

General Crop Estimation Survey on Principal/Minor Crops

Presently the yield rates are estimated through a national program known as General Crop Estimated Survey(GCES). It is based on scientifically designed survey methodology based on for crop cutting experiments (CCE) in which 13 crop (9 food and 4 nonfood) are covered in 23 Districts. Every year around 7416 experiments are conducted with the help of state revenue and agricultural staff. Currently, about 95% of the production of food grains is estimated based on yield rates obtained from crop cutting experiments. NSSO coordinates the work under CES in all districts to provides necessary guidance on crop estimates surveys.

The current process of recording and generation of yield estimates is completely manual. The manual process causes delay in the submission of the CCE results and further generation of yield estimates. In addition to that, there is lack of transparency in the whole process. Therefore, to overcome these drawbacks and to strengthen and digitize the recording of Crop Cutting Experiments (CCEs) under the General Crop Estimation Survey (GCES). The GOI has developed a dedicated CCE mobile application and web portal. This application & portal will facilitate the recording of CCE results from the field and generation of crop yield estimates resulting in transparency and accuracy within the system.

Current Status

The pilot project for recording CCE through mobile application, which took place during kharif 2023-24 season in only two districts (Fetahgarh Sahib & Malerkotla) has provided a valuable insights and demonstrated the efficiency of the GCES mobile application and web portal. At the meanwhile Deptt roll out the GCES mobile application and web portal in all the districts of all the major crops under Rabi 2023-24 season.

To achieve the reliable yield estimation of various agriculture crops of kharif and rabi season. Statistical wing conducts the crop cutting experiments on Principal/minor crops in both season for yield estimation.

a) Crop wise planned & Analyzed No. of Crop Cutting Experiments.

| Achievements in CCE scheme | 2020-21 | | 2021-22 | | 2022-23 | | 2023-24(E) | |
|----------------------------|---------|----------|---------|----------|---------|----------|------------|----------|
| | Planned | Analyzed | Planned | Analyzed | Planned | Analyzed | Planned | Analyzed |
| Paddy | 2004 | 2001 | 1998 | 1998 | 2084 | 2084 | 2186 | 2184 |
| Maize | 354 | 354 | 342 | 340 | 312 | 306 | 324 | 322 |
| Cotton | 656 | 652 | 672 | 672 | 616 | 615 | 522 | 522 |
| Sugarcane | 692 | 687 | 636 | 635 | 628 | 624 | 636 | 510 |
| Wheat | 2342 | 2338 | 2346 | 2346 | 2356 | 2354 | 2356 | - |
| Barley | 252 | 251 | 266 | 266 | 226 | 224 | 254 | |
| Gram | 94 | 94 | 106 | 106 | 112 | 112 | 112 | - |
| Rabi Oil Seed | 574 | 573 | 584 | 584 | 650 | 649 | 654 | - |
| Moong | 254 | 165 | 230 | 144 | 196 | 95 | 106 | 36 |
| Mash | 58 | 58 | 48 | 46 | 58 | 54 | 58 | 53 |
| Arhar | 54 | 48 | 50 | 44 | 48 | 40 | 52 | 35 |
| Sesamum | 110 | 82 | 86 | 66 | 90 | 73 | 90 | 48 |
| Massar | 36 | 36 | 42 | 40 | 40 | 24 | 40 | - |

Note: These experiments are conducted on the random sample method to represent every crop and to achieve the reliable yield estimation on the basis of these crop cutting experiment results, statistical wing estimates the crop yield and then calculates the crop production with the help of crop area released by the State Revenue Department.

b) AYP OF PRINCIPAL/MINOR CROPS IN PUNJAB STATE

In General Crop Survey Estimation, based on Crop cutting experiments the Final Area, yield and production of various crops in Punjab state is as follows: -

