98.90 | 91 | 91 | 100.00 | 91 | 91 | 100.00 |
| 9 | Chikkaballapura | 303 | 302 | 99.67 | 303 | 302 | 99.67 | 303 | 264 | 87.13 |
| 10 | Chikkamagaluru | 223 | 219 | 98.21 | 223 | 223 | 100.00 | 223 | 223 | 100.00 |
| 11 | Chitradurga | 210 | 208 | 99.05 | 210 | 210 | 100.00 | 210 | 206 | 98.10 |
| 12 | D. Kannada | 72 | 72 | 100.00 | 72 | 72 | 100.00 | 72 | 72 | 100.00 |
| 13 | Davanagere | 165 | 164 | 99.39 | 165 | 165 | 100.00 | 165 | 164 | 99.39 |
| 14 | Dharwad | 78 | 77 | 98.72 | 78 | 78 | 100.00 | 78 | 78 | 100.00 |
| 15 | Gadag | 64 | 64 | 100.00 | 64 | 64 | 100.00 | 64 | 64 | 100.00 |
| 16 | Kalaburagi | 184 | 182 | 98.91 | 184 | 184 | 100.00 | 184 | 182 | 98.91 |
| 17 | Hassan | 544 | 503 | 92.46 | 544 | 542 | 99.63 | 544 | 541 | 99.45 |
| 18 | Haveri | 137 | 137 | 100.00 | 137 | 137 | 100.00 | 137 | 137 | 100.00 |
| 19 | Kodagu | 54 | 54 | 100.00 | 54 | 54 | 100.00 | 54 | 54 | 100.00 |
| 20 | Kolar | 358 | 358 | 100.00 | 358 | 358 | 100.00 | 358 | 334 | 93.30 |
| 21 | Koppal | 125 | 123 | 98.40 | 125 | 125 | 100.00 | 125 | 125 | 100.00 |
| 22 | Mandya | 295 | 294 | 99.66 | 295 | 295 | 100.00 | 295 | 295 | 100.00 |
| 23 | Mysuru | 268 | 260 | 97.01 | 268 | 268 | 100.00 | 268 | 268 | 100.00 |
| 24 | Raichuru | 176 | 175 | 99.43 | 176 | 176 | 100.00 | 176 | 176 | 100.00 |
| 25 | Ramanagara | 164 | 164 | 100.00 | 164 | 164 | 100.00 | 164 | 161 | 98.17 |
| 26 | Shivamogga | 310 | 309 | 99.68 | 310 | 310 | 100.00 | 310 | 308 | 99.35 |
| 27 | Tumakuru | 539 | 533 | 98.89 | 539 | 539 | 100.00 | 539 | 500 | 92.76 |
| 28 | Udupi | 53 | 53 | 100.00 | 53 | 53 | 100.00 | 53 | 53 | 100.00 |
| 29 | U.Kannada | 256 | 256 | 100.00 | 256 | 256 | 100.00 | 256 | 256 | 100.00 |
| 30 | Yadagiri | 102 | 102 | 100.00 | 102 | 102 | 100.00 | 102 | 102 | 100.00 |
| | TOTAL | 5826 | 5747 | 98.64 | 5826 | 5820 | 99.90 | 5826 | 5702 | 97.87 |

^{* 53-}Villages marked as Non-Agriculture villages (NA), 26 Villages - Mapping issue/Sub merged due to flooding/Technical issues/Villages under wildlife area.

^{** 1} Village - Mapping issue, 1 Village - zero extent, 4 Villages - Not reflecting in MIS report.

^{*** 39} Villages in Tumkur, 38 Villages in Chikkaballapur and 24 in Kolar were not verified by the verifier due to Covid-19 restrictions and remaining 23 Villages Map Issue/Zero Extent/not reflecting in MIS/Location not found, Forest/Wild area.

APPENDIX - 2.1 Cropwise and Seasonwise, ratio estimate and reconciled area for the year 2019-20

Rabi

Area in hectares

Total

Summer

% of % of % of Reconciled Reconciled Reconciled Reconciled Variation Variation Variation Sl. No. District area area % of Variation over area area Ratio Ratio Ratio Ratio over over over Reconciled area (as per (as per (as per (as per Reconciled Reconciled Reconciled Crop Survey) Crop Survey) Crop Survey) Crop Survey) area area area Bagalkote 36 33 8.91 0 49 -100.00 0.00 36 -56.57 Bengaluru Rural 140 141 -0.88 0 102 60 68.99 242 -100.00 207 17.07 Bengaluru Urban 196 573 -65.83 0 23 29 -21.72 219 611 -64.17 -100.00 -100.00 4 Belagavi 60571 0.09 0 1333 0 30 -100.00 60571 61878 -2.11 60515 5 Bellary 97180 14807 3313 31741 30682 9.57 97180 0.00 346.88 3.45 143728 131176 Bidar 743 743 0.00 24 -3.13 6 0 -100.000 0.00 743 767 -22.91 Vijayapura 122 108 12.72 0 50 -100.00 0 0.00 122 158 Chamarajanagar 6983 6783 2.96 2408 1205 99.83 579 570 1.58 9970 8558 16.50 Chikkaballapura 626 239 161.67 0 233 -100.00 34 -100.00 626 506 23.84 1233 Chikkamagaluru 16713 14399 1204 -2.39 17918 15634 14.61 16.07 -29.08Chitradurga 130 96 36.01 881 784 12.37 1122 998 12.51 11 111 118 -5.68 12 D. Kannada 9898 10260 -3.532451 2368 3.52 0 0.00 12349 12628 -2.2134299 105522 13 Davanagere 71223 69724 2.15 0 106 -100.00 34610 -0.90104440 1.04 14 Dharwad 12376 9965 24.20 0 64 -100.00 7.53 12377 10029 23.41 15 Gadag 3947 3222 22.49 0 168 -100.001488 1426 4.36 5435 4816 12.85 Kalaburagi 16 5226 7040 -25.78 0 1051 -100.00 401 578 -30.57 5627 8670 -35.10 17 Hassan 41841 42301 -1.090 1653 -100.00 525 538 -2.4142366 44492 -4.7818 Haveri 28237 29195 -3.280 31 -100.00 7166 7104 0.88 35403 36330 -2.55 19 Kodagu 27245 27849 -2.170 -100.00 10 -20.00 27253 27864 -2.19 20 Kolar 1210 1148 5.43 0 91 -100.00 0 -100.00 1210 1240 -2.41 Koppal

RCA - Reconciled Crop Area

57241

52208

77102

145797

2527

81554

32987

47263

88134

971023

1565

56290

52192

76138

2463

82004

1493

34553

46275

87474

964088

143692

1.69

0.03

1.27

1.46

2.61

-0.55

4.78

-4.53

2.14

0.75

0.72

0

0

0

0

0

408

3195

723

1145

26019

Crop: Paddy

21

22 Mandya

23 Mysuru

24 Raichuru

28 Udupi

30 Yadgiri

Ramanagara

26 Shivamogga

29 U.Kannada

Tumakuru

STATE TOTAL

Kharif

571

766

5642

28

495

32

3716

928

2020

26742

-100.00

-100.00

-100.00

-100.00

-17.58

-100.00

-14.03

-22.12

-43.31

-2.70

0.00

42058

13560

7481

74629

208

896

48

460

30095

253890

6807

43515

13694

7544

73145

234

897

54

544

30924

254522

6947

-3.35

-0.98

-0.83

2.03

-11.05

-2.02

-0.16

-10.73

-15.49

-2.68

-0.25

99299

65768

84583

220426

2735

88769

2461

36230

48446

119374

1250932

100375

66651

83682

222479

2725

89446

2423

38323

47747

120418

1245352

-1.07

-1.32

1.08

-0.92

0.37

-0.76

1.57

-5.46

1.46

-0.87

0.45

APPENDIX - 2.2 Cropwise and Seasonwise estimated area under ratio method and reconciled area during 2019-20

Crop: Jowar Area in hectares

| Crop | rop : Jowar Area in nectares | | | | | | | | | , | |
|------------|------------------------------|--------|---|--|--------|---|--|--------|---|---|--|
| | | | Kharif | | | Rabi | | Total | | | |
| Sl. No. | District | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | |
| 1 | Bagalkote | 5549 | 5512 | 0.67 | 70909 | 71138 | -0.32 | 76458 | 76650 | -0.25 | |
| 2 | Bengaluru Rural | 1941 | 1960 | -0.95 | 0 | 137 | -100.00 | 1941 | 2097 | -7.44 | |
| 3 | Bengaluru Urban | 3104 | 3250 | -4.49 | 0 | 48 | -100.00 | 3104 | 3298 | -5.87 | |
| 4 | Belagavi | 14290 | 13412 | 6.54 | 117417 | 129033 | -9.00 | 131707 | 142445 | -7.54 | |
| 5 | Bellary | 13653 | 13575 | 0.57 | 21292 | 20795 | 2.39 | 34945 | 34370 | 1.67 | |
| 6 | Bidar | 18001 | 17265 | 4.26 | 0 | 30312 | -100.00 | 18001 | 47576 | -62.16 | |
| 7 | Vijayapura | 1394 | 1392 | 0.10 | 88428 | 72617 | 21.77 | 89822 | 74009 | 21.37 | |
| 8 | Chamarajanagar | 28277 | 27540 | 2.67 | 0 | 1045 | -100.00 | 28277 | 28585 | -1.08 | |
| 9 | Chikkaballapura | 10354 | 10152 | 2.00 | 0 | 518 | -100.00 | 10354 | 10669 | -2.95 | |
| 10 | Chikkamagaluru | 1833 | 214 | 755.55 | 0 | 2024 | -100.00 | 1833 | 2238 | -18.09 | |
| 11 | Chitradurga | 10440 | 10424 | 0.15 | 9440 | 5606 | 68.39 | 19880 | 16030 | 24.02 | |
| 12 | D. Kannada | 0 | 0 | -100.00 | 0 | 1 | -100.00 | 0 | 1 | -100.00 | |
| 13 | Davanagere | 726 | 715 | 1.49 | 3962 | 3412 | 16.12 | 4688 | 4127 | 13.58 | |
| 14 | Dharwad | 999 | 973 | 2.65 | 45358 | 38263 | 18.54 | 46357 | 39236 | 18.15 | |
| 15 | Gadag | 3045 | 2966 | 2.63 | 49657 | 61060 | -18.68 | 52702 | 64027 | -17.69 | |
| 16 | Kalaburagi | 4766 | 4688 | 1.66 | 64821 | 55751 | 16.27 | 69587 | 60440 | 15.13 | |
| 17 | Hassan | 15849 | 15903 | -0.34 | 0 | 477 | -100.00 | 15849 | 16380 | -3.24 | |
| 18 | Haveri | 402 | 356 | 12.77 | 58116 | 49482 | 17.45 | 58518 | 49839 | 17.41 | |
| 19 | Kodagu | 326 | 339 | -4.01 | 0 | 0 | 0.00 | 326 | 339 | -4.01 | |
| 20 | Kolar | 2347 | 2247 | 4.43 | 0 | 378 | -100.00 | 2347 | 2625 | -10.60 | |
| 21 | Koppal | 6892 | 6892 | 0.01 | 35519 | 34016 | 4.42 | 42411 | 40908 | 3.67 | |
| 22 | Mandya | 3058 | 2864 | 6.79 | 0 | 609 | -100.00 | 3058 | 3473 | -11.95 | |
| 23 | Mysuru | 16812 | 17414 | -3.46 | 641 | 1340 | -52.18 | 17453 | 18754 | -6.94 | |
| 24 | Raichuru | 6214 | 6131 | 1.36 | 60755 | 58759 | 3.40 | 66969 | 64890 | 3.20 | |
| 25 | Ramanagara | 2130 | 2132 | -0.11 | 0 | 343 | -100.00 | 2130 | 2475 | -13.95 | |
| 26 | Shivamogga | 81 | 80 | 1.26 | 366 | 239 | 53.10 | 447 | 319 | 40.07 | |
| 27 | Tumakuru | 8101 | 8714 | -7.04 | 0 | 365 | -100.00 | 8101 | 9079 | -10.77 | |
| 28 | Udupi | 7 | 7 | -3.38 | 0 | 13 | -100.00 | 7 | 20 | -67.26 | |
| 29 | U.Kannada | 158 | 157 | 0.89 | 200 | 227 | -12.05 | 358 | 384 | -6.77 | |
| 30 | Yadagiri | 1314 | 1311 | 0.17 | 19059 | 18326 | 4.00 | 20373 | 19637 | 3.75 | |
| S | TATE TOTAL | 182061 | 178587 | 1.95 | 645940 | 656335 | -1.58 | 828001 | 834922 | -0.83 | |