Area '000' Ha Average Yield Kg/ha Production '000' Ton,/170Bales

| Crops | 2020-21 | | | 2021-22 | | | 2022-23 | | |
|----------------------------|---------------|-------------|--------------|---------------|---------------|----------------|---------------|---------------|----------------|
| | A | Y | P | A | Y | P | A | Y | P |
| Non-Basmati | 2742.9 | 6964 | 19102 | 2707.3 | 6834.4 | 18502.7 | 2673.3 | 6812.1 | 18210.9 |
| Basmati | 406.2 | 4381 | 1780 | 436.1 | 4265.7 | 1860.3 | 494.5 | 4678.0 | 2313.3 |
| Total Paddy | 3149.1 | 6631 | 20882 | 3143.4 | 6478.0 | 20362.9 | 3167.8 | 6479.0 | 20524.2 |
| Total Rice | 3149 | 4443 | 13992 | 3143.4 | 4340.3 | 13643.2 | 3167.8 | 4340.9 | 13751.0 |
| Maize | 108.1 | 3667 | 396.4 | 105.3 | 3931.0 | 414.0 | 93.3 | 4393.0 | 409.9 |
| Bajra | 0.4 | 640 | 0.3 | 2.3 | 632.0 | 1.5 | 0.6 | 690.0 | 0.4 |
| Moong | 2.6 | 960 | 2.5 | 2.1 | 938.0 | 2.0 | 3.8 | 780.0 | 3.0 |
| Mash | 2.0 | 614 | 1.2 | 1.6 | 441.0 | 0.7 | 1.3 | 418.0 | 0.5 |
| Tur (Arhar) | 1.8 | 1163 | 2.1 | 1.5 | 1014.0 | 1.5 | 1.2 | 1107.0 | 1.3 |
| Total Pulses | 6.4 | 0.0 | 5.8 | 5.2 | 0.0 | 4.2 | 6.3 | 0.0 | 4.8 |
| Groundnut | 1.5 | 1980 | 3.0 | 1.4 | 1985.0 | 2.8 | 1.7 | 1717.0 | 2.9 |
| Sesamum | 2.5 | 384 | 1.0 | 2.8 | 363.0 | 1.0 | 2.1 | 345.0 | 0.7 |
| Total Kh.Oilseeds | 4.0 | 0.0 | 3.9 | 4.2 | 0.0 | 3.8 | 3.8 | 0.0 | 3.6 |
| Cotton | 251.7 | 691 | 1023 | 250.3 | 438.0 | 644.9 | 248.9 | 303.0 | 443.6 |
| Sugarcane | 89.4 | 83835 | 7495 | 87.3 | 82100.0 | 7167.3 | 90.3 | 83123.0 | 7506.0 |
| Guaraseed | 8.4 | 831 | 7.0 | 27.7 | 1039.0 | 28.8 | 8.9 | 779.0 | 6.9 |
| Wheat | 3530.2 | 4868 | 17185 | 3526.5 | 4217.0 | 14871.3 | 3517.5 | 4710.0 | 16567.4 |
| Barley | 5.7 | 3767 | 21.5 | 5.0 | 3134.0 | 15.7 | 5.5 | 3840.0 | 21.1 |
| Gram | 1.8 | 1321 | 2.4 | 1.7 | 1317.0 | 2.2 | 1.7 | 1060.0 | 1.8 |
| Lentil | 0.6 | 598 | 0.4 | 0.5 | 554.0 | 0.3 | 0.5 | 910.0 | 0.5 |
| Peas | 1.8 | 895 | 1.6 | 3.2 | 1041.0 | 3.3 | 3.1 | 1497.0 | 4.6 |
| Total Rabi Pulses | 4.2 | 0.0 | 4.3 | 5.4 | 0.0 | 5.8 | 5.3 | 0.0 | 6.9 |
| Rabi Oilseed | 32.1 | 1591 | 51 | 42.8 | 1581.0 | 67.7 | 45.0 | 1623.0 | 73.0 |
| Sunflower | 2.5 | 1794 | 4.5 | 0.5 | 1840.0 | 0.9 | 1.5 | 1987.0 | 3.0 |
| Total Rabi Oilseeds | 34.6 | 0.0 | 55.6 | 43.3 | 0.0 | 68.6 | 46.5 | 0.0 | 76.0 |