APPENDIX - 2.3
Cropwise and Seasonwise estimated area under ratio method and reconciled area during 2019- 20

Crop: Ragi

| Crop | . Ragi | | | | | | | | | Area iii liectares | | | | |
|------------|-----------------|--------|--|---|-------|--|---|-------|--|---|--------|--|---|--|
| | | | Kharif | | | Rabi | | | Summer | | | Total | | |
| Sl. No. | District | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | |
| 1 | Bagalkote | 35 | 46 | -23.80 | 0 | 76 | -100.00 | 0 | 0 | 0.00 | 35 | 122 | -71.52 | |
| 2 | Bengaluru Rural | 38369 | 46494 | -17.48 | 379 | 159 | 138.82 | 47 | 32 | 48.78 | 38795 | 46685 | -16.90 | |
| 3 | Bengaluru Urban | 17112 | 18380 | -6.90 | 0 | 376 | -100.00 | 7 | 8 | | 17119 | 18765 | -8.77 | |
| 4 | Belagavi | 1640 | 1014 | 61.76 | 0 | 98 | -100.00 | 0 | 0 | -100.00 | 1640 | 1112 | 47.48 | |
| 5 | Bellary | 10512 | 11189 | -6.05 | 6655 | 7677 | -13.31 | 865 | 875 | -1.18 | 18032 | 19741 | -8.66 | |
| 6 | Bidar | 8 | 36 | -77.99 | 0 | 24 | -100.00 | 0 | 0 | 0.00 | 8 | 60 | -86.76 | |
| 7 | Vijayapura | 104 | 110 | -5.52 | 0 | 89 | -100.00 | 0 | - | 0.00 | 104 | | -47.69 | |
| 8 | Chamarajanagar | 5149 | 5081 | 1.32 | 162 | 438 | -63.02 | 77 | 91 | -15.20 | 5388 | 5610 | -3.97 | |
| 9 | Chikkaballapura | 44823 | 44956 | -0.30 | 0 | 679 | -100.00 | 264 | 173 | 52.55 | 45087 | 45809 | -1.58 | |
| 10 | Chikkamagaluru | 33416 | 33624 | -0.62 | 0 | 595 | -100.00 | 0 | | -100.00 | 33416 | 34222 | -2.36 | |
| 11 | Chitradurga | 38219 | 38291 | -0.19 | 7597 | 7305 | 4.00 | 609 | 866 | -29.64 | 46425 | 46461 | -0.08 | |
| 12 | D. Kannada | 0 | | 0.00 | 0 | 0 | | 0 | | 0.00 | 0 | - | 0.00 | |
| 13 | Davanagere | 6569 | 6899 | -4.78 | 2402 | 2292 | 4.79 | 228 | 231 | -1.17 | 9199 | | -2.36 | |
| 14 | Dharwad | 40 | 52 | -23.20 | 0 | 56 | -100.00 | 0 | 0 | 0.00 | 40 | | -63.11 | |
| | Gadag | 51 | 53 | -4.71 | 0 | 32 | -100.00 | 0 | 1 | -100.00 | 51 | 86 | -40.92 | |
| | Kalaburagi | 50 | 61 | -17.21 | 0 | 44 | -100.00 | 0 | - | 0.00 | 50 | | -51.86 | |
| 17 | Hassan | 72314 | 71870 | 0.62 | 9251 | 4210 | | 324 | 309 | 4.89 | 81889 | 76389 | 7.20 | |
| | Haveri | 246 | 233 | 5.28 | 53 | 89 | | 17 | 17 | 1.98 | 316 | | -6.94 | |
| | Kodagu | 16 | 21 | -23.92 | 0 | 0 | **** | 0 | | | 16 | | -23.92 | |
| | Kolar | 59999 | 59808 | 0.32 | 0 | 727 | -100.00 | 51 | 56 | -8.63 | 60050 | | -0.89 | |
| 21 | Koppal | 69 | 77 | -10.95 | 0 | 35 | -100.00 | 0 | 0 | 0.00 | 69 | 112 | -38.60 | |
| 22 | Mandya | 44151 | 43848 | 0.69 | 3820 | 2053 | 86.06 | 2072 | 2090 | -0.84 | 50043 | 47991 | 4.27 | |
| | Mysuru | 41022 | 43158 | -4.95 | 9748 | 14020 | | 160 | 170 | -5.80 | 50930 | | -11.19 | |
| | Raichuru | 72 | 77 | -6.95 | 0 | 59 | | 0 | | 0.00 | 72 | 137 | -47.32 | |
| | Ramanagara | 57297 | 56632 | 1.17 | 66 | 379 | -82.58 | 698 | 698 | -0.03 | 58061 | 57709 | 0.61 | |
| 26 | Shivamogga | 492 | 500 | -1.71 | 0 | 21 | -100.00 | 7 | 8 | -17.36 | 499 | 530 | -5.83 | |
| 27 | Tumakuru | 142158 | 143275 | -0.78 | 105 | 299 | -64.89 | 493 | 425 | 15.93 | 142756 | 143999 | -0.86 | |
| 28 | Udupi | 0 | 0 | -26.67 | 0 | 0 | | 0 | 0 | 0.00 | 0 | - | -82.81 | |
| 29 | U.Kannada | 5 | 6 | -4.96 | 0 | 15 | -100.00 | 0 | 0 | 0.00 | 5 | 21 | -74.36 | |
| 30 | Yadagiri | 4 | 4 | -7.32 | 0 | 14 | | 0 | | -100.00 | 4 | 22 | -82.35 | |
| Si | TATE TOTAL | 613940 | 625796 | -1.89 | 40238 | 41862 | -3.88 | 5919 | 6056 | -2.26 | 660097 | 673714 | -2.02 | |

APPENDIX - 2.4
Cropwise and Seasonwise estimated area under ratio method and reconciled area during 2019-20

Crop: Maize

| Crop | . IVIAIZE | | Kharif | | | Rabi | | Summer | | | Total | | |
|------------|-----------------|---------|-------------------------|-----------------|--------|-----------------|-----------------|--------|-------------------------|-----------------|---------|-----------------|-------------------|
| | | % of | | | | Reconciled | % of | | | % of | | Reconciled | % of |
| Sl. No. | District | Ratio | Reconciled area (as per | Variation over | Ratio | area (as per | Variation over | Ratio | Reconciled area | Variation over | Ratio | area (as per | Variation over |
| | | | Crop Survey) | Reconciled area | | Crop Survey) | Reconciled area | | (as per Crop Survey) | Reconciled area | | Crop Survey) | Reconciled area |
| 1 | Bagalkote | 48080 | 48260 | -0.37 | 14300 | 11251 | 27.10 | 3246 | 3451 | -5.93 | 65626 | 62961 | 4.23 |
| 2 | Bengaluru Rural | 7664 | 6731 | 13.87 | 223 | 122 | 83.37 | 31 | 57 | -45.64 | 7918 | 6910 | 14.60 |
| 3 | Bengaluru Urban | 2358 | 2073 | 13.74 | 0 | 15 | -100.00 | 29 | 24 | 22.62 | 2387 | 2112 | 13.02 |
| 4 | Belagavi | 139727 | 138709 | 0.73 | 34203 | 36455 | -6.18 | 7221 | 7843 | -7.93 | 181151 | 183008 | -1.01 |
| 5 | Bellary | 187476 | 188034 | -0.30 | 3455 | 4337 | -20.33 | 245 | 213 | 15.28 | 191176 | 192583 | -0.73 |
| 6 | Bidar | 990 | 913 | 8.49 | 0 | 291 | -100.00 | 0 | 85 | -100.00 | 990 | 1289 | -23.16 |
| 7 | Vijayapura | 55579 | 55554 | 0.05 | 5410 | 6226 | -13.10 | 2136 | 2025 | 5.46 | 63125 | 63805 | -1.07 |
| 8 | Chamarajanagar | 20400 | 20198 | 1.00 | 126 | 4667 | -97.30 | 1525 | 1518 | 0.43 | 22051 | 26383 | -16.42 |
| 9 | Chikkaballapura | 43025 | 41856 | 2.79 | 346 | 740 | -53.25 | 123 | 135 | -9.01 | 43494 | 42732 | 1.78 |
| 10 | Chikkamagaluru | 16512 | 15989 | 3.27 | 0 | 427 | -100.00 | 0 | 10 | -100.00 | 16512 | 16426 | 0.53 |
| 11 | Chitradurga | 91773 | 91284 | 0.54 | 3249 | 3698 | -12.13 | 477 | 512 | -6.88 | 95499 | 95494 | 0.01 |
| 12 | D. Kannada | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| 13 | Davanagere | 135115 | 135001 | 0.08 | 711 | 810 | -12.18 | 891 | 856 | 4.06 | 136717 | 136667 | 0.04 |
| 14 | Dharwad | 50202 | 48462 | 3.59 | 9439 | 6995 | 34.94 | 1020 | 1020 | -0.02 | 60661 | 56477 | 7.41 |
| 15 | Gadag | 71545 | 72737 | -1.64 | 2898 | 5780 | -49.86 | 385 | 289 | 33.05 | 74828 | 78806 | -5.05 |
| 16 | Kalaburagi | 2825 | 2818 | 0.24 | 0 | 547 | -100.00 | 0 | 124 | -100.00 | 2825 | 3489 | -19.05 |
| 17 | Hassan | 97766 | 97727 | 0.04 | 2553 | 3753 | -31.98 | 268 | 236 | 13.35 | 100587 | 101716 | -1.11 |
| 18 | Haveri | 204698 | 204680 | 0.01 | 15027 | 14555 | 3.24 | 6128 | 6030 | 1.63 | 225853 | 225265 | 0.26 |
| 19 | Kodagu | 1596 | 1497 | 6.65 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 1596 | 1497 | 6.65 |
| 20 | Kolar | 1515 | 1519 | -0.24 | 0 | 252 | -100.00 | 74 | 78 | -5.31 | 1589 | 1849 | -14.03 |
| 21 | Koppal | 54777 | 50444 | 8.59 | 3694 | 3480 | 6.16 | 502 | 477 | 5.23 | 58973 | 54401 | 8.40 |
| 22 | Mandya | 3131 | 3142 | -0.33 | 693 | 392 | 76.96 | 395 | 361 | 9.49 | 4219 | 3894 | 8.35 |
| 23 | Mysuru | 29082 | 28581 | 1.75 | 3985 | 3954 | 0.79 | 183 | 180 | 1.56 | 33250 | 32715 | 1.63 |
| 24 | Raichuru | 778 | 691 | 12.53 | 0 | 905 | -100.00 | 0 | 12 | -100.00 | 778 | 1608 | -51.64 |
| 25 | Ramanagara | 2677 | 2680 | -0.12 | 459 | 877 | -47.66 | 671 | 608 | 10.38 | 3807 | 4165 | -8.59 |
| 26 | Shivamogga | 59436 | 59333 | 0.17 | 1580 | 1776 | -11.03 | 3706 | 3804 | -2.58 | 64722 | 64913 | -0.29 |
| 27 | Tumakuru | 26377 | 26132 | 0.94 | 0 | 412 | -100.00 | 93 | 85 | 9.85 | 26470 | 26629 | -0.60 |
| 28 | Udupi | 1 | 1 | -30.77 | 0 | 16 | -100.00 | 0 | 1 | -100.00 | 1 | 19 | -95.16 |
| 29 | U.Kannada | 10158 | 10081 | 0.76 | 1325 | 1238 | 7.05 | 750 | 815 | -7.97 | 12233 | 12134 | 0.82 |
| 30 | Yadagiri | 197 | 194 | 1.17 | 0 | 99 | -100.00 | 0 | 10 | -100.00 | 197 | 304 | -35.25 |
| ST | TATE TOTAL | 1365461 | 1355322 | 0.75 | 103676 | 114067 | -9.11 | 30099 | 30861 | -2.47 | 1499236 | 1500250 | -0.07 |

APPENDIX - 2.5
Cropwise estimated area under ratio method and reconciled area during 2019-20

| | | E | Bajra (Kharif | f) | | Wheat (Rabi) | | | Tur (Kharif) | | Bei | ngalgram (R | abi) |
|-----------|-----------------|--------|--|---|--------|---|---|---------|--|---|--------|--|---|
| Sl. No | District | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area |
| 1 | Bagalkote | 30567 | 41733 | -26.76 | 19817 | 20814 | -4.79 | 51833 | 50933 | 1.77 | 56504 | 52472 | 7.68 |
| 2 | Bengaluru Rural | 8 | 8 | 7.05 | 0 | 0 | -100.00 | 725 | 822 | -11.87 | 0 | | -100.00 |
| 3 | Bengaluru urban | 1 | 16 | -92.81 | 0 | 0 | 0.00 | 305 | 952 | -67.96 | 0 | 0 | -100.00 |
| 4 | Belagavi | 10361 | 18933 | -45.28 | 46876 | 49523 | -5.35 | 14398 | 14311 | 0.61 | 84204 | 86953 | -3.16 |
| 5 | Bellary | 30239 | 31500 | -4.00 | 38 | 129 | -70.53 | 11168 | 11498 | -2.87 | 17349 | 16221 | 6.95 |
| 6 | Bidar | 1854 | 2073 | -10.57 | 0 | 5549 | -100.00 | 129384 | 127939 | 1.13 | 0 | 54910 | -100.00 |
| 7 | Vijayapura | 46805 | 49960 | -6.31 | 25354 | 28156 | -9.95 | 500927 | 497180 | 0.75 | 60796 | 58668 | 3.63 |
| 8 | Chamarajanagar | 882 | 885 | -0.36 | 0 | 15 | -100.00 | 386 | 319 | 21.10 | 1479 | 2091 | -29.26 |
| 9 | Chikkaballapura | 175 | 198 | -11.78 | 0 | 0 | 0.00 | 5002 | 5149 | -2.86 | 0 | 39 | -100.00 |
| 10 | Chikkamagaluru | 28 | 23 | 21.87 | 0 | 0 | 0.00 | 285 | 224 | 27.00 | 0 | 6667 | -100.00 |
| 11 | Chitradurga | 3103 | 2933 | 5.79 | 669 | 363 | 84.10 | 5597 | 5773 | -3.04 | 34039 | 34503 | -1.34 |
| 12 | D. Kannada | 5 | 8 | -42.79 | 0 | | 0.00 | 1 | 1 | -3.85 | 0 | 0 | 0.00 |
| 13 | Davanagere | 695 | 744 | -6.51 | 0 | 187 | -100.00 | 720 | 646 | 11.43 | 4598 | 6188 | -25.69 |
| 14 | Dharwad | 31 | 42 | -25.83 | 18812 | 22007 | -14.52 | 554 | 545 | 1.56 | 66780 | 80740 | -17.29 |
| 15 | Gadag | 2893 | 2827 | 2.34 | 19038 | 20122 | -5.39 | 903 | 878 | 2.95 | 91903 | 115041 | -20.11 |
| 16 | Kalaburagi | 1302 | 7449 | -82.53 | 4194 | 7608 | -44.87 | 604879 | 606717 | -0.30 | 77856 | 17516 | 344.49 |
| 17 | Hassan | 96 | 87 | 9.90 | 0 | 6 | -100.00 | 841 | 880 | -4.44 | 497 | 580 | -14.35 |
| 18 | Haveri | 36 | 42 | -14.59 | 638 | 535 | 19.28 | 895 | 795 | 12.60 | 7389 | 3528 | 109.45 |
| 19 | Kodagu | 1 | 1 | 0.00 | 0 | 0 | 0.00 | 2 | 3 | -46.26 | 0 | 0 | 0.00 |
| 20 | Kolar | 119 | 117 | 2.26 | 0 | 1 | -100.00 | 541 | 1028 | | 0 | · | -100.00 |
| 21 | Koppal | 105913 | 105746 | 0.16 | 1837 | 1497 | 22.74 | 27678 | 33633 | -17.70 | 62094 | 66312 | -6.36 |
| 22 | Mandya | 14 | 10 | 43.63 | 0 | 0 | -100.00 | 282 | 366 | -22.82 | 0 | 8 | -100.00 |
| 23 | Mysuru | 7 | 15 | -50.73 | 0 | 0 | -100.00 | 2279 | 2530 | -9.89 | 2807 | 357 | 685.39 |
| 24 | Raichuru | 55850 | 54728 | 2.05 | 0 | 82 | -100.00 | 147896 | 144487 | 2.36 | 77306 | 29487 | 162.17 |
| 25 | Ramanagara | 1 | 2 | -54.22 | 0 | 0 | 0.00 | 1262 | 1644 | -23.23 | 0 | 1 | -100.00 |
| 26 | Shivamogga | 3 | 5 | -31.78 | 0 | 0 | 0.00 | 10 | 12 | -15.03 | 0 | | -100.00 |
| 27 | Tumakuru | 192 | 179 | 6.93 | 0 | 1 | -100.00 | 7705 | 7987 | -3.54 | 388 | 329 | 18.11 |
| 28 | Udupi | 2 | 2 | -1.17 | 0 | 0 | 0.00 | 0 | - | -53.62 | 0 | 10 | -100.00 |
| 29 | U.Kannada | 2 | 2 | 0.00 | 0 | 0 | 0.00 | 0 | | | 0 | 11 | -100.00 |
| 30 | Yadagiri | 8215 | 7781 | 5.58 | 0 | 62 | -100.00 | 106918 | 109136 | -2.03 | 2916 | 520 | 461.29 |
| ST | TATE TOTAL | 299396 | 328046 | -8.73 | 137273 | 156659 | -12.37 | 1623378 | 1626389 | -0.19 | 648905 | 633188 | 2.48 |

APPENDIX - 2.6 Cropwise and Seasonwise estimated area under ratio method and reconciled area during 2019-20

Crop: Groundnut

Area in hectares **Kharif** Rabi/Summer **Total** Reconciled % of Reconciled % of Reconciled % of Sl. No. District Variation over Variation over area area Variation over area Ratio Ratio Ratio (as per Crop Reconciled (as per Reconciled (as per Crop Reconciled Crop Survey) Survey) Survey) area area area Bagalkote 2574 1991 29.24 13499 13582 -0.61 16073 15573 3.21 190 189 0.54 Bengaluru Rur 189 0.54 0.00 190 3 Bengaluru Urb 149 0.82 0 0.00 149 148 0.82 148 4 25264 24863 1.61 5303 5712 -7.15 30567 30575 -0.03 Belagavi 5 Bellary 53881 53908 -0.05 7613 7687 -0.9661494 61595 -0.16Bidar 37 14.99 0.00 32 14.99 6 32 37 -0.63 12167 11956 20049 20464 -2.03 32216 32420 Vijayapura 1.76 8 Chamarajanaga 4553 4544 0.19 0.00 4553 4544 0.19 9 Chikkaballapur 25199 24826 1.50 31 -100.00 25199 24857 1.38 Chikkamagaluı 10 1601 1565 17 1615 1582 2.11 2.32 14 -17.6511 Chitradurga 117745 116877 0.74 557 799 -30.33 118302 117677 0.53 12 D. Kannada 0.00 0.00 0.00 0 13 10061 9987 0.74 420 404 4.00 10481 10391 0.87 Davanagere 14 0.52 Dharwad 35310 35160 0.43 512 478 7.16 35822 35638 15 Gadag 35257 35235 4670 4694 -0.5039927 39929 0.06 0.00 509 8.29 912 955 -4.51 1421 1425 -0.29 16 Kalaburagi 470 17 370 371 -0.24-100.00 370 422 -12.30Hassan 51 18 Haveri 19710 19512 1.02 2740 2769 -1.06 22450 22281 0.76 19 71.68 -25.00 -13.03 Kodagu 20 Kolar 7731 7277 6.24 3 -100.00 7731 7280 6.20 21 19952 Koppal 10767 10609 1.48 9904 9342 6.01 20671 3.60 22 -5.97 -5.97 Mandya 250 266 0 0 0.00 250 266 23 1579 1454 0 1579 1454 8.60 Mysuru 8.60 0 0.00 927 24 Raichuru 535 14.70 422 461 -8.38 957 3.23 466 25 Ramanagara 880 900 -2.23 0 6 -100.00 880 906 -2.85 3 26 Shivamogga 68 66 4.30 54.32 73 69 6.66 27 697 12.47 51501 49261 Tumakuru 50804 48641 4.45 620 4.55 28 Udupi 0.00 0 0 0.00 0 0.00 29 U.Kannada 23 21 7.07 20 23 -12.32 43 44 -3.01 30 Yadagiri 2582 2519 2.50 613 667 -8.08 3195 3186 0.29 STATE TOTAL 419798 413855 1.44 67956 68774 -1.19487754 482629 1.06

APPENDIX - 2.7
Cropwise and Seasonwise ratio estimate and reconciled area for the year 2019-20

Crop: Sunflower

| | | | Kharif | | | Rabi | | Summer | | | | Total | |
|-----|-----------------|--------|------------|------------|-------|------------|------------|--------|------------|------------|--------|------------|------------|
| | | | Reconciled | % of | | Reconciled | % of | | Reconciled | % of | | Reconciled | % of |
| Sl. | District | | area | Variation | | area | Variation | | area | Variation | | area | Variation |
| No. | District | Ratio | (as per | over | Ratio | (as per | over | Ratio | (as per | over | Ratio | (as per | over |
| | | | Crop | Reconciled | | Crop | Reconciled | | Crop | Reconciled | | Crop | Reconciled |
| | | | Survey) | area | | Survey) | area | | Survey) | area | | Survey) | area |
| 1 | Bagalkote | 15435 | 15571 | -0.87 | 5481 | 3855 | 42.17 | 830 | 807 | 2.84 | 21746 | 20234 | 7.48 |
| 2 | Bengaluru Rural | 4 | 7 | -41.31 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 4 | 7 | -41.31 |
| 3 | Bengaluru Urban | 2 | 6 | -67.75 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 2 | _ | 0,1,0 |
| 4 | Belagavi | 7189 | 6924 | 3.83 | 2728 | 2523 | 8.13 | 624 | 875 | -28.67 | 10541 | 10322 | 2.12 |
| 5 | Bellary | 10693 | 10135 | 5.51 | 768 | 2162 | -64.48 | 89 | 100 | -10.94 | 11550 | 12397 | -6.83 |
| 6 | Bidar | 125 | 133 | -5.80 | 0 | 26 | -100.00 | 0 | 0 | 0.00 | 125 | 159 | |
| 7 | Vijayapura | 7653 | 7539 | 1.51 | 0 | 123 | -100.00 | 0 | 20 | -100.00 | 7653 | 7682 | -0.38 |
| 8 | Chamarajanagar | 15826 | 16312 | -2.98 | 0 | 595 | -100.00 | 0 | 30 | -100.00 | 15826 | 16937 | -6.56 |
| 9 | Chikkaballapura | 2 | 3 | -9.69 | 0 | 48 | -100.00 | 0 | 0 | -100.00 | 2 | 50 | |
| 10 | Chikkamagaluru | 556 | 328 | 69.83 | 0 | 0 | -100.00 | 0 | 0 | 0.00 | 556 | | |
| 11 | Chitradurga | 2435 | 2343 | 3.93 | 191 | 235 | -18.67 | 0 | 0 | 0.00 | 2626 | 2578 | 1.87 |
| 12 | D. Kannada | 0 | 0 | 0.00 | 0 | 0 | -100.00 | 0 | 0 | 0.00 | 0 | 0 | -100.00 |
| 13 | Davanagere | 1007 | 1012 | -0.48 | 0 | 133 | -100.00 | 0 | 46 | -100.00 | 1007 | 1192 | -15.49 |
| 14 | Dharwad | 328 | 287 | 14.22 | 1032 | 697 | 47.99 | 0 | 0 | 0.00 | 1360 | 984 | 38.14 |
| 15 | Gadag | 18386 | 19082 | -3.65 | 4818 | 5592 | -13.84 | 278 | 255 | 8.99 | 23482 | 24929 | -5.80 |
| 16 | Kalaburagi | 10843 | 10441 | 3.84 | 0 | 73 | -100.00 | 0 | 0 | 0.00 | 10843 | 10514 | 3.12 |
| 17 | Hassan | 87 | 89 | -1.61 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 87 | 89 | |
| 18 | Haveri | 165 | 114 | 45.23 | 5419 | 3260 | 66.25 | 486 | 473 | 2.84 | 6070 | 3846 | 57.83 |
| 19 | Kodagu | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| 20 | Kolar | 3 | 4 | -18.50 | 0 | 1 | -100.00 | 0 | 0 | 0.00 | 3 | 5 | -38.21 |
| 21 | Koppal | 12784 | 11657 | 9.68 | 7100 | 4982 | 42.50 | 1875 | 1816 | 3.25 | 21759 | 18455 | 17.91 |
| 22 | Mandya | 6 | 5 | 8.64 | 0 | 0 | -100.00 | 0 | 37 | -100.00 | 6 | 42 | -86.95 |
| 23 | Mysuru | 562 | 545 | 2.96 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 562 | 545 | 2.96 |
| 24 | Raichuru | 2726 | 2571 | 6.07 | 0 | 57 | -100.00 | 0 | 0 | 0.00 | 2726 | 2628 | 3.76 |
| 25 | Ramanagara | 2 | 2 | 19.87 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 2 | 2 | 19.87 |
| 26 | Shivamogga | 0 | 0 | 0.00 | 637 | 795 | -19.87 | 60 | 58 | 3.82 | 697 | 853 | -18.26 |
| 27 | Tumakuru | 24 | 24 | 0.04 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 24 | 24 | 0.04 |
| 28 | Udupi | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| 29 | U.Kannada | 0 | 0 | 0.00 | 0 | 3 | -100.00 | 0 | 0 | 0.00 | 0 | 3 | -100.00 |
| 30 | Yadagiri | 802 | 808 | -0.79 | 0 | 3 | -100.00 | 0 | 0 | 0.00 | 802 | 811 | -1.16 |
| | STATE TOTAL | 107647 | 105941 | 1.61 | 28174 | 25164 | 11.96 | 4242 | 4517 | -6.09 | 140063 | 135621 | 3.28 |

APPENDIX - 2.8
Cropwise and Seasonwise, ratio estimate and reconciled area for the year 2019-20

Area in hectares Safflower (Rabi) Linseed (Rabi) Sesamum (Kharif) Reconciled % of Variation Reconciled % of Variation Reconciled % of Variation Sl. **District** area over area over area over No. Ratio Ratio Ratio (as per Crop Reconciled (as per Reconciled (as per Reconciled Survey) Crop Survey) Crop Survey) area area area Bagalkote 381 353 7.90 0 26 -100.00 501 549 -8.62 Bengaluru Rural 0 0.00 0 0 -100.00 0.00 0 0.00 0 -100.00 -76.48 Bengaluru Urbai 766 727 5.32 0 104 -100.00 25 25 2.04 Belagavi Bellary 1078 535 101.39 0 -100.00 121 126 -4.41 -100.00 Bidar 8685 0 -100.00 999 994 0.47 Vijayapura 1489 1283 16.01 14 15 -7.96304 311 -2.24 0 -100.00 0.00 2886 3776 -23.57 Chamarajanagar 6 Chikkaballapura 0.00 10 14 -30.02 -1.89 0 0 Chikkamagaluru -100.000.00 113 96 18.17 12.65 0 3 47 22.06 Chitradurga 1464 1300 -100.0058 D. Kannada 0.00 0.00 0.00 0.00Davanagere 13 -100.00 0 0 10.34 45 Dharwad 6574 4486 46.53 3208.82 15 19 -17.98 Gadag 3634 4.47 11 10 164 163 0.38 15 3479 14.70 Kalaburagi -1.43 0 0 10207 13069 -21.90 681 691 0.00 Hassan 0 0 -100.00 0 0 -100.00 287 271 5.89 Haveri 18 608 449 35.48 6 29.59 10 12 -11.18 19 Kodagu 0 0.00 0 0 0.00 0.00 0 0 Kolar 0 0 -100.00 0 0 0.00 6 -13.98 20 Koppal 0 1004 -100.00 0 4 -100.00 6088 6535 -6.84 21 0 0 2159 2341 -7.77 22 Mandva 0 0 -100.00-100.00 0 23 0 -100.00 4 -100.00 1259 1180 Mysuru 0 6.63 Raichuru 0 253 -100.00 0 0 0.00 903 822 9.96 Ramanagara 0 0.00 0 0 0.00 256 237 7.88 0 Shivamogga 0 0 0.00 0 0.00 -100.00 0 27 Tumakuru 0 16 -100.000 0 0.00 38 48 -20.77 Udupi 0 0.00 0 0 0.00 0 0.00 28 0 0 0 U.Kannada 0 -100.00 -100.00 0.00 0 30 Yadagiri 76 43 74.83 0 0 0.00 50 87 -42.89 STATE TOTAL 16751 23326 -28.19 86 193 -55.39 26455 30724 -13.89

APPENDIX 2.9 Cropwise estimated area under ratio method and reconciled area during 2019-20

Area in hectares

| | | | Cotton (Rabi) | | Su | igarcane (Rab | i) |
|------------|-----------------|-------|---|---|--------|---|---|
| Sl. No. | District | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area | Ratio | Reconciled area (as per Crop Survey) | % of Variation over Reconciled area |
| 1 | Bagalkote | 0 | 169 | -100.00 | 27288 | 42896 | -36.38 |
| 2 | Bengaluru Rural | 0 | 1 | -100.00 | 0 | 3 | -100.00 |
| 3 | Bengaluru Urban | 0 | 0 | 0.00 | 0 | 111 | -100.00 |
| 4 | Belagavi | 970 | 1001 | -3.09 | 61207 | 95707 | -36.05 |
| 5 | Bellary | 490 | 967 | -49.32 | 10474 | 5114 | 104.79 |
| 6 | Bidar | 0 | 11 | -100.00 | 0 | 8768 | -100.00 |
| 7 | Vijayapura | 743 | 570 | 30.39 | 25565 | 18300 | 39.70 |
| 8 | Chamarajanagar | 0 | 60 | -100.00 | 1564 | 1291 | 21.16 |
| 9 | Chikkaballapura | 0 | 31 | -100.00 | 0 | 41 | -100.00 |
| 10 | Chikkamagaluru | 0 | 5 | -100.00 | 0 | 20 | -100.00 |
| 11 | Chitradurga | 346 | 426 | -18.85 | 0 | 23 | -100.00 |
| 12 | D. Kannada | 0 | 0 | 0.00 | 0 | 1 | -100.00 |
| 13 | Davanagere | 0 | 100 | -100.00 | 0 | 419 | -100.00 |
| 14 | Dharwad | 1526 | 2110 | -27.69 | 0 | 7683 | -100.00 |
| 15 | Gadag | 5125 | 4627 | 10.76 | 786 | 1043 | -24.67 |
| 16 | Kalaburagi | 400 | 420 | -4.75 | 21566 | 3074 | 601.59 |
| 17 | Hassan | 0 | 6 | -100.00 | 0 | 645 | -100.00 |
| 18 | Haveri | 0 | 0 | 0.00 | 4232 | 3995 | 5.93 |
| 19 | Kodagu | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| 20 | Kolar | 0 | 2 | -100.00 | 0 | 4 | -100.00 |
| 21 | Koppal | 320 | 308 | 3.83 | 0 | 514 | -100.00 |
| 22 | Mandya | 0 | 0 | 0.00 | 12983 | 9014 | 44.03 |
| 23 | Mysuru | 0 | 0 | 0.00 | 1720 | 2133 | -19.37 |
| 24 | Raichuru | 1650 | 1675 | -1.49 | 0 | 190 | -100.00 |
| 25 | Ramanagara | 0 | 2 | -100.00 | 0 | 88 | -100.00 |
| 26 | Shivamogga | 0 | 2 | -100.00 | 0 | 168 | -100.00 |
| 27 | Tumakuru | 0 | 0 | 0.00 | 371 | 43 | 762.19 |
| 28 | Udupi | 0 | 0 | 0.00 | 0 | 16 | -100.00 |
| 29 | U.Kannada | 0 | 4 | -100.00 | 0 | 1348 | -100.00 |
| 30 | Yadagiri | 960 | 941 | 2.03 | 605 | 185 | 226.67 |
| S | STATE TOTAL | 12530 | 13438 | -6.76 | 168361 | 202837 | -17.00 |

Cropwise Percentage variation of estimates of area (ratio method) over reconciled area for the years 2018-19 and 2019-20

APPENDIX - 3

| | | 2018-19 | 2019-20 |
|---------|---------------------------|----------------------|----------------------|
| Sl. No. | Сгор | % variation over RCA | % variation over RCA |
| 1 | 2 | 3 | 4 |
| | <u>Kharif</u> | | _ |
| 1 | Paddy | 0.1 | 0.72 |
| 2 | Jowar | -8.2 | 1.95 |
| 3 | Ragi | 6.2 | -1.89 |
| 4 | Bajra | -8.7 | -8.73 |
| 5 | Maize | -6.9 | 0.75 |
| 6 | Tur | -2.1 | -0.19 |
| 7 | Groundnut | 4.1 | 1.44 |
| 8 | Sesamum | 21.5 | -13.89 |
| 9 | Sunflower | 10.0 | 1.61 |
| | <u>Rabi</u> | | |
| 1 | Paddy | -8.3 | -2.70 |
| 2 | Jowar | -6.6 | -1.58 |
| 3 | Ragi | -23.7 | -3.88 |
| 4 | wheat | -12.3 | -12.37 |
| 5 | Maize | .24.0 | -9.11 |
| 6 | Gram | -8.1 | 2.48 |
| 7 | Cotton | -5.1 | -6.76 |
| 8 | Sugarcane | -8.3 | -17.00 |
| 9 | Sunflower | 8.3 | 11.96 |
| 10 | Safflower | 3.2 | -28.19 |
| 11 | Linseed | 101.5 | -55.39 |
| | <u>Summer</u> | | _ |
| 1 | Paddy | 0.5 | -0.25 |
| 2 | Maize | -3.3 | -2.47 |
| 3 | Ragi | 3.4 | -2.26 |
| 4 | Groundnut (Rabi & Summer) | 3.6 | -1.19 |
| 5 | Sunflower | 6.3 | -6.09 |